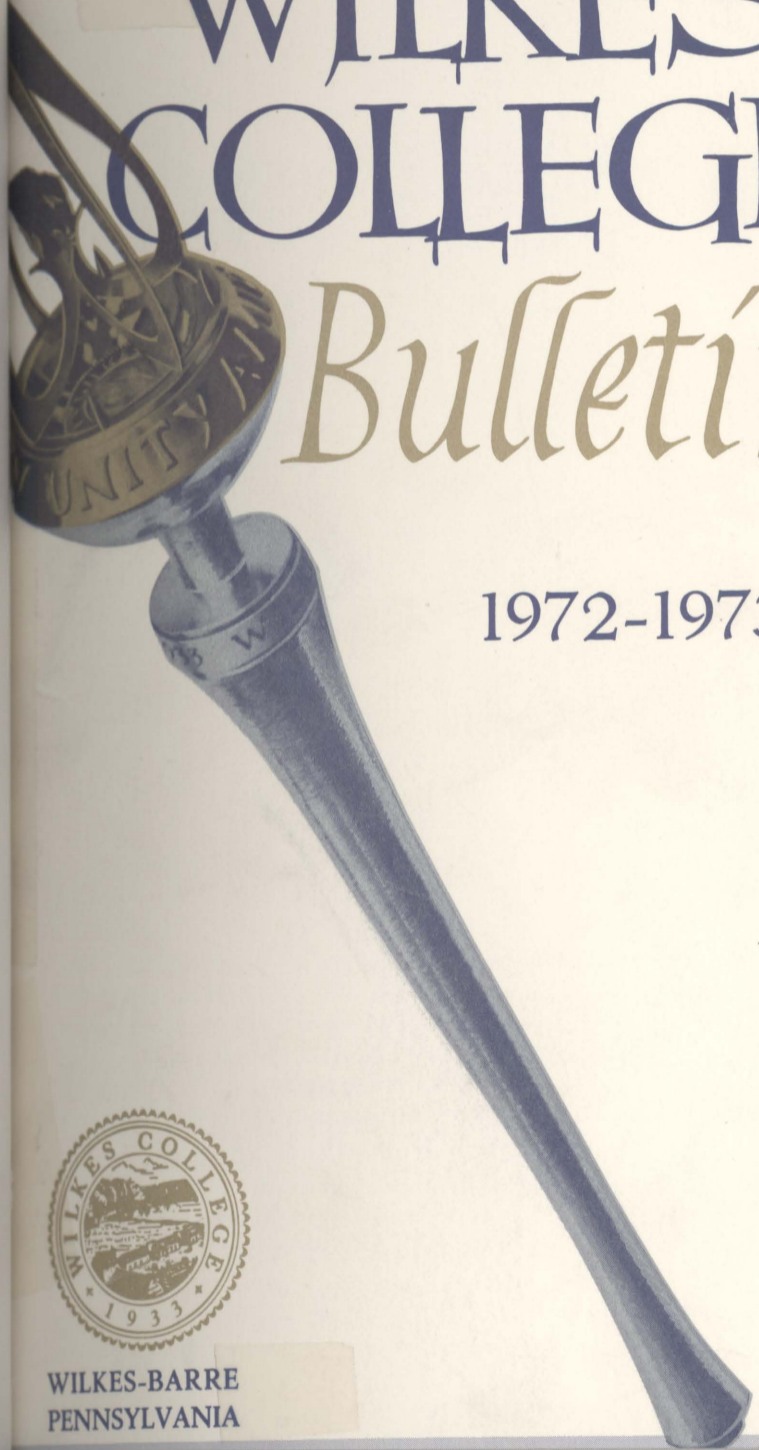


WILKES
COLLEGE
Bulletin

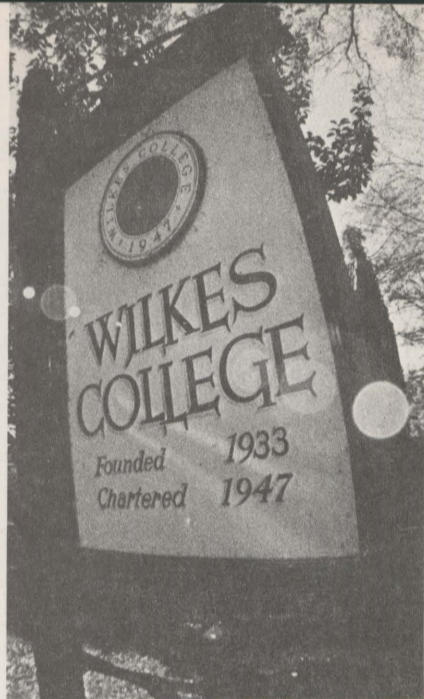
1972-1973



WILKES-BARRE
PENNSYLVANIA

EUGENE SHEDDEN FALLEY LIBRARY

... unity
amidst
diversity ...?



THE COVER

THE COLLEGE MACE is made of sterling silver throughout. At the lower end of the hammered shaft is a gilt (gold-plated) knob. The upper end of the shaft displays the inscription "Wilkes College 1933." Above the short, hammered neck rises a bowl to indicate that Wilkes-Barre acted as a melting pot in forming a new and vigorous community of people of many different backgrounds. This theme is clearly stated in the gilt inscription around the upper part of the bowl: "Unity Amidst Diversity." Set into the top of the bowl is the gilt seal of Wilkes College. The top of the mace is a gilt flame-like structure to indicate the enlightenment to be gained from higher education. A piece of anthracite coal from a local mine is set in the center of this "flame" to commemorate the origin of the community and the College in its coal mining past.

EUGENE FREDDEN FARLEY LIBRARY



Eugene S. Farley Library — named in honor of the College's first President

EUGENE SHEDDEN FARLEY LIBRARY

1933

WILKES COLLEGE WILKES-BARRE, PA.
WILKES
COLLEGE
Bulletin

UNDERGRADUATE STUDIES

1972-1973

SPRING AND FALL SEMESTERS

VOL. XXI

Wilkes-Barre, Pennsylvania 18703

Telephone: (717) 824-4651

ARCHIVES
LD6051
W2266
1972-1973

College Calendar

FALL SEMESTER — 1972-73

<i>Freshmen Registration and Orientation</i>	Friday, September 22 Saturday, September 23
<i>Upperclassmen Registration</i>	Sunday, September 24
<i>Classes Begin</i>	Monday, September 25
<i>Progress Reports</i>	Saturday, November 4
<i>Pre-registration for Seniors and Juniors</i>	Monday, November 6 to Friday, November 10
<i>Pre-registration for Sophomores</i>	Monday, November 13 to Friday, November 17
<i>Pre-registration for Freshmen</i>	Monday, November 27 to Friday, December 1
<i>Thanksgiving Recess</i>	November 23 thru November 26
<i>Classes Resume</i>	Monday, November 27, 8 a.m.
<i>Christmas Vacation</i>	December 23 thru January 3
<i>Classes Resume</i>	Thursday, January 4, 8 a.m.
<i>Classes End for Fall Semester</i>	Friday, January 12, 5 p.m.
<i>Final Examination Period</i>	Monday January 15 to Saturday, January 20 (six days)
<i>Fall Semester Ends</i>	Saturday, January 20

College Calendar

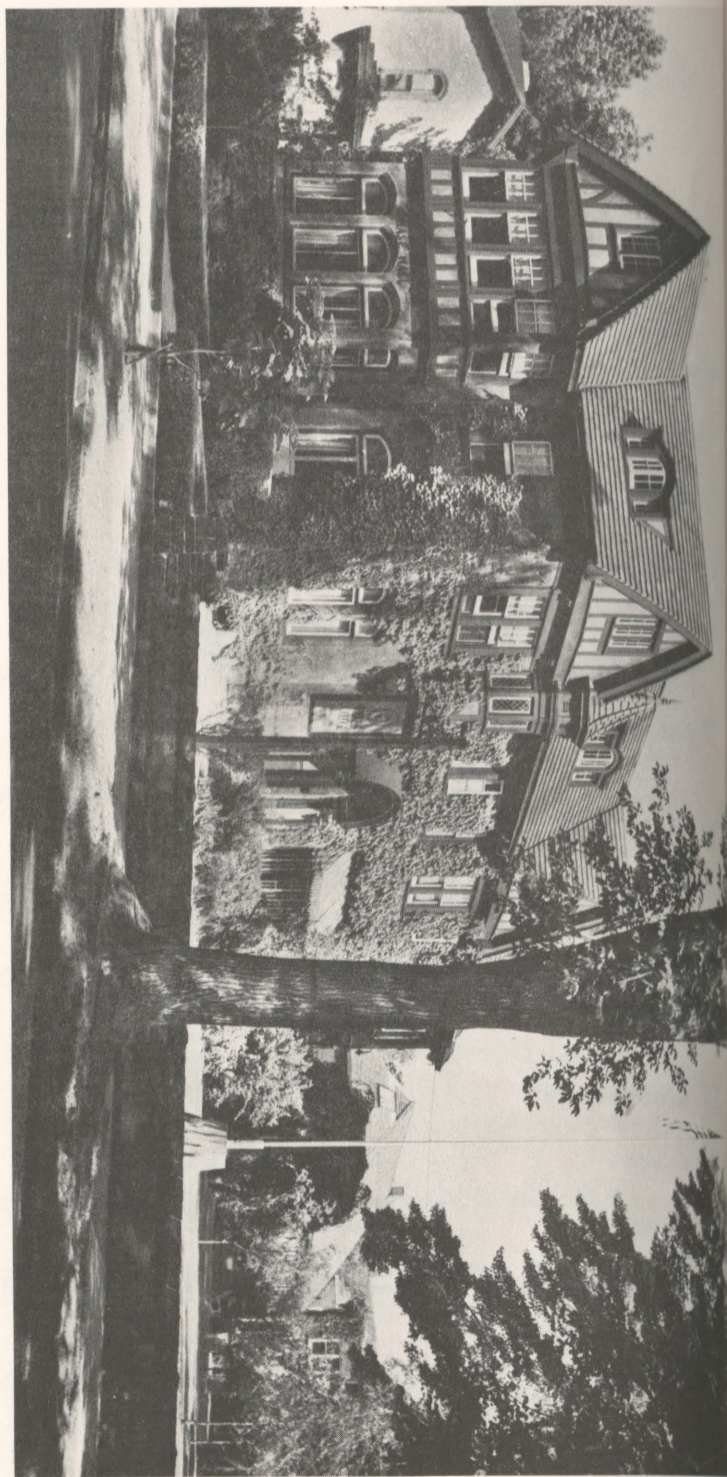
SPRING SEMESTER — 1973

<i>Registration</i>	Friday, February 2
<i>Classes Begin</i>	Monday, February 5
<i>Incomplete Grades Due</i>	Saturday, February 17
<i>Progress Reports</i>	Saturday, March 17
<i>Spring Vacation</i>	April 14 through April 22
<i>Classes Resume</i>	Monday, April 23, 8 a.m.
<i>Pre-registration for Juniors</i>	Monday, April 23 to Friday, April 27
<i>Pre-registration for Sophomores</i>	Monday, April 30 to Friday, May 4
<i>Pre-registration for Freshmen</i>	Monday, May 7 to Friday, May 11
<i>Classes End for Spring Semester</i>	Friday, May 18, 5 p.m.
<i>Final Examination Period</i>	Monday, May 21 to Saturday, May 26 (six days)
<i>Spring Semester Ends</i>	Saturday, May 26
<i>Baccalaureate</i>	Sunday, June 3, 11 a.m.
<i>Commencement</i>	Sunday, June 3, 5 p.m.
<i>Incomplete Grades for Spring Term-1973</i>	Saturday, June 23 (Due)

*(The College issues a supplementary Summer Bulletin)

78-135954

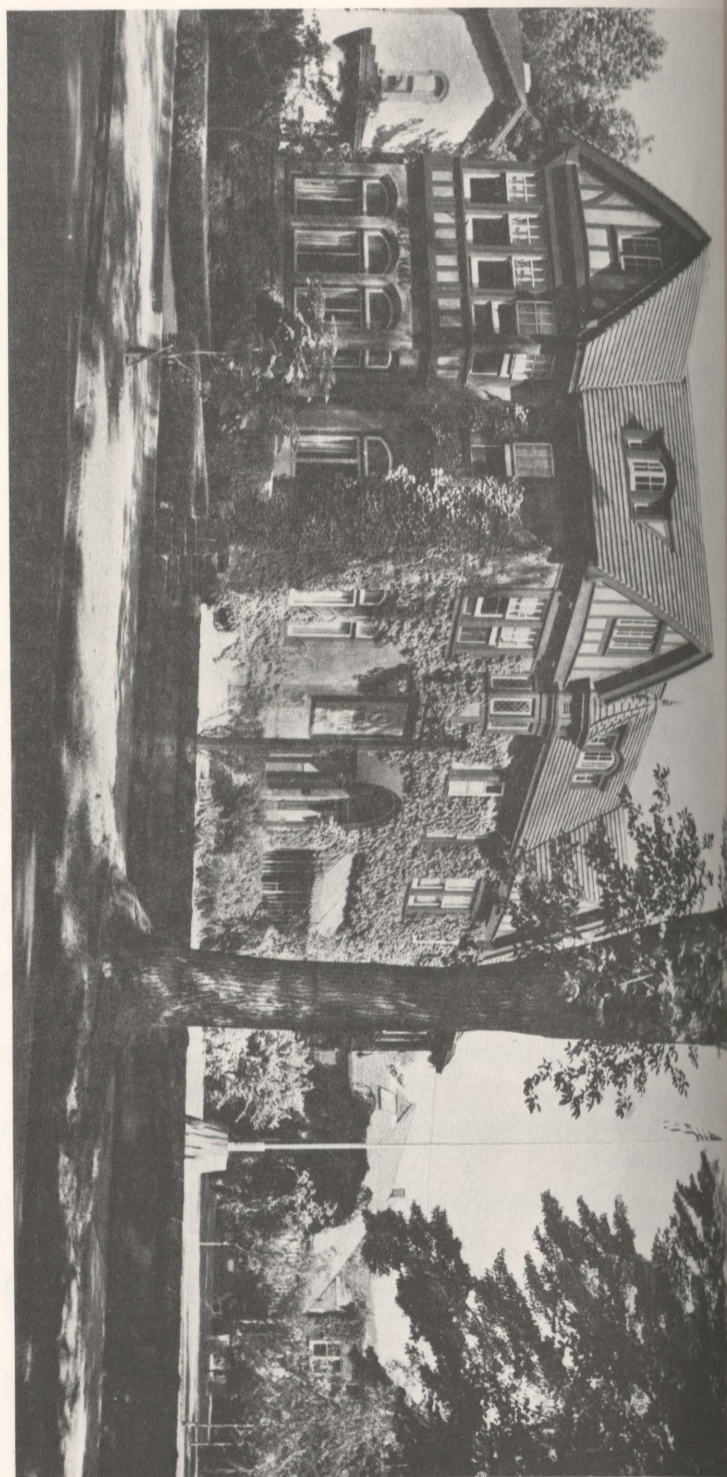
Chase Hall on South River Street houses Admissions office.



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Wilkes College

Wilkes College had its beginnings in 1933 when Bucknell University, responding to a request of community leaders, established its Junior College in Wilkes-Barre. On June 26, 1947, Bucknell University Junior College came to an end and Wilkes College received its charter as a four-year, coeducational, liberal arts college. The College has grown slowly to its current enrollment of approximately 2600 full-time day students and 600 part-time evening school students and over 600 graduate students.

From its inception the College has been dedicated to these twin goals — a sound and stimulating intellectual experience for students and a program of service to the community.

AN INDEPENDENT COLLEGE

It was inevitable that the new college should be non-sectarian, for its purpose was to serve all students equally and its supporters wished the College to integrate itself with all constructive efforts in the community. It was believed that these ends could be served best by an independent college that was interdenominational in its influence and non-denominational in its control.

FREEDOM OF INQUIRY

Years have passed since Bucknell gave the control of the Junior College to a local Board of Trustees, guided by the late Gilbert S. McClintock, and events of these years demonstrate the wisdom of their decision. With responsibility came a pressing desire to strengthen the work of the faculty, united in their belief that the intellectual and spiritual resources of the student are vigorous where the creative mind is free.

UNITY AMIDST DIVERSITY

A college that wishes to serve all groups requires both a definite philosophy and a working policy. Wilkes College has been guided by the thought that unity in our community, our nation, and our world requires not only great vision but warm understanding of peoples. In its small circle Wilkes College brings together

students of many faiths, backgrounds, and countries. It encourages them to maintain their convictions and their loyalties. It encourages them to create friendships based upon respect for differences, and to adhere to those ideals that create unity and good will amidst diversity.

While academic work is the basis of the College program, the faculty recognizes that academic training will be of little importance unless students emerge as men and women of strong faith and fine character. In the words of John Stuart Mill, "Before you can make men doctors and lawyers, you must first make them men."

Wilkes College is committed to education as a way of life.

DECADES OF GROWTH

Because of their interest and faith, friends have multiplied their support during the past decades and the campus has expanded steadily so that it now includes most of the properties facing the River Common. Fortunately, a growing endowment has kept pace with the expansion of the campus.

A COOPERATIVE EFFORT

The original concept of community services has been strengthened with the passing of the years and with growing experience. It has been clearly demonstrated that the students, the College, and the community all benefit from cooperative effort. This cooperative relationship, with its emphasis on trained intelligence and extended planning, has resulted in cooperative action.

ACCREDITATION

Wilkes College is accredited by the Department of Education of the Commonwealth of Pennsylvania and the Middle States Association of Colleges and Secondary Schools.

In addition to the total program accreditation certain special areas are recognized by professional societies. The Accounting curriculum has been accredited by the Certified Public Accounting Examiners of the State of New York. The Chemistry curriculum is approved by the American Chemical Society.

**An
Educated
Man**

seeks truth, for without truth there can be no understanding;

possesses vision, for he knows that vision precedes all great attainments;

is aware of the diversity of ideas and beliefs that exist among men;

has faith in the power of ideals to shape the lives of men;

knows that man's progress requires intellectual vigor, moral courage, and physical endurance;

cultivates inner resources and spiritual strength, for they enrich his daily living and sustain him in times of crisis;

has ethical standards by which he lives;

respects the religious convictions of all men;

participates constructively in the social, economic, cultural, and political life of the community;

communicates ideas in a manner that assures understanding, for understanding unites men in their search for truth.

*Formulated and adopted by the
faculty as a guide to learning.*

Policies and Objectives

Admissions

Registration

Tuition, Fees, and Expenses

Financial Assistance

Education at Wilkes

The spirit of the College derives from the ideals of the faculty and the quality of its instruction; from its library, its laboratories and equipment.

The spirit of the College is the integrity of its mission, the intellectual climate that enriches the student as a person.

The College believes that no attention can be too great which intensifies a student's thinking or deepens his interest or develops his techniques and skills.

It believes that a good student commits himself to the disciplines of his work. To learn, to master, and to understand he must accept the responsibilities that he shares with others.

Admissions

True education demands a love of learning and a spirit of sacrifice and service. Education is not a right or privilege but an opportunity that carries with it obligations prescribed by the College and responsibilities shared with the student.

This concept has guided the faculty and trustees in developing the philosophy and procedures of the Admissions Committee, making it possible for students of ability, determination, and soundness of character to study at Wilkes.

Here the student will find an atmosphere of competitive learning in the world of ideas. His desire to undertake study at Wilkes places him among the ready men for whom education is an experience in excellence. He will be charged with the responsibility for fulfilling that trust.

The careful selection of able and committed students is deemed essential to the attainment of high standards and warm personal relationships between students and faculty.

Undergraduate Admission Requirements

SECONDARY SCHOOL RECORD

Candidates applying for admission to Wilkes should be secondary school graduates and should offer at least fifteen units of work representing the equivalent of the usual four-year secondary school preparatory school course. For entrance into certain departments, specific courses in secondary school are necessary. Students interested in studying biology, chemistry, engineering, mathematics, medical technology, and science education should be prepared to enter Math. 105 or 111 (Calculus) in the first semester.

APPLICATION FOR ADMISSION

To assist students seeking admission, the College has adopted procedures designed to simplify admissions.

Applications for admission and instructions regarding secondary school records, recommendations, and entrance examinations may be obtained from the Dean of Admissions. The completed applications should be returned to him with a \$10.00 application fee.

EUGENE STEEDEN PARLEY LIBRARY

ADMISSIONS TESTS

The Scholastic Aptitude Test of the College Entrance Examination Board is required of all applicants. Students should plan to take this examination in December or January of their senior year. If unusual circumstances prevent the applicant from taking this test, he must notify the Dean of Admissions. Students who wish the Admissions Committee to review their application on the basis of College Boards taken in their junior year should make this request in writing to the Dean of Admissions. Wilkes is a member of the College Entrance Examination Boards.

Students communicating with the Educational Testing Center in Princeton, New Jersey, or in Los Angeles, California, should refer to the Wilkes College code number 2977.

ACCEPTANCE OF ADMISSION AND DEPOSIT

After receipt of the secondary school record, the secondary school recommendations, and the senior College Board scores, the Admissions Office acts upon all applications. Notification of action is sent immediately. Resident students are required to forward a \$100.00 tuition and dormitory deposit by May 1; local students are required to forward a \$50.00 tuition deposit by May 1 in order to guarantee their entry into the College.

The College accepts a limited number of applications for the February class. Procedures are similar to those followed in the fall semester.

ADMISSIONS COMMITTEE

The Admissions Committee is comprised of the Dean of Admissions and appointed faculty members. This committee acts upon special cases referred to it by the Dean of Admissions.

PERSONAL INTERVIEWS

A personal interview with each student is not required. Students and their families are invited to visit the College at their convenience. It is advisable to write for an appointment so that the Deans may arrange to meet with them.

Music applicants are required to audition for the music faculty.

TRANSFER STUDENTS

Candidates from other institutions wishing to enter with advanced standing shall follow the regular procedure for admission. The student should request the college or university he is attending to forward to Wilkes a transcript and an official statement of his honorable withdrawal. Students offered admission should secure a personal interview with the Dean of Admissions, at which time an evaluation of the transfer credits will be made and a tentative program scheduled. This program will be subject to final review by the faculty adviser at the time of registration. Acceptable credits will be placed on the Wilkes record of the student following a final evaluation.

College policy prohibits the Admissions Committee from considering for admission any student who has been placed on academic probation or who has been dismissed from any other college or university until a period of one year has elapsed.

ADVANCED COURSE STANDING

Superior students who have undertaken college-level courses in secondary school may request college credit for such work and permission to enter advanced courses. To qualify for advanced placement, the secondary school student must take the Advanced Placement tests of the College Entrance Examination Board, in addition to the regular Scholastic Aptitude tests required for admission. Action by the College will be determined by scores obtained on the Advanced Placement Examination, the secondary school record submitted by the student, and the recommendations of the secondary school faculty. After he is admitted the applicant will request the College Entrance Examination Board to send the results of the Advanced Placement Tests to the Dean of Admissions. The request will then be considered by the Admissions Committee and the appropriate department chairman. The applicant will be advised of their action prior to registration.

Evening Division

The evening division offers educational opportunities to adults who cannot attend day classes. Students may register for courses

in the Evening Division and earn credits toward an undergraduate degree. Graduate courses are also offered during the evening hours.

Students will confer with the Director of the Evening Division to arrange a course of study to meet their needs, abilities, and special requirements. During the semester students will consult with the Director of the Evening Division concerning their program.

When the student completes thirty hours, his record is reviewed by the Admissions Committee. At this time the Committee recommends that a student continue to work for a degree, or be placed on probation, or withdraw from the Evening Division.

Students who do not desire a degree may be admitted to classes which they are qualified to take by reason of their maturity, previous education, and work experience. Secondary school training is desirable but not necessary, provided the student is qualified to follow special courses of instruction in which he wishes to register.

Summer College

The faculty offers selected courses during two five-week day sessions and one eight-week evening session. The course offerings are listed each year in the Summer College Bulletin available on request from the Admissions Office.

A student from another college who wishes to take summer work at Wilkes must secure the approval of the proper officer of his own institution if he expects to receive credit for such work.

A student from Wilkes College who wishes to take summer work at another institution must secure the approval of the Academic Standing Committee. Application in writing shall be made through the office of the Deans.

Inquiries concerning summer graduate courses should be directed to the Director of Graduate Studies.

Graduate Division

Information concerning admission to the Graduate Division may be obtained from the Office of the Director of Graduate Studies. The College issues a supplementary graduate bulletin.

Registration

Every student is expected to register on the dates specified in the College calendar. A student presenting himself for registration after the time designated for registration will pay a late registration fee of \$10.00.

Incoming freshman students will be sent a program of courses they will be enrolled in for the first semester. This program should be reviewed by the student and returned to the Admissions Office within two weeks. Any questions or changes relating to this program should be directed to the Dean of Admissions immediately.

Expenses

TUITION

The flat tuition fee of \$925.00 per semester will be charged to all students taking a course load in excess of thirteen and up to eighteen hours. A student who registers for thirteen or fewer hours of work will be charged at a rate of \$60.00 per credit hour. A student who elects a heavier schedule than 18 hours will be charged \$60.00 for each additional credit hour.

RESIDENT STUDENTS

Students occupying residence halls on the campus will be charged \$1,170 for room and board. This includes related fees such as linen, laundry, insurance, etc. Incidental expenses are estimated at \$130.00.

EVENING SCHOOL

Students registered in the Evening School will be charged \$60.00 per semester hour. Further information regarding the content of the courses, requirements for undergraduate and graduate degrees, and requirements for teacher certification may be secured from the Office of Admissions.

SUMMER COLLEGE

Students registering for courses in the Summer College sessions will be charged \$60.00 per semester hour of study payable before registration.

FEES

For those courses that require individual faculty supervision or the addition of supplies and equipment the College finds it necessary to charge nominal fees. These fees are listed in the Bulletin with the course description. When these fees total more than \$50.00 a flat fee of \$50.00 per semester will be charged.

Medical technology students will be charged in both the seventh and eighth semesters a \$50.00 College Administrative Fee for supervision of the hospital course work required in this program.

The cost of individual instruction in applied music is \$50.00 for full-time students for a series of fourteen half-hour lessons. The College accepts a limited number of special students for individual instruction in applied music for a series of fourteen half-hour lessons at a cost of \$70.00 per semester.

A student activities fee of \$20.00 provides for a number of special programs, including plays, recitals, and lectures, offered at the Center for the Performing Arts, and for home athletic events.

A graduation fee of \$25.00 is charged to all graduating seniors.

AUDIT

A full time enrolled student (14 hours or more) may audit a course for no additional charge. Part-time students may audit a course for one-half the regular tuition fee.

TRANSCRIPTS

There is no charge for the first transcript requested. The student will pay one dollar for each additional transcript.

When requests for more than one transcript are given on the same order the charge shall be:

- a. One dollar for the first copy.
- b. Seventy-five cents for the second copy.
- c. Fifty cents for the third copy.
- d. Twenty-five cents for each copy thereafter.

CHEMISTRY BREAKAGE

Students taking chemistry laboratory courses are required to deposit \$10.00 to cover possible charges for broken, lost, or damaged equipment. The unexpended balance of this fee is refundable.

HEALTH SERVICE

The College makes available both accident and health insurance to students. Each student will be required to pay a \$10.00 health fee. A health insurance policy is available to commuting students but is optional with them. Health insurance required of all resident students is prepaid as part of the dormitory fee. Both policies provide protection for twelve months and premiums are payable in full with the first semester charges. There are four fully accredited hospitals in the vicinity of the campus, and a college physician and college infirmary are available for emergency treatment.

PAYMENTS

All payments for tuition, room and board, fees, etc., are due prior to final registration.

Payment of all charges for tuition, fees, room and board is to be made at the Finance Office, Parrish Hall, before registration. Several plans have been developed to assist students who do not have the cash in hand, and it is suggested these plans be considered when special assistance is needed. Students may consult with the Director of Financial Aid for information regarding scholarship and loan programs.

When the student is unable to make payments prior to registration, he may apply to the Comptroller for an extension of sixty days. Any student not meeting his obligations within this grace period of sixty days beyond the date of registration will be denied the privilege of class attendance and, if a residence hall student, he shall be excluded from the residence hall and dining hall.

REFUNDS

Students in good standing who withdraw from the College will receive a refund of tuition under the following conditions:

During the first six weeks of a term one-half of the tuition will be refunded upon request if the withdrawal is made for adequate and satisfactory reasons. After the first six weeks no refunds are allowed and the student is obligated for the full costs for the term.

Refund of dormitory charges will not be allowed except under conditions beyond the control of the student.

No student who is suspended or expelled shall be entitled to any refunds.

Living Quarters and Board

RESIDENCE HALLS

Residence for boarding students is provided in a new dormitory for men and in a number of large mansions that have been given to, or purchased by, the College in recent years. The women's dormitories accommodate from twelve to fifty students and a resident assistant. Every effort is made to maintain a homelike atmosphere. Students and their families are invited to inspect these homes. Each room includes a bureau, desk, chair, and a bed. Students will supply their own blankets; bed linens and towels are furnished through a local laundry on contract by the College.

The admission of resident students is limited to the capacity of the resident halls, and all students not residing with parents or guardians are required to live in the residence halls.

Any exception to this rule must be requested in writing to the Dean of Student Affairs, and must be approved by the Administrative Council after recommendation by the Council of Deans.

A deposit of \$50.00 is required to reserve a room. The charge for room and board is \$585.00 per student per semester. This charge includes the cost of health and accident insurance and linen rental and laundry service for bed linen and towels only. Personal laundry plans are offered, and for students who wish to do their own laundry, facilities are available on campus.

Resident students are required to take their meals at the College Dining Hall. Exceptions will not be made without formal recommendation from the college physician and the approval of the Dean's Council.

Each resident student will be required to maintain a minimum balance of \$50.00 on deposit with the College so long as that student is enrolled. Charges for damage to College residence hall property will be automatically deducted from the student's deposit. When the student graduates or terminates his matriculation at the College, he will be given the refundable portion of the deposit.

Information regarding residence halls can be obtained from the Office of Admissions or the Housing Office.

Financial Assistance

To provide assistance for those who need financial help, the College receives substantial gifts from friends. These gifts provide scholarship aid to those who are already making every effort to help themselves.

In accepting any form of aid from the College the student accepts an obligation — which is also the obligation of every other conscientious student — to:

1. Maintain a good scholastic record.
2. Exert a constructive influence in the College and the community.
3. Participate constructively in an all-college activity of his own choice.

In planning to meet any difference between his own resources and the cost of education the student should consider a combination of *work, loans, and grants*.

Scholarships

A few honor scholarships are awarded without regard to financial need to students of outstanding achievement in appreciation of their contribution to the intellectual life of the group. High school seniors who desire to be considered for an honor award should apply in writing to the Dean of Admissions at the time of their application for admission.

Financial Aid

REQUIREMENTS

1. Students must be admitted to the College before their applications for financial aid will be considered.
2. The primary responsibility for financing the cost of education rests with the student and his family. Consequently, financial aid will be granted only after they have made every reasonable effort to finance as large a portion of the costs of his education as possible. When such home support is lacking, the College will seek to develop with the student a plan whereby his education may be continued through work, loans, and scholarships.

3. Every applicant for financial aid shall submit confidential information pertaining to his financial needs and his record of achievement.

4. Aid awarded to a student from sources outside the College shall be reported to the College by the student. All such aid shall be taken into consideration to insure the most equitable distribution of funds to the student body. When necessary, a financial aid package awarded by the College may be adjusted in light of aid awarded by outside sources.

5. Financial aid will be forfeited if the student at any time carries fewer hours than are normal for his course of study.

6. No financial aid is awarded for more than one year; however, aid will be renewed upon request, provided this request is supported by a good academic record, by evidence of continued need, and by constructive participation in at least one all-college activity of his choice.

7. The amount of the grant is confidential, and any breach of this confidence shall terminate the award.

INSTRUCTIONS TO THE APPLICANT

1. To establish eligibility for financial aid, the student must first apply for admission to the College, and must be accepted.

2. Students requesting consideration for assistance shall indicate this in the appropriate space on the application for admission to the College.

Wilkes College participates in the College Scholarship Service (CSS) of the College Entrance Examination Board. Participants in the College Scholarship Service subscribe to the principle that the amount of financial aid granted a student should be based on financial need. The College Scholarship Service assists colleges and universities in determining the student's need for financial assistance. All entering students applying for financial aid are required to submit a copy of the Parents' Confidential Statement (PCS) form to the College Scholarship Service, designating Wilkes College as one of the recipients, by February 1. The Parents' Confidential Statement form may be obtained from a secondary school guidance office or the College Scholarship Service, P. O. Box 176, Princeton, New Jersey 08540.

3. After the student has been accepted for admission to the College, and after a copy of the Parents' Confidential Statement is received, the Committee on Financial Aid acts on all completed applications. Notification of action by the Committee is sent immediately.

Grants-in-Aid

WILKES SCHOLARSHIPS

To assist able and ambitious students, friends and alumni support a substantial scholarship fund that enables the College with its limited resources to more adequately serve those for whom it was created. Because these funds are given by generous men and women who are desirous in helping young people in their effort toward self-improvement and self-development, it is essential that worthy and able students be carefully selected. Wilkes College is dedicated to the belief that no student who has met the competition for admission to the College should be denied the chance to begin his college education, nor forced to withdraw after he has matriculated, for purely financial reasons.

Wilkes Scholarship grants are available to students with good records of achievement and performance in high school or college who cannot finance fully the cost of their education. The amount of each grant shall be based on the financial need of the student. These funds, combined with those furnished by the State and Federal governments, are offered to students in packages consisting usually of grants, loans, and work.

EDUCATIONAL OPPORTUNITY GRANTS

Federal grants ranging from \$200 to \$1,000 are available to students demonstrating exceptional financial need, who, except for this aid, would be unable to obtain a higher education. Applications will be considered for an Educational Opportunity Grant award if the expected parental contribution, as determined by the College Scholarship Service, cannot exceed \$625.

STATE SCHOLARSHIPS

The Commonwealth of Pennsylvania offers direct grants to students meeting the criteria set forth by the Pennsylvania Higher

Education Assistance Agency (PHEAA) program. High school students from other states wishing information concerning their state's program should contact their guidance counselor.

Loans

STUDENT LOAN FUNDS

The Florence and Joseph A. Goldman Loan Fund has been created by the donors to assist Juniors and Seniors whose education may be interrupted by unexpected difficulties. The loan bears no interest and is to be repaid by the student at the earliest practical time so that other students may receive needed assistance from this revolving loan fund.

The Robert W. Hall Student Loan Fund was established by Robert W. Hall, class of 1951, to assist students in meeting small emergency financial needs.

NATIONAL DEFENSE STUDENT LOAN FUND

Long-term, low interest loans are available to students who demonstrate financial need. The amount of the loan is determined by need with a maximum of \$1,000 per academic year. Interest and repayment are deferred until the student leaves school. The program includes loan cancellation provisions for students who enter teaching. Applicants will be notified by the Committee if their financial aid package includes a National Defense Student Loan.

STATE GUARANTY LOAN PROGRAMS

Most states now operate guaranteed loan programs which enable students to borrow from their local banks to meet educational expenses. Ordinarily, no interest is charged while the student remains in school if adjusted family income is below \$15,000 per year. Applications and further information are available at the student's hometown bank, savings-and-loan association, or credit union participating in the program.

Employment

PART-TIME EMPLOYMENT

College makes strict demands on a student's time. The student

who finds it necessary to seek full-time employment during the school year is advised to work a year and then apply for admission.

The College cautions the student to limit off-campus work, especially during the freshman year, when working may result in academic failure.

However, part-time jobs in offices, stores, and industry are available for students wishing to earn part of their expenses. For such jobs the student will register with the College Placement Office.

COLLEGE EMPLOYMENT

The College also participates in the College Work-Study Program, funded jointly by the Federal Government and the College. Part-time employment not to exceed 15 hours per week during class periods, is available in the dining rooms, offices, laboratories, reception desk, library, or maintenance staff. Since this program is designed to provide financial aid to students, prospective employees must meet financial need requirements set forth by the Federal Government. The holders of these jobs shall meet all obligations of their assignments or forfeit this help from the College. Interested students should contact the Financial Aid Office for information.

DEFERRED PAYMENT PLANS

The College has authorized the operation of two plans through which costs of tuition and other educational expenses may be met from current family income. Basically, these are loan agreements which are to be repaid during the year through monthly repayment plans. Additional information can be secured through the Financial Aid Office or by writing to either:

The Tuition Plan, Inc.	EFI Fund Management Program
575 Madison Avenue	36 South Wabash — Room 1000
New York, New York 10022	Chicago, Illinois 60603

Founders of Scholarships

Each year some 1000 friends contribute to the scholarship fund of the College on an annual basis. Other friends have created scholarships which bear the names of the donors or of persons whom they have memorialized by means of a scholarship.

Trust Funds and Endowed Scholarships

ARNAUD CARTWRIGHT MARTS SCHOLARSHIP was created by the associates of Dr. Arnaud C. Marts, in the firm of Marts & Lundy, to honor the Chairman of their Board and former President of their Company.

It is appropriate that this scholarship should bear his name for no person has done more to bring new opportunities to the young people of Wyoming Valley. As President of Bucknell University, he was instrumental in the establishment of Bucknell University Junior College, which became Wilkes College in 1947. After Wilkes College became an independent college, he joined its Board of Trustees and was elected Vice-Chairman of the Board. Because of his vision and faith in the young people of this region, he has supported and guided every forward-looking and constructive effort of the College.

The Arnaud C. Marts Scholarship will be awarded each year to that outstanding senior who has need of financial aid and who, by high scholarship and participation in college activities, has demonstrated those qualities of leadership that are needed in Wilkes College and in our nation.

WALTER S. CARPENTER SCHOLARSHIPS IN ENGINEERING. Two full tuition scholarships are awarded annually to Freshmen planning a career in Materials Science or Electrical Engineering. The recipients of these awards are selected by the faculty of the Engineering Department on the basis of the applicant's high school record and Scholastic Aptitude Test scores, without regard to financial need. Scholarships are renewable annually upon recommendation of the Department of Engineering. Interested students should apply in writing to the Chairman, Department of Engineering, Wilkes College.

CHARLES AND SADIE DONIN MEMORIAL SCHOLARSHIPS are supported by a substantial endowment created by Mr. Donin. These scholarships are awarded to able and highly motivated students of limited financial means.

JOHN WELLES HOLLENBACK SCHOLARSHIP. Miss Anna Hollenback has created a scholarship in memory of her father, John

Welles Hollenback, and the annual interest of the principal is used for scholarship purposes.

JEWISH WAR VETERANS, WILKES - BARRE POST 212 SCHOLARSHIP is established in honor of B. J. Levin, one of the Post's founders. The purpose of this scholarship is to aid the child of a local war veteran. The award shall be made on the basis of need and ability without regard for race or creed.

CONYNGHAM POST NO. 97, GRAND ARMY OF THE REPUBLIC, DEPARTMENT OF PENNSYLVANIA, SCHOLARSHIP. In 1968, Trustees of Post 97 established a trust at the College, the annual income of which is used to provide partial scholarships for residents of Luzerne County, with preference given to descendants of veterans of the Civil War.

MABEL AND JOHN C. MOSTELLER SCHOLARSHIP FUND has been created to provide scholarships for needy and intelligent boys who have insufficient financial resources of their own and who would not have the opportunity to attend college if they were unable to secure financial assistance. The scholarships shall be granted only to boys of good moral character who are in the upper ten per cent of their class in academic standing and who have passed a qualifying competitive examination administered by Wilkes College.

HENRY BLACKMAN PLUMB AND EDITH PLUMB SCHOLARSHIP TRUST has been established to provide scholarships for students of outstanding ability and character majoring in one of the sciences and attending Wilkes College.

WILLIAM B. SCHAEFFER MEMORIAL SCHOLARSHIPS. In 1951 a substantial bequest was left to the College by Mr. Schaeffer with the thought that it would be used to advance the interests of the College and the students. By action of the Board of Trustees a considerable portion of the income from this bequest has been set aside for scholarships.

MOHAMAD ABRAHAM SCHOLARSHIP has been created by a gift to the College made by Mohamad Abraham. Its purpose is to assist Palestinian Arabs, or their descendants, to obtain a college

education. To qualify, the individual must be a Palestinian Arab, or the descendant of a Palestinian Arab. In addition, the student must demonstrate his ability to successfully complete the work of the College and must submit evidence of financial need.

ROBERT MARC SCHUB MEMORIAL SCHOLARSHIP was established by Mr. and Mrs. Marvin Schub in memory of their son. This scholarship is to be awarded to a local student, preferably studying in the area of the humanities or sciences who otherwise could not attend college. The scholarship will be awarded annually to a worthy student of high potential.

ANDREW J. SORDONI FOUNDATION SCHOLARSHIP. This scholarship is used to assist students of unusual promise and proved ability.

JESSIE STURDEVANT MEMORIAL SCHOLARSHIP awarded to a student of unusual promise and ability has been made available from the interest of a fund established by the late Miss Sturdevant.

MRS. LEWIS H. TAYLOR left a bequest to the College to be used in assisting students of outstanding scholastic ability who otherwise could not gain a college education.

ESTHER WECKESSER WALKER SCHOLARSHIP. This is an endowed scholarship created by Mrs. Walker to assist students of outstanding promise and achievement during their junior and/or senior years.

Annual Name Scholarships

THE WILLIAM H. CONYNGHAM MEMORIAL SCHOLARSHIP is awarded annually by Mrs. Conyngham in memory of her late husband, a friend and neighbor of the College and for years an outstanding leader in business and community life.

DICKSON MEMORIAL SCHOLARSHIPS. Funds for four scholarships have been given to the College by the Trustees of the Allan H. and Kate P. Dickson Memorial Trust. These half-tuition scholarships will be granted to students of high scholastic achievement and aptitude who have also demonstrated leadership in student affairs during their high school years.

MR. HARLAND W. HOISINGTON gives an annual scholarship to assist students of high scholastic ability.

M. W. WOOD SCHOLARSHIP. A half-tuition scholarship is awarded annually to a student of high scholastic ability and financial need.

RICHARD H. ROYER SCHOLARSHIP is awarded annually to a student who has demonstrated outstanding ability in his studies and in student activities.

MARY POST TIGER MEMORIAL SCHOLARSHIP to be awarded annually to a student selected by the Scholarship Committee of the College because of need and ability.

College and Community Organizations

WILLITS COLEMAN MEMORIAL SCHOLARSHIP has been established in memory of Willits Coleman, a member of the Wilkes-Barre Rotary Club, a service organization long active in efforts to raise educational standards in the schools. The scholarship will be awarded to a senior who has demonstrated ability in the classroom and in student activities.

ALPHA RHO CHAPTER OF DELTA KAPPA GAMMA annually awards a partial scholarship to a deserving woman student in need of financial assistance.

THE WYOMING VALLEY CHAPTER OF THE AMERICAN BUSINESS WOMEN'S ASSOCIATION offers to an outstanding woman student of the College a scholarship each year. The education committee of the club in cooperation with the administration chooses a young woman who shows promise of making an outstanding contribution in business or professional life following graduation.

POLISH ROOM COMMITTEE SCHOLARSHIP created to express appreciation of services rendered to Wilkes College and the Community of Northeastern Pennsylvania by Dr. and Mrs. Joseph J. Kocyan. Awarded annually to a student of Polish extraction who has graduated in upper fifth of high school class and tested above 600 on each part of his College Board Examination. The Director

EUGENE STEDDEN EARLEY LIBRARY

of Financial Aid and the Director of Admissions shall select qualified students and award the scholarships.

GREATER WILKES-BARRE JUNIOR CHAMBER OF COMMERCE awards a partial scholarship to a deserving student who without financial assistance could not attend college.

LETTERWOMEN'S CLUB annually awards a partial scholarship to a woman athlete selected by the organization.

NEIL DADURKA MEMORIAL SCHOLARSHIP is awarded annually by the Wilkes College Lettermen's Club. The money for this scholarship is earned and donated by the Wilkes College Lettermen's Club. The scholarship itself is named in honor of one of the most beloved athletes of Wilkes, Neil Dadurka, who was killed while flying for the United States Marine Corps.

This half-tuition scholarship is given to an incoming freshman who is in need of financial aid and who is an outstanding athlete. The scholarship is given to enable an athlete to participate in the sport for which the scholarship is awarded.

THETA DELTA RHO, the all-college women's service organization, offers a scholarship yearly to a woman student achieving a high score in a competitive examination conducted by the College.

WEST SIDE EVENING WOMAN'S CLUB SCHOLARSHIP shall be awarded annually to a Wyoming Valley girl who matriculates at Wilkes College with the intention of working toward a degree.

WILKES COLLEGE FACULTY WOMEN'S CLUB SCHOLARSHIP is given in memory of Eleanor Coates Farley and awarded annually to a female student in need of financial support.

Commercial and Industrial Concerns

ARNOLD FOUNDATION. Arnold Biscontini, president, provides scholarship assistance to students who demonstrate need and academic achievement.

FRANK E. BALDWIN, INC. SCHOLARSHIP. A half-tuition scholarship is awarded annually to a student maintaining high academic standing and in need of financial assistance.

BALESTER OPTICAL COMPANY, INC. annually makes scholarship funds available to assist students of proved academic ability in need of financial assistance in order to complete their education.

CONSOLIDATED CIGAR CORPORATION. This scholarship is awarded annually to students demonstrating scholarship excellence and financial need.

FRANKLIN FEDERAL SAVINGS AND LOAN ASSOCIATION OF WILKES-BARRE awards a one-half tuition scholarship to a student of high scholastic achievement who is active in campus and community activities.

HEAVENLY SHOES, INC. An annual scholarship is granted by Irving Schor, company president, who manifests concerned dedication to aiding worthy students of Wyoming Valley.

THE GIBBONS SCHOLARSHIP is awarded each year to a deserving male student as selected by the Scholarship Committee.

MEDICO INDUSTRIES awards a partial tuition scholarship to a deserving student of high scholastic standing.

NELSON OF KINGSTON, INC. awards a one-half tuition scholarship to a student of high scholastic standing.

ADRIAN AND RICHARD PEARSALL OF CRAFT ASSOCIATES, INC. have created a half-tuition scholarship which will be awarded to a high school graduate who has demonstrated leadership in his scholastic and extracurricular activities and who, without scholarship aid, would be unable to attend college.

LAVENTHOL, KREKSTEIN, HORWATH & HORWATH SCHOLARSHIP. This award is presented annually to a senior accounting major by the firm of Lavenhol, Krekstein, Horwath & Horwath in recognition of high academic endeavor.

PENNSYLVANIA MILLER'S MUTUAL INSURANCE COMPANY awards a partial tuition scholarship to a student who has demonstrated outstanding ability in his studies and in student activities.

A. RIFKIN AND COMPANY awards a partial tuition scholarship to a worthy young man or woman of outstanding scholastic ability.

STEGMAIER SCHOLARSHIPS. Two one-half tuition scholarships are awarded to senior male students who have made outstanding contributions to the College community.

Employee's Family Scholarships

THE LESLIE FAY SCHOLARSHIP is granted each year to the son or daughter of an employee of the Company whose record in secondary school and on the admissions tests has been outstanding.

A recipient of the scholarship will be selected on a competitive basis by the Scholarship Committee of Wilkes College. The scholarship will be retained by the student for the four years in College, provided his achievement and influence at the College are deemed outstanding by the faculty.

THE METROPOLITAN WIRE GOODS CORPORATION has created scholarships of \$500, \$300 or \$200 at Wilkes College for the sons or daughters of its employees. To qualify for candidacy, a student must graduate in the upper half of his secondary school class, must test above 1100 on the College Board Examinations, and must demonstrate financial need.

The scholarship will be granted through the College to the applicant making the best record in secondary school and on the College Board Examinations. To retain this scholarship, a student must make a strong academic record and must exert a constructive influence in the College.

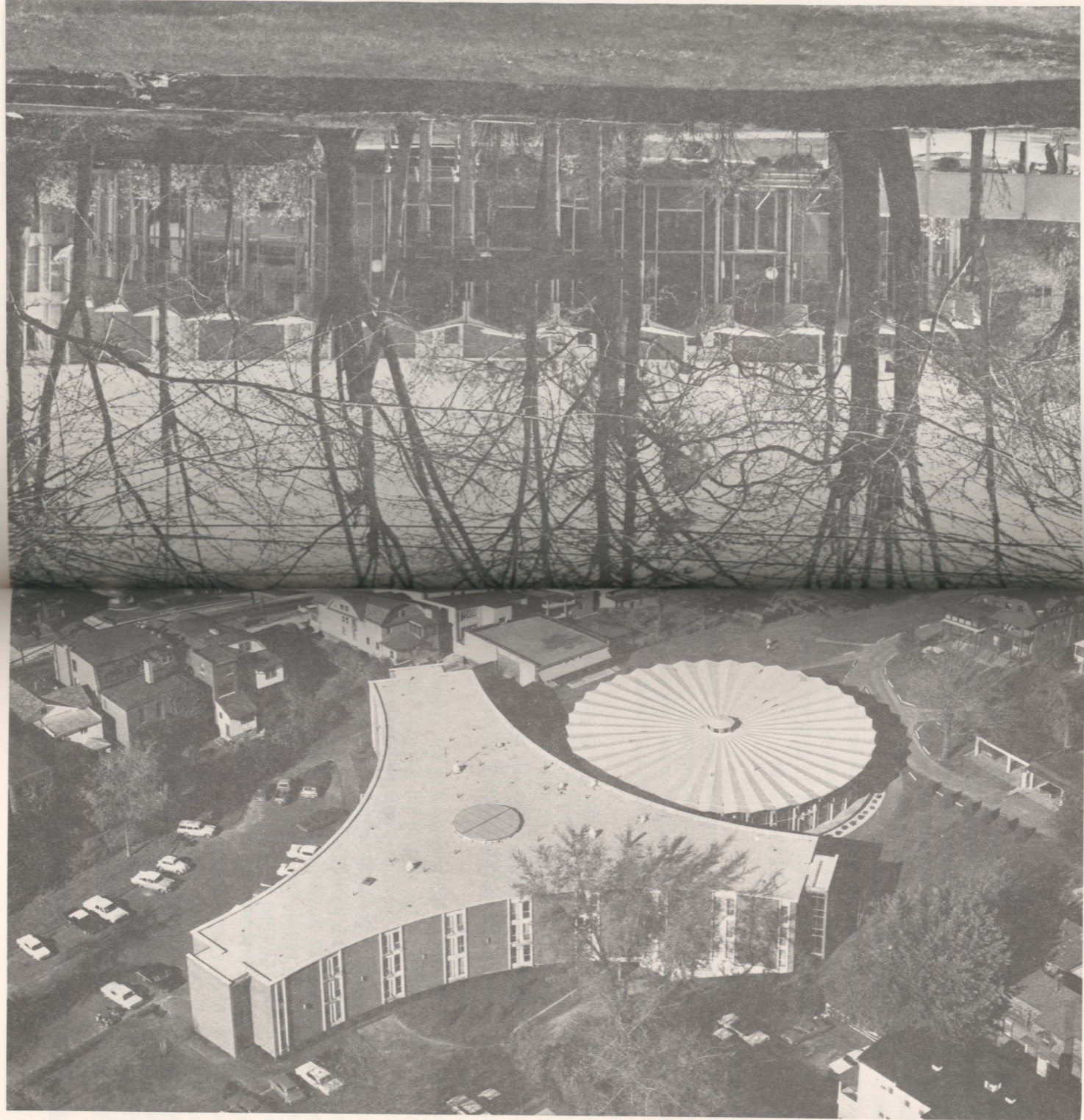
Special Endowments

THE W. S. CARPENTER MEMORIAL FUND was established in 1965 by W. S. Carpenter, Jr. and his sons in memory of W. S. Carpenter, who was born in Wilkes-Barre on April 5, 1853, and lived in this community during his entire active business life. The fund was given to strengthen the work of the science division by subsidizing research projects, assisting the College in attaining able teachers, providing scholarships for outstanding students, providing lectures by speakers of national prominence, purchasing exceptional tools, apparatus, or other equipment for use in the science department.

THE ALLAN HAMILTON DICKSON CHAIR OF ENGLISH LITERATURE was created by Dorothy Dickson Darte in memory of her father, Allan Hamilton Dickson, to encourage enlightened teaching, extended scholarship, and creative writing in the field of literature.

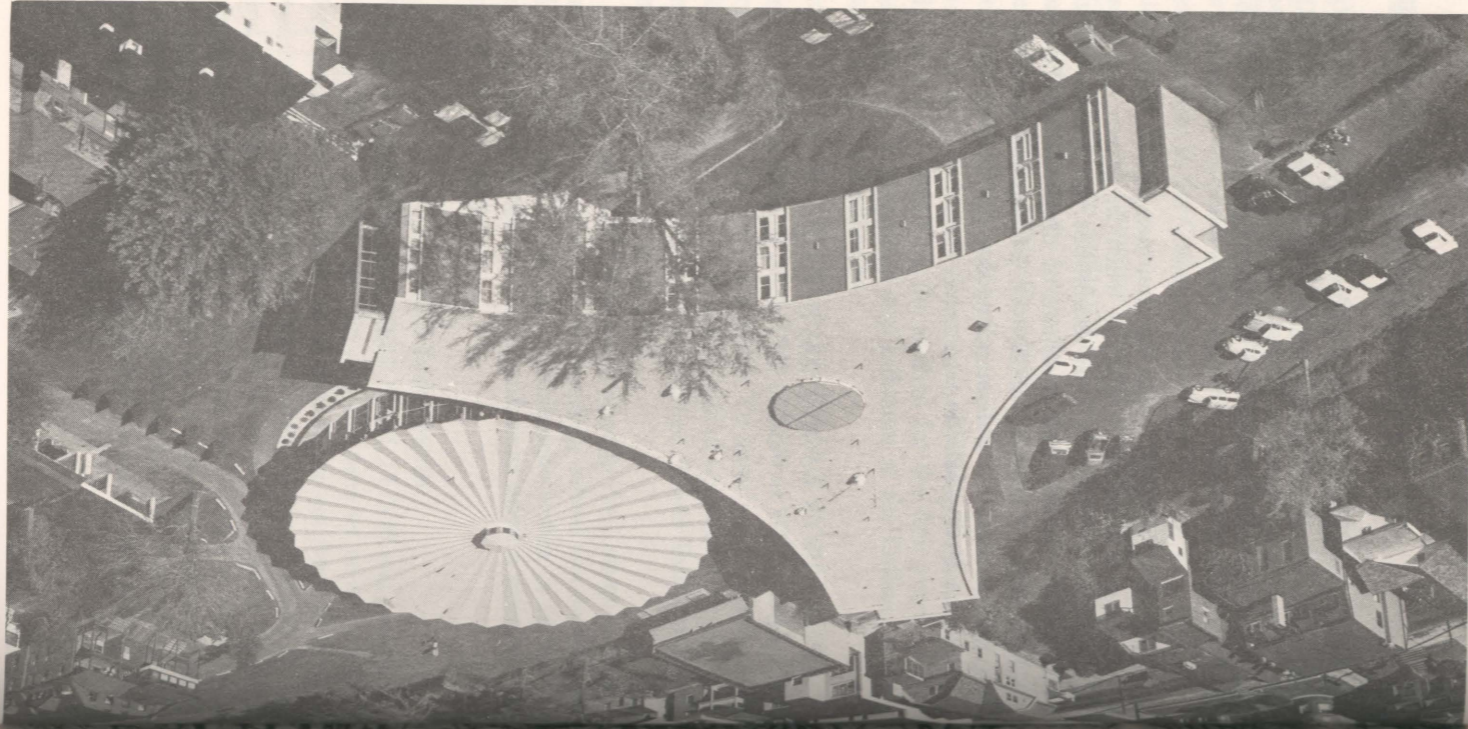
GILBERT S. McCLINTOCK was the chairman of the Junior College Committee of Bucknell University when, in answer to a local need, Bucknell University in 1933 established the Junior College in Wilkes-Barre. As the first chairman of the Board of Trustees of Wilkes College, Attorney McClintock left his entire estate to Wilkes College with the understanding that the income shall be used to improve faculty salaries.

Main Dining Hall provides service for students and faculty.



Aerial photograph of Dining Hall and New Men's Residence Hall.

Aerial photograph of Dining Hall and New Men's Residence Hall.



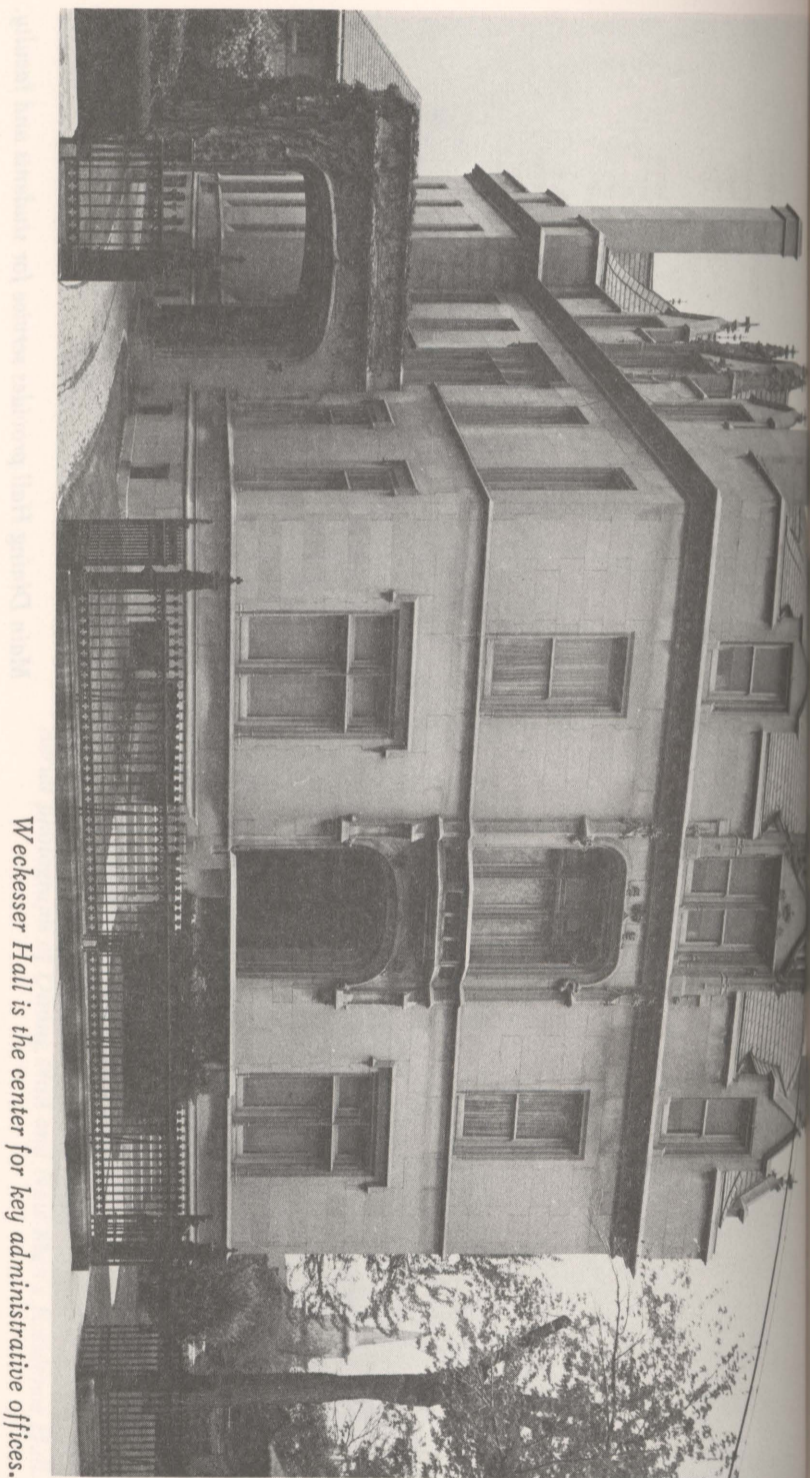
Main Dining Hall provides service for students and faculty.

The Facilities
of the College

Buildings and Plant



Weckesser Hall is the center for key administrative offices.



Weckesser Hall is the center for key administrative offices.

The Facilities of the College

Buildings and Plant

EUGENE SHEDDEN FAMILY LIBRARY

Experience at Wilkes

Education is the process of connecting and relating, of testing and retesting, of discovery and rediscovery.

The faculty can teach the student facts, but his contribution to a free society depends upon the continual expansion of his knowledge and upon its relevance to human experience.

The student can strive for technical and professional competence, but the inner resources of the mind and spirit must nourish and enrich his achievement.

The Facilities of the College

Buildings and Plant

The College is constantly seeking to implement and improve its facilities for instruction. A growing campus provides added classrooms, modern laboratories and research facilities.

EUGENE SHEDDEN FARLEY LIBRARY

The new library, completed in the summer of 1968, has been named by the Trustees in honor of the first president of Wilkes College.

From 1947 to 1968 Kirby Hall, the former residence of Mr. and Mrs. Fred Morgan Kirby, was used as the College library. The building, first named the Kirby Home for Education, was presented to the College in 1941 as a gift of Allan Kirby, son of Wilkes-Barre's most generous benefactors. It is presently being used by the Modern Foreign Language Department and contains the language laboratory, initiated by a gift of the graduating class of 1962.

The new Eugene Shedden Farley Library occupies the northwest corner of West South and South Franklin Streets. The four floors contain spacious reading areas, student study carrels, faculty research offices; audio-visual equipment; special collection rooms. One room is devoted to Polish art treasures and exhibits of craftsmanship furnished by the Women's Committee for the Polish Room at Wilkes College, another contains books and papers from the estate of Attorney Gilbert McClintock, another holds historical documents presented by Admiral Harold Stark, and there is a room dedicated in memory of Eleanor Coates Farley, First Lady of Wilkes College.

The library contains more than 120,000 volumes and 1,600 current periodicals and journals, with space provided for a total of 300,000 volumes and study area for 600 students. Shelved on open stacks, books are easily accessible and may be borrowed for periods of two weeks. Reserve books for particular courses circulate for the time period specified by the instructor. Students may borrow books from twelve nearby libraries (public and college) through the inter-library loan system.

The schedule of library hours is announced at the beginning of each academic session.

STARK HALL OF SCIENCE

The departments of biology, chemistry, and physics are housed in Stark Hall of Science, named in honor of the late Admiral Harold R. Stark, former Chief of Naval Operations and former Honorary Chairman of the Board of Trustees of the College. This building was completed in 1958 and enlarged in 1963, so that it now provides approximately 85,000 square feet of modern classroom, laboratory, and office space. Complete facilities are included for undergraduate instruction and student research in all departments, and for graduate study in biology, chemistry, and in physics.

In addition to the usual instructional facilities, Stark Hall houses the Science Research Center, where faculty, graduate students, and selected undergraduate students conduct various research programs, many with industrial or governmental financial support. Also located in Stark Hall is the Computer Center. The facilities and services of the Computer are available to students and faculty who are involved in computer programming, research, and large-scale problem solving.

A new \$5,800,000 Learning Center is currently under construction and will connect with Stark Hall, providing even greater space for academic efforts in the science fields.

Research in the sciences has included such varied work as research in allergy, immunochemistry, developmental plant morphology, protozoology, limnology, theoretical acoustics, atmospheric physics, experimental solid state physics, thermochemistry, surface chemistry, fuel cell research, and organic synthesis.

Outside sponsors of recent research programs included the National Science Foundation, the Pennsylvania Heart Association, the National Institutes of Health, the United States Air Force, the Petroleum Research Fund of the American Chemical Society, and numerous private industries and individuals.

CENTER FOR THE PERFORMING ARTS

A fully equipped, 500-seat theater is a gift of Dorothy Dickson Dart. The site, with a view of the Susquehanna River and Kirby

Park, was deeded to the College by the Wyoming Valley Society of Arts and Sciences.

Until 1965, theatrical activity was in Chase Theater, formerly the carriage house behind Chase Hall, presented to the College in 1937 by Admiral and Mrs. Harold R. Stark, as a memorial to Fred M. Chase and his wife, the sister of Admiral Stark.

Cue and Curtain, the student drama group, has given one-act plays by O'Neill, Sartre, Albee, Anouilh, Tennessee Williams, and others. One-act plays are student directed. Over the years the College has presented Elizabethan plays of Shakespeare, Webster, Dekker, Middleton, as well as plays of Moliere, Shaw, Ibsen, Pirandello, Wilder, Osborne, Noel Coward and Philip Barry.

The College, in cooperation with the Wilkes-Barre Kiwanis Club, has presented the following musical comedies, the proceeds from which have assisted in the establishment of the Wilkes-Barre Kiwanis Charitable Foundation: *Bloomer Girl*, *Paint Your Wagon*, *Annie Get Your Gun*, *The Music Man*, *The Sound of Music*, *Camelot*, *How To Succeed in Business Without Really Trying*, and *Guys and Dolls*.

DOROTHY DICKSON DARTE MUSIC CENTER

Faculty offices, studios, practice and rehearsal rooms are located in a new music center opened in the summer of 1969. This new facility is integrated with the Performing Arts Center completed in the fall of 1965.

The band and the choruses present concerts locally and on tour. The Department of Music has been host to Pennsylvania Collegiate Choral Festivals and Pennsylvania Intercollegiate Band Festivals. Nationally known music educators, clinicians, and performers have participated in workshop and classroom activities. Throughout the year solo recitals and ensemble concerts are presented by students and faculty before audiences from the College and the community.

CONYNGHAM ANNEX (ART GALLERY)

The art club holds its annual Art Fair in the Little Art Gallery in Conyngham Annex, where the works of students and of local and professional artists are shown. The public is invited to the displays and exhibits. Opportunities are offered to the students to enter their works in local and regional competition.

GYMNASIUM AND OUTDOOR ATHLETIC PLANT

Completed in September of 1950, the Gymnasium is well equipped for intramural and intercollegiate athletic events. It has a seating capacity of 2400. Recently, the College added modern training room facilities off campus adjacent to Kirby Park. Here also are located Ralston Field, named in honor of Wilkes' first athletic coach and present Dean, and the playing fields for soccer, baseball, and hockey, as well as asphalt tennis courts and an archery range. All students are invited by the Jewish Community Center, on South River Street, and the YM-YWCA, on South Franklin Street, to use their swimming pools and bowling alleys.

GUIDANCE CENTER

The College maintains a testing center to assist the Deans in their counseling of students. The College Testing Service is available at no charge to all Wilkes students and, for a fee, to members of the Community. The testing center also provides assistance to the State Bureau of Rehabilitation and other agencies. The Guidance Center, on South River Street, was the law offices of the late Gilbert S. McClintock, the first Chairman of the Board of Trustees.

PLACEMENT OFFICE

The Placement Office assists seniors in finding permanent employment in a position suitable to their talents and training. It also extends such assistance to any graduate of the College. The Placement Office also assists students in securing part-time employment during the school year and during the summer.

Complete information about job opportunities and graduate schools is available. Each year the Office is visited by over one-hundred representatives of industries and one hundred school systems from all parts of the United States to interview students for business and teaching positions.

Comfortable quarters are provided for representatives from industry, from school systems, and from graduate schools to interview and discuss with students opportunities available to them.

All students seeking employment are invited to register with the Placement Office.

Full credentials are on file so that prospective employers may be given adequate information regarding the student.

Credentials and recommendations from faculty members are submitted to the Placement Office upon the request of either the student or the Placement Office.

The Placement Office is located in the Guidance Center, on South River Street, next to McClintock Hall.

ALUMNI OFFICE

The Alumni Office keeps records of all graduates and alumni of the College. It publishes, through the Public Relations Office, the quarterly *Wilkes College Report*, acts as liaison for the College with alumni, and interprets to the alumni chapters the changes and needs of the institution.

Prospective students interested in finding out more about the College may write for information to the Alumni Office. They are always welcome at Alumni Chapter meetings.

Current active Chapters are located in Pennsylvania in Wilkes-Barre, Allentown, Bethlehem, Easton, Harrisburg, Scranton, Philadelphia; in New York in Binghamton, New York City, Long Island; in New Jersey in Newark, Somerville, Morristown, Trenton; Wilmington, Delaware; Baltimore, Maryland; Washington, D.C.

THE BOOKSTORE

Books, stationery, and supplies may be purchased at the College Bookstore in the new men's residence hall. The bookstore is operated on a cash basis. The cost of books and supplies will vary with the course of study, but will average approximately \$75.00 per semester.

The College also maintains a United States Post Office substation in the Bookstore.

THE COMMONS

The Commons, facing South Street, provides cafeteria service for commuting students and includes a lounge and recreation area.

SNACK BAR

Cafeteria service is also provided at the College's newly furnished Snack Bar, behind McClintock Hall.

CLASSROOMS AND INSTRUCTION

The Institute of Regional Affairs occupies offices in Franklin Hall. Classes and faculty offices in Commerce and Finance, Political Science, Psychology, and Sociology are in Parrish Hall.

Conyngham Hall, located on South River Street, was one of the earliest properties acquired by the College. The Conyngham home was a gift in 1937 of Mrs. Bertha Robinson Conyngham, in memory of her husband, John N. Conyngham. The building was destroyed by fire on December 28, 1968.

Bedford Hall, a gift of Mr. and Mrs. Paul Bedford, is the home of the English Department.

Pickering Hall, next to the library, is the home of the Art Department. Classes in fine arts and in art education meet also in Conyngham Annex.

OFFICES OF ADMISSION — ADMINISTRATION

Chase Hall, 184 South River Street, the first building on the campus, was donated in 1937 by Admiral and Mrs. Harold R. Stark. On the first floor are the Dean of Admissions and the Director of Financial Aid. The Education Department is on the second and third floors.

Weckesser Hall, 170 South Franklin Street, is the gift of Mr. and Mrs. Frederick J. Weckesser. The President and the Dean of Academic Affairs have their offices in Weckesser Hall. Also in Weckesser Hall are the Deans of Men, the Deans of Women, the Director of Athletics, the Registrar, the Director of Student Activities, the Alumni Office, the Public Relations Office, and the Office of College Development.

Parrish Hall, formerly the Glen Alden Building of the Lehigh and Wilkes-Barre Coal Company, was acquired in 1958. Presently, the Finance Office occupies the first floor. The new men's residence hall, constructed in 1965, is the location of the Housing Office.

RESIDENCE HALLS

Over 20 residence halls are named after prominent local families and for patriots of the American Revolutionary War, whose history forms part of the rich heritage of the Wyoming Valley region.

Student Life

Counseling

Student Activities

Social Activities

Student Responsibility

Athletics

Studying at Wilkes

In college the teacher works with the student, challenging him to extend the limits of his mind. He encourages him to think courageously and truthfully and to create with all his resources so that he may act with independent judgment.

In a college community freedom of inquiry is essential.

In the world community the right of the individual to differ safeguards the freedom of all men.

As student and teacher engage in the experience of creative thinking, the heritage of learning becomes the responsibility of everyone.

Counseling

The guiding principle of all Wilkes counseling is to encourage the student to discover his own abilities and potentialities and to assist him in making sound, independent decisions; most of all he must learn to assume responsibility for all he does.

FRESHMAN ORIENTATION PROGRAM

The transition from the directed work of the high school to the independent and more intensive work of the College occasionally causes difficulty. Several days at the beginning of the term are, therefore, set aside to assist freshmen in planning their academic program.

During the first week, new students may take aptitude and interest tests. The week also gives the new students an opportunity to become acquainted with one another and to learn about the College, the curriculum, and the student activities.

Throughout their first term small groups of freshmen meet to discuss informally their personal, academic, and vocational objectives. Representatives of the faculty and student body discuss with them:

1. Methods of intelligent self-directed study.
2. Standards of value in personal conduct and in relationships with others.
3. Values of the College extracurricular program.
4. The value of college experiences in developing a philosophy of life.

By placing responsibility upon the student for planning and conducting these discussions, the College encourages clarity of thought and expression, initiative, poise, and breadth of view.

EUGENE SHEDDEN FARLEY LIBRARY

STUDENT ADVISEMENT

Students sometimes need guidance in resolving personal, social, and academic difficulties. Since a student's physical and mental health affect his studies and his grades, he is encouraged throughout his college career to consult with his classroom instructors, his faculty adviser, the Deans, or the Department Chairmen concerning his scholastic progress.

Student Activities

The student activities of the College broaden a student's interests begun in the classroom. The faculty encourages a program of extracurricular activities that contribute to the educational development of the student who chooses to participate.

Student activities are designed to appeal to a wide variety of tastes and talents; as such they enjoy the support of the College community. The student activities include Athletics, Dramatics, the College Band, College Chorus, Collegians Male Chorus, Choralette Chorus and numerous brass, woodwind and percussion ensembles, Madrigal Singers, the College newspaper, the yearbook, the radio station, and the literary magazine.

There are four class organizations. In addition, special departmental clubs stimulate and satisfy individual interest in academic, professional, and artistic fields. These clubs are developed for students in cooperation with the faculty. All women students may become members of Theta Delta Rho, headed by its own executive committee, which plans and arranges social activities.

POLICY

The College requires that all campus organizations be open to all students; consequently, groups that are exclusive do not exist. All student groups work in cooperation with faculty advisers and the Deans.

STUDENT GOVERNMENT

Government of student affairs rests in a Council composed of annually elected members representing the classes and other student groups. The Council serves as a coordinating agency. It formulates the student activities budget; it submits this budget to the Administrative Council for approval and is responsible for the supervision of expenditures within the budget. It plans and supervises the social calendar of the College; it is responsible for the Homecoming programs; it recommends to the Council of Deans social regulations pertaining to student life. It consults with and advises the Deans and the Administrative Council. It recommends to the Administration student nominees for appointment to selected faculty committees.

INTER-DORMITORY COUNCIL

The Inter-Dormitory Council, made up of elected representatives from the men's and women's residence halls, plans and coordinates residence hall educational and social programs. The Director of Housing advises and works closely with this organization and develops and administers residence hall policy in conjunction with the Council of Deans.

COMMUTER COUNCIL

The Commuter Council, made up of elected representatives from among men and women day students, plans and coordinates educational and social activities. This council works closely with the Council of Deans.

PUBLICATIONS — RADIO

The students publish the *Beacon*, a weekly newspaper; the *Manuscript*, a literary magazine, issued in the Spring; and the *Amnicola*, the College annual. There are opportunities for students on the editorial, art, and business staffs.

Graduated amounts, in the form of tuition stipends, are available to students in the upper classes who hold editorial and managerial positions on the *Beacon*, the *Manuscript*, and the *Amnicola*. Students eligible for these grants should make written application to the faculty adviser of the publication before April 1 for review by the publications committee and the Administrative Council.

The college also maintains an FM radio station, WCLH, which broadcasts daily at 90.7 Mz. Interested students are invited to participate.

CONCERT AND LECTURE SERIES

A carefully selected Concert and Lecture Series is presented throughout the regular college year. All programs are subject to change. They are open to the college family and the public without charge.

Social Activities

The College believes in helping students to help themselves. Groups are encouraged to initiate programs that will serve their interest and benefit others. It has been found that students gain most from those activities, social and cultural, which release the best talents of the individual.

Special projects include the following: TDR's Golden Agers Christmas party, at which residents of Convalescent Homes are entertained; Student Government's party for children of St. Stanislaus Orphanage; Wilkes J.C.'s party for YMCA children; Student Work Day, in support of an orphan in a foreign land.

In addition there are various social affairs to raise money for the United Fund, to collect toys for the Salvation Army, and to donate books for students in foreign countries.

A full and varied program of social and recreational activities supplements the extracurricular program. At all these functions members of the faculty and their wives are invited guests.

COME-AND-MEET-US-PARTY

Student Government makes plans for student leaders to welcome the freshmen one week before the semester starts. An informal party and dance for the entire student body culminate the week's introduction to college life.

PARENTS' DAY

After they have adjusted themselves to the academic life of the College, students invite their families to a weekend of social, cultural, and athletic events. Preparations for the annual Parents' Day program are entirely the responsibility of a Student Planning Committee. The agenda includes intercollegiate soccer and football games, luncheon with the faculty, and a concert.

HOMECOMING

To welcome returning alumni, students construct displays on campus and decorate dormitory and classroom buildings. For the outstanding displays an alumni committee presents awards during halftime ceremonies at the football game. A Homecoming Queen and her escorts are feted at a dinner dance.

TDR TEAS

Throughout the year TDR sponsors afternoon teas and student receptions. The women of Theta Delta Rho entertain those high school seniors who plan to enter the College the following year.

IDC CHRISTMAS PARTY

The Inter-Dormitory Council sponsors an annual Christmas party preceding the winter vacation. The student body, faculty, and administration are invited to a buffet and dance.

WILKES OPEN WRESTLING TOURNAMENT

Between Christmas and New Year's the College sponsors the Wilkes Open Wrestling Championships. Known as the "Rose Bowl of Wrestling," this annual tournament attracts athletes from over sixty colleges, athletic clubs, and YMCA's throughout the United States. Wilkes wrestlers join them in competing for individual and team awards. Tourneys and clinics are held over a three-day period in the Wilkes gymnasium. The Tournament, the largest in the country, has the record for the most number of entries.

WINTER CARNIVAL

Student Government sponsors a Winter Carnival, held at one of the nearby resorts in the Poconos. A day of skiing, tobogganing, and ice skating climaxes the close of the mid-year examination period.

SPRING WEEKEND

Student Government also plans Spring Weekend. Clubs and organizations set up gala outdoor booths, and the campus takes on a Mardi Gras atmosphere.

THE MANUSCRIPT FILMS

During each semester the *Manuscript Society* brings to the campus distinguished motion pictures, produced by American and foreign film companies.

CLUB ACTIVITIES

In addition to the regular social calendar, campus organizations plan their own special activities.

Athletics

Athletics are an integral part of the activity program and as such are subject to policies set by the faculty and administration and approved by the Board of Trustees.

VARSITY SPORTS

The College maintains intercollegiate schedules in nine varsity sports: football, baseball, basketball, soccer, golf, tennis, swimming, wrestling, cross-country, and lacrosse. Men who take part in intercollegiate sports satisfy the requirements for physical education for the duration of that sport.

INTRAMURAL SPORTS

A program of intramural sports and physical education stresses physical standards and cooperative team spirit and recreation. Every man has a chance to participate in basketball, touch football, volleyball, softball, and bowling. The athletic program for women includes dancing, folk and modern, bowling, basketball, softball, and swimming.

ATHLETIC POLICY

Intercollegiate athletics are introduced for the benefit of the student body and in consequence athletes receive the same consideration in admissions and in the awarding of scholarships that is given to other students. Wilkes enters into intercollegiate competition with other colleges of the Middle Atlantic Conference adhering to similar policies of admission and maintaining comparable scholastic standards.

The College is a member of the Middle Atlantic Collegiate Athletic Conference, the National Collegiate Athletic Association, and the Eastern Collegiate Athletic Conference.

Student Responsibility

The students in a great measure determine the influences of the College. The faculty counts upon their cooperation in establishing the highest possible standards of intellect and morals. The College may request students to withdraw when their influence and behavior are deemed detrimental to the best interests of the student body and the College.

THE COLLEGE AND YOU

The college motto of "Unity Amidst Diversity" represents the attitude of the institution as a whole. It is recognized that education is the only way the divisive forces of ethnic origin, religion and social classes, could be minimized — the only way a unity of respect for the individual could be achieved.

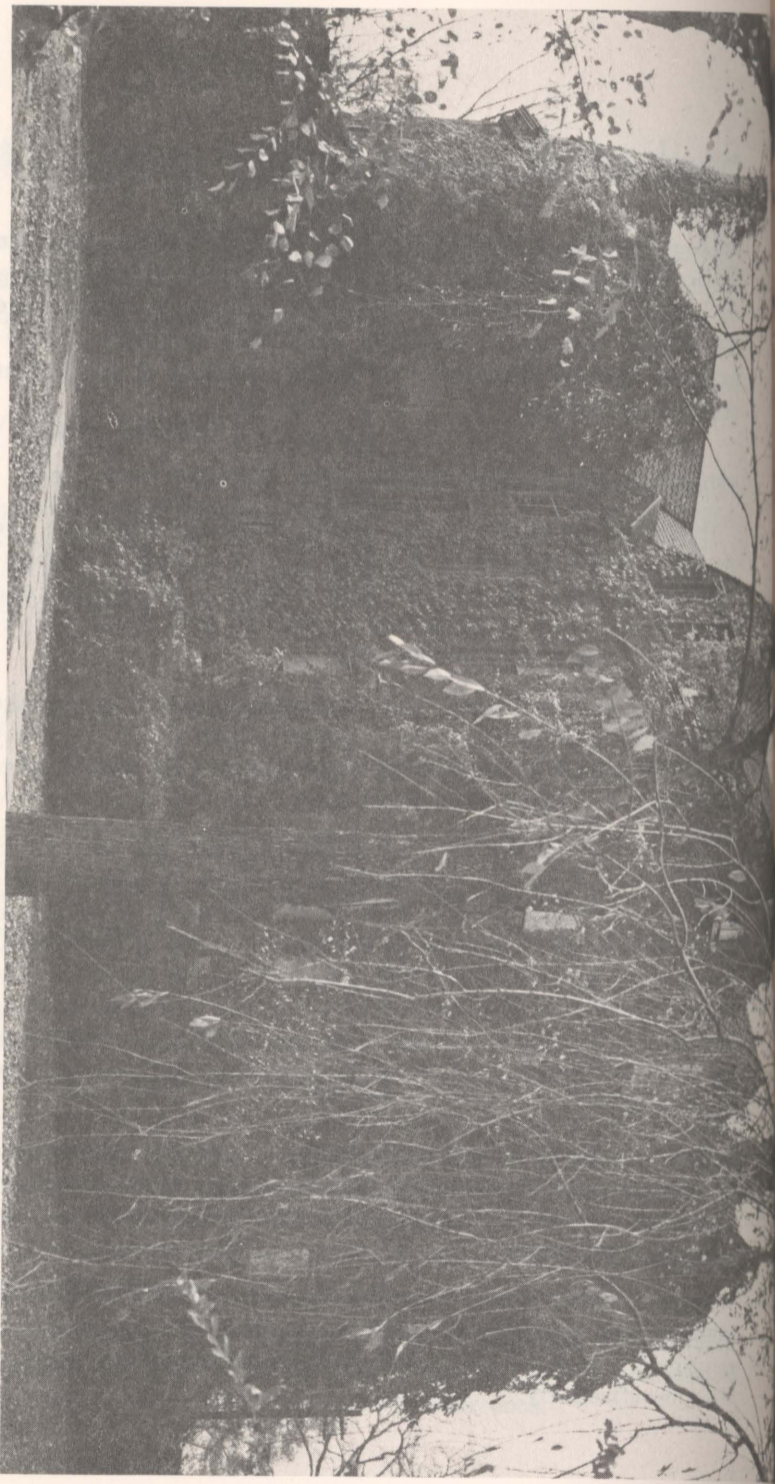
Society's problems come from achievement and they are the problems that are the challenges of education and our entire society today. The college encourages the students to pick up the challenge of solving the problems of today.

The challenge to all of us at Wilkes is great. We must never forget that an academic community is a unique community. We have a responsibility to each other in all that we do. Any actions which discredit the institution or disrupt the ability of the institution to perform its function effectively cannot be tolerated. The freedom for us to perform our creative function is a precious thing that few societies enjoy. We must maintain the mutual respect that can bring unity to our efforts while sustaining the diversity that has made us great.

Students are encouraged immediately to assume the spirit of Wilkes as it exists at the college and share with other members of the "campus family" the responsibilities for maintaining high academic and social levels.

A college career is only as productive and enjoyable as the individual chooses to make it. Students are, therefore, encouraged to participate in campus and local activities, planning and utilizing their time effectively.

Kirby Hall is one of the three original buildings making up the campus.



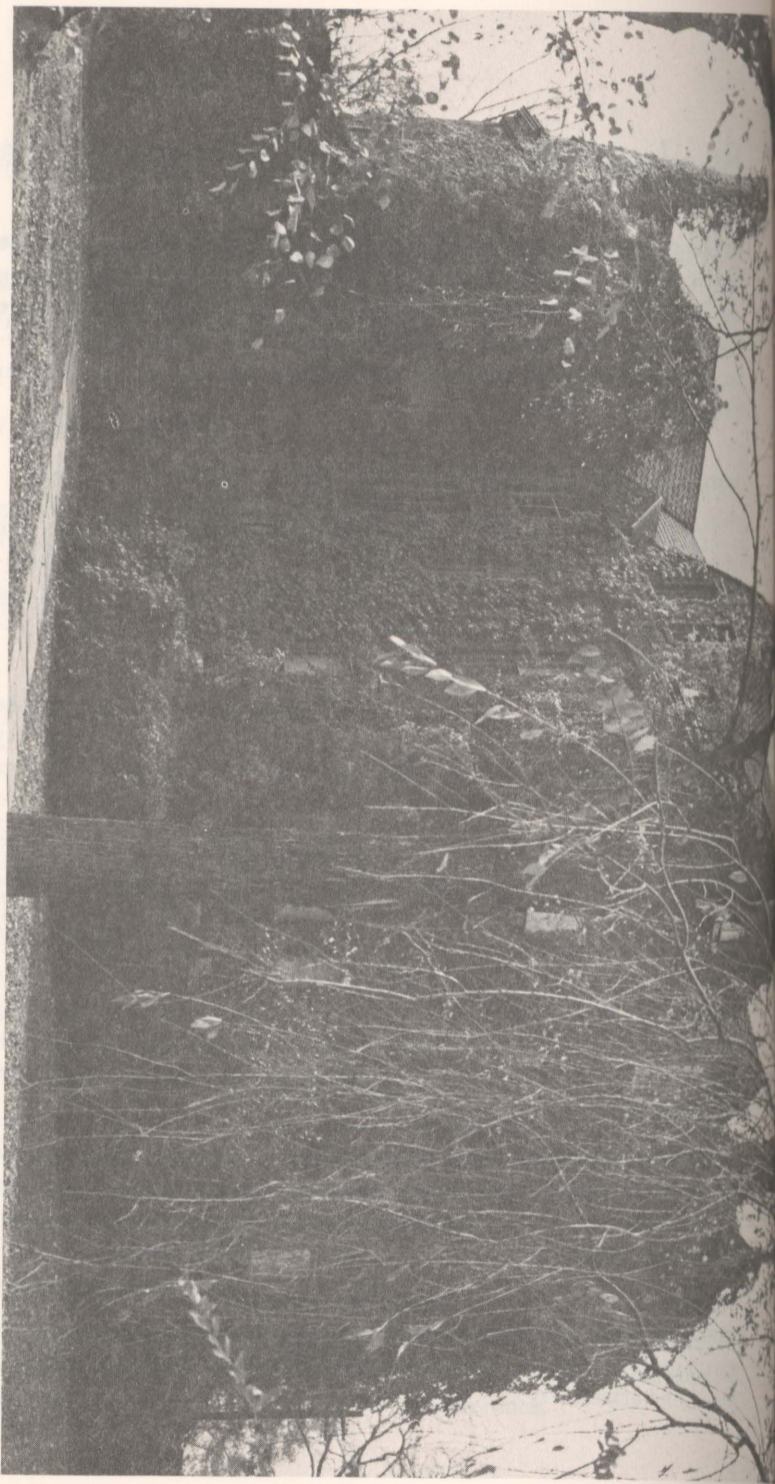
The Academic Program

Curricula

Academic Requirements

Graduation Requirements

Kirby Hall is one of the three original buildings making up the campus.



The Academic Program

Curricula

Academic Requirements

Graduation Requirements

Learning at Wilkes

Education leads men to seek answers to problems of significance and to inquire into ideas and beliefs of eternal relevance. There is no better expression of man's purpose than his sense of belonging to a universe ruled by truth.

Creative thinkers set the standards and the high aims of education. One may not reach these standards in his lifetime; that they are recognized and sought after is the measure of one's intellectual concerns.

The faculty encourages the student to cultivate learning that he may grow in wisdom. In this way the mind in its journeyings finds constant surprise and delight at rediscovering itself.

Curricula

Graduate Programs

WILKES COLLEGE DEGREE PROGRAMS

To fulfill its objective of service to the community and the nation, Wilkes in 1961 introduced two new curricula leading to the degrees of Master of Science in Chemistry and in Physics. These curricula are designed to make practicable either full-time graduate study toward the degrees or part-time study by engineers and scientists with appropriate undergraduate training employed in the Wilkes-Barre area. A program leading to a Master of Science degree in Biology was introduced in September, 1967. In September, 1969 two programs were introduced: one leading to a Master's Degree in Business Administration, and a second leading to a Master of Science degree in Education providing for concentration in the academic disciplines of English, history, mathematics, biology, physics, chemistry, and elementary education. The degree of Master of Science in Mathematics was introduced in September, 1971.

Full details of these programs are published in the bulletin of the Graduate Division.

COOPERATIVE GRADUATE PROGRAMS

Wilkes is cooperating with both Lehigh and Temple Universities to make graduate programs available to regional teachers and businessmen.

The Temple University program leads to the degree of Master of Science in General Education and is accepted by the Commonwealth for permanent certification of classroom teachers. Candidates may register at the College. Under this cooperative program, all credits are granted by Temple University.

Wilkes and Lehigh University are cooperating in offering graduate courses in education leading to a Master's Degree in Education, and graduate courses in Business Administration leading to a Master's Degree in Business Administration.

Details of these graduate programs may be obtained by writing to the Director of Graduate Studies.

Undergraduate Programs

Wilkes is an independent, liberal arts college that offers the degree of Bachelor of Arts in the humanities, the social sciences, and the natural sciences.

All course work in education required for careers in teaching is available in combination with the degree programs mentioned.

The College confers the degree of Bachelor of Science in biology, chemistry, engineering, mathematics, physics, medical technology, commerce and finance, and certain areas of education. The College also offers in selected engineering fields a two-year program leading to transfer.

A detailed description of these programs is provided in the section of the bulletin titled "Degree Programs."

PRE-PROFESSIONAL DEGREE PROGRAM

Four years of undergraduate study are ordinarily required to qualify for the Bachelor's degree. Wilkes College makes an exception to this requirement for medical and dental students.

These students may, with the approval of the Academic Standing Committee, satisfy the requirements for the Bachelor's degree by completing three years of undergraduate study at Wilkes and by requesting credit toward the degree for their first two years of work in graduate school.

Such students must petition the Academic Standing Committee for permission to graduate, submit official transcripts from the professional school, and pay the usual graduation fees. In all cases the final approval for the granting of the degree rests with the Academic Standing Committee of Wilkes College.

RESERVE OFFICER TRAINING CORPS

The program of instruction of the Department of Air Force Aerospace Studies is established under guidelines set up under AFROTC Regulation 53-3. Individual ROTC Departments are given considerable latitude in the preparation of instruction and the maintenance of curriculum standards.

Interested high school students who feel they can meet the competitive standards and qualification criteria for Air Force ROTC Scholarships may apply.

Students competing for scholarships as first year applicants, who meet the basic eligibility criteria, will be evaluated on the basis of achievement on the CEEB Scholastic Aptitude Test (SAT) or American College Test (ACT). To meet the deadline, the applicant must take this test before or during the December test cycle of his/her senior year. Students will also be evaluated on the basis of high school academic record, high school record of extracurricular and athletic activities, personal recommendations by member of the community and high school teachers, and tentative medical eligibility as reported by personal physician.

Scholarship recipients who enter the program as first year students, although they are not initially considered on the basis of college grade point average, must, by the end of their first academic year, achieve at least a 2.25 cumulative grade average based on all college work. Cadets who fail to attain this minimum level of performance will not be eligible to continue as recipients.

Scholarship applicants at the second or third year levels of Air Force ROTC, who are able to meet the eligibility requirements, may submit their applications for scholarships directly to the professor of Aerospace Studies at Wilkes.

LUCENE STODDEN FAMILY LIBRARY

Academic Requirements

GRADES

The primary purpose of any marking system is to inform the student of his achievement. Marks also aid in evaluating students for purposes of recommendation. Grade reports are sent to students and parents at the end of each term. Mid-term reports are sent if the work is unsatisfactory.

Five numerical grades are given for academic work.

Grade	Interpretation
4	Academic achievement of outstanding quality.
3	Academic achievement of high quality.
2	Academic achievement of acceptable quality in meeting requirements for graduation.
1	Academic achievement of quality below the average required for graduation.
0	Academic achievement below the minimum required for course credit.
P	Passing, no credit.

"X," "Inc.," means that the student received an incomplete grade. Incompletes will be granted to students who, because of illness or reasons beyond their control, have been unable to satisfy all course requirements including the final examination. When such a grade is given, the incomplete work must be made up by or before the end of the fourth week following the last day of the examination period. If the incomplete is not removed within this time, or an extension of time granted by the instructor who gave the grade or by some other authorized person, and the Registrar's Office so notified, the grade will be changed to a zero on the student's record.

COURSE CREDITS

Each course at the College is assigned a specific number of credits. For example, English 101 is a 3 credit course and Chemistry 201 is a 4 credit course. Usually, credits assigned to the course are determined by the number of hours that the class meets per week.

POINT AVERAGES

The student is given a number grade for every course in which he is enrolled. To calculate the number of points earned in a course, multiply the grade in each course by the number of credit hours for the course. To compute the point average, total these points for all courses and divide by the total number of credit hours.

Below is an example illustrating the method used to compute point averages.

Course	Credit Hrs. Carried	Grade	Points	Credit Hrs. Passed
Bio. 101	3	4	12	3
Eng. 101	3	0	0	0
Fr. 101	3	2	6	3
Hist. 101	3	1	3	3
Mus. 101	3	3	9	3
Total credit hrs. carried				15
Total credit hrs. passed				12
Total points earned			30	
Average				$30 \div 15 = 2.0$

Notice that the student has accumulated 12 credits toward graduation. The zero grade in English means that the student must repeat that course.

Averages are cumulative; the work of each semester will be added to the total. To graduate a student must have at the end of his senior year at least a 1.85 average for all his courses and a 2.0 average in his major field.

Transfer credits are not included in the calculation of grade point averages.

CLASS STANDING

Grades and averages at the end of each semester of the four academic years indicate a student's progress. Unless the following minimum averages are met, a student's record is automatically reviewed by the Academic Standing Committee.

	General Average	Major Average
Freshman Year	1.4	1.6
Sophomore Year	1.7	1.9
Junior Year	1.85	2.0

If these minimum averages are not attained during each semester of the year indicated, the Academic Standing Committee will review the student's record and take action resulting in his being placed on probation or dismissed from the College.

PROBATION AND DISMISSAL

A student placed on probation must attain the required grade average in the next semester or be subject to dismissal from the College.

Unless special permission is granted by the Academic Standing Committee, a student dropped for academic failure will not be considered for readmission until one year after being dropped.

If readmitted the student will still be on probation and shall be given one semester in which to prove his ability to continue in college.

ATTENDANCE

Attendance at all classes is expected. Repeated absence is deemed a sufficient cause for failure.

After five consecutive absences from a class, a student may be readmitted to the class only by action of the appropriate Dean and the Department Chairman concerned.

STUDENT LOAD

No students shall be allowed to carry an overload without approval of the adviser and the Dean. An overload will be permitted only for students with an average grade record of 3 or special need.

WITHDRAWALS

Students may change their courses during the first week of a semester, provided they secure the approval of their faculty adviser and the Dean. A student who withdraws from a course after the first week but who continues other courses will receive a zero unless the Dean, faculty adviser, and instructor agree that the student be permitted to drop the course without prejudice.

No student who has been advised to withdraw from the College's day school program for academic reasons will be permitted to register in the Evening Division without the approval of the Academic Standing Committee and then will be allowed to register only as a non-matriculated student.

Students who withdraw from the College or drop courses should give prompt written or verbal notice to the appropriate Dean or the Director of the Evening Division and to the instructors concerned, in order that their records may not unjustly show failure in courses.

STUDENTS ENTERING MILITARY SERVICE

Students called to the Armed Services should make every effort to complete unfinished academic assignments at the College before leaving.

If a student is called to active duty before completing the semester in which he enrolled, he will decide after consultation with the Academic Standing Committee and the faculty member involved whether to finish all assignments and take all examinations, or drop all courses.

A student called to the Service may apply toward a Wilkes College degree credits earned in collegiate programs approved by the military services. Such credits must be appropriate to a Wilkes College degree program. The Academic Standing Committee must approve all such requests.

CHANGE OF PROGRAM

Students who wish to transfer from one department to another shall obtain the approval of the Department Chairmen and the Dean. The student shall satisfy the curriculum requirements of the Bulletin in force at the time of transfer.

TRANSFER OF SUMMER CREDITS

Students desiring to study at another college during the summer must petition the Academic Standing Committee for approval. The student must earn a grade of 2 or higher in order for the work to be credited toward graduation. In some cases it may be necessary for a student to take examinations before credit is granted.

Transfer credits are not included in the calculation of grade point averages.

DEAN'S LIST

The faculty gives recognition for high quality work. Candidates for the Dean's List, published at the end of each term, must obtain a point average of 3.25 or higher for all courses taken. Students taking less than the full credit load for their curriculum will not be eligible for the Dean's List.

HONORS

The granting of Honors at Commencement is based upon the academic record made by students carrying a normal load for their curriculum during their last two years at the College. Requirements for Honors are as follows: for *cum laude*, a cumulative average of 3.35; *magna cum laude*, 3.60; *summa cum laude*, 3.80. Transfer students who wish consideration for honors should make application to the Academic Standing Committee.

Graduation Requirements

All candidates for degrees and certificates must be present at Commencement. If circumstances prevent their attendance, students must apply to the appropriate Dean for permission to take the degree or certificate *in absentia*.

The faculty has approved the following requirements which the student must satisfy in order to be eligible for graduation:

1. He must complete all subjects required for the degree as stated in the Bulletin in force at the time of his admission to the program. All students must complete the last 30 credits in residence at the College.
2. He must earn a grade of 1 or better in each required subject.
3. He must obtain a minimum cumulative average of 1.85 for all courses.
4. He must obtain a minimum cumulative average of 2.0 for all subjects within his major.
5. He must satisfy all requirements pertaining to the orientation and physical education programs.
6. He must demonstrate competence in written and spoken English.

No student shall be graduated until all financial obligations to the College have been satisfied.

Awards

At the end of the academic year a number of awards are presented to outstanding students in selected fields. The Deans also give two special awards for highest academic achievement.

Senior Awards

THE DEAN'S SCHOLARSHIP AWARDS are granted to the man and woman in the graduating class who have excelled in scholarship throughout their four years at the College.

THE AWARD IN THE HUMANITIES is given each year in memory of Miss Annette Evans to the man or woman in the graduating class who has demonstrated outstanding scholarship in the humanities, and has manifested intellectual curiosity and creative imagination.

HUGO V. MAILEY MEMORIAL AWARD is given each year to the man or woman in the graduating class who has demonstrated outstanding scholarship in the social sciences, and has manifested intellectual curiosity and creative imagination.

THE PHYSICS AWARD is presented annually to the graduate of the department who has maintained throughout his or her college career the highest scholastic average in physics courses.

THE BIOLOGY RESEARCH AWARD is presented annually to the graduate who has demonstrated exceptional ability in a research project. The faculty of the Biology Department selects the recipient of this award.

THE CHEMISTRY AWARD is presented by the Department of Chemistry to the graduate who has maintained the highest scholastic average throughout the four years of the chemistry program.

THE WALL STREET JOURNAL AWARD is granted to a graduate in commerce and finance for high scholarship in his field of concentration.

THE PENNSYLVANIA INSTITUTE OF CERTIFIED PUBLIC ACCOUNTANTS AWARD is granted to a graduating senior who has received high grades in accounting and demonstrated qualities of leadership in other activities.

THE W. F. DOBSON AWARD IN ACCOUNTING is given to the graduate who has made the most outstanding record in accounting during his four years at the College.

THE MATHEMATICS AWARD is granted annually to the senior who, in the opinion of the mathematics faculty, has done the most outstanding work in the fulfillment of the major requirements in mathematics.

THE OUTSTANDING GRADUATE OF THE YEAR AWARD is given by the Wilkes College Alumni Association to the graduate considered by a special committee to have made the strongest contribution to the life of the College.

Undergraduate Awards

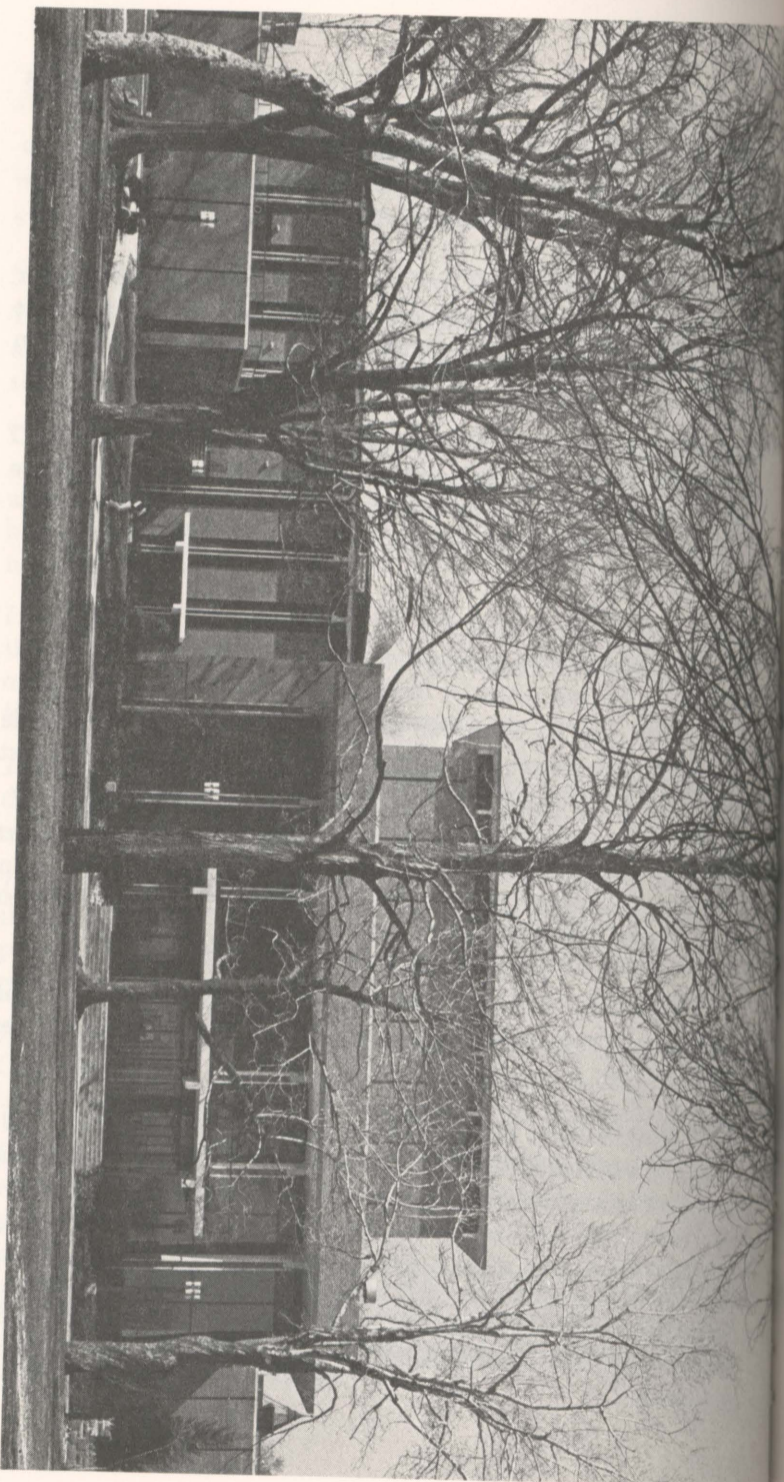
THE MRS. JAMES McKANE AWARDS of \$25 each are made to the man and woman in the junior class who have ranked highest in their class throughout their first two years of college.

THE LINDA MORRIS AWARD is given by Mr. and Mrs. Herbert Morris in memory of their daughter, Linda, to the young woman who has maintained the highest academic record through the first three years at Wilkes College.

THE WILKES FACULTY WOMEN'S AWARD is given to the sophomore woman who has ranked first in her class during her freshman year.

THE ALPHA RHO CHAPTER OF THE DELTA KAPPA GAMMA SOCIETY AWARD is offered annually to an outstanding young woman in the field of education. The Alpha Rho Committee on Professional Affairs, in cooperation with the Wilkes College Administration, will select a Junior student from Wyoming Valley who shows a concern for and a commitment to the education of young people and who possesses those qualities of enthusiastic leadership which will contribute to the advancement of the teaching profession.

Center for the Performing Arts and Dorothy Darte Music Center.



The College and the Community

Institute of Regional Affairs
Economic Development
Council

Northeastern Pennsylvania
Orchestra

Fine Arts Fiesta

Center for the Performing Arts
Educational Development
Center

Center for the Performing Arts and Dorothy Darte Music Center.



The College and the Community

Institute of Regional Affairs
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Center for the Performing Arts
Educational Development
Center

Service
at
Wilkes

It is his own deficiency, and no degree of fate, that makes a man sink into the depths. To think there is no escape from preordained misery is to make the misery perpetual. To seek new paths in a constant renewal of strength — that has always been the secret of progress. When a man waits helplessly for the turning in the wheel of fortune, he has to be regarded as shorn of manhood.

If we could free even one village from the shackles of helplessness and ignorance, an ideal for the whole of India would be established. Let a few villages be rebuilt in this way, and I shall say they are my India. That is the way to discover the true India.

RABINDRANATH TAGORE
Towards Universal Man

The College and the Community

The College was founded to serve the community and has received a large measure of its ever-growing support from outstanding leaders in the community. It has recognized for many years that its growth was related to the economic and social redevelopment of the community and, therefore, it has sought to participate in every effort for community betterment. In consequence, a pattern of cooperation has developed in which the College and the Community work with one another for their mutual benefit.

Institute of Regional Affairs

The Institute of Regional Affairs is a multi-purpose college organization which views regional problems as belonging to no simple academic discipline, but rather as a contemporary phenomenon spilling into many disciplines. It is really the natural integration of prior activities in which members of the Wilkes College faculty have engaged for at least twenty years. The Institute of Regional Affairs was created to assure the coordination of these varied efforts and better understand and resolve complex and contemporary problems.

Its resources include not only the College faculty in the social sciences — economics, psychology, government, sociology — but also those experts in the region who can lend their talents to teaching, research, and consultation. Its four-fold purpose is: education and training, community information, research, and consultation.

1. Labor-Management Courses

To establish a climate for industrial progress, the College has pioneered a management training program under which special classes are organized for personnel in industry, commerce, and banking to meet the needs of business firms in this region. Such programs are arranged in consultation with officials, foremen, and other employees to meet the specific problems of a particular company.

A program designed for members of labor unions is also tailored to the needs of a particular group. All classes are conducted on the campus where the intellectual climate stimulates free intellectual inquiry.

Union and management personnel sometimes meet in an effort to develop that mutual understanding that is essential to constructive action.

2. *Banking*

Short courses have been co-sponsored with both the Institute of Banking and the Savings and Loan Institute. The instructional program offered to the personnel of these two groups is intended to assist them to meet changing needs and acquire a broad knowledge in their fields.

3. *Municipal Government Program*

The fundamental general purpose in assisting local governments has been to help make American democracy stronger by guaranteeing the semi-autonomous structure of American local government, so long as it can retain the capacity to solve its own problems. The program of training, information and consultation service, publications, and research in this field have been aimed at improving the world of local government officials, both elected and appointed. In the fall of 1964, the Glen Alden Coal Company made available an area in Hanover Township known as Concrete City — a 40 acre site — for training the police, firemen, and civil defense workers. The In-Service training program for local government officials has been offered in full cooperation with the Public Service Institute of the Department of Education, Commonwealth of Pennsylvania.

4. *Other Activities*

From time to time, the Psychology Department, the Sociology Department, the Education Department, and the Guidance Center initiate and participate in seminars, conferences, and workshops, in the fields of social welfare, mental health, and education.

Economic Development Council

As a result of the support and the success of the College's Area Research Center, an independent Economic Development Council has been established to serve Northeastern Pennsylvania. The College has supported a number of programs in their infancy and helped them become independent, community activities.

Northeastern Pennsylvania Orchestra

The Northeastern Pennsylvania Orchestra, organized under the aegis of the College in 1951, and the Scranton Philharmonic Orchestra have been combined to form the Northeastern Pennsylvania Orchestra. The orchestra presents a series of four concerts annually in both Wilkes-Barre and Scranton. Among its members are students and faculty from the Department of Music of the College.

Fine Arts Fiesta

In 1954 several members of the Board of Trustees and the faculty assisted in the formation of the Wilkes-Barre Fine Arts Fiesta, as part of the City's Sesquicentennial celebration. The College participates with area-wide cultural groups in this four-day festival of music, drama, and the arts presented each spring.

Center for the Performing Arts

The Center for the Performing Arts provides a varied program of cultural and educational events for the Community as well as the College.

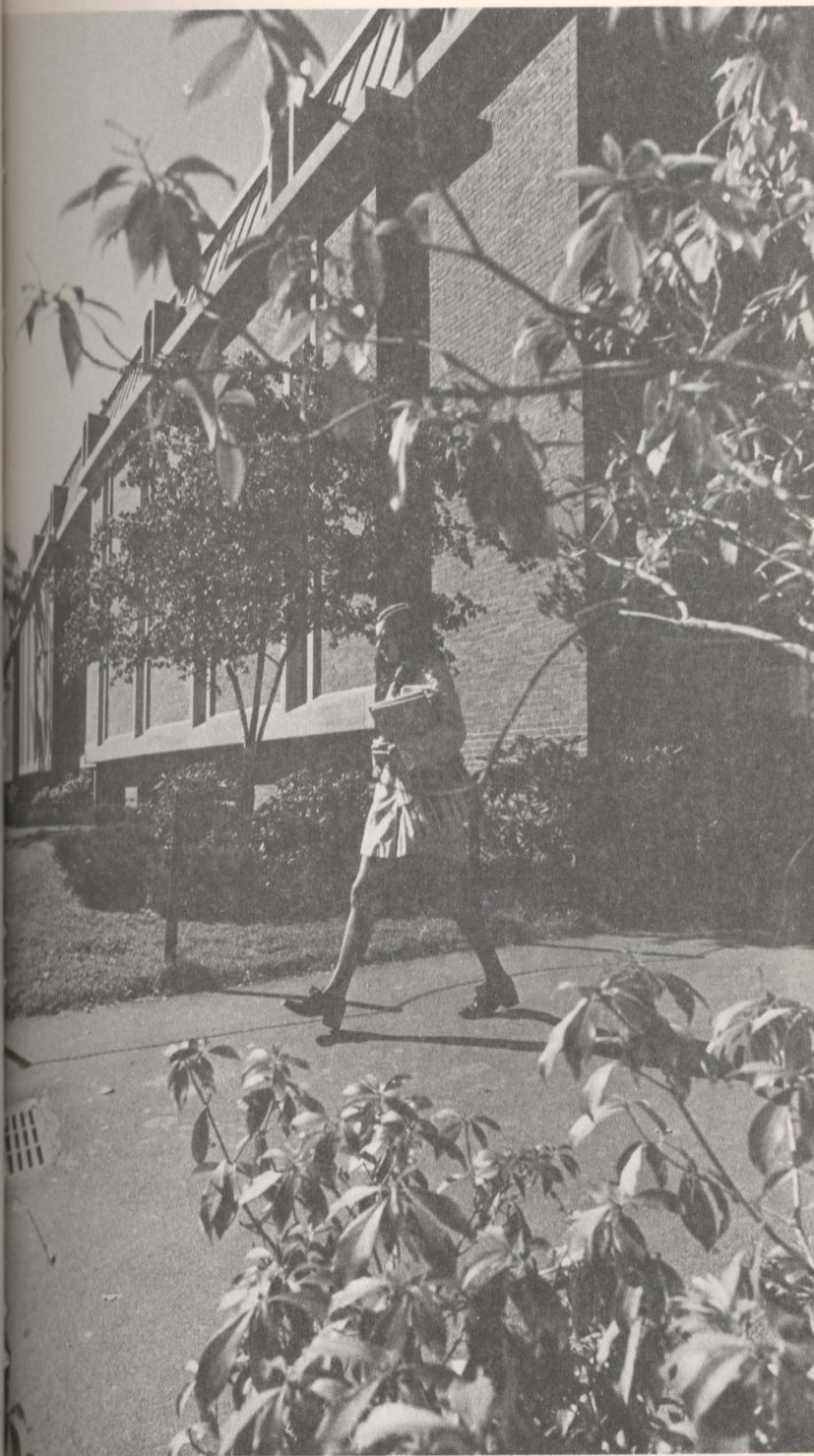
Completed in October, 1965, the gift of Mrs. Dorothy Dickson Dart, the Center has facilities for theater, dance, music, and films. Dramatic productions, recitals, lectures, choral and band concerts, ensemble programs, and other cultural events are offered throughout the year.

The Center is operated by the students under faculty direction and supervision.

Educational Development Center

The Educational Development Center is an arm of the Commonwealth of Pennsylvania Department of Education. It is housed on the Wilkes College campus by mutual agreement between the college and the Pennsylvania Department of Education. There are six such centers which have been established on college campuses across the state of Pennsylvania.

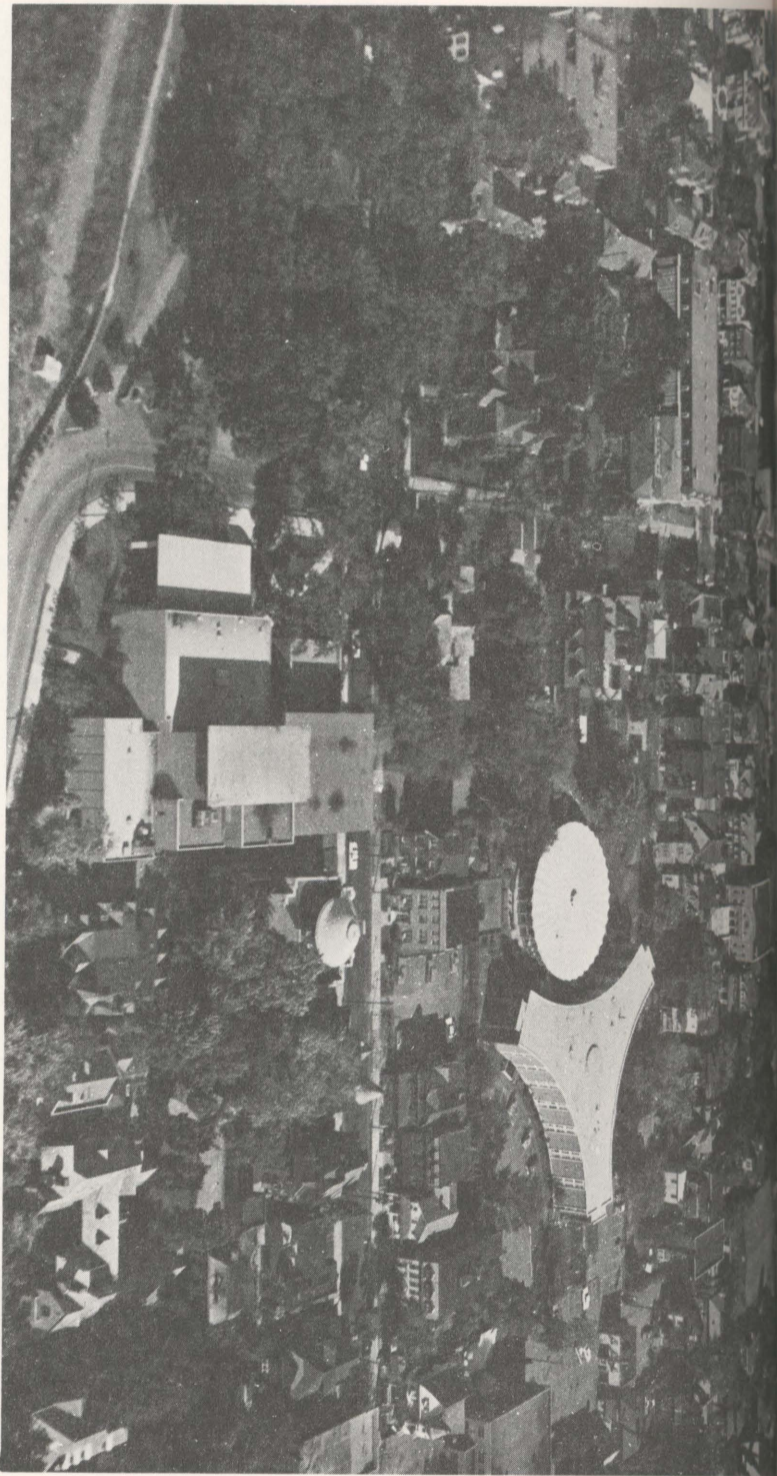
Each center has both a statewide and local mission. The center at Wilkes College has as its statewide mission the development of curriculum models in various disciplines for elementary and secondary education. The center's work has included surveying and developing curriculum models for elementary science education, career education, and the education of neglected and delinquent students. At the local level the center has helped to plan the functions of the local intermediate unit and continues to work closely with the unit to provide service to school districts in the area. The center has sponsored a number of seminar programs which have brought to the area prominent speakers from various fields of education.



The Eugene Shedden Farley Library one of the newest additions to campus.

EUGENE SHEDDEN FARLEY LIBRARY

Aerial view of Wilkes College Campus (south portion)



Undergraduate Programs

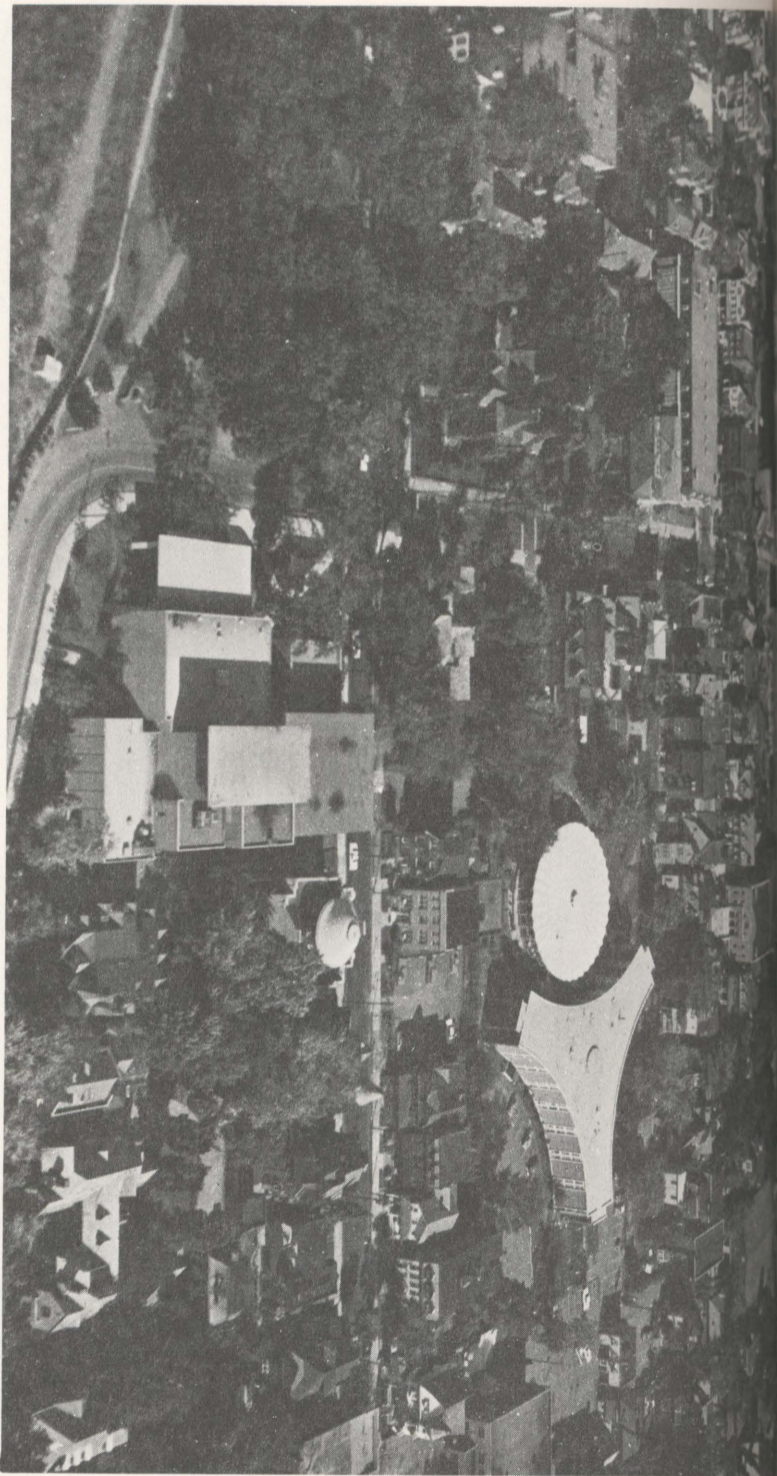
Bachelor of Arts Degree

Bachelor of Science Degree

Degree Requirements

Pre-Professional Programs

Aerial view of Wilkes College Campus (south portion)



Undergraduate Programs

Bachelor of Arts Degree

Bachelor of Science Degree

Degree Requirements

Pre-Professional Programs

Leadership at Wilkes

Those of us who are concerned with the education of young people and with the vitality of our society can never accept uncertainty and confusion as the inevitable condition of society.

We, therefore, are confronted with two choices. We can grasp and support a rigid ideology that offers final answers by ignoring uncongenial facts and truths, or we can make every effort to comprehend the significance of new facts, new truths, and new conditions.

We must endeavor to extend the vision of our students, enlarge their understanding, and prepare them to participate in strengthening and developing our social institutions.

DR. EUGENE S. FARLEY
First President of Wilkes College

Undergraduate Programs

The program at Wilkes has been carefully designed so that students may meet the entrance requirements of graduate and professional schools. Students planning to go to graduate school should consult as early as possible with their department chairmen.

In its degree programs Wilkes College provides for a broad liberal education and for the concentration in special areas for which students are qualified and have interest. In the Bachelor of Arts and Bachelor of Science degree programs the faculty encourages students to achieve intellectual, social, and spiritual development.

Bachelor of Arts Degree

Programs leading to the Bachelor of Arts degree are primarily concerned with the cultivation of an understanding of our civilization and of the men who have created it and lived in it. Studies center around men and events, thoughts and institutions, art and science. Programs are designed to create breadth and perspective as opposed to more specialized skills.

A liberal arts program must acquaint the student with the nature and extent of knowledge in all the principal fields. The student will carry on his explorations in the humanities, social sciences, and sciences.

A R E A S

<i>Humanities</i>	<i>Social Sciences</i>	<i>Sciences</i>
English	Commerce and Finance	Biology
Fine Arts	Economics	Chemistry
Foreign Languages	Education (Elementary and Secondary)	Physics
Mathematics	History	
Music	Political Science	
Philosophy -	Psychology	
Religious Studies	Social Science	
Theatre Arts	Sociology	

GENERAL REQUIREMENTS FOR B.A. DEGREE

The following courses are required of all candidates for the Bachelor of Arts degree. They will usually be taken in the semesters indicated. In a curriculum that requires a student to begin with courses at a more advanced level, the advanced course will be accepted as fulfilling the general requirements in that subject.

Required Courses	Credit Hours	To be Taken in Semesters
<i>Humanities</i>		
Eng. 101, 102 — Composition	6	1-2
Eng. 151, 152 — World Literature	6	3-4
Hist. 101, 102 — World Civilization	6	1-2
Phil. 101 — Introduction; Phil. 102 — Logic	6	3-4-5-6
F.A. 101 — Experiencing Art; or Mus. 101 — Introduction I; or Th. Arts 101 — Approach to Theater ¹	3	1 or 2
For. Lang. ² 101, 102 — Elementary; For. Lang. ² 203, 204 — Intermediate	6-12	1-2-3-4
<i>Mathematics, Science Electives</i>		
Any two courses in Mathematics ³ or Phys. 101-102 — Physical Science; or Bio. 101-102 — Biological Science; or Env. Sci. — 101 — Earth Science and Env. Sci. 282 — Space Science ⁴	12	1-2-3-4
<i>Social Science Electives</i>		
Ec. 101, 102 — Principles; or P. S. 101, 102 — Political Science; or Psy. 101, 102 — General Psychology; or Soc. 101, 102 — Sociology and Anthropology	12	3-4-5-6
<i>Physical Education</i>		
Phys. Ed. 101, 102, 103, 104 — Physical Education	0	1-2-3-4
Phys. Ed. 105, 106 — Hygiene	2	1-2
	65	

¹ Courses in Speech, Argumentation and Debate, and Speech for the Stage (2 credits each) are not required for the Bachelor of Arts degree, but may be taken as an elective.

² In all curricula requiring foreign language the level of the course will depend upon the achievement of the student. Except for foreign language majors, the language requirement is through the 204 course, or an equivalent course prescribed by the student's adviser.

³ The mathematics requirement will vary with individual programs. Students planning to major in Accounting, Biology, Business Administration, Chemistry, Economics, Engineering, Elementary Education, Mathematics, and Physics should check individual program requirements listed in the Bulletin. For those who whose program does not require Math. 105-106 or 111-112, Math. 100 will be counted in this requirement only when followed by Math. 105 or 111.

⁴ Env. Sci. 211, 232, 251 may be substituted for Env. Sci. 282.

SELECTION OF A MAJOR

To provide depth of knowledge, some concentration is required. It is desirable that a major be elected as early as possible, especially in the areas of biology, mathematics, and music. It is essential that the major field of concentration be elected before the beginning of the junior year.

Majors in the Bachelor of Arts degree program may be selected from the following subject areas:

Biology	Foreign Language	Physics
Chemistry	History	Political Science
Economics	Mathematics	Psychology
Education ¹	Music	Social Science
English	Philosophy -	Sociology
Fine Arts	Religious Studies	

COURSE REQUIREMENTS

The specific requirements for a degree in any of the above majors are listed in the section of this bulletin titled "Degree Requirements." The student with his faculty adviser will plan the proper sequence of his major course requirements.

¹ Students wishing to prepare for public school teaching should refer to page 91 for detailed information concerning the selection of a major and the sequence of required courses in Education.

Bachelor of Science Degree

The Bachelor of Science degree programs require more concentration upon a restricted area of human thought and activity. Although these programs emphasize knowledge and skill in special fields, a basic program of general education is coupled with this specialized effort.

GENERAL REQUIREMENTS FOR B. S. DEGREE

The general requirements for the Bachelor of Science degree are basically the same as those required for the Bachelor of Arts degree. Specific requirements are described in this bulletin under the section titled "Degree Requirements."

SELECTION OF A MAJOR

Majors in the Bachelor of Science degree program may be selected from the following subject areas:

Biology	Music Education
Chemistry	Medical Technology
Commerce and Finance	Nursing
(a) Accounting	Nursing Education
(b) Business Administration	Physics
(c) Business Education	Mathematics
Engineering	

COURSE REQUIREMENTS

The specific requirements for a degree in any of the above majors are listed in the section of this bulletin titled "Degree Requirements." The student with his faculty adviser will plan the proper sequence of his major course requirements.

Degree Requirements

B.A. AND B.S. DEGREE PROGRAMS

The following section of the bulletin provides the detailed information on the requirements for each of the degree programs offered at Wilkes College.

The general requirements for the B.A. degree are listed on page 82 of this bulletin. They are repeated on the following page to provide guidance in scheduling. Courses in Fundamentals of Speech, Argumentation and Debate, and Speech for the Stage are available as electives that may be taken during the freshman year.

The course sequence listed in the following outline is the standard sequence for all B.A. degree majors except those in biology, chemistry, fine arts, mathematics, music, and physics. These programs will be specifically outlined for convenience in scheduling.

The following pages, therefore, describe the specific course requirements for each B.A. degree major and for each B.S. degree major. The student is responsible for meeting the requirements of his major program. The major subject areas follow in alphabetical order.

WILKES COLLEGE-HAHNEMANN MEDICAL COLLEGE COOPERATIVE PROGRAM IN MEDICAL EDUCATION

Wilkes College and Hahnemann Medical College, as of September 1972, began a six-year cooperative program leading to a Baccalaureate degree from Wilkes College and a M.D. (Doctor of Medicine) degree from Hahnemann Medical College.

One objective of this program is to increase the number of physicians graduating in *Family Medicine* from Hahnemann Medical College in less time and at lower cost. Another objective is to encourage students who will remain to practice medicine in Northeastern Pennsylvania or surrounding areas after graduation.

The first two years at Wilkes College are designed to provide an in-depth coverage of the basic areas of the natural and physical sciences, mathematics and social studies. Successful performance in courses in the sciences, humanities and the social sciences will provide the necessary

foundation for advanced studies in the Hahnemann Medical College Basic Science Curriculum.

At the end of the sophomore year qualified students will be selected to enter the first year of medical school at Hahnemann Medical College. Admissions to the program at Hahnemann Medical College will be supervised by a joint Admissions Committee of faculty from the respective institutions and will be based upon the recommendations of this committee, the student's performance during his first two years at Wilkes College, and MCAT scores.

Students, who after completion of the first two years, do not make application to the Hahnemann program or who prefer other medical school alternatives will have available all the normal degree options including a variety of allied health professions.

Admission to Wilkes College does not imply automatic admission into the Hahnemann Medical Components.

General Requirements for B. A. Degree

FIRST SEMESTER		SECOND SEMESTER	
Eng. 101 — Composition	3	Eng. 102. — Composition	3
For. Lang. 101 — Elementary	3	For. Lang. 102 — Elementary	3
Hist. 101 — World Civilization	3	Hist. 102 — World Civilization	3
Math., Science Elective (see page 82)	3	Math., Science Elective (see page 82)	3
Fine Arts Elective (see page 82) ¹	3	Fine Arts Elective (see page 82) ¹	3
P.E. 101 — Physical Education	0	P.E. 102 — Physical Education	0
P.E. 105 — Hygiene	1	P.E. 106 — Hygiene	1
	16		16
THIRD SEMESTER		FOURTH SEMESTER	
Eng. 151 — World Literature	3	Eng. 152 — World Literature	3
For. Lang. 203 — Intermediate	3	For. Lang. 204 — Intermediate	3
Math., Science Elective (see page 82)	3	Math., Science Elective (see page 82)	3
Social Science Electives (see page 82)	6	Social Science Electives (see page 82)	6
(Phil. 101 — Introduction) ²		(Phil. 102 — Logic) ²	
P.E. 103 — Physical Education	0	P.E. 104 — Physical Education	0
	15		15
FIFTH SEMESTER		SIXTH SEMESTER	
Phil. 101 — Introduction ²	3	Phil. 102 — Logic ²	3
Major and electives ³	12-13	Major and electives ³	12-13
	15-16		15-16
SEVENTH SEMESTER		EIGHTH SEMESTER	
Major and electives	15-16	Major and electives	15-16

¹Courses in Speech, Argumentation and Debate, and Speech for the Stage (2 credits each) are not required for the Bachelor of Arts degree, but may be taken as an elective during the freshman year.

²Philosophy majors or students interested in earlier scheduling of philosophy may take Phil. 101 and 102 in the third and fourth semester by later scheduling of the social science requirement. Other Philosophy or Religious Studies courses may be substituted for Phil. 102 in any major with the approval of the student's adviser and the Philosophy Department chairman. No substitutions are permitted for Phil. 101.

³Students planning to fulfill requirements for teacher certification will usually take required education courses as electives in the fifth and sixth semester.

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Course Requirements in the Majors

Biology¹

The biology program is a general program covering basic areas of biology. Specific pre-professional training is minimized in favor of the broadest possible background in the liberal arts as well as the biological sciences.

Students intending to major in Biology should have at least three years of college preparatory mathematics courses (including Algebra II, geometry, and topics in trigonometry) so as to be prepared to take Math. 105 (Calculus in the first term of the freshman year. Experience has shown that the student who does not have such a background will usually require additional pre-college mathematics courses. He may take, preferably in the summer preceding entrance, Math. 100 (algebra and trigonometry) offered at Wilkes, or, with the approval of the Mathematics Department, take an equivalent course at another college or university. Credits in such remedial courses will not exempt the student from any required elective in his program.

The B.A. curriculum is primarily for those students in secondary education who are preparing to teach and must include the professional semester in the seventh or eighth semester.

The B.S. curriculum listed on page 102 is recommended for the student interested in a professional career in life sciences.

The following are the degree requirements for the Bachelor of Arts degree with a major in biology.

FIRST SEMESTER		SECOND SEMESTER	
Bio. 201M — Principles of Modern Biology	2½	Bio. 203M — Embryology	2½
Bio. 202M — Chordate Anatomy	2½	Bio. 204M — Histology	2½
Chem. 201 — Principles of Chemistry	4	Chem. 202 — Chemical Equilibria	4
Eng. 101 — Composition	3	Eng. 102 — Composition	3
Math. 105 — Introductory Calculus I	4	Math. 106 — Introductory Calculus II	4
P.E. 101 — Physical Education	0	P.E. 102 — Physical Education	0
P.E. 105 — Hygiene	1	P.E. 106 — Hygiene	1
	17		17

¹ This curriculum may be adapted for use by those students who wish to enter the field of secondary education. A pre-professional degree program is described on page 60. The first three years of the program described here will be followed by pre-professional candidates.

² Biology 301, 303, 305, 307.

³ Biology 302, 304, 306, 308.

THIRD SEMESTER

Bio. 205M — Genetics	2½
Bio. 206M — General Physiology	2½
Chem. 232 — Organic Chemistry	4
Ec., P.S., Psy., Soc. (101-102)	3
For. Lang. 101 — Elementary	3
Eng. 151 — Western World Literature	3
P.E. 103 — Physical Education	0
	18

FIFTH SEMESTER

Bio. Elective ²	3
Ec., P.S., Psy., Soc. (101-102)	3
For. Lang. 203 — Intermediate	3
Phys. 105 — Introduction	4
Electives	3-5
	16-18

SEVENTH SEMESTER

Bio. 397 — Seminar	½
Hist. 101 — History of World Civilization	3
Phil. 101 — Introduction	3
Electives	9-12
	15½-18½

FOURTH SEMESTER

Bio. 207M — Comparative Physiology	2½
Bio. 208M — Ecology	2½
F.A. 101 — Experiencing Art I	3
Ec., P.S., Psy., Soc. (101-102)	3
For. Lang. 102 — Elementary	3
Eng. 152 — Western World Literature	3
P.E. 104 — Physical Education	0
	17

SIXTH SEMESTER

Bio. Elective ³	3
Ec., P.S., Psy., Soc. (101-102)	3
For. Lang. 204 — Intermediate	3
Phys. 106 — Introduction	4
Electives	3-5
	16-18

EIGHTH SEMESTER

Bio. 397 — Seminar	½
Hist. 102 — History of World Civilization	3
Phil. 102 — Logic and Scientific Method	3
Electives	9-12
	15½-18½

Chemistry

This curriculum is designed for the student interested in a major in chemistry in preparation for a career in teaching, medicine, dentistry, technical sales, technical librarianship, as technical translator, etc. The student will choose electives after consultation with his adviser.

Students intending to major in Chemistry should have at least three years of college preparatory mathematics courses (including algebra II, geometry, and topics in trigonometry) so as to be prepared to take Math. 111 (Calculus) in the first term of the freshman year. Experience has shown that the student who does not have such a background will usually require additional pre-college mathematics courses. He may take, preferably in the summer preceding entrance, Math. 100 (algebra and trigonometry) offered at Wilkes, or with the approval of the mathematics department, take an equivalent course at another college or university. Credits in such remedial courses will not exempt the student from any required elective in his program.

The B.S. curriculum listed on page 102 is recommended for the student interested in a professional career in chemistry.

Chemistry 212 and 341 must be taken in addition to those courses listed below. The general requirements for the B.A. degree, listed on page 82 in the bulletin, must also be met.

FIRST SEMESTER		SECOND SEMESTER	
Chem. 201 — Introduction to the Principles of Chemistry	4	Chem. 202 — Chemical Equilibria	4
Hist. 101 — World Civilization	3	Hist. 102 — World Civilization	3
Math. 111 — Analysis I	4	Math. 112 — Analysis II	4
Eng. 101 — Composition	3	Eng. 102 — Composition	3
P. E. 101 — Physical Education	0	P. E. 102 — Physical Education	0
P. E. 105 — Personal Hygiene	1	P. E. 106 — Personal Hygiene	1
	<hr/> 15		<hr/> 15
THIRD SEMESTER		FOURTH SEMESTER	
Chem. 232 — Organic Chemistry	4	Chem. 233 — Organic Chemistry	4-5
Math. 211 — Intermediate Analysis I	4	Phys. 202 — General Physics II	4
Phys. 201 — General Physics I	4	Electives	9
Electives	6		
	<hr/> 18		<hr/> 17-18
FIFTH SEMESTER		SIXTH SEMESTER	
Chem. 221 — Inorganic and Quantitative Analysis	4	Chem. 262 — Chemical Literature	2
Phys. 203 — General Physics III	3	Electives	15
Electives	9		
	<hr/> 16		<hr/> 17
SEVENTH SEMESTER		EIGHTH SEMESTER	
Chem. 261 — History of Chemistry	1	Electives	15-18
Electives	14-17		
	<hr/> 15-18		<hr/> 15-18

Economics

Students who major in Economics are required to complete twenty-four hours of work in economics beyond Ec. 101, 102 in addition to the general requirements for the B. A. degree. Selection and scheduling of these courses will be done in consultation with the student's adviser. The twenty-four hours in economics which the major must carry include Ec. 201, 202, 231, 232, and 241. Students who elect a program in Economics should take Math. 105, 106 and, if necessary, Math. 100.

Education

Students wishing to prepare for public school teaching in Business subjects or Music complete the B.S. program described for these subjects. Prospective elementary school teachers complete the B.A. program.

Prospective secondary school teachers:

- may elect to major in Biology, Chemistry, Economics, English, Foreign Languages, History, Mathematics, Physics, Political Science, Psychology or Sociology. Students who major in Economics, History, Political Science, Psychology or Sociology must complete the Social Studies Certification Program. A description of the program may be obtained in the Education Department office.
- must elect Psy. 101-102.
- must elect Ed. 201, 202, and 330. (Note that Psy. 102 is prerequisite to Ed. 202.)

Transfer students must take at least one course in Education at Wilkes College prior to enrolling in the professional semester. Teacher certification requirements for most states may be met at Wilkes College. Students are expected to familiarize themselves with specific state requirements.

B.A. DEGREE IN ELEMENTARY EDUCATION

FRESHMAN YEAR				SOPHOMORE YEAR			
Semester I		Semester II		Semester I		Semester II	
Eng. 101	3	Eng. 102	3	Eng. 151	3	Eng. 152	3
For. Lang. 101	3	For. Lang. 102	3	For. Lang. 203	3	For. Lang. 204	3
Hist. 101	3	Hist. 102	3	Math. 232	3	Math. 243	3
Psy. 101	3	Psy. 102	3	Ed. 201	3	Ed. 202	3
Math. 103	3	Math. 104	3	Science	3-4	Science	3-4
P.E. 105	1	P.E. 106	1	P.E. 103	0	P.E. 104	0
P.E. 101	0	P.E. 102	0				
	<hr/> 16		<hr/> 16		<hr/> 15-16		<hr/> 15-16
JUNIOR YEAR				SENIOR YEAR			
Semester I		Semester II		Semester I		Semester II	
Phil. 101	3	Phil. 102	3	Ed. 300 or 310	15	Ed. 300 or 310	15
Ed. 291	2	Ed. 292	2	or		or	
Psy. 221	3	Option	12-13	Ed. 391 and option	2 15	Ed. 391 and option	2 15
Option	9-10						
	<hr/> 17-18		<hr/> 17-18		<hr/> 15-17		<hr/> 15-17

STUDENTS MUST SELECT AND FOLLOW ONE OPTION

- OPTION I (36*) — 18 Sciences/Mathematics (min. 12 of 18 one Dept.); 6-12 Humanities**; 6-12 Social Science.
- OPTION II (36*) — 6 Sciences/Mathematics; 18 Humanities** (min. 12 of 18 one Dept.); 12 Social Science.
- OPTION III (36*) — 6 Sciences/Mathematics; 6 Humanities**; 24 Social Science (min. 12 of 24 one Dept.).

* Total hours in Option.

** Must include minimum 3 credits, Fine Arts Elective (see page 82).

English

Students who major in English are required to take English 101 and 102 in the freshman year; 151, 153, 154 and 201 in the sophomore year; and 21 credit hours including 204, 213 and 221, as well as the core program for the B.A. degree. In addition to these requirements students seeking certification as public school teachers must include either English 381 or 382 among their required courses and elect one of the following speech courses: English 131 or 132, or Theater Arts 131. Selection and scheduling of these courses will be done in consultation with the student's adviser. The cumulative average in the major will be calculated from the grades received in all English courses except speech and those prescribed for the freshman year. The English Department strongly recommends that its majors choose either German or French as their foreign language.

Students who major in English may elect to concentrate in drama and theater arts. They must take Theater Arts 101 and 131 and English 101 and 102 in their freshman year; Theater Arts 330, 210 or 250, and 241, and English 151, 153 and 154 in their sophomore year; fifteen additional credits in Theater Arts; and twenty-one additional credits in English, including 381 or 382, 204, 221, and two of the following: 321, 341, or 374. Students who seek certification as secondary teachers are required to take only fifteen additional hours in English, including 381 or 382, 204, 221, and two of the following: 321, 341, or 374.

Fine Arts

Students who major in Fine Arts are required to complete the following program of studies in addition to the general requirements for the B.A. degree. Students who desire certification for teaching Art in the public elementary and secondary schools elect the professional semester in Fine Arts Education during the seventh or eighth semesters.

FIRST SEMESTER		SECOND SEMESTER	
Eng. 101 — Composition	3	Eng. 102 — Composition	3
Hist. 101 — World Civilization	3	Hist. 102 — World Civilization	3
For. Lang. 101 ¹ — Elementary	3	For. Lang. 102 ¹ — Elementary	3
F.A. 201 — Color and Design	3	F.A. 202 — Drawing & Composition	3
P. E. 101 — Physical Education	0	P. E. 102 — Physical Education	0
P. E. 105 — Hygiene	1	P. E. 106 — Hygiene	1
Math., Science Elective (see page 82)	3	Math., Science Elective (see page 82)	3
	16		16

¹ French or German is recommended for students who plan to continue with graduate programs in Art.

THIRD SEMESTER

Eng. 151 — World Literature	3
For. Lang. 203 — Intermediate	3
F.A. 203 — Oil Painting I	3
F.A. 223 — History of Art I	3
P. E. 103 — Physical Education	0
Math., Science Elective ² (see page 82)	3
	15

FIFTH SEMESTER

Phil. 101 — Introduction	3
F.A. 211 — Modeling & 3-D Design ³	3
F.A. 213 — Metalwork & Jewelry ³	3
Social Science Electives (see page 82)	6
Elective	3
	18

SEVENTH SEMESTER

F.A. 231 — Contemporary Design	2
F.A. 311 — Senior Exhibit ⁴	2
F.A. 212 — Ceramics ³	3
Electives	8-9
	15-16

FOURTH SEMESTER

Eng. 152 — World Literature	3
For. Lang. 204 — Intermediate	3
F.A. 204 — Water Color Painting	3
F.A. 224 — History of Art II	3
P. E. 104 — Physical Education	0
Math., Science Elective ² (see page 82)	3
	15

SIXTH SEMESTER

F.A. 206 — Printmaking I ³	3
Social Science Electives (see page 82)	6
F.A. 226 — History of Contemporary Art	3
Phil. 230 — Aesthetics	3
Elective (optional)	3
	15-18

EIGHTH SEMESTER

F.A. 311 — Senior Exhibit ⁴	2
F.A. 332 — Studio Problems	2
Electives	11-12
	15-16

Foreign Languages (Modern)

A major in any of the modern foreign languages consists of twenty-four additional credit hours in advanced language courses beyond the 102 course.

History

Students who major in history are required to take History 101 and 102 in the freshman year, History 207 and 208 in the sophomore year, and 18 additional credit hours in advanced history courses. Advanced courses taken must include a minimum of six hours each in American and non-American topics. Individuals planning graduate study in history are urged to take History 371.

² Students working for a degree in Fine Arts Education should elect Psy. 101-102 for semesters three and four and take Science requirements in semesters five and six.

³ F.A. 211 — Modeling & 3-D Design, F.A. 206 — Printmaking I, F.A. 213 — Metalwork and Jewelry, and F.A. 212 — Ceramics are offered Fall and Spring semesters.

⁴ Senior Exhibit will be scheduled either the seventh or eighth semesters.

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Mathematics

The Department of Mathematics offers courses of study leading to the B.A., B.S., M.S. in Mathematics Education, and the M.S. in Mathematics degrees. Descriptions of the graduate programs are contained in a separate graduate bulletin.

The baccalaureate programs are designed to provide a firm background for graduate studies in pure and applied mathematics, for careers in industry, the computer field, governmental service, and secondary or elementary school teaching.

In recent years, the mathematical sciences have played an ever-expanding role not only in the physical sciences, but also in the social and natural sciences as well. The study of mathematics is often not an end in itself. The mathematics degree requirements at Wilkes are sufficiently flexible to allow a student to have at least 30 credits of electives in any area of his choice. This is often enough to enable him to take all courses required of another major. By combining the study of mathematics with properly chosen courses in other fields, a student in either the B.A. or the B.S. program will be able to obtain more than adequate preparation for further study leading to careers in actuarial science, economics, business and management, law, medicine, physical and engineering sciences, and many interdisciplinary fields. Many professional schools particularly welcome applicants with a strong undergraduate mathematics background.

Students intending to major in Mathematics should have at least three years of college preparatory mathematics courses (including algebra II, geometry, and topics in trigonometry) so as to be prepared to take Math. 111 (Calculus) in the first term of his freshman year. Experience has shown that the student who does not have such a background will usually require additional pre-college mathematics courses. He may take, preferably in the summer preceding entrance, Math. 100 (algebra and trigonometry), offered at Wilkes, or with the approval of the mathematics department, take an equivalent course at another college or university. Credits in such remedial courses will not exempt the student from any required elective in his program.

The B.A. is intended for those who wish to elect more liberal arts and social science courses while the B.S. degree allows for greater concentration of physical and natural science electives. Students may satisfy the

certification requirements for secondary or elementary school teaching in either programs.

The core requirements for the major in both the B.S. and the B.A. degrees are Math. 211, 212, 222, 311, 312, 331, and 334. Additional requirements for the B.A. degree are:

- a. all requirements listed on page 82, with the exception of Phil. 102, must be met;
- b. at least two mathematics electives numbered above 222;
- c. the science electives must include a minimum of three courses, at least two of which are in the same department, chosen from biology, chemistry, environmental sciences, and physics.

Mathematics

The following program lists the sequence of course requirements for the B.A. degree in Mathematics and the semesters in which they should normally be taken.

FIRST SEMESTER		SECOND SEMESTER	
Eng. 101 — Composition	3	Eng. 102 — Composition	3
For. Lang. 101 — Elementary Elective ¹	3	For. Lang. 102 — Elementary	3
Social Science Elective ²	3	Science Elective	3-4
Math. 111 — Analysis I	4	Social Science Elective ²	3
P.E. 101 — Physical Education	0	Math. 112 — Analysis II	4
P.E. 105 — Hygiene	1	P.E. 102 — Physical Education	0
	<hr/>	P.E. 106 — Hygiene	1
	17		<hr/>
			17-18
THIRD SEMESTER		FOURTH SEMESTER	
Eng. 151 — World Literature	3	Eng. 152 — World Literature	3
For. Lang. 103 — Intermediate Elective ³	3	For. Lang. 104 — Intermediate	3
Science Elective	3-4	Math. 222 — Set Theory and Logic	3-4
Math. 211 — Intermediate Analysis I	4	Science Elective ³	3-4
P.E. 103 — Physical Education	0	Math. 212 — Intermediate Analysis II	4
	<hr/>	P.E. 104 — Physical Education	0
	16-17		<hr/>
			16-17
FIFTH SEMESTER		SIXTH SEMESTER	
Hist. 101 — World Civilization	3	Hist. 102 — World Civilization	3
Social Science Elective ²	3	Social Science Elective ²	3
Electives ⁴	9-12	Electives ⁴	9-12
	<hr/>		<hr/>
	15-18		15-18
SEVENTH SEMESTER		EIGHTH SEMESTER	
Electives ⁴	15-18	Electives ⁴	15-18

A minimum of 126 credits is required for this program.

¹ Must be one of these: F.A. 101 — Experiencing Art I, Mus. 101 — Introduction, or Th. Arts 101 — Approach to Theater.

² Must elect two out of the four sequences: Ec., Psy., Soc., P.S. 101-102. Prospective elementary or secondary teachers must elect Psy. 101-102 in their freshman year.

³ Prospective elementary or secondary school teachers must elect Ed. 201—Introduction. Others should elect Phil. 101 — Introduction.

⁴ These electives must include: (a) Math. 311-312, 331, 334 and at least two other mathematics courses numbered above 222; (b) Phil. 101 if the student has elected Ed. 201 in the third semester; (c) for prospective secondary school teachers, Ed. 202 in the junior year; (d) for prospective elementary school teachers, Ed. 202 in the fifth semester and Ed. 299 in the sixth semester.

⁵ Any three courses in physical or natural science, at least two of which must be from the same department.

Music¹

Students who major in music are required to complete the following program of studies in addition to the general requirements for the B. A. degree. Students interested in careers in music education should follow the program described in the Bachelor of Science in Music Education. This program is described on page 118 of this bulletin. The following are the course requirements for the music major.

FIRST SEMESTER		SECOND SEMESTER	
Math., Science Elective (see pg. 82)	3	Math., Science Elective (see pg. 82)	3
Eng. 101 — Composition	3	Eng. 102 — Composition	3
For. Lang. 101 — Elementary	3	For. Lang. 102 — Elementary	3
Mus. 105 — Theory of Music	5	Mus. 106 — Theory of Music	5
Applied Music ²	1	Applied Music ²	1
Band, Orchestra, Chorus	1/2	Band, Orchestra, Chorus	1/2
P. E. 101 — Physical Education	0	P. E. 102 — Physical Education	0
P. E. 105 — Hygiene	1	P. E. 106 — Hygiene	1
	<hr/>		<hr/>
	16 1/2		16 1/2
THIRD SEMESTER		FOURTH SEMESTER	
For. Lang. 203 — Intermediate	3	For. Lang. 204 — Intermediate	3
Mus. 107 — Theory of Music	5	Mus. 108 — Theory of Music	5
Applied Music ²	1	Applied Music ²	1
Psy. 101 — Psychology	3	Psy. 102 — Psychology	3
Hist. 101 — World Civilization	3	Hist. 102 — World Civilization	3
Math., Science Elective (see pg. 82)	3	Math., Science Elective (see pg. 82)	3
Band, Orchestra, Chorus	1/2	Band, Orchestra, Chorus	1/2
P. E. 103 — Physical Education	0	P. E. 104 — Physical Education	0
	<hr/>		<hr/>
	18 1/2		18 1/2
FIFTH SEMESTER		SIXTH SEMESTER	
Eng. 151 — World Literature	3	Eng. 152 — World Literature	3
Phil. 101 — Introduction	3	Phil. 230 — Aesthetics	3
Mus. 109 — History of Music	3	Mus. 110 — History of Music	3
Applied Music ²	2	Applied Music ²	2
Soc. 101 — Sociology	3	Soc. 102 — Sociology	3
Band, Orchestra, Chorus	1/2	Band, Orchestra, Chorus	1/2
	<hr/>		<hr/>
	14 1/2		14 1/2
SEVENTH SEMESTER		EIGHTH SEMESTER	
Applied Music ²	2	Applied Music ²	2
Mus. 215 — Instrumentation	2	Mus. 216 — Arranging	2
Mus. 217 — Analysis	2	Mus. 218 — Counterpoint	3
Band, Orchestra, Chorus	1/2	Band, Orchestra, Chorus	1/2
Electives	9	Electives	9
	<hr/>		<hr/>
	15 1/2		16 1/2

¹ There is a music fee of \$10 per semester for all music and music education majors.

² Private instruction. The fee for this instruction is in addition to the regular tuition charge.

Philosophy—Religious Studies

A major in the combined fields of philosophy and religious studies consists of twenty-four hours in philosophy and religious studies courses beyond Philosophy 101 and 102. At least eighteen of the twenty-four hours must be taken in Philosophy. Philosophy-Religious Studies majors must schedule courses in Philosophy and Religious Studies in their sophomore year.

Physics

This B.A. curriculum in physics is designed for the student interested in a major in physics in preparation for a career in teaching, medicine, dentistry, patent law, technical sales, technical translation, technical writing, etc. The student will choose electives after consultation with his adviser.

The B.S. curriculum on page 122 is recommended for the student interested in a professional career in physics.

Students intending to major in Physics should have at least three years of college preparatory mathematics courses (including algebra II, geometry, and topics in trigonometry) so as to be prepared to take Math. II (Calculus) in the first term of the freshman year. Experience has shown that the student who does not have such a background will usually require additional pre-college mathematics courses. He may take, preferably in the summer preceding entrance, Math. 100 (algebra and trigonometry), offered at Wilkes, or with the approval of the mathematics department, take an equivalent course at another college or university. Credits in such remedial courses will not exempt the student from any required elective in this program.

Normally students will begin the physics program in the first semester. In exceptional cases the mathematics and physics sequence may be started in the third semester. The preferred sequence is listed on page 99.

FIRST SEMESTER

Math. 111 — Analysis I	4
Eng. 101 — Composition	3
Hist. 101 — World Civilization	3
Phys. 201 — General Physics I	4
P.E. 105 — Personal Hygiene	1
P.E. 101 — Physical Education	0
	<hr/>
	15

THIRD SEMESTER

Math. 211 — Intermediate Analysis I	4
Phys. 203 — General Physics III	3
For. Lang. 101 — Elementary	3
P.E. 103 — Physical Education	0
Chem. 201 — Introduction to Principles of Chemistry	4
F.A. 101 — Experiencing Art I or Mus. 101 — Introduction or Th. Arts 101 — Approach to Theater	3
	<hr/>
	17

FIFTH SEMESTER

Phys. 331 — Electricity & Magnetism	4
For. Lang. 203 — Intermediate	3
Phys. 311 — Mechanics	3
Eng. 151 — World Literature	3
Elective	3
	<hr/>
	16

SEVENTH SEMESTER

Phil. 101 — Introduction	3
Electives	13
	<hr/>
	16

SECOND SEMESTER

Math. 112 — Analysis II	4
Eng. 102 — Composition	3
Hist. 102 — World Civilization	3
Phys. 202 — General Physics II	4
P.E. 106 — Personal Hygiene	1
P.E. 102 — Physical Education	0
	<hr/>
	15

FOURTH SEMESTER

Math. 212 — Intermediate Analysis II	4
For. Lang. 102 — Elementary	3
Chem. 202 — Chemical Equilibria	4
P.E. 104 — Physical Education	0
Electives	6-7
	<hr/>
	17-18

SIXTH SEMESTER

For. Lang. 204 — Intermediate	3
Eng. 152 — World Literature	3
Electives	9-10
	<hr/>
	15-16

EIGHTH SEMESTER

Phil. 102 — Logic	3
Electives	13
	<hr/>
	16

The student must choose at least six credits from the following list in addition to those prescribed in the curriculum:

Physics 230 (4)	Physics 332 (4)
Physics 231 (3)	Physics 361 (4)
Physics 240 (3)	Physics 380 (4)
Physics 312 (3)	Physics 391-392 (1-2)

A student electing the minimum of 24 credits in physics must elect an additional four credits in chemistry.

The student must choose 12 credits from the following course combinations: Economics 101 and 102 or Psychology 101 and 102; Political Science 101 and 102 or Sociology 101 and 102.

Political Science

A major in political science consists of twenty-four hours. Political Science 101 and 102 are not accepted toward a major.

Psychology

Psychology 101 and 102 is the starting point for the psychology program and must be taken by all psychology majors. These two courses do not count toward the 24-credit hours of psychology required of majors. In addition to the general requirements for the B.A. degree, the department requires that the two-semester courses in mathematics, general biology, physics (or environmental science) be taken. English 131 or 132 or Theater Arts 131 is also required. It is recommended that psychology majors defer beginning their mathematics and science courses until the Sophomore year and that they take Psychology 101 and 102 in the Freshman year.

To allow the greatest possible flexibility in the psychology program, there is only one additional psychology course required of all psychology majors once the Psychology 101 and 102 sequence has been taken, that being Psychology 215, Research Design and Analysis. The student is then free to tailor his program of study to fit his own needs and interests. It is strongly recommended, however, that the student take Psychology 211 and 212, Experimental Psychology, especially if he has any intention of pursuing graduate training. Students are reminded that professional psychological work presumes advanced graduate study. Psychology 206, History of Psychology, would be useful to the student so that he might appreciate the breadth and nature of psychological thought and effort.

It would be highly desirable for the student to take *at least* one course from each of the interest areas listed below to achieve a reasonably balanced exposure. Because some courses have prerequisites and all courses are not offered each semester, it is advised that the individual program be started early and be well planned. Research Design and Analysis would then be taken in the sophomore year along with History of Psychology and/or Contemporary Psychological Theories. Experimental Psychology and interest area courses would then be reserved for the Junior year, saving Seminars and Independent Research for the final semesters.

Required Courses: Psy. 101-102 General Psychology
Psy. 215 Research Design and Analysis

- Strongly Advised: Psy. 211-212 Experimental Psychology
Psy. 206 History of Psychology
- Interest Areas: I: Psy. 203 Contemporary Psychological Theories
Psy. 213 Physiological Psychology
Psy. 214 Sensation and Perception
- II: Psy. 242 Psychological Tests
Psy. 243 Industrial Psychology
Ed. 202 Educational Psychology*
Soc. 255 Social Psychology*
- III: Psy. 221 Child Psychology
Psy. 232 Human Behavior
Psy. 245 Clinical Psychology
Psy. 331 Abnormal Psychology

*While not given within the Department of Psychology, these courses may still be counted toward the 24-credit hours required of the psychology major.

Sociology — Anthropology

A major in sociology consists of twenty-four hours. Although Sociology 101, 102 are prerequisites to all the courses in sociology, they are not accepted toward a major in sociology. Political Science 204 and Philosophy 240 will be accepted toward the major in sociology. Students who intend to major in sociology are requested to plan their work in the department in consultation with the chairman. A major in sociology shall include the following courses: Sociology 255, 280, and 393. With the approval of the department chairman, however, other courses may in some instances be substituted.

Social Science -- Urban Affairs

The Social Science degree with a major in urban affairs is designed to provide an interdisciplinary training for those students who wish to enter careers in governmental or non-governmental agencies concerned with the general phenomenon of urbanization at the national, state, or local level. Students who complete academic work in this program can continue graduate study either in the traditional academic disciplines or in interdepartmental programs.

The Social Science major in urban affairs consists of 39 semester hours in political science, economics, and sociology, with a minimum of 12 semester hours in each. Economics 236, Political Science 251, and Sociology 215 are required. Political Science 101 and 102, Economics 101 and 102, and Sociology 101 and 102 are not accepted toward the major.

Students who intend to pursue this program should consult with the director of the Institute of Regional Affairs.

76-135954

Course Requirements for B.S. Degree Programs Biology¹

The following curriculum in biology meets all of the liberal arts requirements for the Bachelor of Arts degree. In addition, it provides a greater concentration of advanced biology courses. This program is recommended for those students planning to enter industry or continue with graduate study in biology their studies in the life sciences.

Students intending to major in biology should have at least three years of college preparatory mathematics courses (including algebra II, geometry, and topics in trigonometry) so as to be prepared to take Math. 105 (Calculus) in the first term of the freshman year. Experience has shown that the student who does not have such a background will usually require additional pre-college mathematics courses. He may take, preferably in the summer preceding entrance, Math. 100 (algebra and trigonometry) offered at Wilkes, or with the approval of the mathematics department, take an equivalent course at another college or university. Credits in such remedial courses will not exempt the student from any required elective in his program.

FIRST SEMESTER		SECOND SEMESTER	
Bio. 201M — Principles of Modern Biology	2½	Bio. 203M — Embryology	2½
Bio. 202M — Chordate Anatomy	2½	Bio. 204M — Histology	2½
Chem. 201 — Principles of Chemistry	4	Chem. 202 — Chemical Equilibria	4
Eng. 101 — Composition	3	Eng. 102 — Composition	3
Math. 105 — Introductory Calculus I	4	Math. 106 — Introductory Calculus II	4
P.E. 101 — Physical Education	0	P.E. 102 — Physical Education	0
P.E. 105 — Hygiene	1	P.E. 106 — Hygiene	1
	<hr/>		<hr/>
	17		17
THIRD SEMESTER		FOURTH SEMESTER	
Bio. 205M — Genetics	2½	Bio. 207M — Comparative Physiology	2½
Bio. 206M — General Physiology	2½	Bio. 208M — Ecology	2½
Chem. 232 — Organic Chemistry	4	Chem. 235 — Organic Chemistry IIa	4
Eng. 151 — Western World Literature	3	Eng. 152 — Western World Literature	3
Hist. 101 — History of World Civilization	3	For. Lang. 102 — Elementary	3
For. Lang. 101 — Elementary	3	Hist. 102 — History of World Civilization	3
P.E. 103 — Physical Education	0	P.E. 104 — Physical Education	0
	<hr/>		<hr/>
	18		18
FIFTH SEMESTER		SIXTH SEMESTER	
Biology electives ²	6	Biology electives ³	6
Phys. 105 — Introduction	4	Phys. 106 — Introduction	4
For. Lang. 203 — Intermediate	3	For. Lang. 204 — Intermediate	3
Chem. 221 — Inorganic Quantitative Analysis	4	F.A. 101 — Experiencing Art I	3
	<hr/>		<hr/>
	17		16
SEVENTH SEMESTER		EIGHTH SEMESTER	
Bio. 397 — Seminar	½	Bio. 397 — Seminar	½
Bio. elective ² or Research	3	Bio. elective ³ or Research	3
Phil. 101 — Introduction	0	Phil. 102 — Logic and Scientific Method	3
Ec., P.S., Psy., Soc. (101-102) electives	3	Ec., P.S., Psy., Soc. (101-102) electives	3
Free electives	6	Free electives	6
	3-6		0-3
	<hr/>		<hr/>
	15½-18½		15½-18½

¹This degree meets the same general requirements as listed for B.A. Degree, page 82.

²Biology 301, 303, 305, 307.

³Biology 302, 304, 306, 308.

Chemistry

The chemistry curriculum is planned to provide thorough training in the fundamentals of the science and to contribute to the general education of the student. Graduates in chemistry may enter industry immediately upon graduation or may continue their studies in graduate school.

Students intending to major in Chemistry should have at least three years of college preparatory mathematics courses (including algebra II, geometry, and topics in trigonometry) so as to be prepared to take Math. III (Calculus) in the first term of the freshman year. Experience has shown that the student who does not have such a background will usually require additional pre-college mathematics courses. He may take, preferably in the summer preceding entrance, Math. 100 (algebra and trigonometry) offered at Wilkes, or with the approval of the mathematics department, take an equivalent course at another college or university. Credits in such remedial courses will not exempt the student from any required elective in this program.

Wilkes is approved by the American Chemical Society for the professional training of chemists. Students who wish to be certified for membership in the American Chemical Society in the minimum period of two years following graduation must elect Chemistry 411 in the senior year of the B.S. course of study.

Chemistry

FIRST SEMESTER

Chem. 201 — Introduction to the Principles of Chemistry	4
Eng. 101 — Composition	3
Hist. 101 — World Civilization	3
Math. 111 — Analysis I	4
P.E. 101 — Physical Education	0
P.E. 105 — Hygiene	1
	<hr/>
	15

THIRD SEMESTER

Chem. 232 — Organic Chemistry	4
For. Lang. 101 — Elementary	3
Math. 211 — Intermediate Analysis I	4
Phys. 201 — General Physics I	4
P.E. 103 — Physical Education	0
	<hr/>
	15

FIFTH SEMESTER

Chem. 221 — Inorganic Quantitative Analysis	4
Chem. 341 — Elementary Physical Chemistry	4
Eng. 151 — World Literature	3
For. Lang. 203 — Intermediate	3
Phys. 203 — General Physics III	3
	<hr/>
	18

SEVENTH SEMESTER

Chem. 395 — Research	3
Chem. 261 — History of Chemistry	1
Chem. 397 — Seminar	1
Electives ¹	12-14
	<hr/>
	17-19

SECOND SEMESTER

Chem. 202 — Chemical Equilibria	4
Eng. 102 — Composition	3
Hist. 102 — World Civilization	3
Math. 112 — Analysis II	4
P.E. 102 — Physical Education	0
P.E. 106 — Hygiene	1
	<hr/>
	15

FOURTH SEMESTER

Chem. 212 — Inorganic Chemistry	4
Chem. 235 — Organic Chemistry	4
For. Lang. 102 — Elementary	3
Math. 212 — Intermediate Analysis II	4
Phys. 202 — General Physics II	4
P.E. 104 — Physical Education	0
	<hr/>
	19

SIXTH SEMESTER

Chem. 334 — Organic Qualitative Analysis	3
Chem. 342 — Intermediate Physical Chemistry	4
Chem. 262 — Chemical Literature	2
Eng. 152 — World Literature	3
For. Lang. 204 — Intermediate Elective ¹	3
	<hr/>
	15-18

EIGHTH SEMESTER

Chem. 376 — Advanced Analytical Chemistry	4
Chem. 397 — Seminar	1
Electives ¹	11-12
	<hr/>
	16-17

¹Electives must include two philosophy courses, Mus. 101 or F.A. 101 or Th. Arts 101, at least one advanced chemistry course in Semester 7 and/or Semester 8, and one of the following: P.S. 101-102, Psy. 101-102, or Soc. 101-102.

Commerce and Finance

MAJOR IN ACCOUNTING

FIRST SEMESTER		SECOND SEMESTER	
Acct. 101 — Elementary I	3	Acct. 102 — Elementary II	3
Eng. 101 — Composition	3	Eng. 102 — Composition	3
Hist. 101 — World Civilization	3	Hist. 102 — World Civilization	3
Ec. 111 — Economic History	3	F. A. 101 — Experiencing Art I or	
Math. 100 — Pre-calculus Mathematics	4	Mus. 101 — Introduction or	
or Math. 105 — Introductory		Th. Arts 101 — Approach to	
Calculus I	4	Theater	3
P. E. 101 — Physical Education	0	B.A. 115 — Mathematics of Business	3
P. E. 105 — Hygiene	1	and Finance	
		or Math. 106 — Introductory	
		Calculus II	4
		P. E. 102 — Physical Education	0
		P. E. 106 — Hygiene	1
	17		16
THIRD SEMESTER		FOURTH SEMESTER	
Acct. 111 — Intermediate I	3	Acct. 112 — Intermediate II	3
B. A. 231 — Business Law	3	B. A. 232 — Business Law	3
Ec. 101 — Principles I	3	Ec. 102 — Principles II	3
Eng. 151 — World Literature	3	Eng. 152 — World Literature	3
Bio. 101 — Biological Science or		Bio. 102 — Biological Science or	
Phys. 101 — Physical Science or		Phys. 102 — Physical Science or	
Env. Sci. 101 — Earth Science	3	Env. Sci. 282 — Space Science	3
Eng. 131 — Fundamentals of Speech	2	P. E. 104 — Physical Education	0
P. E. 103 — Physical Education	0		
	17		17
FIFTH SEMESTER		SIXTH SEMESTER	
Acct. 201 — Cost Accounting I	3	Acct. 202 — Cost Accounting II	3
Ec. 201 — Money & Banking	3	Acct. 242 — Advanced	3
Ec. 231 — Applied Statistics	3	B.A. 234 — Business Law	3
Soc. 101 — Sociology or		Ec. 232 — Economic Statistics	3
P. S. 101 — Political Science I	3	Soc. 102 — Sociology or	
Phil. 101 — Introduction	3	P. S. 102 — Political Science II	3
Elective ¹	3	Elective ¹	3
	18		18
SEVENTH SEMESTER		EIGHTH SEMESTER	
Acct. 221 — Taxes I	3	Acct. 232 — Auditing II	3
Acct. 231 — Auditing I	3	Acct. 252 — Internship	3
B. A. 209 — Correspondence & Reports	3	Ec. 202 — Theory of Money or	
B. A. 225 — Corporation Finance	3	Ec. 236 — Public Finance	3
B. A. 251 — Principles of		Ec. 228 — Economic Geography	3
Management I	3	Elective ¹	3
Elective ¹	3		
	18		15

¹ Students intending to sit for the New York State C.P.A. examinations should elect subjects in the humanities. All students should choose electives from outside the major field.

Commerce and Finance

MAJOR IN BUSINESS ADMINISTRATION

FIRST SEMESTER		SECOND SEMESTER	
Acct. 101 — Elementary I	3	Acct. 102 — Elementary II	3
Ec. 111 — Economic History	3	F. A. 101 — Experiencing Art I or	
Eng. 101 — Composition	3	Mus. 101 — Introduction or	
Hist. 101 — World Civilization	3	Th. Arts 101 — Approach to	
Bio. 101 — Biological Science or		Theater	3
Phys. 101 — Physical Science or		Eng. 102 — Composition	3
Env. Sci. 101 — Earth Science	3	Eng. 131 — Fundamentals of Speech	2
P. E. 101 — Physical Education	0	Hist. 102 — World Civilization	3
P. E. 105 — Hygiene	1	Bio. 102 — Biological Science or	
		Phys. 102 — Physical Science or	
		Env. Sci. 282 — Space Science	3
		P. E. 102 — Physical Education	0
		P. E. 106 — Hygiene	1
	16		18
THIRD SEMESTER		FOURTH SEMESTER	
B. A. 231 — Business Law	3	B. A. 232 — Business Law	3
Ec. 101 — Principles I	3	Ec. 102 — Principles II	3
Eng. 151 — World Literature	3	Eng. 152 — World Literature	3
Math. 100 — Pre-calculus Mathematics	4	B.A. 115 — Mathematics of Business	
or Math 101 — Fundamentals		and Finance	
or Math. 105 — Introductory		or Math. 102 — Fundamentals	
Calculus I	4	or Math. 106 — Introductory	
P. S. 101 — Political Science I or		Calculus II	4
Soc. 101 — Sociology	3	P. S. 102 — Political Science II or	
P. E. 103 — Physical Education	0	Soc. 102 — Sociology	3
		P. E. 104 — Physical Education	0
	16		15
FIFTH SEMESTER		SIXTH SEMESTER	
B. A. 251 — Principles of Management	3	B. A. 252 — Principles of	
Ec. 201 — Money & Banking	3	Management II	3
Ec. 231 — Applied Statistics	3	Ec. 202 — Theory of Money or	
Phil. 101 — Introduction	3	Ec. 228 — Economic Geography or	
Electives	6	C and F elective	3
		Ec. 232 — Economic Statistics	3
		Phil. 102 — Logic	3
		B. A. 222 — Marketing	3
		Elective	3
	18		18
SEVENTH SEMESTER		EIGHTH SEMESTER	
B. A. 209 — Correspondence & Reports	3	B. A. & Ec. electives	12
B. A. & Ec. electives	12	Elective	3
Elective	3		
	18		15

EUGENE SIEDDEN FARLEY LIBRARY

Students who major in business administration will select their electives from the following. At least six courses in one of these groups are required of students concentrating in this field.

BANKING AND FINANCE

- | | |
|---------------------------------|---------------------------------------|
| B. A. 220 — Real Estate | Math. 105 — Introductory Calculus I & |
| B. A. 225 — Corporation Finance | Math. 106 — Introductory Calculus II |
| B. A. 226 — Investments | Math. 261 — Introduction to |
| Ec. 202 — Theory of Money | Computer Science |
| Ec. 225 — International Trade | Math. 264 — Cobol Programming |
| Ec. 236 — Public Finance | |
| Ec. 241 — Economic Analysis | |
| Ec. 252 — Introduction to | |
| Mathematical Economics | |

ECONOMICS

- | | |
|---------------------------------------|---------------------------------------|
| Ec. 212 — Government & Business | Ec. 229 — Comparative Economic |
| Ec. 217 — Economics of Transportation | Systems |
| Ec. 222 — American Labor Movement | Ec. 230 — Business Cycles |
| Ec. 223 — Collective Bargaining | Ec. 236 — Public Finance |
| Ec. 224 — Economic Development | Ec. 241 — Economic Analysis |
| Ec. 225 — International Trade | Ec. 245 — Consumer Economics |
| Ec. 227 — Economic Geography of | Ec. 252 — Introduction to |
| North America, Europe and | Mathematical Economics |
| the Soviet Union | Ec. 395-396 — Research |
| Ec. 228 — Economic Geography of | Math. 105 — Introductory Calculus I & |
| Asia, Africa and Latin America | Math. 106 — Introductory Calculus II |
| | Math. 261 — Introduction to |
| | Computer Science |
| | Math. 264 — Cobol Programming |

MANAGEMENT AND INDUSTRIAL RELATIONS

- | | |
|-----------------------------------|---------------------------------------|
| Ec. 222 — American Labor Movement | Math. 105 — Introductory Calculus I & |
| Ec. 223 — Collective Bargaining | Math. 106 — Introductory Calculus II |
| B.A. 240 — Property Insurance or | Math. 261 — Introduction to |
| B.A. 241 — Life Insurance | Computer Science |
| Psy. 242 — Psychological Tests or | Math. 264 — Cobol Programming |
| Psy. 243 — Industrial Psychology | Soc. 265 — Sociology of Industry |
| | P.S. 208 — Labor Legislation |

MARKETING

- | | |
|---------------------------------------|--------------------------------------|
| B. A. 114 — Salesmanship | Math. 106 — Introductory Calculus II |
| B. A. 216 — Advertising | Math. 261 — Introduction to |
| B. A. 240 — Property Insurance | Computer Science |
| Ec. 217 — Economics of Transportation | Math. 264 — Cobol Programming |
| Ec. 224 — Economic Development | Ret. 101 — Principles of Retailing |
| Ec. 225 — International Trade | Ret. 214 — Retail Buying |
| Ec. 245 — Consumer Economics | Soc. 265 — Sociology of Industry |
| Math. 105 — Introductory Calculus I & | Psy. 243 — Industrial Psychology |

MAJOR IN BUSINESS EDUCATION

The degree of Bachelor of Science in business education is designed to provide a background in general education while it prepares the student for teaching business subjects in secondary schools or for a career in business.

A student planning to enter as a freshman may find it advantageous, at first, to consider a two-year program leading to a certificate in general office or secretarial proficiency. This two-year program provides a foundation for general secretarial preparation, or prepares for later specialization in the four-year major in business education.

FIRST SEMESTER

- | | |
|--|-------|
| Bus. Ed. 105 ¹ — Elementary Shorthand | 2 |
| or Acct. 101 — Elementary I | 3 |
| Bus. Ed. 107 — Elementary | |
| Typewriting | 2 |
| Eng. 131 — Fundamentals of Speech | 2 |
| Bio. 101 — Biological Science or | |
| Phys. 101 — Physical Science or | |
| Env. Sci. 101 — Earth Science | 3 |
| Eng. 101 — Composition | 3 |
| Hist. 101 — World Civilization | 3 |
| P. E. 101 — Physical Education | 0 |
| P. E. 105 — Hygiene | 1 |
| | <hr/> |
| | 16-17 |

SECOND SEMESTER

- | | |
|--|-------|
| Bus. Ed. 106 ¹ — Intermediate | 2 |
| Shorthand | |
| or Acct. 102 — Elementary II | 3 |
| Bus. Ed. 108 — Intermediate | |
| Typewriting | 2 |
| Eng. 102 — Composition | 3 |
| B.A. 115 — Mathematics of Business | |
| and Finance | 3 |
| Bio. 102 — Biological Science or | |
| Phys. 102 — Physical Science or | |
| Env. Sci. 282 — Space Science | 3 |
| Hist. 102 — World Civilization | 3 |
| P. E. 102 — Physical Education | 0 |
| P. E. 106 — Hygiene | 1 |
| | <hr/> |
| | 17-18 |

THIRD SEMESTER

- | | |
|--------------------------------------|-------|
| Bus. Ed. 207 — Advanced Shorthand I | |
| or Acct. III — Intermediate I | 3 |
| Bus. Ed. 201 ² — Advanced | |
| Typewriting I | 1 |
| Acct. 101 — Elementary I | |
| or Ret. 101 — Principles | 3 |
| B. A. 231 — Business Law | 3 |
| Psy. 101 — Psychology | 3 |
| Ec. 101 ³ — Principles I | 3-4 |
| P. E. 103 — Physical Education | 0 |
| | <hr/> |
| | 15-17 |

FOURTH SEMESTER

- | | |
|--------------------------------------|-------|
| Bus. Ed. 208 — Advanced | |
| Shorthand II | |
| or Acct. 112 — Intermediate II | 3 |
| Bus. Ed. 202 ² — Advanced | |
| Typewriting II | 1 |
| Acct. 102 — Elementary II | |
| or Retailing Elective | 3 |
| Psy. 102 — Psychology | 3 |
| P. E. 104 — Physical Education | 0 |
| Ec. 102 ³ — Principles II | 3 |
| B. A. 232 — Business Law | 3 |
| | <hr/> |
| | 15-16 |

¹It is required that any Business Education major, regardless of sequence, shall have at least two semesters in Accounting.

²Students following accounting sequence need not take third and fourth semesters of typewriting.

³Two-year program students take Bus. Ed. 205 in semester 3 and Ec. 101 in semester 4.

FIFTH SEMESTER	
Acct. 111 — Intermediate I or Ret. 101 — Principles or Elective ¹	3
Soc. 101 — Sociology or P.S. 101 — Political Science I	3
Eng. 151 — World Literature	3
Ed. 201 — Introduction to Education	3
B.A. 251 — Principles of Management I	3
	<hr/> 15
SEVENTH SEMESTER	
Bus. Ed. 243 — Principles and Methods of Business Education ²	3
Bus. Ed. 205 — Office Procedures and Machines	4
Phil. 101 — Introduction	3
Mus. 101 — Introduction or F. A. 101 — Experiencing Art I or Th. Arts 101 — App. to Theater	3
B. A. 209 — Business Correspondence & Reports	3
	<hr/> 16

SIXTH SEMESTER	
Acct. 112 — Intermediate II or Retailing Elective ¹	3
Soc. 102 — Sociology or P.S. 102 — Political Science II	3
Eng. 152 — World Literature	3
Ed. 202 — Educational Psychology	3
B.A. 252 — Principles of Management II	3
	<hr/> 15
EIGHTH SEMESTER	
Ed. 330 — Secondary Education Elective	12 3
	<hr/> 15

Engineering

Wilkes College offers four-year programs in electrical engineering and in materials engineering leading to the Bachelor of Science degree. In addition the first two years of programs in civil engineering, chemical engineering, and mechanical engineering are offered. Upon completion of the second year, students in any of these programs may transfer to the junior year at other engineering schools.

The first year of all curricula in engineering is the same. The second year will vary depending upon the student's choice of major engineering interest.

Students intending to major in engineering should have at least three years of college preparatory mathematics courses (including algebra II, geometry, and topics in trigonometry) so as to be prepared to take Math. II (calculus) in the first term of the freshman year. Experience has shown that the student who does not have such a background will usually require additional pre-college mathematics courses. He may take, preferably in the summer preceding entrance, Math. 100 (algebra and trigonometry) offered at Wilkes, or with the approval of the mathematics department, take an equivalent course at another college or university. Credits in such remedial courses will not exempt the student from any required elective in this program.

¹ Students who have already met required accounting and retailing courses would elect one course in both the fifth and sixth semesters, preferably one of the two should be in retailing to meet requirement for certification in retailing.

² Offered every other year.

Engineering

FRESHMAN YEAR COMMON TO ALL ENGINEERING PROGRAMS

FIRST SEMESTER		SECOND SEMESTER	
Math. 111 — Analysis I	4	Math. 112 — Analysis II	4
Chem. 201 — Introduction to the Principles of Chemistry	4	Chem. 202 — Chemical Equilibria	4
Eng. 101 — Composition	3	Phys. 201 — General Physics I	4
Engi. 111 — Introduction to Engineering	3	Eng. 102 — Composition	3
Liberal Arts Elective	3	Engi. 112 — Engineering Graphics	3
P.E. 105 — Hygiene	1	P.E. 106 — Hygiene	1
P.E. 101 — Physical Education	0	P.E. 102 — Physical Education	0
	<hr/> 18		<hr/> 19

ELECTRICAL ENGINEERING

Second, third, and fourth year requirements leading to a B.S. degree in electrical engineering.

THIRD SEMESTER		FOURTH SEMESTER	
Math. 211 — Intermediate Analysis I	4	Math. 212 — Intermediate Analysis II	4
Phys. 202 — General Physics II	4	Phys. 203 — General Physics III	3
E.E. 211 — Circuit Theory I	3	E.E. 212 — Circuit Theory II	4
Engi. 211 — Mechanics I. Statics	3	Engi. 212 — Mechanics II. Dynamics	3
Math. 263 — Fortran Programming	3	Ma.E. 202 — Materials Science	3
	<hr/> 17	Eng. 131 — Speech	2
			<hr/> 18
FIFTH SEMESTER		SIXTH SEMESTER	
E.E. 331 — Electromagnetic Fields I	4	E.E. 332 — Electromagnetic Fields II	4
E.E. 251 — Electronic Circuits I	4	E.E. 252 — Electronic Circuits II	4
Math., Science or Engi. Electives	3	Math., Science or Engi. Electives	3
Liberal Arts Elective ¹	6	Liberal Arts Elective ¹	6
	<hr/> 17		<hr/> 17
SEVENTH SEMESTER		EIGHTH SEMESTER	
E.E. 335 — Energy Transmission and Radiation	3	E.E. 320 — Electromechanical Energy Conversion	4
E.E. 381 — Advanced Engineering Laboratory I	4	E.E. 382 — Advanced Engineering Laboratory II	4
Engi. 397 — Seminar	1	Engi. 397 — Seminar	1
Engineering or Science Elective	3	Engineering or Science Elective	3
Liberal Arts Electives ¹	6	Liberal Arts Electives ¹	6
	<hr/> 17		<hr/> 18

¹ English 151, 152 (Western World Literature) is a required elective.

MATERIALS ENGINEERING

Second, third, and fourth year requirements leading to a B.S. degree in materials engineering.¹

THIRD SEMESTER

Math. 211 — Intermediate Analysis I	4
Phys. 202 — General Physics II	4
E.E. 211 — Circuit Theory I	3
Engi. 211 — Mechanics I. Statics	3
Ec. 101 — Principles of Economics	3

17

FOURTH SEMESTER

Math. 212 — Intermediate Analysis II	4
Phys. 203 — General Physics III	3
Engi. 212 — Mechanics II. Dynamics	3
Ma.E. 202 — Materials Science	3
Eng. 131 — Speech	2
Liberal Arts Elective	3

18

FIFTH SEMESTER

E.E. 331 — Electromagnetic Fields I	4
E.E. 251 — Electronic Circuits I	4
Ma.E. 211 — Crystallography	3
Chem. 341 — Elementary Physical Chemistry	4
Math., Engi., or Science Elective	3

18

SIXTH SEMESTER

Ma.E. 212 — X-Ray Diffraction	4
Ma.E. 242 — Physical Metallurgy	3
Chem. 342 — Intermediate Physical Chemistry	4
Liberal Arts Elective	3
Math., Engi., or Science Elective	4

18

SEVENTH SEMESTER

Ma.E. 321 — Phase Equilibria	3
Ma.E. 331 — Crystalline Anisotropy	3
Chem. 221 — Inorganic Quantitative Analysis	4
Liberal Arts Elective ²	3
Engi. or Science Elective	3

16

EIGHTH SEMESTER

Ma.E. 322 — Crystal Growth and Defects	4
Ma.E. 382 — Materials Engineering Instrumentation Laboratory	3
Liberal Arts Electives ²	6
Engi. or Science Electives	6

19

¹ For Freshman year see page 111.

² English 151, 152 (Western World Literature) is a required elective.

CIVIL ENGINEERING

Second year requirements for the two-year civil engineering program.¹

THIRD SEMESTER

Math. 211 — Intermediate Analysis I	4
Phys. 202 — General Physics II	4
Engi. 211 — Mechanics I. Statics	3
C.E. 103 — Plane Surveying	3
Liberal Arts Elective	3

17

FOURTH SEMESTER

Math. 212 — Intermediate Analysis II	4
Phys. 203 — General Physics III	3
Engi. 212 — Mechanics II. Dynamics	3
C.E. 104 — Route Surveying	4
Ma.E. 202 — Materials Science	3

17

CHEMICAL ENGINEERING

Second year requirements for the two-year chemical engineering program.¹

THIRD SEMESTER

Math. 211 — Intermediate Analysis I	4
Phys. 202 — General Physics II	4
Engi. 211 — Mechanics I. Statics	3
Chem. 221 — Inorganic Quantitative Analysis	4
Liberal Arts Elective	3

18

FOURTH SEMESTER

Math. 212 — Intermediate Analysis II	4
Phys. 203 — General Physics III	3
Engi. 212 — Mechanics II. Dynamics	3
Chem. 232 — Organic Chemistry I	4
Ma.E. 202 — Materials Science	3

17

MECHANICAL ENGINEERING

Second year requirements for the two-year mechanical engineering program.¹

THIRD SEMESTER

Math. 211 — Intermediate Analysis I	4
Phys. 202 — General Physics II	4
Engi. 211 — Mechanics I. Statics	3
E.E. 211 — Circuit Theory I	3
Liberal Arts Elective	3

17

FOURTH SEMESTER

Math. 212 — Intermediate Analysis II	4
Phys. 203 — General Physics III	3
Engi. 212 — Mechanics II. Dynamics	3
Liberal Arts Elective	3
Ma.E. 202 — Materials Science	3

16

¹ For Freshman year see page 111.

Environmental Sciences

A four-year degree program has been authorized and will be implemented during the 1973-74 academic year.

Mathematics

The B.S. curriculum provides for a greater concentration of advanced mathematics courses and enables students to take more physical science electives than is possible in the B.A. program.

It is highly recommended that prospective mathematics majors elect French, German, or Russian in secondary school. As a rule, three years of one of these languages is more desirable than two years or less of each of two different languages. Spanish is not acceptable toward fulfillment of the language requirement in this program.

The Department of Mathematics offers courses of study leading to the B.A., B.S., M.S. in Mathematics Education, and the M.S. in Mathematics degrees. Descriptions of the graduate programs are contained in a separate graduate bulletin.

The baccalaureate programs are designed to provide a firm background for graduate studies in pure and applied mathematics, for careers in industry, the computer field, governmental service, and secondary or elementary school teaching.

In recent years, the mathematical sciences have played an ever-expanding role not only in the physical sciences, but also in the social and natural sciences as well. The study of mathematics is often not an end in itself. The mathematics degree requirements at Wilkes are sufficiently flexible to allow a student to have at least 30 credits of electives in any area of his choice. This is often enough to enable him to take all courses required of another major. By combining the study of mathematics with properly chosen courses in other fields, a student in either the B.A. or the B.S. program will be able to obtain more than adequate preparation for further study leading to careers in actuarial science, economics, business and management, law, medicine, physical and engineering sciences, and many interdisciplinary fields. Many professional schools particularly welcome applicants with a strong undergraduate mathematics background.

Students intending to major in Mathematics should have at least three years of college preparatory mathematics courses (including algebra II, geometry, and topics in trigonometry) so as to be prepared to take Math.

111 (Calculus) in the first term of his freshman year. Experience has shown that the student who does not have such a background will usually require additional pre-college mathematics courses. He may take, preferably in the summer preceding entrance, Math. 100 (algebra and trigonometry), offered at Wilkes, or with the approval of the mathematics department, take an equivalent course at another college or university. Credits in such remedial courses will not exempt the student from any required elective in this program.

The B.A. is intended for those who wish to elect more liberal arts and social science courses while the B.S. degree allows for greater concentration of physical and natural science electives. Students may satisfy the certification requirements for secondary or elementary school teaching in either programs.

The core requirements for the major in both the B.S. and the B.A. degrees are Math. 211, 212, 222, 311, 312, 331, and 334.

The following program lists the course requirements for the B.S. degree in Mathematics and the suggested sequence in which they may be taken.

FIRST SEMESTER		SECOND SEMESTER	
Eng. 101 — Composition	3	Eng. 102 — Composition	3
For. Lang. 101 — Elementary	3	For. Lang. 102 — Elementary	3
Elective ¹	3	Phys. 201 — General Physics I	4
Social Science Elective ²	3	Social Science Elective ²	3
Math. 111 — Analysis I	4	Math. 112 — Analysis II	4
P.E. 101 — Physical Education	0	P.E. 102 — Physical Education	0
P.E. 105 — Hygiene	1	P.E. 106 — Hygiene	1
	<hr/>		<hr/>
	17		18
THIRD SEMESTER		FOURTH SEMESTER	
Eng. 151 — World Literature	3	Eng. 152 — World Literature	3
For. Lang. 203 — Intermediate	3	For. Lang. 204 — Intermediate	3
Science Elective ¹	3-4	Science Elective ¹	3-4
Math. 211 — Intermediate Analysis I	4	Math. 212 — Intermediate Analysis II	4
P.E. 103 — Physical Education	0	Math. 222 — Set Theory and Logic	3
Phil. 101 — Introduction	3	P.E. 104 — Physical Education	0
	<hr/>		<hr/>
	16-17		16-17

¹Must be one of these: F.A. 101 — Experiencing Art I; Mus. 101 — Introduction; or Th. Arts 101 — Approach to Theater.

²Must elect one of these sequences: Ec., Psy., Soc., P.S. 101-102. Students intending to prepare themselves for secondary or elementary school teaching must elect Psy. 101-102.

<i>FIFTH SEMESTER</i>		<i>SIXTH SEMESTER</i>	
Hist. 101 — World Civilization	3	Hist. 102 — World Civilization	3
Electives ²	12-15	Electives ²	12-15
	15-18		15-18
<i>SEVENTH SEMESTER</i>		<i>EIGHTH SEMESTER</i>	
Electives ²	15-18	Electives ²	15-18

A minimum of 127 credits is required for this program.

¹ Must be one of the following:

- (a) Two courses from the same department chosen from Group A, given below or
- (b) Phys. 202 and one additional course from Group A.

² These electives must include:

- (a) Eight Mathematics courses numbered above 260, including Math. 311-312, 331 and 334, and
- (b) Two additional courses chosen from Group A or Group B.

Group A:

- Any Biology course numbered above 200.
- Any Chemistry course numbered above 200.
- Any Physics course numbered above 200.
- Any course in Electrical or Materials Engineering.
- Mechanical Engineering 211, 212.
- Philosophy 320, 360.

Group B:

- Any Mathematics course numbered above 260.

Medical Technology

The American Society of Clinical Pathologists and the American Society of Medical Technologists recommend certain requirements for a program of training leading to a degree in medical technology. The curriculum offered at Wilkes College follows these recommendations and is presented below. The final year in this program is taken in hospitals approved for such training by the American Society of Clinical Pathologists.

Wilkes College has established a formal affiliation with the Allentown Hospital in Allentown, Pa., the Robert Packer Hospital in Sayre, Pa., Somerset Hospital in Somerville, N. J., Hackensack Hospital in Hackensack, N. J., and the General Hospital in Wilkes-Barre, Pa. Fulfillment of the fourth year requirement at non-affiliated hospitals requires special permission of the department chairman and of the Academic Standing Committee.

<i>FIRST SEMESTER</i>		<i>SECOND SEMESTER</i>	
Biology 201M	2½	Biology 203M	2½
Biology 202M	2½	Biology 204M	2½
Chemistry 201	4	Chemistry 202	4
Mathematics 105 ¹	4	Mathematics 106 ¹	4
English 101	3	English 102	3
Phys. Ed. 101	0	Phys. Ed. 102	0
Phys. Ed. 105	1	Phys. Ed. 106	1
	17		17
<i>THIRD SEMESTER</i>		<i>FOURTH SEMESTER</i>	
Biology 205M	2½	Biology 207M	2½
Biology 206M	2½	Biology 208M	2½
Chemistry 221	4	Chemistry 106	4
English 151	3	English 152	3
Psy./Soc. etc. elective	3	Psy./Soc. etc. elective	3
Language 101	3	Language 102	3
Phys. Ed. 103	0	Phys. Ed. 104	0
	18		18
<i>FIFTH SEMESTER</i>		<i>SIXTH SEMESTER</i>	
Biology 303	3	Biology 304	3
Biology 307	3	Elective	3
Physics 105	4	Physics 106	4
Language 203	3	Language 204	3
History 101	3	History 102	3
	16		16
<i>SEVENTH SEMESTER²</i>		<i>EIGHTH SEMESTER²</i>	

¹ Students with mathematical deficiencies may register for a lower mathematics course for credit.

² The Professional Year is taken at an affiliated school of medical technology. Fee to Wilkes College is \$50 each semester.

Music Education ¹

FIRST SEMESTER		SECOND SEMESTER	
Eng. 101 — Composition	3	Eng. 102 — Composition	3
Math., Science Elective (see page 82)	3	Math., Science Elective (see page 82)	3
Mus. 105 — Theory of Music	5	Mus. 106 — Theory of Music	5
Mus. Ed. 101 — Clarinet Class or Mus. Ed. 103 — Brass Class	2	Mus. Ed. 102 — Clarinet Class or Mus. Ed. 104 — Brass Class	2
Hist. 101 — World Civilization	3	Hist. 102 — World Civilization	3
Applied Music ²	1	Applied Music ²	1
Band, Orchestra, Chorus	1/2	Band, Orchestra, Chorus	1/2
P. E. 101 — Physical Education	0	P. E. 102 — Physical Education	0
P. E. 105 — Hygiene	1	P. E. 106 — Hygiene	1
	<hr/>		<hr/>
	18 1/2		18 1/2

THIRD SEMESTER		FOURTH SEMESTER	
Eng. 151 — World Literature	3	Eng. 152 — World Literature	3
Mus. Ed. 101 — Clarinet Class or Mus. Ed. 103 — Brass Class	2	Mus. Ed. 102 — Clarinet Class or Mus. Ed. 104 — Brass Class	2
Mus. 107 — Theory of Music	5	Mus. 108 — Theory of Music	5
Mus. 109 — History of Music	3	Mus. 110 — History of Music	3
Applied Music ²	1	Applied Music ²	1
Psy. 101 — Psychology	3	Psy. 102 — Psychology	3
Band, Orchestra, Chorus	1/2	Band, Orchestra, Chorus	1/2
P. E. 103 — Physical Education	0	P. E. 104 — Physical Education	0
	<hr/>		<hr/>
	17 1/2		17 1/2

FIFTH SEMESTER		SIXTH SEMESTER	
Ed. 201 — Introduction	3	Ed. 202 — Educational Psychology	3
Ec. 101 — Principles I or P. S. 101 — Political Science I or Soc. 101 — Sociology	3	Ec. 102 — Principles II or P. S. 102 — Political Science II or Soc. 102 — Sociology	3
Mus. Ed. 105 — Woodwind Class	2	Mus. Ed. 106 — Brass Class	2
Mus. Ed. 209 — Conducting	2	Mus. Ed. 210 — Conducting	2
Mus. Ed. 121 — Violin Class	2	Mus. Ed. 123 — Violoncello and Bass Class	2
Mus. Ed. 201 — Elementary School Methods	2	Mus. Ed. 202 — Secondary School Methods	2
Applied Music ²	1	Applied Music ²	1
Band, Orchestra, Chorus	1/2	Band, Orchestra, Chorus	1/2
Mus. 111 — Piano Class	2	Mus. 112 — Piano Class	2
	<hr/>		<hr/>
	17 1/2		17 1/2

¹ There is a music fee of \$10 per semester for all music and music education majors.
² Private instruction. The fee for this instruction is in addition to the regular tuition charge.

SEVENTH SEMESTER		EIGHTH SEMESTER	
Mus. 215 — Instrumentation	2	Mus. 216 — Arranging	2
Mus. Ed. 127 — Voice Class	2	Mus. Ed. 128 — Voice Class	2
Mus. Ed. 122 — Viola Class or Mus. Ed. 125 — Percussion Class	2	Mus. Ed. 122 — Viola Class or Mus. Ed. 125 — Percussion Class	2
Mus. Ed. 340 — Professional Semester in Music Education or Elective	8-6	Mus. Ed. 340 — Professional Semester in Music Education or Elective	8-6
Applied Music ¹	1	Applied Music ¹	1
Band, Orchestra, Chorus	1/2	Band, Orchestra, Chorus	1/2
Mus. 113 — Piano Class or Elective	2-3	Mus. 114 — Piano Class or Elective	2-3
	<hr/>		<hr/>
	15 1/2-18 1/2		15 1/2-18 1/4

Bachelor of Science in Nursing

Professional nursing offers a variety of careers for men and women. The new nursing program at Wilkes College leads to a Bachelor of Science Degree with a major in Nursing, and reflects the need for a curriculum design that is responsive to the changing needs of society for health care. Emphasis is placed on the prevention of disease and the delivery of health services to the people in both the hospital and community settings. Opportunity is provided for students to focus in-depth on nursing practice in complex situations and plan experiences with students in other health programs in the delivery of health services.

The proposed curriculum design covers a four-academic-year period totaling approximately 126 credits. The courses in science, humanities, and social science total 56 credits; nursing 46 credits, and electives, 24 credits. Nursing will be introduced in the freshman year and experiences from the simple to the complex will progress throughout the sophomore and junior years. The student will have the option to select an area of concentration related to the care of sick people or to the family and community health in the senior year. Opportunities for individualized learning experiences are provided and instruction, experience and guidance will be offered to help the student develop:

1. the ability to practice professional nursing as an initial practitioner in the episodic and distributive patient care settings.
2. the ability for self-direction and critical judgment.
3. a desire for continued personal and professional development as a contributing member of society.

Many resources of the community will be utilized for clinical practice such as the Home-Health Services of Luzerne County, Wyoming Valley

Hospital, Nesbitt Memorial Hospital, Wilkes-Barre General Hospital, Veteran's Administration Hospital, Rural Health Corporation Clinic of Luzerne County and others.

Candidates applying for admission to Wilkes should:

1. be secondary school graduates and offer at least 15 units of work representing the equivalent of the usual four-year secondary school preparatory school course. Courses in biology and chemistry are required and physics and mathematics are highly recommended.
2. take the Scholastic Aptitude Test of the College Entrance Examination Board.
3. present secondary school recommendations.
4. write for an appointment to the Chairman of the Nursing Department if a personal interview is desired. Students and their families are invited to visit the College at their convenience.
5. have a pre-entrance health examination which includes a complete physical examination, chest x-ray, laboratory tests, dental and eye examinations and successful smallpox vaccinations.

FIRST YEAR

FIRST SEMESTER		SECOND SEMESTER	
Eng. 101	3 cr.	Eng. 102	3 cr.
Psy. 101 — Gen. Psy.	3 cr.	Bio. 113 — Micro.	4 cr. 3 lect. 3 lab
Chem. 105 — Gen. Chem.	4 cr. 3 lect. 3 lab	Chem. 106 — Org. & Bio.	4 cr. 3 lect. 3 lab
Soc. 101 — Introduction to Soc. and Anthro. I	3 cr.	Nursing 102 — Nursing as a Process	4 cr. 3 lect. 3 lab
Nursing 101 — Introduction to Nursing	2 cr.	P.E. 102 — Phys. Ed.	0 cr. 2 hrs.
P.E. 101 — Phys. Ed.	0 cr. 2 hrs.		
Total	15 cr.	Total	15 cr.

SECOND YEAR

THIRD SEMESTER		FOURTH SEMESTER	
Bio. 115 — Human A&P	4 cr. 3 lect. 3 lab	Bio. 116 — Human A&P	4 cr. 3 lect. 3 lab
Nutrition 200 — Principles of Normal and Therapeutic Nutrition	3 cr.	Soc. 200 — The Family	3 cr.
Nursing 201 — Nursing Care of the Growing Family I	7 cr. 4 lect. 9 lab	Nursing 202 — Nursing Care of the Growing Family II	7 cr. 4 lect. 9 lab
Psy. 221 — Child Psych.	3 cr.	P.E. 104 — Phys. Ed.	0 cr. 2 hrs.
P.E. 103 — Phys. Ed.	0 cr. 2 hrs.	Elective	3 cr.
Total	17 cr.	Total	17 cr.

THIRD YEAR

FIFTH SEMESTER		SIXTH SEMESTER	
Hist. 101 or 102 — World Civilization or Eng. 151 — World Literature	3 cr.	Hist. 101 or 102 — World Civilization or Eng. 151 or 152 — World Literature	3 cr.
Phil. 101 or 102 — Logic and Scientific Method	3 cr.	Nursing 204 — Nursing of the Adult Family Member II	7 cr. 4 lect. 9 lab
Nursing 203 — Nursing of the Adult Family Member I	7 cr. 4 lect. 9 lab	Elective	6 cr.
Elective	3 cr.		
Total	16 cr.	Total	16 cr.

FOURTH YEAR

SEVENTH SEMESTER		EIGHTH SEMESTER	
Hist. 101 or 102 — World Civilization or Eng. 151 or 152 — World Literature	3 cr.	Hist. 101 or 102 — World Civilization or Eng. 152 — World Literature	3 cr.
Nursing 295 — Independent Study in Area of Interest	4 cr.	Nursing 296 — Independent Study	6 cr.
Nursing 297 — Contemporary Problems in Nursing	2 cr.	Elective	6 cr.
Elective	6 cr.		
Total	15 cr.	Total	15 cr.

Nursing Education

The program in Nursing Education is designed for the preparation of instructors, head nurses, and supervisors in hospitals and schools of nursing. It presupposes graduation from an approved school of nursing and State registration. Credits required for the degree are one hundred twenty-three, of which at least seventy-three must be college credits. The number of credits allowed for the school of nursing program ranges from thirty-five to fifty and will be determined by an evaluation of the student's record and by results obtained on the Nursing Examination.

FIRST SEMESTER		SECOND SEMESTER	
Math. 101 — Fundamentals or		Eng. 102 — Composition	3
Eng. 101 — Composition	3	Hist. 102 — World Civilization	3
Hist. 101 — World Civilization	3	Bio. 203M — Embryology or	
Bio. 201M — Principles of		Bio. 204M — Histology	2½
Modern Biology or		Math. 102 — Fundamentals or	
Bio. 202M — Chordate Anatomy	2½	Phys. 102 — Physical Science or	
Math. 101 — Fundamentals or		Env. Sci. 282 — Space Science	3
Phys. 101 — Physical Science or		N.E. 104 — Community Resources	2
Env. Sci. 101 — Earth Science	3-4	Soc. 102 — Sociology or	
Soc. 101 — Sociology or		Psy. 102 — Psychology	3
Psy. 101 — Psychology	3	N.E. 106 — Supervision	2
N.E. 103 — History, Trends in		Elective (optional) ²	2-3
Nursing	3		
Elective	2-3		
	16-21½		17-21½
THIRD SEMESTER		FOURTH SEMESTER	
Eng. 151 — World Literature	3	Eng. 152 — World Literature	3
Phil. 101 — Introduction	3	Phil. 102 — Logic	3
Soc. 101 — Sociology or		Soc. 102 — Sociology or	
Psy. 101 — Psychology ³	3	Psy. 102 ³ — Psychology	3
Ed. 351 — Educational Measurement	2	N. E. 112 — Field Experience	4
N.E. 107 — Principles & Methods	2	Elective	2-3
N.E. 108 — Techniques	1		
F.A. 101 — Experiencing Art or			
Mus. 101 — Introduction or			
Th. Arts 101 — Approach to Theater	3		
	17		15-16

Physics

The B.S. curriculum in physics is designed to provide a thorough grounding in the fundamentals of this rapidly-expanding science, as well as to acquaint the student with the current frontiers of knowledge and research. Upon completion of the requirements for the degree, the stu-

¹ Private instruction. The fee for this instruction is in addition to the regular tuition charge.

² If the Bio. 104 laboratory course is taken, the elective will not be allowed.

³ P.S. 101, P.S. 102, Ec. 101, Ec. 102 may be substituted as electives.

dent will be well prepared to proceed to graduate study leading to an advanced degree or to undertake an industrial position.

Experience has shown that students who have not had four years of mathematics study in secondary school will usually require some pre-college courses. In the summer session preceding entrance the student may take Math. 100, Pre-Calculus Mathematics (algebra and trigonometry), offered at Wilkes, or with the approval of the mathematics department take an equivalent course at another college or university. Credit in this remedial course does not exempt the student from any required elective in his program.

FIRST SEMESTER		SECOND SEMESTER	
Math. 111 — Analysis I	4	Math. 112 — Analysis II	4
Eng. 101 — Composition	3	Eng. 102 — Composition	3
Hist. 101 — World Civilization	3	Eng. 131 — Fundamentals of Speech	2
Phys. 201 — General Physics I	4	Hist. 102 — World Civilization	3
P.E. 105 — Hygiene	1	Phys. 202 — General Physics II	4
P. E. 101 — Physical Education	0	P.E. 106 — Hygiene	1
		P. E. 102 — Physical Education	0
	15		17
THIRD SEMESTER		FOURTH SEMESTER	
Math. 211 — Intermediate Analysis I	4	Math. 212 — Intermediate Analysis II	4
Phys. 203 — General Physics III	3	Phys. 230 — Optics and Light	4
Phys. 231 — Electronics	3	Phys. 240 — Thermodynamics	3
Ger. 101 ¹ — Elementary	3	Ger. 102 ¹ — Elementary	3
Chem. 201 — Introduction to the		Chem. 202 — Chemical Equilibria	4
Principles of Chemistry	4	P. E. 104 — Physical Education	0
P. E. 103 — Physical Education	0		
	17		18
FIFTH SEMESTER		SIXTH SEMESTER	
Math. 361 — Advanced Calculus I	3	Math. 362 — Advanced Calculus II	3
Phys. 331 — Electricity & Magnetism	4	Phys. 332 — Electricity & Magnetism	4
Phys. 311 — Mechanics	3	Phys. 312 — Mechanics	3
Ger. 203 ¹ — Intermediate	3	Ger. 205 ¹ — Scientific	3
Eng. 151 — World Literature	3	Eng. 152 — World Literature	3
	16		16
SEVENTH SEMESTER		EIGHTH SEMESTER	
Phys. 361 — Atomic Physics	4	Phys. 380 — Nuclear Physics	4
Advanced Math. Elective	3	Advanced Math. Elective	3
Eng. 131 — Fundamentals of Speech	2	Electives	8-10
Electives ⁴	8-10		
	15-17		15-17

¹ Russian may be substituted for German with the approval of the adviser. Math. 261 and Math. 263 may be substituted for German with the approval of the student's adviser.

⁴ Students contemplating graduate study in Physics should elect Phys. 351 — Quantum Mechanics.

**Pre-professional Programs in Health Sciences —
Family Medicine**

Students who express an interest in the accelerated six-year program in family medicine must meet the admission requirements of Wilkes College. As Wilkes students, they must select a major which will allow them to meet the minimum natural science, social science, and communicative skills for potential entry into the accelerated program. Although it is anticipated that most students will select a biology major, curricular outlines have been developed which will allow selection of other disciplines related to health professions such as chemistry, physics, medical technology, psychology, and sociology, as well as such non-related areas as English, history, mathematics, political science, and philosophy. The high degree of flexibility designed into the program provides maximum mobility to attract highly motivated students who might desire a major other than biology. It should be emphasized that only a limited number of students who demonstrate academic achievement, maturity, and a sincere desire for family medicine will be selected upon completion of the initial two-year curriculum. Those not selected may still pursue one of a variety of degree options offered by the college including those which would allow entrance into regular medical school programs.

<i>FIRST SEMESTER</i>		<i>SECOND SEMESTER</i>	
Bio. 201-202 — Principles of Biology and Chordate Anatomy	5	Electives ²	5-6
Chem. 201 — Principles of Chemistry	4	Chem. 202 — Chemistry Equilibrium	4
Math. 105 or 111 — Intro. Calculus or Analysis I	4	Math. 106 or 112 — Intro. Calculus or Analysis II	4
Eng. 101 ¹ — Composition	3	English 102 — Composition	3
Phys. Ed. 101	0	Phys. Ed. 102	0
Orientation — Medicine and Health Professions	0	Orientation — Medicine and Health Professions	0
	<hr/> 16		<hr/> 16-17

SUMMER I

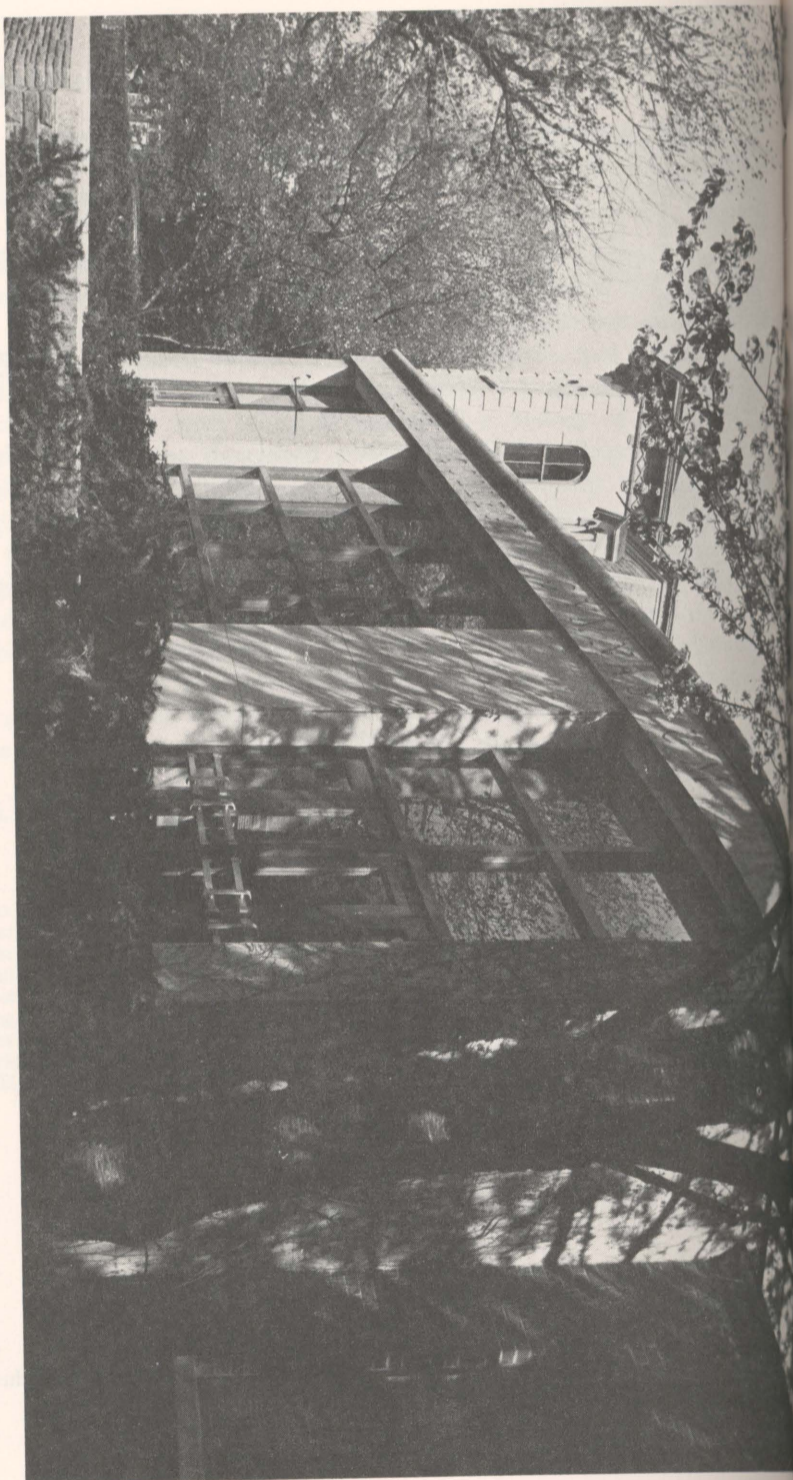
Psych. 101-102 — General Psychology	6
Eng. 151-152 — World Literature	6

<i>THIRD SEMESTER</i>		<i>FOURTH SEMESTER</i>	
Bio. 205-206 — Genetics and General Physiology	5	Electives ²	5-7
Chem. 232 — Organic Chemistry I	4	Chem. 235 — Organic Chemistry II	4
Phys. 105 or 210 — Intro. Physics or General Physics I	4	Phys. 106 or 202 — Intro. Physics or General Physics II	4
Soc. 101 — Intro. Sociology and Anthropology	3	Soc. 102 — Intro. Sociology and Anthropology	3
Phys. Ed. 103	0	Phys. Ed. 104	0
	<hr/> 16		<hr/> 16-18

SUMMER II

Soc. 200 — The Family	3
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¹Students may obtain advanced placement in English Composition.
²Electives should include a one semester course in English 131 — Speech. Remaining electives should be selected from the Sciences, Social Sciences, and Humanities to meet personal needs and/or degree requirements at Wilkes College.



Wilkes College Gymnasium.

Courses of Instruction

Description of Courses

KEY TO COURSE NUMBERING

- 100 SERIES — SERVICE COURSES
- 200 SERIES — ADVANCED COURSES APPLIED
TOWARD MAJORS
- 300 SERIES — ADVANCED UNDERGRADUATE COURSES
- 400 SERIES — INTRODUCTORY GRADUATE COURSES
- 500 SERIES — EXCLUSIVELY GRADUATE COURSES



Wilkes College Gymnasium.

Courses of Instruction

Description of Courses

KEY TO COURSE NUMBERING

100 SERIES — SERVICE COURSES

200 SERIES — ADVANCED COURSES APPLIED
TOWARD MAJORS

300 SERIES — ADVANCED UNDERGRADUATE COURSES

400 SERIES — INTRODUCTORY GRADUATE COURSES

500 SERIES — EXCLUSIVELY GRADUATE COURSES

Acct. 201. Cost Accounting I

Accounting for material, labor, and overhead expenses; methods of apportionment of manufacturing costs; detailed study of job-cost and process-cost methods. Class, two hours a week; laboratory, two hours a week.

Prerequisite: Acct. 112, or approval of instructor.

Three credits

Acct. 202. Cost Accounting II

Establishing the practical use of cost systems through analytical and comparative statements; detailed study of various cost systems; standard costs; budgets; interpretation of data. Class, two hours a week; laboratory, two hours a week.

Prerequisite: Acct. 201, or approval of instructor.

Three credits

Acct. 221. Taxes I

The preparation of Federal income tax returns for individuals based on current law, regulations and court decisions; problems of inclusion and exclusion from income; gains and losses from sales and exchanges; allowable deductions. Class, two hours a week; laboratory, two hours a week.

Prerequisite: Acct. 112, 202, or approval of instructor.

Three credits

Acct. 222. Taxes II

Tax accounting for installment and deferred payment sales; Federal tax returns for partnerships; fiduciaries and corporations; miscellaneous Federal and Pennsylvania corporate taxes. Class, two hours a week; laboratory, two hours a week.

Prerequisite: Acct. 221.

Three credits

Acct. 231. Auditing I

An analysis of modern auditing concepts involving staff organization, professional ethics and legal responsibility, internal control, audit programs, and working papers, and original record examination. Class, two hours a week; laboratory, two hours a week.

Prerequisite: Acct. 202.

Three credits

Acct. 232. Auditing II

Advanced application of auditing principles to actual practice; problems of classification and interpretation of accounts; study of methods of internal control; preparation of reports to clients. Class, two hours a week; laboratory, two hours a week.

Prerequisite: Acct. 231.

Three credits

Acct. 241. Advanced Accounting I

A comprehensive review of partnerships; special procedures and problems of installment sales, consignments, home office and branch relationships; introduction to accounting for business combinations and consolidations. Class, two hours a week; laboratory, two hours a week.

Prerequisite: Acct. 112.

Three credits

Acct. 242. Advanced Accounting II

A detailed analysis of the problems of consolidations; analysis of the procedure in accounting for bankruptcies, receiverships, estates and trusts, foreign exchange, and governmental units. Class, two hours a week; laboratory, two hours a week.

Prerequisite: Acct. 112 and permission of instructor.

Three credits

Acct. 252. Accounting Internship

This course provides a minimum of 240 hours of accounting in the office of a Certified Public Accountant or the equivalent.

Three credits

AEROSPACE STUDIES

Professor Aikman, chairman; Assistant Professor Carpenter.

AF 101. Freshman Air Force Aerospace Studies

A study of the objectives and organization of the U. S. Air Force; a study of U. S. strategic offensive and defensive forces and their mission; function and employment of nuclear weapons, and a study of civil defense.

One credit

AF 102. Freshman Air Force Aerospace Studies

A study of aerospace defense, missile defense, U. S. general purpose and aerospace support forces, the mission resources, and operations of tactical air forces with special attention to limited war, review of Army, Navy and Marine general purpose forces.

One credit

AF 103. Sophomore Air Force Aerospace Studies

A study of defense policies; theories of general war; the nature and context of limited war; the policies and strategies of the Soviet Union and China; and the role of alliances in U. S. defense policies.

One credit

AF 104. Sophomore Air Force Aerospace Studies

A study of defense organization and decision making; the organization and function of the Department of Defense; the role of the military in the United States' national policies; the elements and process of defense decision-making.

One credit

**AF 301. Air Force Aerospace Studies —
Air Force Officer Development**

Development of the knowledge and skills required of the junior officer in the Air Force. This will include the nature of war, history of air power, and the mission, doctrine, and employment of the United States Air Force.

Three credits

**AF 302. Air Force Aerospace Studies —
Air Force Officer Development**

Continuation of the development of knowledge and skills required of a junior Air Force Officer. This will include the history and importance of national space effort, orbits and trajectories, space vehicle systems, manned space flight, and operations in space.

Three credits

**AFAS 303. Air Force Aerospace Studies —
The Professional Officer**

Introduction to military professionalism. A study of the meaning of professional responsibilities of the professional officer, the foundations of the military profession, the military justice system, theories of leadership, discipline and human relations.

Three credits

**AFAS 304. Air Force Aerospace Studies —
The Professional Officer**

A military explanation of leadership and management. Includes principles and functions of management; Air Force personnel policies, channels of communication, problem solving, the command-staff team, the subordinate, performance standards, data processing, and Air Force controls.

Three credits

BIOLOGY

Professor Reif chairman; Professors Cohen, Michelini; Associate Professors Ogren, Kimball, Tappa, Houseknecht, Hayes; Assistant Professors Acheson, Turoczi.

Bio. 101-102. Biological Science

Biological Science is a survey course intended for students who take no other course in biology. It presents the essential general information about plants and animals, explains fundamental laws governing the biological world, and emphasizes their relationship to man. Class, three hours a week.

Three credits each semester

Bio. 111-112. General Botany

General Botany presents a broad consideration of the plant world. It includes the study of the fundamental principles of biology, emphasizing the structure, physiology, genetics, and ecology of plants. Lecture, two hours a week; laboratory, three hours a week. Fee: \$20 each course.

Three credits each semester

¹ Or the equivalent.

Bio. 113. Microbiology

This course presents the basic principles of bacteriology and the relationship of micro-organisms to disease and its prevention, control and treatment. It considers the effects of microbes within the body and the body's reaction to them. Lecture, three hours a week; laboratory, three hours a week. Fee: \$20.

Four credits

Bio. 115-116. Human Anatomy & Physiology

This course provides a general study of the human body, its structure and normal function. It provides an appreciation of the complex nature of the human body with relation to the promotion of a healthy organism. Lecture, three hours a week; laboratory, three hours a week. Fee: \$20 each course.

Four credits each semester

Bio. 201M. Principles of Modern Biology

Introduction to the basic physical and biochemical properties of life, and the survey of representative plant and animal types.

Two and one-half credits

Bio. 202. Biology of Vertebrate Organs

Biology of Vertebrate Organs is a study of major vertebrate tissues and organs from the modern standpoints of cytology, development, function, regulation, and interrelationships. Lecture, two hours a week; laboratory, six hours a week. Fee: \$20.

Prerequisites: Bio. 201 and Chem. 221.

Four credits

Bio. 202M. Chordate Anatomy

A study of the principle organ systems of representative Chordates. Evolution and taxonomy of the phylum Chordata will be emphasized.

Two and one-half credits

Bio. 203M. Embryology

Embryology is the study of the early development of animals. Growth is traced from the egg to later stages in the frog, chick, and man.

Two and one-half credits

Bio. 204. Microtechnique

Microtechnique embraces all methods of studying specimens with the microscope. The course also includes the study of normal tissues and organs. The laboratory work covers the technique of preparing microscopic slides. Lecture, one hour a week; laboratory, six hours a week. Fee: \$20.

Prerequisite: Bio. 116, or permission of instructor.

Three credits

Bio. 204M. Histology

Histology is the study of tissues and of the arrangement of tissues to form organs and organ systems. The material included in this course is restricted to vertebrate structures.

Two and one-half credits

Bio. 205M. Genetics

Genetics is the study of the inheritance of normal characters and the variation of these characters in plants and animals.

Two and one-half credits

Bio. 206M. General Physiology

Physiology is the study of the physical and chemical activities of all living organisms.

Two and one-half credits

Bio. 207M. Comparative Physiology

The study of organ function in comparative animal forms.

Two and one-half credits

Bio. 208M. Ecology

Ecology is the study of the interrelationships between organisms, singly and collectively, and their environment.

Two and one-half credits

Bio. 224. Biological Techniques

A laboratory course in the preparation of materials for use in the study of organisms. Included will be such procedures as are needed to prepare photographs, make microscope slides, accomplish field collecting and telemetry, and the production of drawings for publication. Three-hour practicum.

One credit

Bio. 302. Endocrinology

A study of the endocrine system and the mechanism of action of hormones on the life processes and functions. Emphasis will be placed on the mammalian system with reference to comparative forms.

Prerequisite: Bio. 201-208 or permission of instructor.

Three credits

Bio. 305. Invertebrate Biology

A study of the major invertebrate phyla with respect to their taxonomy, evolution, morphology, physiology and ecology.

Prerequisite: Bio. 201-208 or permission of instructor.

Three credits

Bio. 306. Neurobiology

A study of the functional aspects of excitable cells and nervous systems of living animals. Laboratory includes techniques in the stimulation and recording of excitable cells and organs.

Prerequisite: Bio. 201-208 or permission of instructor.

Three credits

Bio. 307. Analytical Cytology

Experimental analysis of cell structure, organelles, chemistry and activities by means of microscopic techniques and instrumentation.

Prerequisite: Bio. 201-208 or permission of instructor.

Three credits

Bio. 308. Advanced Genetics

A study of plant and animal genetic systems with respect to contemporary literature, techniques, and modes of analysis.

Prerequisite: Bio. 201-208 or permission of instructor.

Three credits

Bio. 311-312. Bacteriology

Bio. 311 is a general introduction, covering the morphology and growth of bacteria, sterilization, and applied uses of bacteria. It also includes a brief survey of other groups of microorganisms. The laboratory work covers techniques of staining, culturing, and biochemical testing for the identification of bacteria. Lecture, two hours a week; laboratory, six hours a week. Fee: \$20.

Prerequisite: Bio. 104.

Four credits

Bio. 312 covers the relationship of bacteria to disease, immunity, serology, and pathology. Laboratory work continues with special stains, identification of unknowns, isolation of bacteria from natural sources, and techniques used in applied bacteriology. Lecture, two hours a week; laboratory, six hours a week. Fee: \$20.

Prerequisite: Bio. 311.

Four credits

Bio. 321. Genetics

Genetics is the study of the inheritance of normal characters and the variation of these characters in plants and animals. Laboratory work includes the study of genetic mechanisms in various botanical, animal, and microbial species. Lecture, three hours a week; laboratory, three hours a week. Fee: \$20.

Prerequisite: through Bio. 202, or permission of instructor.

Four credits

Bio. 322. Ecology

Ecology is the study of the relationship between organisms, singly and collectively, and their environments, including the biotic and physical factors of the environments. Lecture, three hours a week; laboratory and field trips, three hours a week. Fee: \$20.

Prerequisite: through Bio. 321, or permission of instructor.
Four credits

Bio. 331. Physiology

Physiology is the study of the physical and chemical activities characteristic of all living organisms. Laboratory work includes experiments involving living forms. Lecture, two hours a week; laboratory, six hours a week. Fee: \$20.

Prerequisite: through Bio. 322, Chem. 230, and Phys. 112, or permission of instructor.
Four credits

Bio. 332. Evolutionary Mechanisms

Evolutionary Mechanisms is a study of how new species of organisms are derived from previously existing species. Emphasis is placed upon the processes of organic evolution and the development of the evolutionary ideas. Lecture, three hours a week.

Prerequisite: Bio. 322 or permission of instructor.
Three credits

Bio. 395-396. Independent Research

Independent study and research for advanced students in the field of the major under the direction of a staff member. A research paper at a level significantly beyond a term paper is required.

Prerequisite: Approval of the departmental chairman is required.
One to three credits

Bio. 397. Seminar

Presentations and discussions of selected topics.

Prerequisite: Approval of the department chairman is required.
One-half credit each semester.

BUSINESS ADMINISTRATION

Professor R. Werner, chairman; Associate Professors Elliot, Far-rar; Assistant Professors Chesler, Dwivedi, Gera, Engel, Gurdin, Orłowski; Instructor Roberts.

B.A. 114. Salesmanship

The art of selling; the motive behind all buying; creation of interest and desire; presentation of services; meeting objections; types of customers.

Prerequisite: approval of instructor.
Three credits

B.A. 115. Mathematics of Business and Finance

This course will include progressions, logarithms, per cent, interest, discounts, equation of value, annuities, sinking funds, depreciation, taxes, profit and loss.

Three credits

B.A. 209. Business Correspondence and Reports

Fundamental principles of business writing with emphasis on letters and reports.

Prerequisites: Eng. 102.
Three credits

B.A. 216. Advertising

A study of basic principles of advertising. Elements of advertising; a survey of different departments of advertising work, including copy, art, display, engraving, trade-marks, and media. Analysis of current advertisements. Advertising as a social force.

Three credits

B.A. 220. Real Estate

The fundamentals of the real estate business, including consideration of titles, mortgages, leases, advertising, sale, purchase, development, and management of real property.

Prerequisite: Ec. 102.
Three credits

B.A. 222. Marketing

The fundamentals of the marketing system, its functions, institutions and their importance in the economy are studied. Marketing pricing policies and practices are investigated; reference is made to marketing activities and government participation.

Prerequisite: Ec. 102.

Three credits

B.A. 225. Corporation Finance

A study of the economic principles underlying the capital structure of modern business enterprise. Consideration given to alternate types of business organization, corporate securities, and financial policies involved in promotion, disposition of net earnings, working capital and short-term financing, mergers, expansion, financial readjustments, and reorganization.

Prerequisite: Ec. 102.

Three credits

B.A. 226. Investments

Consideration of leading types of investments, tests, and investment programs; financial reports of leading companies, forecasting methods and agencies, stock exchanges, brokerage houses, methods of buying and selling securities, fraudulent promotions and their detection. Laboratory work and case studies.

Prerequisite: B. A. 225.

Three credits

B.A. 231. Business Law — Introduction, Contracts, and Sales

The foundation for all subjects in the field of business law. The nature, classification, and sources of law. Examination of the essential elements of a contract and the nature of contract rights under both the common law and the Uniform Commercial Code. A study of the law of sales of goods: the transfer of title and risk of loss, warranties and product liability, and secured transactions. A comparison of the uniform sales act with the article II of the Uniform Commercial Code.

Prerequisite: B.A. 225.

Three credits

B.A. 232. Business Law — Agency, Partnerships, Corporations, and Real Property

A study of the principles of law governing partnerships and corporations, with respect to formation, operation, internal relationships and dissolution, as well as the advantages and disadvantages of these forms of business association. A survey of the law of real property, nature and types of interests in land. A discussion of deeds and their prerequisites. Rights and duties of the partnership and corporate enterprise with respect to the government, the owners, and the public. The substantive rules of law will be used as stimulants for discussions and wherever possible reported cases will be posed as problems to bring about a more thorough understanding of the principles covered, to promote discussion, and to suggest related problems.

Prerequisite: B.A. 231.

Three credits

B.A. 234. Business Law — Property

The law of real property, nature and types of interests in land. A discussion of deeds and their prerequisites. The rights and duties of the landowner to the public. Rights of the government versus rights of the landowner. The landlord-tenant relationship, the mortgagor-mortgagee relationship. Business crimes (crimes affecting property). The protection of personal and business property, tangible and intangible. The substantive rules of law will be used as stimulants for discussions and wherever possible reported cases will be posed as problems to bring about a more thorough understanding of the principles covered, to promote discussion, and to suggest related problems.

Prerequisite: B. A. 231, 232, Acct. 102.

Three credits

B.A. 240. Property Insurance

This course is a study of the fundamentals of fire, casualty, and marine insurance.

Prerequisite: B.A. 232, or approval of instructor.

Three credits

B.A. 241. Life Insurance

This course is a study of the principles, practices, and uses of life insurance from the overall viewpoint of the product, cost, market, and industry.

Prerequisite: approval of instructor.

Three credits

B.A. 244. Time and Motion Study

The principles and techniques of time and motion study. Class, three hours a week; laboratory, two hours a week.

Three credits

B.A. 251. Principles of Management I

Nature and evolution of management thought. Fundamental universal concepts covered: decision-making, policy formulation, planning, organizing, staffing, actuating, communicating, directing, controlling, etc. Views management as a process of integrating knowledge developed by many disciplines. Social and ethical dimensions of the management process summarized.

Three credits

B.A. 252. Principles of Management II

Application of universal concepts of management. Emphasis on problems of production, sales, personnel, office, finance, organization. Viewpoint on relationship to overall operation of enterprise. Develops analytical abilities and decision-making skills. Case study method emphasized.

Prerequisite: B.A. 251.

Three credits

B.A. 395-396. Independent Research

Independent study and research for advanced students in the field of the major under the direction of a staff member. A research paper at a level significantly beyond a term paper is required.

Prerequisite: Approval of the department chairman is required.

One to three credits

B.A. 397. Seminar

Presentations and discussions of selected topics.

Prerequisite: Approval of the department chairman is required.

One to three credits. (Maximum of three credits per student.)

BUSINESS EDUCATION

Professor R. Werner, chairman; Assistant Professor Gera; Instructor Raspen.

Bus. Ed. 105. Elementary Shorthand

Presentation, development and completion of principles of Gregg Shorthand, Diamond Jubilee Series. Consideration given to non-shorthand factors of transcription, as spelling, punctuation, grammar, and word usage. Introduction to dictation and transcription skills. Four hours a week. One hour lecture, three hours laboratory.

Two credits

Bus. Ed. 106. Intermediate Shorthand

Review and strengthen knowledge of Gregg Shorthand, Diamond Jubilee Series shorthand theory. Development of new word-building power through progressive skill building dictation. Extending knowledge and skill in basic elements of transcription. Four hours each week. One hour lecture, three hours laboratory.

Prerequisite: Bus. Ed. 105, or approval of instructor.

Two credits

Bus. Ed. 107. Elementary Typewriting

Mastery of the techniques of touch typewriting. Emphasis is placed on skill building practices with proper techniques through motivating drills and timed writings. Learning to type simple problems on a production basis such as: Memorandums, personal communications, tabulations, business letters, outlines, manuscripts, and composing. Four hours each week. One hour lecture, three hours laboratory. Fee \$10.

Two credits

Bus. Ed. 108. Intermediate Typewriting

Building typewriting competence by strengthening basic and problem skills. Developing higher degree of proficiency through speed and accuracy timed writings, and production typing problems, such as: business letters with special features; special communication forms; technical papers and business reports; tables;

business forms; and executive communications. Four hours each week. One hour lecture, three hours laboratory. Fee \$10.

Prerequisite: Bus. Ed. 107, or approval of instructor.

Two credits

Bus. Ed. 201. Advanced Typewriting I

Increased emphasis is placed on higher speed and accuracy. Measuring of production skill competencies. A series of simulated on-the-job experiences in which a minimum of direction and a maximum of realism are provided.

Advanced skills applied to typing in General, Accounting, and Executive offices. Three hours laboratory. Fee \$10.

Prerequisite: Bus. Ed. 108.

One credit

Bus. Ed. 202. Advanced Typewriting II

Continuation of speed and accuracy development and reinforcement. Independent specialized production typing, with high degree of speed and accuracy on simulated on-the-job experience: Technical, Professional (Medical, Legal, Scientific) and Government offices. Three hours laboratory. Fee \$10.

Prerequisite: Bus. Ed. 201.

One credit

Bus. Ed. 205. Office Procedures and Business Machines

A study of technical procedures and problems in typical business and professional offices; analysis of personal and professional requirements for office personnel; a general survey and comparison of major office machines classifications; administrative machine procurement problems and procedures; operation and use of office machines and equipment. Eight hours a week. Two hours lecture, six hours laboratory. Fee \$10.

Prerequisite: Approval of instructor.

Four credits

Bus. Ed. 207. Advanced Shorthand I

Mastering of Gregg Shorthand Diamond Jubilee Series theory. Progressive speed forcing and speed building, reinforcement and

control dictation given. Building transcription quality and speed. Five hours each week. Two hours lecture, three hours laboratory.

Prerequisite: Bus. Ed. 106.

Three credits

Bus. Ed. 208. Advanced Shorthand II

Development of shorthand facility and transcription competency when working with highly specialized material. The specialized areas of dictation and transcription are: Medical, Legal, Technical and Scientific, International Trade, and Congressional. Emphasis is placed on specialized terminology. Five hours each week. Two hours lecture, three hours laboratory.

Prerequisite: Bus. Ed. 207.

Three credits

Bus. Ed. 243. Principles and Methods of Business Education

Principles of business education; business curricula in secondary schools; psychology of skill-building; objectives, standards, content; tests and measurements, and techniques of instruction in business education courses; observation; student teaching demonstrations. Offered every other year.

Prerequisite: Approval of instructor.

Three credits

CHEMISTRY

Professor Bohning, chairman; Professors Rozelle, Swain; Associate Professors Salley, Faut, Stine, Labows; Adjunct Professor Stockham.

Chem. 105. General Chemistry

This course is intended for students who take no advanced courses in inorganic, physical, or analytical chemistry. It introduces some of the fundamental laws and theories of chemistry with emphasis on chemical composition. Atomic structure, chemical bonding, solutions, kinetic theory, equilibrium, and radioactivity are considered. Class, three hours a week; laboratory, three hours a week. Breakage deposit required. Laboratory fee: \$20.

Four credits

Chem. 106. Organic & Biological Chemistry

An introduction to the chemistry of carbon compounds and reactions of common functional groups with emphasis on the structures of carbohydrates, proteins and amino acids, steroids and nucleic acids. The laboratory will emphasize the techniques involved in the separation and identification of various classes of organic compounds. Lecture, three hours a week; laboratory, three hours a week. Breakage deposit required. Laboratory fee: \$20.

Prerequisite: Chem. 105 and permission of instructor.

Four credits

Chem. 201. Introduction to the Principles of Chemistry

Chemical periodicity and stoichiometry are emphasized. States of matter, atomic theory, and dynamic equilibrium are introduced. Class, three hours a week; laboratory, three hours a week. Breakage deposit required. Fee: \$20.00.

Four credits

Chem. 202. Chemical Equilibria

A study of the principles of chemical equilibria. Laboratory will involve theory and development of schemes of qualitative analysis with particular emphasis on the reactions of metallic elements. Class, three hours a week; laboratory, three hours a week. Breakage deposit required. Fee: \$20.00.

Prerequisite: Chem. 201.

Four credits

Chem. 212. Systematic Inorganic Chemistry

A systematic description of the chemistry of the elements based on fundamental chemical principles. Fundamental techniques of inorganic synthesis. Class, three hours a week; laboratory, three hours a week. Breakage deposit required. Fee: \$20.

Prerequisite: Chem. 202, Math 112, or permission of instructor.

Four credits

Chem. 221. Inorganic Quantitative Analysis

An introduction to the theory and practice of typical analyses: volumetric, gravimetric, and instrumental. Class, two hours a

week; laboratory, six hours a week. Breakage deposit required. Fee: \$20.00.

Prerequisite: Chem. 202, or permission of the instructor.

Four credits

Chem. 232. Organic Chemistry I

An introduction to the chemistry of carbon compounds through the reactions of common functional groups in aliphatic, alicyclic, aromatic and heterocyclic systems. Reaction pathways will be considered. Emphasis in laboratory will be placed on the development of fundamental techniques. Class, three hours a week; laboratory, three hours a week. Breakage deposit required. Fee: \$20.00.

Prerequisite: Chem. 221, or permission of the instructor.

Four credits

Chem. 233. Organic Chemistry II

A continuation of Chem. 232. Emphasis in laboratory is placed on advanced techniques and sequential syntheses. Class, three hours a week; laboratory, six hours a week. Breakage deposit required. Fee: \$20.00.

Prerequisite: Chem. 232.

Five credits

Chem. 235. Organic Chemistry IIa

A continuation of Chem. 232. Not open to B.S. chemistry majors. Class, three hours a week; laboratory, three hours a week. Breakage deposit required. Fee: \$20.00.

Prerequisite: Chem. 232.

Four credits

Chem. 261. History of Chemistry

A study of chemistry in terms of the personalities responsible for its development. Class, one hour a week.

Prerequisite: Completion of twenty chemistry credits.

One credit

Chem. 262. Chemical Literature

Discussion of the nature and use of the important sources of chemical information. Laboratory problems emphasize techniques

of information retrieval from journals, abstracts, and other source material. Literature preparation for independent research (Chem. 395-396) is included. Class, one hour a week; library laboratory, three hours a week.

Prerequisite: Completion of twenty chemistry credits, or permission of the instructor.

Two credits

Chem. 334. Organic Qualitative Analysis

A study of the systematic identification of organic compounds and mixtures utilizing classical and instrumental techniques. Class, one hour a week; laboratory, six hours a week. Breakage deposit required. Fee: \$20.00.

Prerequisite: Chem. 233.

Three credits

Chem. 341. Elementary Physical Chemistry

The first, second, and third laws of thermodynamics are emphasized. The topics of electrochemistry, chemical kinetics, the phase rule, and the states of matter are introduced. Class, three hours a week; laboratory, three hours a week. Breakage deposit required. Fee: \$20.00.

Prerequisite: Chem. 221, Math 211, Phys. 152, or permission of the instructor.

Four credits

Chem. 342. Intermediate Physical Chemistry

Electrochemistry, electrokinetic phenomena, kinetic molecular theory, Maxwell Boltzman distribution, chemical kinetics, and the states of matter are studied in detail. Quantum mechanics and radiochemistry are introduced. Class, three hours a week; laboratory, three hours a week. Breakage deposit required. Fee: \$20.00.

Prerequisite: Chem. 221, Math 211, Phys. 152, or permission of the instructor.

Four credits

Chem. 352. Biochemistry

A study of the nature and metabolism of proteins, carbohydrates, lipids, and other physiological substances. Emphasis is placed on

the mechanism of enzymatic catalysis. Class, three hours a week. Prerequisite: Chem. 233, 235, or permission of the instructor.

Three credits

Chem. 376. Advanced Analytical Chemistry

The theory and application of modern techniques and instrumental procedures, such as spectrophotometric, electro-analytical, and chromatographic. Theory and practice of analysis of more complex materials. Class, two hours a week; laboratory, six hours a week. Breakage deposit required. Fee: \$20.00.

Prerequisite: Chem. 342.

Four credits

Chem. 395-396. Independent Research

Independent study and research for advanced students in the field of the major under the direction of a staff member. A research paper at a level significantly beyond a term paper is required. Cannot be taken for credit before the seventh semester but may be a continuation of work begun before the seventh semester. Fee: \$20.

Prerequisite: Approval of the department chairman is required.

One to three credits each semester.

Chem. 397. Seminar

Presentations and discussions of selected topics in chemistry conducted by senior chemistry majors and the staff. All chemistry majors are invited to attend the meetings.

Prerequisite: Approval of the department chairman is required.

One credit

Chem. 411. Systematic Inorganic Chemistry

Oxidation-Reduction, atomic structure, theory and application of the principles of chemical bonding, systematic study of properties related to extra-nuclear structure of atoms, coordination chemistry, acid-base phenomena, non-aqueous solvents, descriptive chemistry. Class, three hours a week.

Prerequisite: Chem. 342, or permission of the instructor.

Three credits

Chem. 431-432. Advanced Organic Chemistry

A detailed study of modern theories of mechanism and structure. Topics include nucleophilic and electrophilic substitution, elimination reactions, molecular rearrangements, carbonyl reactions, stereochemistry, kinetics. Class, three hours.

Three credits each semester

Chem. 440. Quantum Chemistry

The experimental foundations and the mathematical formulation of the quantum theory, including the quantum mechanics of simple systems, the hydrogen atom, and approximate methods. Group theory is introduced and the use of symmetry properties is applied to molecular orbital theory. Class, three hours.

Prerequisite: Chem. 342.

Three credits

ECONOMICS

Professor R. Werner, chairman; Professor Rosenberg; Associate Professors Elliot, Farrar, Taylor; Assistant Professors DeYoung, Chesler, Engel, Leviton, Orlowski. Instructors Kelly, Worth.

Ec. 101. Principles of Economics I

An introductory course which presents basic economic problems and shows how these problems are solved in a free enterprise economy; the effects of the increasing importance of the economic role of government are pointed out. The course provides orientation in the broad field of economics and makes use of the analytical trends by means of which the student can understand the economic problems of his environment.

Three credits

Ec. 102. Principles of Economics II

This course is a logical sequence to Economics 101. It is based upon a broad micro-economic foundation concentrated on such units as the firm, the industry, and the consumer.

Prerequisite: Ec. 101.

Three credits

Ec. 111. Economic History

A study of the development of economic institutions with emphasis on the historical roots and evolutionary development of our modern economy. Analysis of causes of development. Major stress is on institutions.

Three credits

Ec. 201. Money and Banking

A study of money, credit, and banking operations. Development of American monetary and banking system. Central banking and the Federal Reserve System. Instruments of monetary control. Financial intermediaries. Monetary standards and international monetary relations.

Prerequisite: Ec. 102.

Three credits

Ec. 202. Theory of Money

Development of monetary theory. Liquidity preference and loanable funds theories of interest. Saving, investment, and income determination. Keynesian and neo-Keynesian analysis. The inflationary process. Exchange rates and international monetary mechanism.

Prerequisite: Ec. 201.

Three credits

Ec. 204. Consumer Credit

This course includes consumer credit in its various aspects. It includes retail credit, sales finance, credit unions, and credit bureau activities.

Prerequisite: approval of instructor.

Two credits

Ec. 212. Government and Business

A study of the relationship of government to economic enterprises with special attention to conditions in the United States; the regulatory activities of government agencies; administrative methods, objectives and results of governmental control. Reference is

made to monopoly and quasi-monopoly situations, public utilities, trusts, transportation, extractive industries, and public enterprise.

Prerequisite: P. S. 101, Ec. 102.

Three credits

Ec. 217. Economics of Transportation

Problems and policies of railroads, buses, trucks, inland waterways, and air and ocean transportation; economic aspects of transportation and traffic management; use of rates and tariff; significance of transportation to society.

Prerequisite: Ec. 102.

Three credits

Ec. 222. The American Labor Movement

A study of the evolving American labor movement and its ideology. This course deals with the development of American labor ideology and psychology in comparison with other labor movements. The relationship of the American labor movement to other political, social and economic institutions is investigated.

Prerequisite: Ec. 102.

Three credits

Ec. 223. Collective Bargaining

An introduction to labor problems and an analyses of major issues in the field of labor. This course deals with collective bargaining, employment, wages, hours and union policies. Governmental participation in labor relations and collective bargaining is also investigated. Reference is made to social welfare devices such as social security, unemployment compensation and workmen's compensation.

Prerequisite: Ec. 102.

Three credits

Ec. 224. Economic Development

A study and analysis of the theories of economic development. Guidelines are provided for development policy in various underdeveloped areas of the world. Objective comparisons are made

which deal with factors that underlie the transition from economic backwardness to sustained economic growth.

Prerequisites: Ec. 101 and Ec. 102 or approval of the instructor.

Three credits

Ec. 225. International Trade

Theory and practice of international trade with special reference to contemporary problems and policies. The topics covered include tariffs, quotas, foreign exchange, equilibrium in international payments. A study will be made of geographic, economic, social, and political influences on international trade. Review of current policies and developments in the United States.

Prerequisite: Ec. 102.

Three credits

Ec. 227. Economic Geography of North America, Europe and the Soviet Union

A study and analysis of the characteristics, potentials and problems of the more advanced nations of the Northern Hemisphere.

Prerequisite: Ec. 102.

Three credits

Ec. 228. Economic Geography of Asia, Africa, and Latin America

A study and analysis of the characteristics, potentials and problems of the less developed nations and areas of the world.

Economics 227 is not a prerequisite.

Three credits

Ec. 229. Comparative Economic Systems

The institutions of planned economy of the U.S.S.R. and those of the contemporary experiment in evolutionary socialism in Great Britain are studied. Constant objective comparisons are made with institutions which are characteristic of a capitalistic economy.

Prerequisite: Ec. 102 or approval of instructor.

Three credits

Ec. 230. Business Cycles

A historical analysis of major business cycles. Contemporary theories and a critical examination of public policy toward business cycles.

Prerequisite: approval of instructor.

Three credits

Ec. 231. Applied General Statistics

A course in statistical methods and their application. A collection and interpretation of statistical data, frequency distribution and measures of central tendency, fitting the normal curve, analysis of variance. Lecture, three hours; laboratory, two hours. Fee: \$10.

Prerequisite: approval of instructor.

Three credits

Ec. 232. Economic Statistics

A continuation of Economics 231. This course will include time-series analysis, construction of index numbers, methods of correlation analysis, multiple and partial correlation, and test of significance for samples; Chi-square test. Lecture, three hours; laboratory, two hours. Fee: \$10.

Prerequisite: Ec. 231.

Three credits

Ec. 236. Public Finance

Fundamental principles of public finance; government expenditures; revenue; financial policies and administration; taxation; principles of shifting and incidence of taxation; public debts and the budget; fiscal problems of federal, state, and local government; the relation of government finance to the economy.

Prerequisite: Ec. 102, P. S. 101.

Three credits

Ec. 241. Economic Analysis

This course is designed to give coverage to the theory of value

and distribution. The determinants of consumer demand and the principles governing costs and outputs of producers are analyzed with some stress on recent theoretical investigations. The method is abstract and deductive.

Prerequisite: Ec. 102.

Three credits

Ec. 245. Consumer Economics

The place of the consumer in the economic system. Theories of consumption; consumption minima; problems of the individual consumer as affected by income, taxes, consumer habits and standards of living are investigated. A study is made of the trends in consumption, income, income disposition and marketing and pricing of consumer goods. Relationships between government activities and the consumer are studied.

Prerequisite: Ec. 102.

Three credits

Ec. 252. Introduction to Mathematical Economics

The application of mathematical methods to economic analysis. The goal is to develop a fundamental understanding of the role of mathematics in economics. Emphasis is on the use of mathematical tools in macro and micro economics.

Prerequisites: Ec. 101, Ec. 102, Math. 105, Math. 106.

Three credits

Ec. 395-396. Independent Research

Independent study and research for advanced students in the field of the major under the direction of a staff member. A research paper at a level significantly beyond a term paper is required.

Prerequisite: Approval of the department chairman is required.

One to three credits

Ec. 397. Seminar

Presentations and discussions of selected topics.

Prerequisite: Approval of the department chairman is required.

One to three credits. (Maximum of three credits per student.)

EDUCATION

Professor Hammer chairman; Professor Darte; Associate Professors Barone, Caldwell; Assistant Professors Siles, Fahmy, Bellucci, Johnson, Watters; Instructor Bynon.

Ed. 201. Introduction to Education

A study of the historical development of American education, the role of the school in American life, educational philosophies, educational organization and administration, school finance, school curricula, school personnel, and current issues in education.

Prerequisite: Sophomore standing.

Three credits

Ed. 202. Educational Psychology

A study of the principles of learning and the application of psychological principles in the practice of education.

Prerequisite: Psy. 102, Junior standing.

Three credits

Ed. 291. Communications Skills in Elementary Education

An introductory course in development of rationale, curriculum and materials for instruction of communications skills in the elementary school.

Prerequisite: Ed. 201, 202.

Two credits

Ed. 292. The Sciences in the Elementary School

An introductory course in development of rationale, curriculum and materials for instruction of sciences in the elementary school.

Prerequisite: Ed. 201, 202.

Two credits

Ed. 298. Principles of Nursery-Kindergarten Education

A study of the historical development, organization, and rationale of early childhood education, including observation of programs for young children.

Prerequisites: Ed. 201, 202 and Psy. 221.

Three credits

Ed. 299. Principles of Elementary Education

A study of the historical development and organization of the American elementary school.

Prerequisite: Ed. 201, 202.

Three credits

Ed. 300. Professional Semester in Elementary Education

Provides classwork and practical experience to prepare students for elementary school teaching. Fee \$25.

To qualify for admission into the Professional Semester, students must secure the recommendation of the department chairman in their major and the approval by the Education Department Chairman.

Prerequisites: Ed. 291, 292 and Math. 232, 243.

Fifteen credits

FOR TRANSFER AND CERTIFICATION PURPOSES, CREDIT WILL BE ASSIGNED AS FOLLOWS:

Ed. 301. The Teaching of Reading

An introduction to the teaching of reading in the elementary grades.

Two credits

Ed. 302. Methods and Materials in Elementary School Arithmetic

A study of curriculum content and teaching procedures in elementary school arithmetic.

Two credits

Ed. 303. Methods and Materials in Elementary School Science

A study of curriculum content and teaching procedures in elementary school science.

Two credits

Ed. 304. Methods and Materials in Elementary School Social Studies

A study of curriculum content and teaching procedures in elementary school history, geography, and government.

Two credits

Ed. 305. Multi-Sensory Techniques in Elementary School Teaching

A study of the use of multi-sensory teaching aids in the elementary school classroom.

One credit

Ed. 306. Student Teaching in Elementary School

Students are assigned to work with experienced classroom teachers. They assume classroom responsibility and teach under supervision. Conferences are arranged with cooperating teachers and college supervisors.

Six credits

Ed. 310. Professional Semester in Nursery-Kindergarten Education

Provides classwork and practical experience to prepare students for Nursery-Kindergarten teaching. Fee \$25.

To qualify for admission into the Professional Semester, students must secure the recommendation of the department chairman in their major and the approval by the Education Department Chairman.

Prerequisite: Ed. 298, Psych. 221.

Fifteen credits

FOR TRANSFER AND CERTIFICATION PURPOSES, CREDIT WILL BE ASSIGNED AS FOLLOWS:

Ed. 311. Family and Community-Life Education

A study of the early childhood teacher's role in family and community life education.

Two credits

Ed. 312. Nutrition, Hygiene, General Health

A study of the teacher's role in nutrition, hygiene, and health of young children.

Two credits

Ed. 313. Curriculum Study

A study of the content and organization of early childhood curriculum.

Two credits

Ed. 314. Methodology

A study of methods and materials of early childhood instruction.

Two credits

Ed. 315. Use of Multi-Sensory Devices

A study of the use of multi-sensory teaching aids in the early childhood center.

One credit

Ed. 316. Practicum

Students are assigned to work with early-childhood teachers. They assume classroom responsibility and work under supervision. Conferences are arranged with cooperative teachers and college supervisors.

Six credits

Ed. 320. Professional Semester in Fine Arts Education

Provides classwork and practical experience to prepare students for the teaching of art in elementary and secondary schools. Fee \$25.

To qualify for admission into the Professional Semester, students must secure the recommendation of the department chairman in their major and the approval by the Education Department chairman.

Students may schedule late afternoon or evening classes during the professional semester.

Prerequisite: Ed. 201, 202.

Fourteen credits

FOR TRANSFER AND CERTIFICATION PURPOSES, CREDIT WILL BE ASSIGNED AS FOLLOWS:

Ed. 321. Art Curriculum

A study of the organization of teaching materials for most effective use in the art curriculum.

Three credits

Ed. 322. The Teaching of Art

A study of materials, techniques, and experiences in the public school art program; evaluation of past and present philosophies.

Three credits

Ed. 323. General Classroom Methods

A study of various instructional procedures used in public school classrooms.

One credit

Ed. 324. Multi-Sensory Techniques in the Teaching of Art

A study of the use of multi-sensory aids in the teaching of art in elementary and secondary schools.

One credit

Ed. 326. Student Teaching in Art

Students are assigned to work with experienced classroom teachers and art specialists. They observe and teach in elementary and secondary school classrooms. Opportunities are

provided for them to participate in school-wide activities. Conferences are arranged with co-operating teachers and college supervisors.

Six credits

Ed. 330. Professional Semester in Secondary Education

Provides classwork and practical experience to prepare students for secondary school teaching. Fee: \$25.

To qualify for admission into the Professional Semester, students must secure the recommendation of the department chairman in their major and the approval by the Education Department chairman.

Students may schedule late afternoon or evening classes during the professional semester.

Prerequisite: Ed. 201, 202.

Twelve credits

FOR TRANSFER AND CERTIFICATION PURPOSES, CREDIT WILL BE ASSIGNED AS FOLLOWS:

Ed. 331. Principles of Secondary Education

A study of the historical development and organization of the American secondary school.

One and one-half credits

Ed. 332. Secondary School Curriculum

A study of the content and organization of the secondary school curriculum.

One and one-half credits

Ed. 333. Secondary School Teaching Methods

A study of various teaching procedures employed in the secondary school classroom.

One credit

Ed. 334. Multi-Sensory Techniques in Secondary School Teaching

A study of the use of multi-sensory teaching aids in the secondary school classroom.

One credit

Ed. 335. The Teaching of Reading in Secondary School Subjects

Instruction in reading methods in secondary school subjects.

One credit

Ed. 336. Student Teaching in the Secondary School

Students are assigned to work with experienced classroom teachers. They assume classroom responsibility and teach under supervision. Conferences are arranged with co-operating teachers and college supervisors.

Six credits

Ed. 351. Educational Measurements

A study of the characteristics, construction, and use of various educational measuring instruments commonly available in schools.

Two credits

Ed. 352. Guidance

An introduction to general principles and the techniques employed in guidance programs in public schools.

Prerequisite: Ed. 202.

Three credits

Ed. 391. Instructional Strategy and Evaluation

An introductory course in development of effective elementary school teacher behavior.

Prerequisite: Ed. 202, Psy. 221.

Two credits

Ed. 395-396. Independent Research

Independent study and research for advanced students in the field of the major under the direction of a staff member. A research paper at a level significantly beyond a term paper is required.

Prerequisite: Approval of the department chairman is required.

One to three credits

Ed. 397. Seminar

Presentations and discussions of selected topics.

Prerequisite: Approval of the department chairman is required.

One to three credits. (Maximum of three credits per student.)

ENGINEERING

Associate Professor Toole, chairman; Associate Professors Thomas, Nejib; Assistant Professors Kaby, Orehotsky.

Engi. 111. Introduction to Engineering

Methods of solving engineering problems. Instruction in the use of the slide rule and mathematical tables. The use of drawing instruments, systems of representation such as orthographic, isometric, and oblique projections. Vector quantities and vector diagrams. Graphical mathematics. Nomographs. Two hours lecture and four hours practicum per week. Fee: \$20.

Three credits

Engi. 112. Engineering Graphics

A continuation of spatial relationships as represented by points, lines, planes, other surfaces and solids. Sections and conventions. The intersection of surfaces and solids. Transformation of coordinates. Practicum, six hours a week. Fee: \$20.

Three credits

Engi. 211. Mechanics I. Statics

Study of force systems in equilibrium: catenary; friction; first and second moments of areas, volumes masses; centroids. Three hours class a week.

Prerequisites: Phys. 201 and Math. 111.

Three credits

Engi. 212. Mechanics II. Dynamics

Laws of motion, rectilinear and curvilinear, for a particle and a rigid body. Work-energy; impulse-momentum. Three hours class a week.

Prerequisite: Engi. 211.

Three credits

Engi. 280. Industrial Training Program

Industrial and research experience gained concurrently with undergraduate studies through organized plant assignments with various companies and industries. (Offered during the summer.)

Prerequisite: Junior Standing.

*Civil Engineering***C.E. 103. Plane Surveying**

Lectures, recitations and problems on the theory and practice of plane and topographic surveying. Field exercises, including the adjustment and use of surveying equipment including transit, levels, compass and tape for surveys of area, topography, profile, grading, excavating and the location of details. Interpretation of and mapping from field notes with attendant computations and the balancing of surveys. Emphasis on the application of surveying to engineering work in general. Practicum, seven hours a week. Fee: \$20.

Prerequisite: Engi. 107.

Three credits

C.E. 104. Route Surveying

A study of the engineering and economic problems affecting the location of routes of communication. Lectures, recitations, field work and problems on the theory and use of simple horizontal, compound, reverse, spiral and vertical alignment curves; grades, cross sections, mass diagrams and earth work computations, grade crossing, right-of-way, and drainage problems. Solar observation to determine true bearing and azimuth. Class, two hours a week; practicum, six hours a week. Fee: \$20.

Prerequisite: C. E. 103.

Four credits

*Electrical Engineering***E.E. 211. Circuit Theory I**

Analysis of simple circuit models. Kirchoff's Law; v-i characteristics of network elements. Forced and natural components of response; natural frequencies, the complex frequency plane, resonance. Transfer functions and the roles of their poles and zeroes. The use of digital computer in solutions. Three hours lecture a week.

Prerequisite: Math. 112.

Three credits

E.E. 212. Circuit Theory II

Fourier series and its application. The Laplace transformation and evaluation of the inverse. Terminal behavior of linear networks. Impulse response; its calculation and its use in obtaining response to other excitations; the convolution integral. The sinusoidal steady state: plots, charts and loci that exhibit frequency dependence, impedance matching and transformers (Smith Charts). Feedback systems and stability. Introduction to random signal and noise; correlation functions and spectra. Two hours class and one three-hour discussion-laboratory a week.

Prerequisite: Phys. 202 and E.E. 211.

Three credits

E.E. 251. Electronic Circuits I

The development of the operating principles and terminal characteristics of electronic devices, particularly semiconductor diodes and transistors. Amplifiers, oscillators and rectifiers at audio and radio frequencies. Three hours class and one three-hour laboratory a week. Fee: \$20.

Prerequisite: E.E. 211 or by special permission.

Four credits

E.E. 252. Electronic Circuits II

Application of electronic devices in detection, modulation, wave-shaping and switching circuits. Design consideration for small and large signals at audio and radio frequencies. The design of com-

plete systems using such sub-systems. Three hours class and one three-hour laboratory a week. Fee: \$20.

Prerequisite: E.E. 251.

Four credits

E.E. 271. Physical Electronics

Structure of the solid state, wave mechanics, statistics, band theory of solids, semiconductors and semiconductor electronics. Emission (thermionic, field and photo-), photoconductivity and luminescence. Diodes, transistors and other devices. Dielectrics, non-linear optics, piezoelectrics, ferroelectrics, ferro and ferrimagnetism. Three hours class a week.

Prerequisite: Phys. 203.

Three credits

E.E. 272. Solid State Devices

Transistor processes and types, properties of semiconductors, junction characteristics and theory. Junction transistor characteristics and theory. High-current effects and low frequency feedback effects. Low frequency and high frequency hybrid parameters. Three hours class a week.

Prerequisite: E.E. 271.

Three credits

E.E. 311. Logic and Switching Circuits

Application of Boolean algebra to the design of combinational logic nets; minimization procedures. Analysis and synthesis of sequential switching circuits; clocked and asynchronous operation. Effects of microelectronic technology on logic design optimization. Fault masking by redundancy techniques. Three hours class a week.

Prerequisite: E.E. 252.

Three credits

E.E. 312. Pulse and Timing Circuits

Tube, transistor circuit techniques and design for diversity of waveforms. Functions needed in pulse systems. Instrumentation and computers. Three hours class a week.

Prerequisite: E.E. 252.

Three credits

E.E. 320. Electromechanical Energy Conversion

Principles of electromagnetic and electrostatic energy conversion and their application to develop a unified treatment of electric machinery. Idealized machines and transformers. Engineering considerations applied to d.c. and a.c. machines. Three hours class and one three-hour laboratory a week. Fee: \$20.

Prerequisite: E.E. 211 and Phys. 202.

Four credits

E.E. 331. Electromagnetic Fields I

Vector analysis. The concept of fields. Electrostatic forces images, potential and Gauss's law. Magnetostatic forces and Ampere's law. Dielectric and Magnetic media. Fields in conductors. Electric and magnetic circuit elements. Plane electromagnetic waves. Three hours class and one three-hour laboratory a week. Fee: \$20.

Prerequisite: Phys. 202, Math 212.

Four credits

E.E. 332. Electromagnetic Fields II

Differential form of Maxwell's equations. Electrostatics, magnetostatics and boundary condition problems in one- two- and three-space dimensions. Transverse electromagnetic waves; energy and power flow. Three hours class and one three-hour laboratory a week. Fee: \$20.

Prerequisite: E.E. 331.

Four credits

E.E. 335. Energy Transmission and Radiation

Plane waves in various media; reflection and refraction, standing waves, waveguides, transmission lines, antennas and radiation. Principles of electrodynamics. Three hours class a week.

Prerequisite: E.E. 331; Senior standing.

Three credits

E.E. 342. Microwave Circuits and Devices

Matrix algebra techniques, reduction of waveguides and discontinuity problems to equivalent transmission line and network

problems, obstacles as matching elements. Multiple waveguide junctions and small aperture coupling. Periodic structures. Electron ballistics and space-charge waves in electron beams. Properties and characteristics of TWT, BOW and cross-field devices. Three hours lecture a week.

Prerequisite: Senior standing.

Three credits

E.E. 362. Control Systems

Laplace and transformation theory. Introduction to the analysis and design of linear feedback control systems by means of locus and frequency response methods. Discussion of stability, transient and steady-state errors. Models and response analysis for automatic control purposes. Two hours class and one three-hour demonstration-laboratory a week. Fee: \$20.

Prerequisite: Senior standing.

Three credits

E.E. 381-382. Advanced Engineering Laboratory I, II

A study of properties and designs of various amplifiers and non-linear circuits. Microwave devices, VHF integrated circuits and the generation and modulation of coherent optical waves. The fabrication of semiconductor devices and integrated circuits. Thin film deposition techniques, solid-state diffusion and photolithographic applications and design and fabrication of integrated capacitor and resistor circuits. One hour lecture-discussion and two three-hour laboratory a week each semester. Fee: \$20.

Prerequisite: Senior standing.

Four credits each semester

E.E. 390. Topics in Electrical Engineering

Selected topics in the field of electrical engineering. These may include one or more of the following: information theory, signals and noise, network synthesis, magnetic and non-linear circuits, direct energy conversion systems, cryogenics, electrodynamics, plasma physics, digital circuits and systems. Three hours class a week.

Prerequisite: Senior standing and special permission.

Three credits

E.E. 395-396. Independent Research

Independent study and research for advanced students in the field of the major under the direction of a staff member. A research paper at a level significantly beyond a term paper is required.

Prerequisite: Approval of the department chairman is required.

One to three credits

E.E. 397. Seminar

Presentations and discussions of selected topics.

Prerequisite: Senior standing or by special permission.

One to three credits. (Maximum of three credits per student.)

Materials Engineering

Ma. E. 202. Materials Science

Introduction to the structure, properties and behavior of solid materials — metals, polymers and ceramics. The ionic, covalent and metallic bond, atomic packing, structure and imperfections. The thermodynamics and mechanical behavior of structures. Three hours class a week.

Prerequisite: Chem. 201.

Three credits

Ma. E. 211. Crystallography

Repetition theory and translational and rotational symmetry. Derivation of the crystal classes. Combination of symmetry operations involving reflections and inversions. The symmetrical plane and space lattices. The coordinate systems of crystallography and crystal forms. Practical determination of point-group symmetry. The algebra of operations. Space groups. Equivalent positions in space groups. The determination of space groups. Group theory and its application to point symmetries. Three hours class a week.

Three credits

Ma. E. 212. X-Ray Diffraction

X-rays and their properties. Directions and intensities of diffracted beams. Laue, Debye-Scherrer, Diffractometer, Rotating, Oscillating, Weissenberg and Precession Methods. Outline of crys-

tal structure analysis. Three hours class and one three-hour laboratory a week. Fee: \$20.

Prerequisite: Ma.E. 211.

Four credits

Ma. E. 242. Physical Metallurgy

Structure and properties of pure metals, constitution, structure, and properties of alloys, mechanical and thermal treatments of metals and alloys. Three hours class a week.

Prerequisite: Ma.E. 202.

Three credits

Ma. E. 321. Phase Equilibria

Thermodynamics approach to phase equilibria, the phase rule, and polymorphism. Theory of alloy phases. Order-disorder phenomena. Binary and ternary phase diagrams and their application to Materials Science. Three hours class a week.

Prerequisite: Chem. 342.

Three credits

Ma. E. 322. Crystal Growth and Defects

A broad look at the important phenomena involved in the growth and perfection of crystalline solids. Vapor, melt, solution and gel growth methods, as well as defect thermodynamics will be studied. Three hours class and one three-hour laboratory a week. Fee: \$20.

Prerequisite: Chem. 342.

Four credits

Ma. E. 331. Crystalline Anisotropy

Groundwork of crystal physics and transformation of second-rank tensors. Paramagnetic and Diamagnetic susceptibility. Electric Polarization. Stress, strain and thermal expansion. Elasticity and fourth-rank tensors. Matrices. Thermodynamics of equilibrium thermal conductivity, and thermoelectricity. Three hours class a week.

Three credits

Ma. E. 382. Materials Engineering Instrumentation Laboratory

The application of X-ray methods in Materials Engineering.

X-ray spectrometers and spectrochemical analysis. Techniques for quantitative analysis. The Electron Probe and microanalysis. Techniques for quantitative analysis. Applications. Two three-hour lecture-laboratories per week. Fee: \$20.

Prerequisite: Chem. 221.

Three credits

Ma. E. 390. Special Topics in Materials Engineering

Selected topics in the field of materials engineering. These may include one or more of the following: x-ray diffraction, crystal structure analysis, phase equilibria, crystal growth, metallurgy, ceramics, etc. Three hours lecture-discussion a week.

Prerequisite: Senior standing and special permission.

One to three credits

Ma. E. 395-396. Independent Research

Independent study and research for advanced students in the field of the major under the direction of a staff member. A research paper at a level significantly beyond a term paper is required.

Prerequisite: Approval of the department chairman is required.

One to three credits

Ma. E. 397. Seminar

Presentations and discussions of selected topics.

Prerequisite: Approval of the department chairman is required.

One to three credits. (Maximum of three credits per student.)

ENGLISH

Associate Professor Kaska, chairman; Professors Rizzo, Fiester; Associate Professors Groh, Lord, Terry; Assistant Professors Gutin, Mistichelli, Allen, Heaman, Swartchild, Boyle, Greenwald, Craddock, Geist, Holm, Moran, Kish, Molley; Instructors Roberts, Tyburski, Pasquarelli, Kerr.

Eng. 100. Writing Workshop

A remedial course in the fundamentals of writing. Combines extensive practice in the writing of expository prose with systematic study of the grammar and the rhetoric of the sentence and paragraph.

Eng. 101. Composition

Principles of exposition; collateral reading; writing of themes.
Three credits

Eng. 102. Composition

Principles of exposition continued; collateral reading; writing of themes; research paper.
Prerequisite: Eng. 101.
Three credits

Eng. 131. Fundamentals of Speech¹

A basic course in the preparation and delivery of short speeches.
Two credits

Eng. 132. Argumentation & Debate¹

Training in the fundamentals of argumentation and debate. Practice in gathering and organizing evidence and supporting materials.
Two credits

Eng. 151. Western World Literature

Survey of western world literature to the beginning of the eighteenth century; lectures, quizzes, conferences.
Prerequisite: Eng. 102, or equivalent in composition.
Three credits

Eng. 152. Western World Literature

Survey of western world literature from the eighteenth century to the present.
Prerequisite: English 151.
Three credits

Eng. 153. Survey of English Literature

A study of the works and movements in English literature from the Anglo Saxon period through the eighteenth century.
Prerequisite: English 102.
Three credits

¹ Credit for only one of the three courses, Eng. 131, Eng. 132, and Th. Arts 131, will be accepted toward graduation requirements in any degree program.

Eng. 154. Survey of English Literature

A study of the works and movements in English literature from the Romantic movement to the present.
Prerequisite: English 153.
Three credits

Eng. 201. Literary Analysis and Critical Writing

Study and practice in the techniques of literary analysis and critical writing.
Prerequisite: Eng. 102.
Three credits

Eng. 203. Creative Writing

Training in the selection and use of materials for writing the short story; attention is also given to some poetic forms and to the writing of short plays.
Prerequisite: Eng. 102.
Three credits

Eng. 204. History of the English Language

Study of the origins of the English language and of the principal phenomena of later development.
Prerequisite: Eng. 152.
Three credits

Eng. 213. Chaucer

Study of Chaucer's life and major works, including *The Canterbury Tales* and *Troilus and Criseyde*.
Prerequisite: Eng. 152.
Three credits

Eng. 221. Shakespeare

A study of selected plays; written reports on others not studied in class.
Prerequisite: Eng. 152.
Three credits

Eng. 310. Medieval English Literature

A study of English literature to 1500, exclusive of Chaucer and the drama.

Prerequisite: Eng. 152.

Three credits

Eng. 320. Tudor Prose and Poetry

Study of English non-dramatic literature from 1485 to 1603.

Prerequisite: Eng. 152.

Three credits

Eng. 321. Early English Drama

Study of the drama from the tenth century to 1642; reading of plays by pre-Elizabethan and Elizabethan dramatists exclusive of Shakespeare.

Prerequisite: Eng. 152.

Three credits

Eng. 330. Seventeenth Century Prose and Poetry

A study of the non-dramatic literature of the period.

Prerequisite: English 152.

Three credits

Eng. 335. Milton

A study of Milton's poetry and major prose.

Prerequisite: English 152.

Three credits

Eng. 341. Restoration & Eighteenth Century Drama

Study of the drama from 1660 to 1780.

Prerequisite: Eng. 152.

Three credits

Eng. 343. The Eighteenth Century

The chief poets and essayists of the eighteenth century. Includes Swift, Pope, and Johnson.

Prerequisite: Eng. 152.

Three credits

Eng. 345. Early English Novel

English prose fiction of the sixteenth and seventeenth centuries; rise of the novel to the close of the eighteenth century.

Prerequisite: Eng. 152.

Three credits

Eng. 354. Romantic Prose and Poetry

Study of Wordsworth, Coleridge, Shelley, Keats, and Byron, with related prose writers of the Romantic Period.

Prerequisite: Eng. 152.

Three credits

Eng. 360. Victorian Prose and Poetry

Readings in Tennyson, Browning, Arnold, and other significant writers of the Victorian Age.

Prerequisite: Eng. 152.

Three credits

Eng. 366. Later English Novel

The major novelists of the nineteenth and early twentieth centuries.

Prerequisite: Eng. 152.

Three credits

Eng. 370. Modern Poetry

Study of the major English and American poetry of the twentieth century.

Prerequisite: Eng. 152.

Three credits

Eng. 372. Modern Novel

Study of the major English and American novels of the twentieth century.

Prerequisite: Eng. 152.

Three credits

Eng. 374. Modern Drama

Study of important dramatists, European and American, from the time of Ibsen.

Prerequisite: Eng. 152.

Three credits

Eng. 381. American Literature I

A study of American literature to the Civil War.

Prerequisite: Eng. 152.

Three credits

Eng. 382. American Literature II

A study of American literature from the Civil War to the present time.

Prerequisite: Eng. 152.

Three credits

Eng. 395-396. Independent Research

Independent study and research for advanced students in the field of the major under the direction of a staff member. A research paper at a level significantly beyond a term paper is required.

Prerequisite: Approval of the department chairman is required.

One to three credits

Eng. 397. Seminar

Presentations and discussions of selected topics.

Prerequisite: Approval of the department chairman is required.

One to three credits. (Maximum of three credits per student.)

Journalism

Jour. 101. Basic News Writing

A beginner's course in gathering and writing news. Topics include: definition of news, writing leads and building the story, law of libel, and news sources. Students make comparative study of and report on representative papers of the United States, both dailies and weeklies. There is constant practice in writing, with weekly news assignments. Fee: \$10.

Three credits

Jour. 102. Advanced News Writing

A course in advanced news writing designed as a follow-up to those who have had Journalism 101 (Basic News Writing) or its equivalent. Topics include: writing the human interest and feature-

type article; specialized reporting and introductory copyreading. There is constant practice in writing, with weekly news assignments. Fee: \$10.

Prerequisite: Jour. 101 or approval of instructor.

Three credits

Theater Arts

Th. Arts 101. Approach to Theater

Attention will be directed to the importance of the dramatic imagination in reading and viewing plays, with the objective of developing a critical appreciation of the theater. Emphasis will be on forms of the play, structure of the playhouse, type of audience, and influence of society on theater of various ages, from pre-Shakespearean to the present. Lecture-discussion-demonstration.

Three credits

Th. Arts 131. Speech for the Stage

Students will receive instruction and experience in diction, delivery, interpretation. Classroom exercises will be assigned. This course is designed for those students especially interested in the theater and may be substituted for Eng. 131 or 132. Credit toward graduation requirements in any degree program may be granted for one speech course only.

Two credits

Th. Arts 210. Acting for the Educational Theater

Students will study the art of creating a variety of characters for the stage through the use of vocal interpretation and physical movement. Each student will extend his acting range and experience by performing various roles in selected dramatic scenes for classroom evaluation.

Three credits

Th. Arts 241. Production

The student will study the influences of social changes upon methods of staging and will explore the many facets of theatrical production. He will learn to translate the concept of the playwright into physical actuality and will learn to adapt a production to the requirements of a stage. Class and workshop.

Three credits

Th. Arts 250. Stagecraft

The student will study creative concepts and theories in the evolution of dramatic writing, staging of plays, and methods of acting that affect the modern theater. Special attention will be given to Theater of Alienation, Theater of Cruelty, and Theater of the Absurd.

Three credits

Th. Arts 260. Documentary Drama

The student will study scripts dramatizing issues and problems relating to man's opinion of himself, of his society, and his world. He will analyze and evaluate material presented on stage, on film, and on television.

Three credits

Th. Arts 330. Theater History

The student will study the historical development and background of theatrical art from ancient times to the present. Emphasis will be on structure of the playhouse and influence of society on theater of various ages.

Three credits

Th. Arts 343. Lighting for the Stage

The student will learn the principles of lighting a show so that he may use these principles in either simple or sophisticated lighting systems. He will work with instruments and equipment of the lighting technician.

Three credits

Th. Arts 344. Scene Design

The student will study the nature and function of scenic art. Emphasis will be on contemporary theories and techniques, with special reference to stage designers Robert Edmond Jones, Jo Mielziner, Donald Oenslager, Oliver Smith.

Three credits

Th. Arts 352. Directing: Fundamentals

The course deals with play selection; the practical use of the stage; blocking; interpretation of a role; relation of performer and audience. There will be presentation by individual class members of exercises and scenes from plays, to demonstrate stage picturization, dialogue, and movement. Each student must attend rehearsals, assist in the production, and write an analysis of a play or musical performed at the college. Class and workshop.

Three credits

Th. Arts 380-381. Theater Workshop

This course is intended primarily for those who plan to work in educational theater. Each student will have the opportunity to prepare the full production of a short play for an audience: the student will cast and direct the play, he will plan and supervise the lighting, he will design the setting and supervise its construction for the production. The student will work closely with members of the theater staff.

Three credits each semester

Th. Arts 395-396. Independent Research

Independent study and research under professional supervision for students interested in educational theater.

One to three credits each semester

Th. Arts 397. Seminar

Presentations and discussions of selected topics.

One to three credits. (Maximum of three credits per student.)

ENVIRONMENTAL SCIENCE

Associate Professor El Ashry, chairman; Professor Bruch; Instructors Gregory, Mattei.

Env. Sci. 101. Introductory Earth Science

A survey of contemporary research in the earth sciences with special emphasis on the interactions of man and his physical environment. Readings relate to the broad structure of the lecture

sequence: the earth as a planet; the atmosphere and oceans; the solid earth; landscape and soil. A correlated laboratory program is designed to familiarize the student with natural phenomena and the underlying physical processes. Two hours lecture and two hours laboratory. Fee: \$20.

Three credits

Env. Sci. 211. Geology

An introductory course dealing with materials and surface features of the earth and the significance to man of the pattern of their distribution and manifestation. Lectures and related laboratory work include the following selected topics: minerals; igneous activity and igneous rocks; weathering processes and soil formation; origin and correlation of sedimentary rocks; erosion by running water, glaciers and wind; oceans and shorelines; deformation of the earth's crust and theories of mountain building; metamorphism and metamorphic rocks; earthquakes and structure of the earth's interior; geologic time and the fossil record. Regional problems of geologic interest will also be considered and field trips to nearby geologic features will be included. Two hours lecture and two hours laboratory. Fee: \$20.

Prerequisite: Env. Sci. 101.

Three credits

Env. Sci. 232. Hydrology

The physical and chemical properties of water; precipitation, and factors which determine the distribution and amount on a watershed; drainage systems and the climatic and geologic factors that establish them and modify them; runoff, infiltration, evaporation, and vadose, ground, and limnetic water; applications of hydrology and special topics such as rain making, control of evaporation, underground storage and leaching, flood control dams, and water pollution problems. Lecture, two hours and laboratory, two hours. Fee: \$20.

Prerequisite: Env. Sci. 101.

Three credits

Env. Sci. 251. Meteorology

The physical elements and processes which comprise weather and climate are examined along with their distribution in space and time. Then the relationship between weather, climate and human activity is discussed in specific contexts: climate and water resources; climate and agriculture; weather factors in transportation, communications, and industry; climate and housing; climate and the human body; climatic changes. The fundamentals of weather observations, the analysis of weather maps and charts, and the statistical approach to climatic records for plans and design specifications will be developed in a correlated laboratory program. Two hours lecture and two hours laboratory. Fee: \$20.

Prerequisite: Env. Sci. 101.

Three credits

Env. Sci. 282. Space Science

A survey of contemporary knowledge of astronomy from the fringe of earth's atmosphere to the farthest galaxies. Elements of potential theory and rocketry are included to enable the student to evaluate the aims and capabilities of space flight programs. The lecture sequence follows the broad structure: the fringe of space; the solar system; methods of probing outer space; stellar evolution, the galaxy and beyond. A correlated laboratory program is designed to familiarize the student with celestial coordinates and the physical processes underlying the interpretation of astronomical observations. Two hours lecture and two hours laboratory. Fee: \$20.

Prerequisite: Env. Sci. 101.

Three credits

Env. Sci. 395-396. Independent Research

Independent study and research in the field of environmental science or on the environmental aspects of a problem in the field of the major. A research paper at a level significantly beyond a term paper is required.

Prerequisite: Approval of the coordinator of the environmental science program.

One to three credits

Env. Sci. 397. Seminar

Weekly seminars and discussion on specific problems resulting from the interaction of man and his environment. The extended program includes two lectures establishing necessary background.

Prerequisite: For three credits, three courses in the environmental science program or senior status. For one credit, none.

One or three credits.

FINE ARTS

Assistant Professor Casilli, chairman; Professor Colson; Assistant Professors Richards, D'Vorzon, Fuller, Simon; Instructor Matics.

FA 101. Experiencing Art I

Two and three dimensional studio work is planned for exploration of the creative process in a variety of media. Part of the general education program, this course is open to all students; no art experience is necessary. Lecture, three hours.

Three credits

FA 102. Experiencing Art II

A continuation of FA 101.

Prerequisite: FA 101.

Three credits

FA 201. Color and Design

A study of color systems which includes their physical, psychological, and sociological properties. Lecture, two hours; studio, two hours.

Prerequisite: FA 102 or equivalent.

Three credits

FA 202. Drawing and Composition

An introductory course which explores the potential of line, form, space, and texture with a variety of media. Studio problems include figure drawing, landscape, still life, and non-objective organization. Lecture, two hours; studio, two hours.

Prerequisite: FA 201.

Three credits

FA 203. Oil Painting

An introductory course; no art experience is necessary. Lecture, two hours; studio, two hours.

Three credits

FA 204. Water Color Painting

A basic course in transparent water color painting. Lecture, two hours; studio, two hours.

Prerequisite: FA 202.

Three credits

FA 205. Advanced Painting

Increased emphasis on development of style and experimentation in contemporary art techniques. Lecture, two hours; studio, two hours.

Prerequisite: FA 203.

Three credits

FA 206. Print Making

An introduction of relief, intaglio, and planographic techniques including block printing, etching, lithography, and silk screen. Lecture, two hours; studio, two hours.

Prerequisite: FA 202.

Three credits

FA 207. Advanced Print Making

Individual experimentation using plastics, photographic techniques in silk screen and lithography. Increased emphasis for the development of a personal style. Lecture, two hours; studio, two hours.

Prerequisite: FA 206.

Three credits

FA 210. Sculpture

The study of traditional and contemporary approach to sculpture.

Prerequisite: FA 211.

Three credits

FA 211. Modeling & Three Dimensional Construction

An introductory course in three-dimensional expression; various materials are employed for experimentation with realistic and non-realistic forms. Lecture, two hours; studio, two hours.

Three credits

FA 212. Ceramics

Students explore the making of pottery by solid, coil, slab, casting, wheel, and primitive techniques; they experiment with a variety of methods for surface decoration including slip, engobe, graffiti, and underglaze. Lecture, two hours; studio, two hours.

Prerequisite: Permission of instructor.

Three credits

FA 213. Metalwork and Jewelry

A course in basic metalwork and jewelry techniques and design. Lecture, two hours; studio, two hours.

Prerequisite: Permission of instructor.

Three credits

FA 214. Photography I

An introduction to the fundamentals of photography; a study of tone, texture, viewpoint, depth of field, and simple subject consideration. The student will gain experience in basic darkroom techniques and also in several aspects of preparing photographs for exhibition, such as: lighting, exposure meter, and camera usage. Two lecture hours and two laboratory periods.

Three credits

FA 223. History of Art I

History of art from the prehistoric period through the Gothic era.

Three credits

FA 224. History of Art II

History of art from the Renaissance through the nineteenth century.

Prerequisite: FA 223.

Three credits

FA 226. History of Contemporary Art

A study of twentieth century art forms.

Three credits

FA 231. Contemporary Design

A study of man's visual expression as conditioned by materials, technology, form, and function.

Two credits

FA 311. Senior Exhibit

A study of exhibition techniques climaxed by a showing of the student's work. Required of all Fine Arts majors in either the fall or spring semester of their senior year.

Prerequisite: Permission of instructor.

Two credits

FA 332. Studio Problems

Provides advanced study and research for Fine Arts students. Lecture, two hours.

Prerequisite: Permission of instructor.

Two credits

FA 395-396. Independent Research

Independent study and research for advanced students in the field of the major under the direction of a staff member. A research paper at a level significantly beyond a term paper is required.

Prerequisite: Approval of the department chairman is required.

One to three credits

FA 397. Seminar

Presentations and discussions of selected topics.

Prerequisite: Approval of the department chairman is required.

One to three credits. (Maximum of three credits per student.)

FOREIGN LANGUAGES (Modern)

Associate Professor Seitz, chairman; Associate Professors Disque, A. Belic; Assistant Professors Ribas, deCubas, Marban, Sweeney, Serzan; Instructors Miller, Lovette, L. Belic, Lekstrom.

French

Fr. 101. Elementary French

Introduction to French grammar; practice in reading, writing, and speaking the language. Students presenting two or more units from high school in French will not be granted credit for this course.

Three credits

Fr. 102. Elementary French

Continuation of Fr. 101. Students presenting two or more units from high school in French will not be granted credit for this course.

Prerequisite: Fr. 101 or the equivalent.

Three credits

Fr. 203. Intermediate French

Review of grammar; practice in oral and written French; selected readings of modern French prose.

Prerequisites: Fr. 102 or the equivalent.

Three credits

Fr. 204. Intermediate French

Introduction to French civilization; practice in oral and written French.

Prerequisite: Fr. 203 or the equivalent.

Three credits

Fr. 205. Technical French

Intensive practice in translating. A course designed for students who wish to be able to read material in French in their particular fields of interest.

Prerequisite: Fr. 203 or the equivalent.

Three credits

Fr. 206. French Conversation

Intensive practice in the spoken language, with emphasis on idiomatic usage. Use of records and language laboratory to acquire fluency in speaking French.

Prerequisite: Fr. 204 or the equivalent.

Three credits

Fr. 251. Masterpieces of French Literature in Translation

Problems of dramatic and novelistic form. Comparative analysis of plays by Corneille, Anouilh, Racine, Sartre, Moliere, Ionesco. The idea of the novel in France as seen in such writers as Mme. de Lafayette, de Laclos, Balzac, Stendhal, Gide, Proust, Robbe Grillet.

May not be taken concurrently with or after completion of French 301-302.

Three credits

Fr. 252. Masterpieces of French Literature in Translation

French thought from Renaissance Humanism to Twentieth-century Existentialism: analysis of such writers as Montaigne, Pascal, Voltaire, Rousseau, Camus.

May not be taken concurrently with or after completion of French 301-302.

Three credits

Fr. 301-302. Survey of French Literature

A survey of the evolution of French literature from the Middle Ages to the present, with stress on general ideas, literary genres, and outstanding writers of each century. Reading of representative selections from different periods of French literature.

Prerequisite: Fr. 204 or the equivalent.

Three credits each semester

Fr. 303. French Literature of the Seventeenth Century

Study of classicism and the outstanding writers of the seventeenth century.

Prerequisite: Fr. 301-302 or the equivalent.

Three credits

Fr. 305. French Literature of the Eighteenth Century

Study of the literature and thought in the eighteenth century, with special emphasis on Montesquieu, Diderot, Voltaire, and Rousseau.

Prerequisite: Fr. 301-302 or the equivalent.

Three credits

Fr. 306. Nineteenth Century French Literature

The Romantic Movement: a study of the revolt against the classic tradition leading to the triumph of the Romantic School, with emphasis on Chateaubriand, Constant, Lamartine, Hugo, Vigny, Musset, Balzac and Stendhal.

Prerequisite: Fr. 301-302 or approval of department chairman.

Three credits

Fr. 307. Nineteenth Century French Literature

Naturalism and Symbolism: a study of the rise of naturalism and symbolism in the second half of the century with emphasis on Baudelaire, Zola, Flaubert, Leconte de Lisle, Verlaine and Rimbaud.

Prerequisite: Fr. 301-302 or approval of department chairman.

Three credits

Fr. 308. Contemporary French Drama

The development of modern drama from the latter part of the nineteenth century to the present.

Prerequisite: Fr. 301-302 or the equivalent.

Three credits

Fr. 350. Advanced French Grammar

Intensive, in-depth review of grammar with emphasis on intricacies tending to cause persistent difficulties. Reading, writing and oral exercises significantly above Fr. 204 with goal of superior accuracy and proficiency. For majors and others with sufficient preparation.

Prerequisite: Fr. 204 or the equivalent.

Three credits

Fr. 390. Foreign Language Methodology

An opportunity for French language majors to synthesize their four years of study by examining language as a cultural device. Class sessions are supplemented by activities such as student teaching and language laboratory supervision.

Prerequisite: Senior standing, permission of department chairman.

Three credits

Fr. 395-396. Independent Research

Independent study and research for advanced students in the field of the major under the direction of a staff member. A research paper at a level significantly beyond a term paper is required.

Prerequisite: Approval of the department chairman is required.

One to three credits

Fr. 397. Seminar

Presentations and discussions of selected topics.

Prerequisite: Approval of the department chairman is required.

One to three credits. (Maximum of three credits per student.)

German

Ger. 101. Elementary German

Introduction to German grammar; practice in reading, writing, and speaking the language. Students presenting two or more units from high school in German will not be granted credit for this course.

Three credits

Ger. 102. Elementary German

Continuation of German 101. Reading of easy prose and poetry. Some stress on German culture, life, and customs. Students presenting two or more units from high school in German will not be granted credit for this course.

Prerequisite: German 101 or equivalent.

Three credits

Ger. 203. Intermediate German

Emphasis on difficult grammatical construction and idioms. Reading of prose; practice in speaking and writing German.

Prerequisite: Ger. 102 or equivalent.

Three credits

Ger. 204. Intermediate German

Continuation of Ger. 203. Rapid reading of German works representative of German life and history; practice in writing and speaking German.

Prerequisite: Ger. 203 or equivalent.
Three credits

Ger. 205. Scientific German

Reading of selections from scientific German.

Prerequisite: Ger. 203 or equivalent.
Three credits

Ger. 206. German Conversation

Emphasis laid on speaking, with drill in the colloquial vocabulary. Use of records and language laboratory to acquire fluency in speaking German.

Prerequisite: Ger. 204 or equivalent.
Three credits

Ger. 251. Masterpieces of German Literature in Translation: Novel, Drama

The development of the novel and novelle in German Literature as seen through representative writers such as Grimmelshausen, Goethe, Holderlin, Fontana, Storm, Mann, Hesse and Kafka.

Dramatic form in analysis. Representative plays from Gryphius to Weiss including plays by Lessing, Schiller, Kleist, Buchner, Hofmannstal, Harystmann, Kaiser, Brecht, Hochhuth and Weiss.

Three credits

Ger. 252. Masterpieces of German Literature in Translation: Thought and Criticism

The change in man's view of his world from Humanism to the present, reflected in drama, critical essays, short philosophical writings and satire.

Analysis of social criticism through satire, dramas and essays of writers such as Saaz, Luther, Sachs, Lessing, Schiller, Heine, Buchner and Brecht. Short philosophical essays from Kant to Nietzsche.

Ger. 301-302. Survey of German Literature

A survey of the literature of the important periods from the beginning to 1932.

Prerequisite: Ger. 204 or equivalent.
Three credits each semester

Ger. 303. Goethe

Reading and interpretation of selected works of Goethe. Lectures and individual reports.

Prerequisite: Ger. 301-302 or equivalent.
Three credits

Ger. 304. Schiller

Poet of German idealism.

Prerequisite: Ger. 301-302 or equivalent.
Three credits

Ger. 305. Nineteenth Century German Drama

The German drama of the nineteenth century from Ludwig Tieck to Gerhart Hauptmann. Lectures and reports on the literary and cultural history of the times.

Prerequisite: Ger. 301-302 or equivalent.
Three credits

Ger. 306. Modern German Short Story

The modern German short story from naturalism to the present. Individual reports; lectures on the cultural and literary history of the period.

Prerequisite: Ger. 301-302 or equivalent.
Three credits

Ger. 307. The Age of Enlightenment

The development of German Literature in the eighteenth century with emphasis on the works and theories of Lessing.

Prerequisite: Ger. 301-302 or app. of the department chairman.
Three credits

Ger. 308. Twentieth Century Literature

The study of the development of German Literature from the turn of the century until the present.

Prerequisite: Ger. 301-302 or app. of the department chairman.
Three credits

Ger. 350. Advanced German Grammar

Intensive, in-depth review of grammar with emphasis on intricacies tending to cause persistent difficulties. Reading, writing and oral exercises significantly above Ger. 204 with goal of superior accuracy and proficiency. For majors and others with sufficient preparation.

Prerequisite: Ger. 204 or the equivalent.
Three credits

Ger. 390. Foreign Language Methodology

An opportunity for German language majors to synthesize their four years of study by examining language as a cultural device. Class sessions are supplemented by activities such as student teaching and language laboratory supervision.

Prerequisite: Senior standing, permission of the dept. chairman.
Three credits

Ger. 395-396. Independent Research

Independent study and research for advanced students in the field of the major under the direction of a staff member. A research paper at a level significantly beyond a term paper is required.

Prerequisite: Approval of the department chairman is required.
One to three credits

Ger. 397. Seminar

Presentations and discussions of selected topics.

Prerequisite: Approval of the department chairman is required.
One to three credits. (Maximum of three credits per student.)

*Spanish***Sp. 101. Elementary Spanish**

Introduction to Spanish grammar; practice in reading, writing, and speaking the language. Students presenting two or more units from high school in Spanish will not be granted credit for this course.

Three credits

Sp. 102. Elementary Spanish

Continuation of Spanish 101. Students presenting two or more units from high school in Spanish will not be granted credit for this course.

Prerequisite: Sp. 101 or equivalent.
Three credits

Sp. 203. Intermediate Spanish

Review of grammar; practice in oral and written Spanish; selected readings from modern Spanish prose.

Prerequisite: Sp. 102 or equivalent.
Three credits

Sp. 204. Intermediate Spanish

Introduction to Spanish civilization; practice in oral and written Spanish.

Prerequisite: Sp. 203 or equivalent.
Three credits

Sp. 205. Commercial Spanish

The study of Spanish as it pertains to economic relations between the Spanish-speaking countries and the United States. Special emphasis on the writing of business letters.

Prerequisite: Sp. 203 or equivalent.
Three credits

Sp. 206. Spanish Conversation

Intensive practice in the spoken language, with emphasis on idiomatic usage. Use of records and language laboratory to acquire fluency in speaking Spanish.

Prerequisite: Sp. 204 or equivalent.
Three credits

Sp. 208. Spanish-American Culture

The cultural, economic, and political development of the Spanish-American countries.

Prerequisite: Sp. 203 or equivalent.

Three credits

Sp. 301-302. Survey of Spanish Literature

A survey of the evolution of Spanish literature from the Middle Ages to the present, with stress on general ideas, literary genres, and outstanding writers of each century. Reading of representative selections from different periods of Spanish literature.

Prerequisite: Sp. 204 or equivalent.

Three credits each semester

Sp. 303. The Golden Age of Spanish Literature

Study of the great authors of the sixteenth and seventeenth centuries.

Prerequisite: Sp. 301-302 or equivalent.

Three credits

Sp. 304. Nineteenth Century Spanish Drama

Study of representative works of nineteenth century Spanish drama.

Prerequisite: Sp. 301-302 or equivalent.

Three credits

Sp. 305. Nineteenth Century Spanish Novel

The development of the Spanish novel in the nineteenth century.

Prerequisite: Sp. 301-302 or equivalent.

Three credits

Sp. 306. The Generation of 1898

A study of the literary renaissance that took place in Spain during the turn of the century.

Prerequisite: Sp. 301-302 or equivalent.

Three credits

Sp. 307. Cervantes and Don Quixote

A study of the life and works of Cervantes with special emphasis on *Don Quixote*. Text analysis and interpretation. Later treatments

of the Don Quixote theme in European culture. Open to non-majors for whom suitable translations will be suggested.

Prerequisite: Sp. 301-302 for majors, Eng. 151 for non-majors or permission of instructor.

Three credits

Sp. 308. Survey of Spanish American Literature

A survey of the evolution of Spanish American literature from the discovery to the present. Reading of representative selections from outstanding writers of different periods and countries.

Prerequisite: Sp. 204 or equivalent.

Three credits

Sp. 350. Advanced Spanish Grammar

General grammatical review; systematic, in-depth study of points of grammar that generally tend to cause persistent difficulties for the student; intensive reading, writing and oral exercises significantly above intermediate college level language courses.

Prerequisite: Sp. 204 or equivalent.

Three credits

Sp. 390. Foreign Language Methodology

An opportunity for Spanish language majors to synthesize their four years of study by examining language as a cultural device. Class sessions are supplemented by activities such as student teaching and language laboratory supervision.

Prerequisite: Senior standing, permission of the dept. chairman.

Three credits

Sp. 395-396. Independent Research

Independent study and research for advanced students in the field of the major under the direction of a staff member. A research paper at a level significantly beyond a term paper is required.

Prerequisite: Approval of the department chairman is required.

One to three credits

Sp. 397. Seminar

Presentations and discussions of selected topics.

Prerequisite: Approval of the department chairman is required.

One to three credits. (Maximum of three credits per student.)

Russian

Rus. 101. Elementary Russian

Basic systematic introduction to the grammatical essentials of Russian; practice in reading, writing, and speaking the language.

Three credits

Rus. 102. Elementary Russian

Continuation of Russian 101. Graded elementary readings depicting the culture, life, and customs of the Russian people.

Prerequisite: Rus. 101 or equivalent.

Three credits

Rus. 203. Intermediate Russian

A review of basic grammar followed by emphasis on advanced grammatical structure. Reading of selected prose, directed standard-situation conversation, and composition of Russian.

Prerequisite: Rus. 102 or equivalent.

Three credits

Rus. 204. Intermediate Russian

Continuation of Rus. 203. Stress on conversational and written Russian to provide the student with confidence for self-expression and a basic active vocabulary. Practice in topical readings.

Prerequisite: Rus. 203 or equivalent.

Three credits

HISTORY

Professor Leach, chairman; Professors Kaslas, Cox; Associate Professor Rodechko; Assistant Professors Berg, Show, Meyers, Berlatski, Furlow.

Hist. 101-102. History of World Civilization

This course is designed as a survey of all the basic cultures of the world. The major portion of the course will be devoted to the development of western civilization.

Attention will also be given to the part played by America in world history, especially during the expansion of Europe and in the twentieth century.

Three credits each semester

Hist. 207. American History to 1865

A general survey extending from the period of discovery and exploration to the end of the Civil War.

Three credits

Hist. 208. American History Since 1865

A general survey covering the period from 1865 to the present.

Three credits

Hist. 209. Ancient History: Near East

The birth of civilization in Mesopotamia and Egypt. Babylonian, Persian and Judaic backgrounds of western civilization. Attention will also be paid to certain lesser civilizations, with emphasis on the role of archeology.

Three credits

Hist. 210. Ancient History: Classical World

The direct Greco-Roman antecedents for western civilization will be developed, beginning with Mycenae, through Homer, the Golden age, Hellenistic world, and the rise and fall of Rome. Emphasis will be on the cultural contributions of each group and period to our present world.

Three credits

Hist. 211. Medieval Ages

Consideration will be given to political, economic, cultural institutions and activities, and intellectual development in Medieval Europe to the early Renaissance.

Three credits

Hist. 212. The Renaissance and Reformation

Within the political and economic framework of the period, study will be made of the culture of the Renaissance, the religious reform and conflicts resulting from the crisis in the sixteenth century.

Three credits

Hist. 223. American Constitutional History

A study of the origins of the American Constitution and the growth of the American constitutional system with special attention to the role of the Supreme Court.

Prerequisite: Hist. 207, 208. Restricted to juniors and seniors.

Three credits

Hist. 226. Urban History

A survey of the origins and development of the modern city. Primary emphasis is given to the evolution of the city in America and its influence on American society and culture. Reference is made to the cities of modern Europe and Asia primarily for comparative purposes.

Three credits

Hist. 235-236. History of the Far East

A study of the history of the civilizations developed in India, China, and Japan with emphasis on their inter-relations and distinctive characteristics and on their transformation in response to the penetration of western civilization from the sixteenth century onward. Some attention will be given to similar developments and changes among the countries of Southeast Asia.

Fall semester: to c. 1760. Spring semester: 1760 to the present.

Three credits each semester.

Hist. 241-242. History of Great Britain and the British Empire and Commonwealth

A study of British history from the Neolithic period to present times. The first semester will cover social, economic, and political developments to 1783, including expansion overseas. The second semester will cover the consequences of the industrial revolution and the evolution of the Empire into the Commonwealth.

Three credits each semester

Hist. 321-322. American Social and Intellectual History

A study of social and intellectual developments in the United States from the colonial period to the present time. During the

first semester emphasis will be placed on the influence of the American environment during the colonial period and of expansion and sectional disputes in the federal period upon society and upon religious, economic, and political thought. During the second semester the influences of industrialization, the rise of nationalism and the emergence of the United States as a World Power will be emphasized.

Prerequisite: Hist. 207 and 208.

Three credits each semester

Hist. 327-328. History of the Foreign Policy of the United States

A study of the evolution of the several policies that give direction to the relations of the United States with other nations.

Prerequisite: Hist. 207 and 208.

Three credits each semester.

Hist. 331. Colonial America

Discovery, exploration and settlement; development of social, political, religious and intellectual institutions; independence and political reorganization.

Prerequisite: Hist. 207.

Three credits

Hist. 332. The National Period

A study of the political and economic history of the United States from 1783 to 1865. Special attention will be given to the evolution of sectional differences and the culmination of these differences in intersectional warfare.

Prerequisite: Hist. 207.

Three credits

Hist. 333. The Age of Big Business, 1865-1914

A study of the political and economic history of the United States from 1865 to 1914. Special attention will be paid to the period of congressional dominance and the restoration of presidential power

at the turn of the century; the economic, social and political consequences of the industrial revolution; and the rise of urban America.

Prerequisite: Hist. 208.

Three credits

Hist. 334. Twentieth Century America

The emergence of the United States as an industrial, urban world power and the corresponding development of its political, economic, social, religious, and intellectual institutions.

Prerequisite: Hist. 208.

Three credits

Hist. 353-354. Early Modern Europe 1648-1815

Topics include the absolutism of Louis XIV, the growth of Brandenburg-Prussia, the French Revolution and French Empire, the economic forces of mercantilism and the early Industrial Revolution. The growth of science and the Enlightenment will receive careful attention.

Three credits each semester

Hist. 355. Europe in the Nineteenth Century

A study of the political, social, and cultural development of Europe from the Congress of Vienna to World War I.

Three credits

Hist. 356. Europe in the Twentieth Century

Against a background of the internal and international developments of the leading powers, the class will study the origins and results of the two World Wars.

Three credits

Hist. 357. History of Russia to 1815

A brief review of demographic and geographic factors will be used as background for a study of the political, social, and intellectual history of Russia from early times to 1815.

Three credits

Hist. 358. History of Modern Russia

A thorough examination of nineteenth century Imperial Russia will serve as a basis for a detailed study of the development of Russia in the twentieth century. Emphasis will be on the origins and political, social, and cultural evolution of the Soviet State from its inception to the present.

Three credits

Hist. 371. Historiography and Research

An introduction to historical research and writing. The writings and ideas of major historians of past and present are examined. The student is exposed to research methods, particularly in the area of primary sources, and to the construction and criticism of the historical monograph.

Prerequisite: Approval of the instructor

Three credits

Hist. 381. History of Latin America

Colonial Latin America to 1820. A survey of Latin American History from ancient times to 1820. Problems discussed include Spanish and Portuguese Colonial Government, the social and economic development of Latin America with consideration of Church and State relations, treatment of the Indian, and the Independence Movement.

Three credits

Hist. 382. History of Latin America

Latin America since 1820. A survey of Latin American History since 1820. Problems discussed include the evolution of independent national governments, the development of the modern states of Argentina, Brazil, Chile, and Mexico, and international relations, particularly with the United States.

Three credits

Hist. 395-396. Independent Research

Independent study and research for advanced students in the field of the major under the direction of a staff member. A research paper at a level significantly beyond a term paper is required.

Prerequisite: Approval of the department chairman is required.

One to three credits

Hist. 497. Seminar

Presentations and discussions of selected topics.

Prerequisite: Approval of the instructor is required.

One to three credits. (Maximum of three credits per student.)

MATHEMATICS

Professor Wong, chairman; Associate Professors T. Richards, Earl, Mitra; Assistant Professors DeCosmo, Salsburg, Sours, Jahr, Torelli, J. Wasileski, Tillman; Instructor Como.

Math. 100. Pre-Calculus Mathematics

A remedial course in advanced algebra and trigonometry designed to prepare students for calculus. Content of this course should normally be studied in secondary school.

Prerequisite: Two years of secondary school mathematics in algebra and geometry.

Four credits

Math. 101-102. Fundamentals of Mathematics I & II

A mathematics appreciation course designed to give students a general background in mathematical concepts. It is intended for those who will not take other courses in mathematics. Not open to students with credits in Math. 103-104.

Three credits each semester

Math. 103-104. Mathematics for Elementary School Teachers I and II

A study of the theory of arithmetic, structure of the number systems, geometry, and other topics relevant to the teaching of mathematics in elementary schools. Not open to students with credits in Math. 101-102.

Three credits each semester

Math. 105-106. Introductory Calculus I and II

Intended primarily for students of social and natural sciences.

Review of algebra, limits, differentiation, integration, sequences, and series, partial differentiation, differential equation, probability.

Prerequisite: Geometry, Algebra II, and some knowledge of Trigonometry.

Four credits each semester

Math. 111-112. Analysis I and II

Calculus of functions of a real variable. Topics include: functions, limits and continuity, differentiation, integration and their applications, infinite sequences and series. Not open to students with credits in Math. 105-106.

Prerequisite: Math. 100 or at least three years of secondary school mathematics including geometry, algebra II, and topics in trigonometry.

Four credits each semester

Math. 211-212. Intermediate Analysis I and II

Introduction to calculus of functions of several variables, elementary linear algebra, differential equations.

Prerequisite: Math. 112.

Four credits each semester

Math. 222. Set Theory and Logic

Designed to provide the logical and set theoretical prerequisites for the upper level courses in analysis, algebra, and topology. Topics include: informal logic and propositional calculus, sets, relations, functions, axiom of choice and its equivalents, cardinal and ordinal numbers. Three hours lecture and one hour problem-discussion per week.

Prerequisite: Math. 211 or consent of department chairman.

Three credits

Math. 232. Abstract Algebra for Elementary School Teachers

A study of basic concepts of abstract algebra for elementary school teachers. Not open to students with credit in Math. 331.

Prerequisite: Math. 104 or consent of instructor.

Three credits

Math. 243. Geometry for Elementary School Teachers

A study of topics in informal geometry and measurements for elementary school teachers.

Prerequisite: Math. 104 or consent of instructor.

Three credits

Math. 261. Introduction to Computer Science

Introduction to basic concepts of computing equipment and its operations, algorithmic approach to problem solving, and basic concepts and technique of programming. Fee: \$20.

Three credits

Math. 263. Fortran Programming

Fortran IV programming, including advanced techniques with problems geared to the individual interests of students. Fee: \$20.

Prerequisite: Math. 261 or consent of instructor.

Three credits

Math. 264. Cobol Programming

Common Business Oriented Language programming, including advanced techniques with problems geared to the individual interests of students. Primarily intended for students majoring in business administration and accounting. Fee: \$20.

Prerequisite: Math. 261 or consent of instructor.

Three credits

Math. 311-312. Functions of a Real Variable I and II

Topological preliminaries for analysis, sequences and series of functions, Riemann-Stieltjes integral, introduction to Lebesgue integral, Fourier series.

Prerequisite: Math. 222.

Three credits each semester

Math. 314. Functions of a Complex Variable

Complex functions, limit and continuity, analytic functions, Cauchy's integral theorem and formula, power series, Laurent expansion, residues.

Prerequisite: Math. 311 or consent of instructor.

Three credits

Math. 331. Introduction to Abstract Algebra I

A study of elementary number theory, groups, rings, and fields.

Prerequisite: Math. 222.

Three credits

Math. 334. Linear Algebra

Vector spaces, linear transformations, matrices, determinants, bilinear and quadratic forms, matrix polynomials.

Prerequisite: Math. 222 or consent of instructor.

Three credits

Math. 343. Introduction to Geometry

A study of selected topics from Euclidean geometry, affine geometry, projective geometry, and convexity.

Prerequisite: Math. 222.

Three credits

Math. 351-352. Probability and Mathematical Statistics I and II

Random variables, probability distributions, expectation and limit theorems, estimation, testing statistical hypotheses, confidence intervals.

Prerequisite: Math. 222 or consent of instructor.

Three credits each semester

Math. 361-362. Advanced Calculus I and II

Intended for physical science and engineering students. Topics to be selected from: vector integral and differential calculus, power series, Fourier series, matrices, determinants, and eigenvalue problems.

Prerequisite: Math. 212.

Three credits each semester. Credit for mathematics majors by permission of department chairman only.

Math. 364. Numerical Analysis

Numerical methods of differentiation, integration, solution of equations and of differential equations with emphasis on problems that lend themselves to solution on computers. Knowledge of computer is desirable but not required.

Prerequisite: Math. 212.

Three credits

Math. 365. Partial Differential Equations

Linear, second order partial differential equations and boundary value problems, Fourier series and orthogonality, method of separation of variables.

Prerequisite: Math. 212.

Three credits

Math. 397. Seminar

Presentation and discussion of selected topics.

Prerequisite: Approval of department chairman.

One to three credits

Math. 413. Functions of Several Variables

A modern treatment of calculus of functions of several real variables. Topics include: Euclidean spaces, differentiation, integration on manifolds leading to the classical theorems of Green and Stokes.

Prerequisites: Math. 311 and 334.

Three credits

Math. 432. Introduction to Abstract Algebra II

A continuation of Math. 331. Polynomial rings, ideals, field extensions and Galois Theory.

Prerequisite: Math. 331.

Three credits

Math. 441. Introduction to Topology I

Metric spaces, topological spaces, countability and separation axioms, compactness and connectedness, product spaces.

Prerequisite: Math. 311.

Three credits

Math. 442. Introduction to Topology II

A continuation of Math. 341. Hilbert spaces, Banach spaces, and Banach algebras.

Prerequisite: Math. 441.

Three credits

Math. 470. Reading Course

Individual study of an outstanding text under the supervision of a faculty member. Designed for students who have completed a substantial amount of course work in mathematics. May be repeated for credit.

Prerequisite: Senior standing and consent of department chairman.

One to three credits

Math. 480. Topics in Mathematics

A study of topics of special interest. It may be a continuation and intensive study of topics begun in the upper level courses in analysis, topology, algebra, and probability. May be repeated for credit.

Prerequisite: Consent of instructor.

Three credits

MUSIC¹

Professor Gasbarro, chairman; Associate Professors Chapline, A. Liva; Assistant Professors Garber, Santos, Fall, Nutaitis; Instructors Probert, Weber, Haberkorn, Balshaw, Veremeychick.

Applied Music

Individual and group instruction are offered at all levels of difficulty to students in piano, pipe organ, voice, and orchestral and band instruments. The student receives a series of fourteen lessons a semester. A performing examination before the music faculty is necessary if credit is to be obtained for such study.

Students who are not music majors may receive one credit each semester for voice or instrumental study. No performing examination is necessary if credit is not desired by the student.

The ability, interest, and progress of students intending to major in music will be evaluated at the end of the sophomore year by the music faculty. Students will be advised before the opening of the following semester if the faculty does not recommend a continuation of the music major.

Fees for private instruction are in addition to the regular tuition charge.

One credit each semester

¹There is a music fee of \$10 per semester for all Music and Music Education majors.

Mus. 101. Introduction to the Materials and Literature of Music I

The materials of music and their interrelationships. Illustrations are derived from literature of all periods for the purpose of developing understanding and enjoyment through perceptive listening.
Three credits

Mus. 102. Introduction to the Materials and Literature of Music II

A survey of performance literature extending from the Baroque period to the present. Directed listening to illustrations of various media, forms, and styles characteristic of each period for the purpose of stimulating critical judgment in the listener.
Prerequisite: Mus. 101.
Three credits

Mus. 105-106-107-108. Theory of Music

The study of the theory of music is centered upon three main principles:

- (1) The recognition of intervals and meter through dictation.
- (2) The structure of chords and chord progressions through keyboard harmony.
- (3) The writing of music through exercises in harmonic and contrapuntal techniques.

The first two semesters of theory include ear training, two hours; solfeggio, two hours; harmony, one hour. The third and fourth semesters include ear training, one hour; solfeggio, one hour; harmony, three hours.

There is no prerequisite for Mus. 105. Students may be admitted to Mus. 106, 107, and 108 by examination.
Five credits each course

Mus. 109. History of Music I

A detailed study of the history of music from the beginning of civilization to the seventeenth century.
Three credits

Mus. 110. History of Music II

A continuation of Mus. 109, beginning with J. S. Bach and tracing musical development to the present day. Twentieth century music will be emphasized in the final weeks of study.
Three credits

Mus. 111-112. Piano Class 1 and 2

Class instruction in piano. The classes will be divided into suitable groups according to proficiency. This course is required for all music education majors who cannot play piano grade 4 or better.
No prerequisite.
Two credits each semester

Mus. 113-114. Piano Class 3 and 4

Advanced class instruction in piano. This course is a continuation of the required course for all music education majors who cannot play piano grade 4 or better.
Prerequisite: Mus. 112.
Two credits each semester

Mus. 121-122-123-124. Band

The band offers the student a varied program for concerts and for various athletic events. Students desiring to participate in the band should consult with the director.
All instrumental music education majors are required to participate in the band for four years.
One-half credit each semester

Mus. 125-126-127-128. Chorus

The chorus offers the student a complete range of sacred and secular choral music. Students desiring to participate in the chorus should consult with the director.
All music education majors studying voice or piano are required to participate in the chorus for four years.
One-half credit each semester

Mus. 131-132-133-134. Orchestra

Participation in the Northeastern Pennsylvania Orchestra gives the student experience in the complete range of symphonic literature. Students desiring to participate in the orchestra should consult with the director.

One-half credit each semester

Mus. 215. Instrumentation

The instruments of the modern symphonic orchestra, their capabilities and limitations. The technique of scoring for small instrumental combinations; transposition and clef manipulation.

Prerequisite: Mus. 108 or the approval of the chairman of the department.

Two credits

Mus. 216. Orchestra and Band Arranging

Scoring for the large orchestra or the modern symphonic band. The student may select his field of concentration.

Prerequisite: Mus. 215.

Two credits

Mus. 217. Analysis

The technique of composition as disclosed by melodic, harmonic, and structural analysis of music in varied styles and from diverse periods.

Prerequisite: Mus. 108 or equivalent as demonstrated by an examination.

Two credits

Mus. 218. Counterpoint

A study of the sixteenth century art of contrapuntal writing as found in the styles of Palestrina, di Lasso, and Ingegneri.

Prerequisite: Mus. 108.

Three credits

Mus. 395-396. Independent Research

Independent study and research for advanced students in the

field of the major under the direction of a staff member. A research paper at a level significantly beyond a term paper is required.

Prerequisite: Approval of the department chairman is required.

One to three credits

Mus. 397. Seminar

Presentations and discussions of selected topics.

Prerequisite: Approval of the department chairman is required.

One to three credits. (Maximum of three credits per student.)

MUSIC EDUCATION¹

Mus. Ed. 101-102. Clarinet Class and Methods

Methods of teaching and instruction in the clarinet.

No prerequisite.

Two credits each semester

Mus. Ed. 103-104. Brass Class and Methods

Methods of teaching and instruction in the brass field.

No prerequisite.

Two credits each semester

Mus. Ed. 105. Woodwind Class Methods

A class conducted as an introduction to the teaching of such woodwinds as clarinet, oboe, flute, and bassoon, with demonstrations of the class teaching of these instruments.

No prerequisite.

Two credits each semester

Mus. Ed. 106. Brass Class Methods

A class in brass is conducted as an introduction to the teaching of such brass instruments as trumpet, horn, trombone, baritone, and tuba, with demonstration of the class teaching of these instruments.

No prerequisite.

Two credits

¹There is a music fee of \$10 per semester for all Music and Music Education majors.

Mus. Ed. 121. Violin Class and String Methods

A class in violin playing and in the teaching of string instruments.

No prerequisite.

Two credits

Mus. Ed. 122. Viola Class and String Methods

A class in viola playing and in the teaching of string instruments.

No prerequisite.

Two credits

Mus. Ed. 123. Violoncello and Bass Class and String Methods

A class in the playing of the violoncello and the bass and in the teaching of string instruments.

No prerequisite.

Two credits

Mus. Ed. 125. Percussion Class Methods

A class in the fundamentals of percussion performance and demonstrations of class teaching.

No prerequisite.

Two credits

Mus. Ed. 127-128. Voice Class and Methods

A course in the fundamentals of voice production: breathing, breath control, elementary study of vowel forms, and consonants. Elementary songs are used to develop the student's own voice as well as to train him in voice pedagogy.

No prerequisite.

Two credits each semester

Mus. Ed. 201. Elementary School Music Methods

The course involves a general preparation for the teachers of music in the elementary grades. It entails a study of the principles, procedures, and objectives in school music.

Prerequisite: Junior class standing.

Two credits

Mus. Ed. 202. Secondary School Music Methods

The course is planned to provide a preparation for teaching the various aspects of music in the secondary school.

Prerequisite: Junior class standing.

Two credits

Mus. Ed. 209-210. Conducting and School Music Materials

The development of an adequate baton technique and the presentation of various kinds of school music material, stressing particularly elementary and high school instrumental materials the first semester and high school choral materials the second semester.

No prerequisite.

Two credits each semester

Mus. Ed. 340. Professional Semester in Music Education

Provides classwork and practical experience to prepare for the teaching of music in elementary and secondary schools. Fee: \$20.

To qualify for admission into the Professional Semester, students must secure the recommendation of the department chairman in their major and the approval of the Education Department chairman.

Students may schedule late afternoon or evening classes during the professional semester.

Prerequisite: Ed. 201.

Eight credits

FOR TRANSFER AND CERTIFICATION PURPOSES, CREDIT WILL BE ASSIGNED AS FOLLOWS:

Mus. Ed. 343. General Classroom Methods

A study of various instructional procedures used in public school classrooms.

One credit

Mus. Ed. 344. Multi-Sensory Techniques in the Teaching of Music

A study of the use of multi-sensory aids in the teaching of music in elementary and secondary schools.

One credit

Mus. Ed. 346. Student Teaching in Music

A course in the observation and student teaching of vocal or instrumental music in elementary and secondary schools.

Six credits

NURSING

Associate Professor McHenry, chairman; Assistant Professors Schuler, Lynch, Alexander, Mayock.

Nursing 101. Introduction to Nursing

Theory and field observations provide a broad overview of nursing as a profession — its philosophy, perspectives and goal. An orientation to health concepts encompassing all aspects of a person's life and being; physical, psychological, emotional, social, environmental, spiritual, and cultural is introduced. Dimensions of urban health care systems and the identification of their problems and needs are explored. This course will enable the student to move from a personal to an objective examination of nursing.

Two credits

Nursing 102. Nursing As A Process

Focus is on: 1. the student's understanding of himself as an individual, as a member of a family, as a nurse, as a member of a profession and on the responsibilities involved in each. Skills in communication and observation will be developed. 2. basic care of the family members through the acquisition of fundamental principles, concepts and technical skills. Concepts of mental health will be integrated and public health principles will be introduced; local health needs and major national problems will be explored.

Four credits

Nursing 200. Principles of Normal and Therapeutic Nutrition

An introduction of the basic science of human nutrition; principles of normal and therapeutic nutrition, meal planning, computation of diets, physiological, psychosocial and social effects of food and its constituents, and some contemporary local, national and international nutrition problems.

Three credits

Nursing 201. Nursing Care of the Growing Family I

Focus is on the nursing needs of the growing family during the child-bearing and child rearing years. Theory includes normal reproduction and complications; the well child and common health hazards. The psychosocial, psychiatric and community health concepts will be integrated.

Seven credits

Nursing 202. Nursing Care of the Growing Family II

Focus is on the health needs of the older child through adolescence, and young adult. Theory and learning experiences are designed to help the student to develop the nursing knowledge and skills necessary to assist in the promotion of comfort, health and security. Mental health and community health concepts are integrated.

Seven credits

Nursing 203. Nursing of the Adult Family Member I

Focus is primarily on the adult family member's medical-surgical health problems. Theory is correlated with clinical experience in the episodic and distributive settings. Rehabilitation, mental health, psychiatric and community nursing concepts are integrated as a part of total nursing care.

Seven credits

Nursing 204. Nursing of the Adult Family Member II

Theory and selected clinical experiences in applying concepts and techniques in increasingly complex problems of mobility due to accident, injury, disease or old age. This involves the acute and chronic problems; also the aging patient facing the culmination of life in old age, and to the inevitable issues of death and bereavement.

Seven credits

Nursing 295. Independent Study

This course will offer a body of knowledge and clinical experience in the student's specific area of interest. These interests may be chosen as neurological nursing, cardiovascular nursing, cancer

nursing-NIH, family nurse practitioner, coronary nursing, intensive care nursing, community health nursing, and pediatric nurse practitioner.

Four credits

Nursing 296. Independent Study

This is a continuation of Nursing 295, directed toward advanced knowledge and clinical experience in the area of interest. A project will be required demonstrating advanced knowledge in the area of interest. There will be individual conferences, lecture-discussions, senior seminars, and guest lecturers to broaden the scope of the student's area of interest and to prepare him for the immediate role of the professional nurse.

Six credits

Nursing 297. Contemporary Problems in Nursing

Exploration of contemporary problems and issues relating to the practice of nursing and the profession and the role of the professional nurse as a future leader.

Enrollment in all of the following courses with the exception of N.E. 104 is limited to graduate nurses.

N.E. 103. History and Trends in Nursing

A general survey of the history of nursing with emphasis upon the religious, social, and educational factors that have stimulated its development. Discussion of present problems in nursing and trends or patterns that emerge in the efforts to solve these problems.

Three credits

N.E. 104. Community Resources

A survey of the functions and activities of agencies and organizations contributing to the health and social welfare of the citizens of the community.

Two credits

N.E. 106. Supervision and Administration

A discussion of the basic principles of supervision and administration with emphasis upon democratic leadership and the development of constructive interpersonal and interdepartmental relationships.

Two credits

N.E. 107. Principles and Methods in Nursing Education

This course deals with the selection and organization of teaching materials and learning experiences. It includes the appraisal of effective methods of teaching and the evaluation of student progress and achievement.

Prerequisite: Psych. 102 or permission of instructor.

Two credits

N.E. 108. Multi-Sensory Techniques in Nursing Education

A study of the use of multi-sensory teaching aids in nursing education.

Prerequisite: N. E. 107 (may be taken concurrently).

One Credit

N.E. 112. Field Experience in Supervision or Teaching

Supervised observation and practice in a hospital.

Prerequisite: Approval of adviser.

Four credits

N.E. 113-114. Medical and Surgical Nursing

Advanced study of nursing principles and techniques as applied to the expert nursing care of medical and surgical patients. Offered in two semesters.

Two credits each semester

N.E. 209. Psychiatric Nursing

In the psychiatric setting, skills and understandings pertinent to the nursing care of patients are developed with emphasis on the relationship of the nurse both to the individual patient and to groups of patients. Care of the patient is discussed in the larger context of family and community. Lectures and hospital experience.

Prerequisite: Permission of the instructor.

Six credits

PHILOSOPHY — RELIGIOUS STUDIES

Associate Professor Williams, chairman; Professor S. Vujica; Associate Professor Kay; Assistant Professors Henson, Jardine; Adjunct Professor Barras.

*Philosophy***Phil. 101. Introduction to Philosophy**

An introduction to the nature and function of philosophy, and its relations to some of the other fields of human interest. The approach is through such typical problems as: the nature and origin of life, the relation of mind and body, freedom of the will, the theories of right and wrong, arguments for theism. This course is a prerequisite to all advanced philosophy courses.

Three credits

Phil. 102. Logic and Scientific Method

Elementary principles and techniques of clear and sound thinking. General rules of inductive and deductive reasoning; recognition of fallacies; the nature of scientific knowledge, its methods, its aims, its presuppositions.

Three credits

Phil. 210. Ethics

A critical study of standards for judging the rightness or wrongness of conduct. An inquiry into what men *ought* to do. A survey of representative ethical theories with the emphasis on their application to currently controversial issues in the social, economic, and political fields.

Three credits

Phil. 220. Philosophy of Religion

An examination of various problems that arise when religion is made the object of philosophic reflection. The nature and forms of religious experience; the relation of faith and reason; arguments for God's existence; the problem of evil; the argument for immortality.

Three credits

Phil. 230. Aesthetics

A critical examination of contemporary problems in the philosophy of art. Attention will be focused upon the problems of defining the nature of art and the artistic process, methods and standards in evaluating works of art, the role of aesthetic theory, the identity and ontological status of the aesthetic object, perception and the aesthetic attitude, and the nature and role of aesthetic judgments.

Three credits

Phil. 240. Social and Political Philosophies

Social and political institutions as seen by such classical critics as Plato, Aristotle, Hobbes, Hume, Burke, Bentham and others. Special attention to analysis of the problems of censorship, relation of church and state, prejudice, aims and methods of democratic institutions.

Three credits

Phil. 250. Ancient and Medieval Philosophy

A study of the development of Western thought from Thales to Occam with special attention to such key thinkers as Plato, Aristotle, Democritus, Plotinus, Thomas Aquinas and Duns Scotus.

Three credits

Phil. 260. History of Modern Philosophy

The major trends in philosophic thought from the Renaissance to the end of the nineteenth century, with special emphasis on: Descartes, Spinoza, Leibnitz, Locke, Berkeley, Hume, Kant, Hegel, Schopenhauer, Comte, Bentham, and Mill.

Three credits

Phil. 270. Contemporary Philosophy

A critical examination of current trends in philosophy, with special emphasis on: British and American realism; pragmatism; positivism; contemporary Marxism; existentialism; and linguistic analysis. Major philosophers to be studied: James, Dewey, Moore, Husserl, Russell, Carnap, Santayana, Whitehead, Heidegger, Sartre, and Wittgenstein.

Three credits

Phil. 280. Philosophies of History

A study of the various interpretations of history. The views of Augustine, Vico, Rousseau, Kant, Hegel, Marx, Comte, Spengler, Schweitzer, Toynbee, Sorokin, Niebuhr and others on the meaning of historical events.

Three credits

Phil. 290. Problems in Metaphysics

A critical examination of one or more problems of ontology and cosmology as dealt with by both classical and contemporary metaphysicians. Problems to be considered may include the concepts of substance, existence, causality, God, space and time, the problem of change and motion, free will and casual determinism, fatalism, the relationship between mind and body, and the nature of universals.

Three credits

Phil. 297. Philosophical Explorations

An introductory treatment of some specific contemporary issue or problem of a philosophical nature. The course content is variable and may include borderline problems between philosophy and the sciences, arts, and humanities, such as technology and value, philosophy of biology, futurology, medical ethics, philosophy and literature, etc.

This course may be repeated for credit.

Three credits

Phil. 320. The Philosophy of Science

A critical examination of the nature of science; meaning, verifiability and experimentation in the sciences; the principle of verifiability in Physics and Psychology; induction and the various interpretations of probability; causality and laws of nature, and the nature of explanation and justification.

Three credits

Phil. 330. Existentialism

A close examination of the literature of the major existentialist writers, both theistic and atheistic, together with a consideration of its impact upon philosophy, religion, psychology, and art. Special attention will be given to the thought of Kierkegaard, Nietzsche, Jaspers, Heidegger, Marcel, and Sartre.

Three credits

Phil. 340. Studies in Plato

A critical inquiry into some central issues of Plato's philosophy, such as the foundations of ethics, politics and scientific knowledge; the theory of forms; the nature of man and of the cosmos; and the nature of the philosophic enterprise.

Prerequisites: Phil. 101 and 250 or the consent of the instructor.

Three credits

Phil. 360. Symbolic Logic

An introduction to the methods, techniques, and problems of symbolic logic, from a philosophical point of view. The course will consist of a review of the propositional or sentential calculus, and a thorough examination of the predicate calculus, including identity, definite descriptions, and relations. Emphasis will be placed upon the concept of a formal system and axiomatization, as well as properties of deductive systems such as consistency, completeness, independence of axioms, and other formal properties.

Prerequisite: Phil. 102 or consent of the instructor.

Three credits

Phil. 395-396. Independent Research

Independent study and research for advanced students in the field of the major under the direction of a staff member. A research paper at a level significantly beyond a term paper is required.

Prerequisite: Approval of the department chairman is required.
One to three credits

Phil. 397. Seminar

Presentations and discussions of selected topics.

Prerequisite: Approval of the department chairman is required.
One to three credits. (Maximum of three credits per student.)

*Religious Studies***R.S. 200. Man's Religions**

Nature and origin of religion. Sacred literatures, beliefs, and rituals of the great historical and living faiths. A comparison of the more important features of the great religions. The contributions of religion to the development and preservation of cultural values.

Three credits

R.S. 201. The Literature of the Old Testament

The course aims at giving the student an insight into the books of the Old Testament and the range and depth of the religious heritage received from Israel. The biblical message is studied in its dynamic context of the culture, geography and history of the ancient Near East.

Three credits

R.S. 202. The Literature of the New Testament

An examination of the form and content of the books of the New Testament as literary products and as records of the faith that gave rise to the Christian Church. The teachings of Jesus and the Apostolic Church are studied against the background of their own time and examined in their significance for contemporary life.

Three credits

R.S. 212. Contemporary Trends in Religious Thought

A study of the development of religious thought from "Neo-Orthodoxy" to the "Death of God" theologies. The impact of scientism, linguistic philosophies and ecumenism on modern theologizing; the thinkers whose views will be considered include: Barth, Brunner, the Niebuhrs, Bultmann, Farmer, Weiman, Maritain, Buber, Sartre, Heidegger, Tillich, Rahner, Rubenstein, Altizer, Cox, Brown, and Weigel.

Three credits

PHYSICAL EDUCATION AND HYGIENE

Professor Reese, chairman; Assistant Professors R. Schmidt, Saracino; Instructors Domzalski, Foster, Bloomberg.

Because of the importance of health and the possession of a sound body, attention is given to the physical well-being of students as a regular part of the curriculum; mass athletics and some form of sport or exercise for each student are included in the program of physical education. Physical education is required of both men and women, except by statement of a physician, during the freshman and sophomore years.

The College men at the beginning of each year are given a medical and a physical examination. The work in physical education includes soccer, football, basketball, baseball, volley ball, and other competitive games.

The College women also are given a thorough medical and physical examination before entering upon the program of physical education. The work for women consists of such activities as dancing, basketball, and natural gymnastics.

P.E. 101-102-103-104. Physical Education

This course is designed to promote physical well-being and good health habits and to encourage participation in activities that will provide relaxation and exercise throughout life. Two hours each week.

P.E. 105-106. Hygiene¹

A study of present day health problems. The course undertakes to help students enjoy maximum health and happiness through better understanding of nutrition, infection, disease, nervous and mental disorders, and problems of parenthood. One hour each week.

One credit each semester

PHYSICS

Professor Bellas, chairman; Professors Donahoe, Holden; Associate Professors Thomas, Nejib, Toole; Assistant Professors Morrow, Hostler, Bailey, Placek.

Phys. 101-102. Physical Science

A course for the non-science student to enable an understanding and appreciation of the universe in which he lives. The methods, concepts, and vocabulary of physics and applications of some of its outstanding principles to the needs of the individual and the community; and the manner in which the continually expanding frontiers of science affect our future way of life. Lecture, demonstration, and discussion three hours a week.

Prerequisite: Background in Science and Math. not necessary.

Three credits each semester

Phys. 105-106. Introductory Physics

An introductory course designed to promote an understanding of the more important fundamental laws and methods of the major sections of physics. Laboratory work to emphasize basic principles and to acquaint the student with measuring instruments and their use as well as the interpretation of experimental data. First semester: mechanics, wave motion, sound, and heat. Second semester: electricity, magnetism, and optics. Three class hours and one three-hour laboratory each week. Fee: \$20 each semester.

Four credits each semester

¹ Class instruction in personal hygiene is required of all students, even those excused by physicians from taking physical education.

Phys. 201. General Physics I

A thorough grounding in the concepts, principles, and physical laws of mechanics, thermodynamics and wave motion. Instruction by demonstration lecture, recitation, and experimental work. Demonstration lecture two hours a week, recitation one hour a week, and laboratory three hours a week. Fee: \$20.

Four credits

Phys. 202. General Physics II

Continuation of Phys. 201. Electricity and magnetism, and optics and light. Demonstration-lecture two hours a week, recitation one hour a week, and laboratory three hours a week. Fee: \$20.

Prerequisite: Phys. 201.

Four credits

Phys. 203. General Physics III

Continuation of Phys. 201 and 202. Modern physics. Including the experimental basis, concepts, and foundational principles of modern atomic and nuclear physics. Demonstration lecture three hours a week.

Prerequisite: Phys. 202.

Three credits

Phys. 230. Optics and Light

The principles of geometrical and physical optics are considered in considerably greater detail than in the introductory course. Image formation, refraction, diffraction, origin of spectra, polarized light, optical activity, etc. Three hours class and one three-hour laboratory a week. Fee: \$20.

Prerequisite: Phys. 202.

Four credits

Phys. 231-232. Electronic Networks, Measurements, and Instrumentation

A study of basic passive and active electronic networks and their components. Application of electronic devices in physical measurements. Laboratory calibration and use of electronic instruments. Two hours class and one three-hour laboratory a week. Fee: \$20 each semester.

Prerequisite: Phys. 202.

Three credits each semester

Phys. 240. Thermodynamics

The fundamental concepts of thermodynamics. The laws of thermodynamics, Carnot cycle, entropy, and an introduction to kinetic theory and statistical mechanics. Three hours lecture-discussion a week.

Prerequisite: Phys. 202.

Three credits

Phys. 307. Topics in Theoretical Physics

Selected topics depending upon the interests of the instructor and students. Topics might include advanced mechanics, fluid mechanics, electromagnetic theory, relativity, etc. Three hours class a week.

Prerequisite: Approval of the instructor and the department chairman.

Three credits

Phys. 311-312. Mechanics

Intermediate level courses designed to develop a thorough understanding of the principles of mechanics and the application of mathematical methods to the solution of its problems. Topics include Newtonian motions of particle systems (such as a harmonic oscillator, central force problems, etc.), rotations of rigid bodies, moving coordinate systems, continuous media, inertia and stress, tensors, Lagrange's equations of motion, theory of small vibrations. Recitation-lecture three hours a week.

Prerequisite: Phys. 202 and Math. 212.

Three credits each semester

Phys. 331-332. Electricity and Magnetism

Static and dynamic electricity, magnetism, electromagnetism, thermoelectricity, etc., are covered in considerable detail. The emphasis in this course is on fundamental analysis rather than applications. Three hours class and one three-hour laboratory a week each semester. Fee: \$20 each semester.

Prerequisites: Phys. 202 and Math. 212.

Four credits each semester

Phys. 351. Quantum Mechanics

An introduction to the theoretical and mathematical aspects of quantum mechanics. Topics include Schrodinger's equation and its application to the harmonic oscillator, the potential-well, and the hydrogen atom problems; steady-state nondegenerate, degenerate, and time-dependent perturbation theory; angular momentum; identical particles and Pauli's exclusion principle; relativistic wave equation and the origin of electron spin. Three hours lecture-discussion a week.

Prerequisites: Phys. 312, Math. 362.

Three credits

Phys. 361. Atomic Physics

The structure of the atom, the photo-electric effect, crystal structure, X-rays, spectra, introduction to quantum theory. Class, three hours and one three-hour laboratory a week. Fee: \$20.

Prerequisites: Phys. 203, 311, 331.

Four credits

Phys. 370. Solid State Physics

Selected topics, depending upon the interests of the instructor and students. Topics might include the theory of electrical and thermal conductivity, semiconductors, bonding in solids, point defects, dislocation, magnetic properties, etc. Three hours class a week.

Prerequisite: Phys. 361, Math. 362, or approval of the instructor.

Three credits

Phys. 380. Nuclear Physics

Special relativity, natural and induced radioactivity, nuclear structure, nuclear reactions, reactors, etc. Three hours class and one three-hour laboratory a week. Fee: \$20.

Prerequisite: Phys. 361.

Four credits

Phys. 391-392. Advanced Laboratory

Students desiring to undertake laboratory work in topics of their own choosing should consult the department chairman. Lab fee: \$7 per credit hour.

Prerequisites: Phys. 203, Math. 212.

One or two credits — Hours to be arranged

Phys. 395-396. Independent Research

Independent study and research for advanced students in the field of the major under the direction of a staff member. A research paper at a level significantly beyond a term paper is required.

Prerequisite: Approval of the department chairman is required.

One to three credits

Phys. 397. Seminar

Presentations and discussions of selected topics.

Prerequisite: Approval of the department chairman is required.

One to three credits. (Maximum of three credits per student.)

THE 400 SERIES COURSES ARE GRADUATE COURSES AVAILABLE TO UNDERGRADUATE SENIORS WITH PERMISSION OF THE INSTRUCTOR AND THE DEPARTMENT CHAIRMAN.

Phys. 401-402. Methods of Mathematical Physics

Study of different branches of Mathematics and their applications in Physics. Topics include: Ordinary and partial differential equations; Fourier series and integrals; Complex variables; Matrix methods; Green's functions; Tensor analysis; Group theory; and others. Three hours lecture-discussion.

Prerequisite: Math. 362 or equivalent.

Three credits each semester

Phys. 471. Crystallography

Repetition theory and translational and rotational symmetry. Derivation of the crystal classes. Combination of symmetry operations involving reflections and inversions. The symmetrical plane and space lattices. The coordinate systems of crystallography and crystal forms. Practical determination of point-group symmetry. The algebra of operations. Space groups. Equivalent positions in space groups. The determination of space groups, group theory and its application to point symmetries.

Three credits

Phys. 472. X-Ray Diffraction

X-rays and their properties. Directions and intensities of diffracted beams. Laue, Debye-Scherrer, Diffractometer, Rotating, Oscillating, Weissenberg and Precession Methods. Outline of crystal structure analysis. Laboratory, one period per week. Fee: \$20.

Prerequisite: Phys. 471.

Three credits

Phys. 473. Crystalline Anisotropy

Groundwork of crystal physics and transformation of second-rank tensors. Paramagnetic and diamagnetic susceptibility. Electric polarization. Stress strain and thermal expansion. Elasticity and fourth-rank tensors. Matrices. Thermodynamics of equilibrium thermal conductivity, and thermoelectricity. Three hours class a week.

Prerequisite: Phys. 472.

Three credits

POLITICAL SCIENCE

Associate Professor Shaw, chairman; Assistant Professors Tuhy, Niehoff.

P.S. 101. Political Science I

A broad, comprehensive introduction to the great topics which constitute political science, covering the nature and main elements of the modern states, their politics, their institutions, and their relations with one another.

Three credits

P.S. 102. Political Science II

A descriptive and analytical study of the theory and practice of American National Government including its constitutional basis, organization, powers, and functions and services.

Three credits

P.S. 201. Constitutional Law I

A course intended to show the growth of the American Constitution particularly United States governmental structure and relationships with special emphasis on change in the Constitution, the three branches of government, the Federal System, and the powers of the National Government.

Prerequisite: P. S. 101 and 102.

Three credits

P.S. 202. Constitutional Law II

A course intended to show the growth of the American Constitution particularly the relations between the individual and his government with special emphasis on liberty against government, protection of civil rights, citizenship and its privileges.

Prerequisite: P. S. 101 and 102.

Three credits

P.S. 203. Politics and Political Parties

A course intended to analyze the movements of political parties, elections, and the various methods used to gain control.

Prerequisite: P. S. 101 and 102.

Three credits

P.S. 204. Public Opinion and Propaganda

A study in the behavior of governance, including the factors which determine attitude, the formation and expression of public opinion, and propaganda as used by pressure groups.

Prerequisite: P. S. 101 and 102 and Soc. 101 and 102.

Three credits

P.S. 205. State Government

A broad, general course covering the structure, powers, and function of state governments in the United States. Special emphasis is placed on the Pennsylvania State Government.

Prerequisite: P. S. 101 and 102.

Three credits

P.S. 206. Municipal Government

A course undertaking the study of the organization, work, and administration of local government. Since the national government has assumed a new significance today, special attention is given to the relationship between local and national government.

Prerequisite: P. S. 101 and 102.

Three credits

P.S. 207. Public Administration

A study of the organization, activity, problems, and the recruitment policy of the public service.

Prerequisite: P. S. 101 and 102.

Three credits

P.S. 208. Labor Legislation

A course dealing with the role of government in the field of labor relations and with the laws affecting the conditions of employment and employee-employer relations. The course stresses the increasing importance of government in a field heretofore free of any regulation.

Prerequisite: P. S. 101 and 102.

Three credits

P.S. 210. Government of Metropolitan Areas

An examination of the politics and the processes of contemporary urban government, with special emphasis upon the complex problems presented by the rapidly expanding population in standard metropolitan areas.

Prerequisite: P. S. 101 and 102.

Three credits

P.S. 211. Intergovernmental Relations

An analysis of the evolution, growth, present status and characteristics, including problems, posed by the Federal system of grants-in-aid.

Prerequisite: P.S. 101 and 102.

Three credits

P.S. 212. Management of Municipalities

A study of the underlying issues, problems, and concepts encountered in local government administration affecting urban change.

Prerequisite: P.S. 101 and 102.

Three credits

P.S. 221. International Law

A study of the development of the body of customs and rules which states have developed to govern their relations, with particular consideration for the responsibility of states for their enforcement.

Prerequisite: P. S. 101 and 102.

Desideratum: United States and European history.

Three credits

P.S. 222. International Relations

An analysis of the major concepts, principles and factors involved in an understanding of international relations and foreign policies of nations.

Prerequisite: P. S. 101 and 102.

Desideratum: Some knowledge of history, governments, and geography.

Three credits

P.S. 223. Comparative Government

A comparative study of the various forms and kinds of governments that have developed in the modern world with primary attention directed toward Europe.

Prerequisite: P. S. 101 and 102.

Three credits

P.S. 224. Soviet System of Government

A course dealing with the structure and functions of the Soviet Government emphasizing the contrasts and similarities in form with governments of the West.

Prerequisite: P. S. 101 and 102.

Three credits

P.S. 225. International Organization

A study of the growth of cooperative efforts toward international organization; the nature, functions, and problems relating to international organization.

Prerequisites: P.S. 101 and 102.

Three credits

P.S. 226. Government and Politics of Asia

An analysis of the distinctive institutions, processes, and problems of political development and contemporary government in Asia, with emphasis on the post-independence era, and on Japan and China.

Prerequisites: P.S. 101 and 102.

Three credits

P.S. 251. The Role of Planning in Urban Development

Origins and evolution of city planning, influences of urban growth, legal and institutional framework, and scientific and philosophical premises. Survey of city planning as it has evolved in the United States since 1800 in response to physical, social and economic problems.

Prerequisite: P.S. 101 and 102.

Three credits

P.S. 252. Fundamentals of Urban Design

A study of the principles of urban design and the use of space to achieve efficiency with maximum visual amenity.

Prerequisite: P.S. 251.

Three credits

P.S. 253. Land Use Planning Law

A course dealing in the law of city planning, nuisance, subdivision controls, eminent domain, urban renewal, and public aspects of real estate financing, with special emphasis on the relationship between implementing planning goals and the basic principles of constitutional law.

Prerequisite: P.S. 251.

Three credits

P.S. 395-396. Independent Research

Independent study and research for advanced students in the field of the major under the direction of a staff member. A research paper at a level significantly beyond a term paper is required.

Prerequisite: Approval of the department chairman is required.

One to three credits

P.S. 397. Seminar

Presentations and discussions of selected topics.

Prerequisite: Approval of the department chairman is required.

One to three credits. (Maximum of three credits per student.)

PSYCHOLOGY

Professor Riley, chairman; Assistant Professor Stetten; Instructors Kanner, Pisaneschi, Irzinski, Hobrock, Katz, Roke, Sinco.

Psy. 101-102. General Psychology

An introduction to the field of psychology with emphasis on objective and systematic methods of inquiry. Extensive treatment of major psychological topics such as sensation, perception, learning, motivation, intelligence, and personality development. Frustration, conflict, and mental health also receive attention.

Three credits each semester

Psy. 201. Advanced General Psychology

A more detailed study of topics treated only superficially in the introductory course. There will be emphasis on contemporary readings.

Prerequisite: Psy. 101 and 102.

Three credits

Psy. 203. Contemporary Psychological Theories

An examination of current theories in psychology, with emphasis upon the major systematic and "minature" learning theories.

Prerequisite: Psy. 101 and 102.

Three credits

Psy. 206. History of Psychology

A study of the philosophic and scientific roots of contemporary psychology, with emphasis on the applicability of past questions and knowledge to current psychological thought.

Prerequisite: Psy. 215.

Three credits

Psy. 211-212. Experimental Psychology

A lecture and laboratory course designed to familiarize the student with the methods and the results of modern psychological research. The course includes a study of several of the famous experiments in the field of psychology. Also included is practice with the older as well as the more recent methods of experimental research. Lecture and laboratory. Fee: \$20 each semester.

Prerequisite: Psy. 214.

Three credits each semester

Psy. 213. Physiological Psychology

A systematic study of the physiological mechanisms mediating behavior. Emphasis is on the neuro-physiological bases of sensation, perception, adaptation, motivation, emotion, learning, and memory. Methods and techniques used in the study of the nervous system and sensory and muscular systems will be investigated and demonstrated.

Prerequisites: Psy. 101-102.

Three credits

Psy. 214. Sensation and Perception

Various principles and phenomena of sensation and perception are studied within the visual, auditory, olfactory-gustatory, haptic, and bodily-orientation systems. An introduction to major perceptual theories is also given.

Prerequisites: Psy. 101-102, 213.

Three credits

Psy. 215. Research Design and Analysis

An introduction to the use of scientific methods as a means of studying behavior. This course is required of all majors.

Three credits

Psy. 221. Child Psychology

The course is designed to present a general view of the development and growth of the child. It is concerned primarily with the heredity and native equipment of the child and the manner in which this equipment is modified during childhood. Emotional development, language development, and social relations are considered.

Prerequisite: Psy. 101 and 102.

Three credits

Psy. 232. Human Behavior

Human adjustment and maladjustment to life situations with emphasis on motivation, emotional control, personality formation, and the treatment of the lesser personality disorders.

Prerequisite: Psy. 101 and 102.

Three credits

Psy. 242. Psychological Tests

A survey of the functions measured by psychological tests with emphasis on intelligence and personality. A variety of the group and individual tests which measure these functions are studied. This course is a prerequisite for Psy. 245.

Prerequisites: Psy. 101-102.

Three credits

Psy. 243. Industrial Psychology

An introduction to the industrial application of psychology in the selection, classification, and training of employees; reduction of monotony and fatigue; the maladjusted worker; accident prevention; work conditions; and employee motivation and morale.

Prerequisite: Psy. 101-102.

Three credits

Psy. 245. Clinical Psychology

A survey of the clinical method in psychology with consideration of diagnostic and treatment techniques and the role of the professional psychologist in various settings.

Prerequisite: Psy. 242.

Three credits

Psy. 331. Abnormal Psychology

A general survey of the principal forms of mental abnormalities, with emphasis on causes, symptoms, course, and treatment.

Prerequisite: Psy. 221, 232 and permission of head of department.

Three credits

Psy. 395-396. Independent Research

Independent study and research for advanced students in the field of the major under the direction of a staff member. A research paper at a level significantly beyond a term paper is required.

Prerequisite: Approval of the department chairman is required.

One to three credits

Psy. 397. Seminar

Presentations and discussions of selected topics.

Prerequisite: Approval of the department chairman is required.

One to three credits. (Maximum of three credits per student.)

RETAILING

Professor R. Werner, chairman; Instructor D'Zurko.

Ret. 101. Principles of Retailing

A basic course that discusses the opportunities in retailing; types of retail institutions; problems of store policy, store location; study of the organizational structure of department stores; organization and functions of all store divisions.

Three credits

Ret. 210. Elements of Merchandise: Textiles

Merchandise information; fibers and fabrics; history, production, manufacturing process from fiber to finished fabric; textile terminology, trade names. Identification, testing of fibers; care of fabrics; new developments. Study of natural, industrial and synthetic materials.

Three credits

Ret. 211. Merchandise Information: Non-Textiles

Materials, other than textiles, used in the creation of merchandise are covered through the study of raw materials. Categories of merchandise covered include: leather goods, such as shoes, gloves, handbags, and luggage; floor coverings; glass, pottery, and china; and furniture.

Three credits

Ret. 212. Purchases and Merchandising Control

The principles, techniques, and problems encountered in merchandising; purchase planning, markup, markdown, inventories and their control, turnover, retail method of inventory, and the types and limitation of stock control systems.

Prerequisite: B.A. 115 or approval of instructor

Three credits

Ret. 214. Retail Buying

A study of the scientific principles of what, when, and how much to buy; a study of customer demand. Special attention is given to the technique of buying; markups, markdowns, stockturns, and other factors that are necessary to keep lines complete.

Prerequisite: approval of instructor.

Three credits

Ret. 224. Recent Trends and Developments in Retailing

Review of fundamentals; trends in retailing; study of developments in cooperation with retail store executives. Laboratory work; reports on trends and developments.

Three credits

Ret. 225. Retail Practice

In cooperation with local stores, students interested in Retailing must be employed for an average of 12 to 15 hours a week during one term of the junior or senior year. During the period of employment, students will be required to submit reports concerning their work to the instructor; the store manager or personnel director is required to evaluate the students' ability and aptitude for retailing. Credit for the course given upon certification by the manager or personnel director of the co-operating store that students have satisfactorily completed their terms of employment.

Students who wish to seek their own place of employment may be permitted to do so, provided the place of employment has been approved by the instructor. In general, this approval will be given to employment in department stores, independent stores, variety stores, chain stores, and specialty stores where students will receive a variety of experience, and the stores are of a sufficient size to provide adequate and diversified experience.

Prerequisite: Permission of instructor.

Three credits

SOCIOLOGY AND ANTHROPOLOGY

Professor Moravec, chairman; Assistant Professors Weinstein, Furst, Kemrer, Martin; Instructor Welliver.

Soc. 101. Introduction to Sociology and Anthropology I

Man in Society; a systematic view of sociology, providing essentials for an approach to questions about man in society; analysis of social processes, structures, and functions.

Three credits

Soc. 102. Introduction to Sociology and Anthropology II

Man and Culture; a general survey of the field of anthropology stressing its cultural aspects; study of contemporary non-literate societies and their institutions.

Three credits

Soc. 200. The Family

History and ethnological studies of family. Role of family in the development of the individual. Interrelation of church, state, and family. Social conditions and changes affecting the American family. Family instability and disorganization.

Prerequisite: Soc. 101 and 102 or permission of instructor.

Three credits

Soc. 215. Sociology of Urban Life

The development of modern cities; effects of urban life upon social organization and personality patterns; major social problems of the cities.

Prerequisite: Soc. 101 and 102.

Three credits

Soc. 230. Social Problems

A survey of most pressing contemporary social problems and an examination of current theories of social disorganization.

Prerequisite: Soc. 101 and 102.

Three credits

Soc. 235. Crime and Juvenile Delinquency

Evaluation of current theories and research into causative factors and sociological implications of criminal and delinquent behavior.

Examination of problems, programs, and issues in prevention and treatment of deviant behavior.

Prerequisite: Soc. 230, or permission of the instructor.

Three credits

Soc. 240. Medical and Psychiatric Sociology

A general survey of the application of sociology in two fields: (1) medicine — social and cultural factors affecting health and illness, doctor-patient relationships, the role of the patient, the hospital environment; and (2) psychiatry — social factors affecting the diagnosis, etiology, and treatment of mental disorders, the mental hospital as a social system, community psychiatry.

Prerequisites: Soc. 101 and 102, or permission of the instructor.

Three credits

Soc. 251. Fields of Social Work

A survey of the main problems of social work and of agencies and methods that have developed to cope with them. The nature and requirements of the different fields of social work.

Prerequisite: Soc. 101 and 102 and Psy. 101 and 102.

Three credits

Soc. 252. Comparative Social Welfare Systems

Examination of the social welfare institution within a societal and cultural context. Exploration of historical and conflicting views on responsibility for developing measures to cope with social problems in North American, European, Asiatic, and African countries.

Prerequisites: Soc. 101, 102, Psy. 101, 102.

Three credits

Soc. 255. Introduction to Social Psychology

A general survey of the field of social psychology. Social factors in human nature; psychology of individual differences; social interaction; collective behavior, psychology of personality; social pathology.

Prerequisite: Soc. 101 and 102 and Psy. 101 and 102.

Three credits

Soc. 260. Personality and Social Structure

Examination of current theories and research bearing upon the relationship between personality and social structure; contributions and convergent development in psychology, anthropology, and sociology.

Prerequisite: Soc. 101 and 102; Soc. 255.

Three credits

Soc. 265. Sociology of Industry

An analysis of the formal and informal social organization of the work plant and of the relationship between modern industrial organization and the community.

Prerequisite: Soc. 101 and 102 and Ec. 101 and 102, or permission of the instructor.

Three credits

Soc. 270. Peoples and Cultures of the World

A survey of the non-Western cultures of the world with an emphasis on one of the following areas: The Middle East, The Far East, South-East Asia, Africa, Australasia, Latin America.

Prerequisite: Soc. 101 and 102.

Three credits

Soc. 275. Sociology of Minorities

A theoretical analysis of inter-group tensions and processes of adjustment with special reference to modern racial, national, and religious conflicts.

Prerequisite: Soc. 101 and 102 and Psy. 101 and 102.

Three credits

Soc. 280. Sociological Theory

The aim of the course is to provide the student majoring in sociology, or in one of the related fields, with a historical background necessary for understanding of the current trends in sociology as well as for clarification of its distinct subject matter, problems, and methods.

Prerequisite: Soc. 101 and 102 and two other courses in sociology or permission of the instructor.

Three credits

Soc. 393. Methods of Research in Sociology

Introduction to sociological research; selected problems of research in social relations; interviewing techniques; questionnaire design and case studies.

Prerequisite: Approval of department chairman.

Three credits

Soc. 394. Sociological Analysis

The systematic critical evaluation of data by means of concepts and methods consistent with the principles of sociology. Both quantitative and qualitative procedures will be employed.

Prerequisite: Approval of instructor.

Three credits

Soc. 395-396. Independent Research

Independent study and research for advanced students in the field of the major under the direction of a staff member. A research paper at a level significantly beyond a term paper is required.

Prerequisite: Approval of department chairman.

One to three credits

Soc. 397. Seminar

Presentation and discussion of selected topics.

Prerequisite: Approval of department chairman.

One to three credits. (Maximum of three credits per student).



One of many annual homecoming displays.

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at
Wilkes**

The political world is metamorphosed; new remedies must henceforth be sought for new disorders. To lay down extensive but distinct and settled limits to the action of the government; to confer certain rights on private persons, and to secure to them the undisputed enjoyment of those rights; to enable individual man to maintain whatever independence, strength, and original power he still possesses; to raise him by the side of society at large, and uphold him in that position; these appear to me the main objects of legislators in the ages upon which we are now entering.

One set of men can perceive nothing in the principle of equality but the anarchical tendencies that it engenders; they dread their own free agency, they fear themselves. Other thinkers, less numerous but more enlightened, take a different view: beside that track which starts from the principle of equality to terminate in anarchy, they have at last discovered the road that seems to lead men to inevitable servitude. They shape their souls beforehand to this necessary condition; and, despairing of remaining free, they already do obeisance in their hearts to the master who is soon to appear. The former abandon freedom because they think it dangerous; the latter, because they hold it to be impossible.

If I had entertained the latter conviction, I should not have written this book, but I should have confined myself to deploring in secret the destiny of mankind.

ALEXIS DE TOCQUEVILLE
Democracy in America (1840)

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 B.S. (Wilkes)
 C.P.A. (State of Pennsylvania)
- LINDA HOBROCK (1969) *Assistant Dean of Women*
 B.S. (Bowling Green)
 M.Ed. (Lehigh)
- JAMES A. MOSS (1970) *Assistant to Dean — Student Affairs*
 B.A. (Wilkes)
 B.D. (Colgate-Rochester)
 S.T.M. (Union Theological)
- EDWARD R. BALTRUCHITIS (1972) *Assistant Dean of Men*
 B.S. (Mansfield)
 M.A. (George Washington)
- GEORGE G. PAWLUSH (1969) *Director of Sports Information*
 B.S. (Wilkes)
- CHARLES M. VAN DE WATER (1972) *Assistant Director of Housing*
 B.A. (Parsons)

College Services

- ROBERT M. KERR *College Physician*
 B.S. (Bucknell)
 M.D. (Jefferson)
- JOSEPH H. KANNER *Director of Testing Service*
 B.A. (Bucknell)
 M.A. (New School for Social Research)
- MILDRED GITTINS *Manager of the Bookstore*
- NELSON F. CARLE *Superintendent of Buildings and Grounds*
- CAROL GOLEMBESKI, R.N. *College Nurse*
- JEANNE CONWAY *Coordinator of Women's Housing*

Date following name is the year of appointment.

Faculty

In alphabetical order, with date of appointment following the name.

- FRANCIS J. MICHELINI (1955) *Administration President*
 B.S. (Seton Hall)
 M.S. (Delaware)
 Ph.D. (Pennsylvania)

JAMES H. AIKMAN (1972) B.G.E. (Nebraska at Omaha) M.S. (Southern California)	Aerospace Studies	Professor
FREDERIC E. BELLAS (1961) B.S., M.S., Ph.D. (Pennsylvania State)	Physics	Professor
JAMES J. BOHNING (1959) B.S. (Valparaiso) M.S. (New York) Ph.D. (Northeastern)	Chemistry	Professor
ALVAN BRUCH (1962) B.S. (Chicago) M.S., Ph.D. (New York)	Environmental Science	Professor
ROBERT S. CAPIN (1959) B.S. (Wilkes) C.P.A. (State of Pennsylvania) M.B.A. (Lehigh)	Accounting	Professor
SHELDON G. COHEN (1951) B.A. (Ohio State) M.D. (New York)	Experimental Biology	Professor
CHESTER E. COLSON (1958) B.S. (Massachusetts School of Art) M.S. (Columbia)	Fine Arts	Professor
HAROLD E. COX (1963) B.A. (William and Mary) M.A., Ph.D. (Virginia)	History	Professor
FRANCK G. DARTE, II (1968) B.A. (Yale) M.S., Ed.D. (Pennsylvania)	Education	Professor
FRANCIS J. DONAHOE (1964) B.A. (LaSalle) Ph.D. (Pennsylvania)	Physics	Professor
BENJAMIN F. FIESTER, JR. (1956) B.A. (Wilkes) M.A. (Bucknell) Ph.D. (Pennsylvania State)	English	Professor
WILLIAM R. GASBARRO (1958) B.S. (Juilliard) M.A. (Columbia)	Music Education	Professor
EUGENE L. HAMMER (1953) B.S. (Wheaton) M.A. (Northwestern) Ed.D. (Columbia)	Education	Professor

Date following name is the year of appointment.

STANLEY J. HOLDEN (1963) B.A. (Brooklyn) Ph.D. (Alfred)	Physics	Professor
BRONIS KASLAS (1949) L.L.B. (Kaunas, Lithuania) M.A., Ph.D. (Strasbourg)	History	Professor
DAVID M. LEACH (1969) B.A. (Whitman) Ph.D. (Rochester)	History	Professor
JAROSLAV G. MORAVEC (1963) L.L.D. (Prague, Czechoslovakia) Ph.D. (Boston)	Sociology	Professor
JOHN G. REESE (1955) B.S., M.Ed. (Pennsylvania State)	Physical Education	Professor
CHARLES B. REIF (1942) B.A., M.A., Ph.D. (Minnesota)	Biology	Professor
ROBERT C. RILEY (1949) B.A. (Bucknell) Ph.D. (Pennsylvania State)	Psychology	Professor
PHILIP L. RIZZO (1957) B.A., M.A., Ph.D. (Pennsylvania)	English	Professor
SAMUEL A. ROSENBERG (1948) B.A., M.B.A. (Boston) Ph.D. (North Carolina)	Economics	Professor
RALPH B. ROZELLE (1962) B.S. (Wilkes) Ph.D. (Alfred)	Chemistry	Professor
HOWARD A. SWAIN, JR. (1960) B.S. (Grove City) Ph.D. (Pennsylvania)	Chemistry	Professor
STANKO M. VUJICA (1947) B.A. (Zagreb) M.A. (Innsbruck) Ph.D. (Zagreb)	Philosophy and Religious Studies	Professor
ROBERT E. WERNER (1955) B.A. (Roosevelt) M.S., Ph.D. (Wisconsin)	Economics	Professor
BING K. WONG (1968) B.A. (Kansas State at Pittsburgh) M.A., Ph.D. (Illinois)	Mathematics	Professor
MICHAEL J. BARONE (1964) B.S. (Wilkes) M.S. (Bucknell)	Education	Associate Professor

Date following name is the year of appointment.

ANGEL BELIC (1968) LL.D. (Zagreb) Ph.D. (Rome, Italy)	Foreign Languages	Associate Professor
DALE A. BUEHLER (1962) B.A. (Franklin & Marshall) M.S. in L.S. (Drexel Institute of Technology)	Library	Associate Professor
HARRIE E. CALDWELL (1970) B.S. (Edinboro State) M.S., Ph.D. (Syracuse)	Education	Associate Professor
RICHARD B. CHAPLINE (1959) B.S., M.S. (Juilliard)	Music	Associate Professor
ELWOOD DISQUE (1935) B.A. (Dickinson)	Foreign Languages	Associate Professor
BOYD L. EARL (1963) B.S. (Wilkes) M.S. (Bucknell)	Mathematics	Associate Professor
MOHAMED T. EL-ASHRY (1969) B.S. (Cairo, Egypt) M.S., Ph.D. (Illinois)	Environmental Science	Associate Professor
GEORGE F. ELLIOT (1950) B.A. (Montclair State) M.A. (Clark)	Economics	Associate Professor
WELTON FARRAR (1948) B.S., M.S. (Pennsylvania)	Economics	Associate Professor
OWEN D. FAUT (1967) B.S. (Muhlenberg) Ph.D. (Massachusetts Institute of Technology)	Chemistry	Associate Professor
ALFRED S. GROH (1947) B.A. (Syracuse) M.A. (Columbia)	Theater Arts	Associate Professor
WILBUR F. HAYES (1967) B.A. (Colby) M.S., Ph.D. (Lehigh)	Biology	Associate Professor
LEVERE C. HOSTLER (1967) B.S. (Massachusetts Institute of Technology) M.S., Ph.D. (Stanford)	Physics	Associate Professor
THOMAS KASKA (1966) B.A. (Wilkes) M.A., Ph.D. (Duquesne)	English	Associate Professor
STANLEY B. KAY (1964) B.A. (Case Western Reserve) M.A. (Michigan) Ph.D. (Ohio State)	Philosophy	Associate Professor

Date following name is the year of appointment.

GRACE C. KIMBALL (1963) B.A. (Rochester) Ph.D. (Cornell)	Biology	Associate Professor
JOHN N. LABOWS (1967) B.S. (Lafayette) Ph.D. (Cornell)	Chemistry	Associate Professor
ANNE VANKO LIVA (1970) (Juilliard)	Music	Associate Professor
CHARLOTTE V. LORD (1962) B.S. (New York) M.A. English (Bucknell) M.A. Italian (Middlebury) Ph.D. (Pennsylvania)	English	Associate Professor
RUTH W. McHENRY (1971) B.S., M.A. (Columbia)	Nursing	Associate Professor
SHASHANKA S. MITRA (1969) B.S., M.S. (Calcutta, India) Ph.D. (Washington)	Mathematics	Associate Professor
UMID R. NEJIB (1965) B.S. (Baghdad) M.S., Ph.D. (Carnegie-Mellon)	Engineering	Associate Professor
ROBERT E. OGREN (1963) B.A. (Wheaton) M.S. (Northwestern) Ph.D. (Illinois)	Biology	Associate Professor
THOMAS R. RICHARDS (1943) B.S. (Pennsylvania State) M.S. (Bucknell)	Mathematics	Associate Professor
JAMES P. RODECHKO (1971) B.A. (Hofstra) M.A., Ph.D. (Connecticut)	History	Associate Professor
FRANCIS J. SALLEY (1950) B.S. (St. Joseph's) M.S. (Pennsylvania)	Chemistry	Associate Professor
ROLAND C. SCHMIDT, JR. (1962) B.S. (Bloomsburg) M.S. (Scranton)	Physical Education	Associate Professor
MICHAEL H. SEITZ (1971) A.B. (Dartmouth) A.M. (Harvard) Ph.D. (Michigan)	Foreign Languages	Associate Professor
WILLIAM R. STINE (1965) B.S. (Union) Ph.D. (Syracuse)	Chemistry	Associate Professor

Date following name is the year of appointment.

DONALD W. TAPPA (1965) B.S. (Brooklyn) M.A. (Williams) Ph.D. (Yale)	Biology	Associate Professor
WAGIHA ABDEL-GAWAD TAYLOR (1969) B.A. (Alexandria) M.A. (Brown) Ph.D. (Clark)	Economics	Associate Professor
LEE C. TERRY (1968) B.A. (Southern Methodist) Ph.D. (Texas)	English	Associate Professor
CROMWELL E. THOMAS (1946) B.S. (Washington and Lee)	Engineering	Associate Professor
JAMES M. TOOLE (1968) B.S. (Pennsylvania State) M.S. (Wilkes) Ph.D. (Pennsylvania State)	Engineering	Associate Professor
ROY E. WILLIAMS (1967) B.A. (Eastern Nazarene) S.T.B. (Temple) Ph.D. (Drew)	Philosophy and Religious Studies	Associate Professor
REED D. ACHESON (1969) B.A. (Monmouth) Ph.D. (Cincinnati)	Biology	Assistant Professor
MARIAN E. ALEXANDER (1972) B.S. (New York) M.S. (Simmons)	Nursing	Assistant Professor
FRANK C. ALLEN (1969) B.A. (Maryland) M.A. (New York) Ph.D. (Maryland)	English	Assistant Professor (on leave)
FRANK G. BAILEY (1968) B.S. (Pennsylvania) M.S. (Stevens) M.A. (Columbia) Ph.D. (Polytechnic Institute of Brooklyn)	Physics	Assistant Professor
JOSEPH T. BELLUCCI (1967) B.S. (Scranton) M.Ed., Ed.D. (Lehigh)	Education	Assistant Professor
JAMES P. BERG (1965) B.A. (Harvard) B.D. (Lutheran Seminary) M.A. (Pennsylvania)	History	Assistant Professor

Date following name is the year of appointment.

JOEL BERLATSKY (1970) B.A. (Carleton) M.A. (Brown) Ph.D. (Northwestern)	History	Assistant Professor
MARIE BYCZKOWSKI (1968) B.A. (Douglass) M.A. in L.S. (Rutgers)	Library	Assistant Professor
RICHARD J. CARPENTER, JR. (1972) B.A. (Western State, Colorado) M.B.A. (Utah)	Aerospace Studies	Assistant Professor
HENRY R. CASILLI (1971) B.S. (Edinboro) M.A. (Pennsylvania State)	Fine Arts	Assistant Professor
ARTHUR D. CHESLER (1969) B.A., M.A. (Rutgers)	Economics	Assistant Professor
BRUCE CRADDOCK (1970) B.A. (Park) M.A., Ph.D. (Texas)	English	Assistant Professor
E. SHELDON CURTIS (1952) B.S.C. (Washington & Lee)	Accounting	Assistant Professor
LORNA C. DARTE (1969) B.A. (George Washington) M.S. in L.S. (Drexel Institute of Technology)	Library	Assistant Professor
JAMES G. DECOSMO (1962) B.S. (West Chester) M.S. (Adelphi)	Mathematics	Assistant Professor
JORGE E. DE CUBAS (1966) B.A., LL.D., P.L.D. (Havana)	Foreign Languages	Assistant Professor
ROBERT DEYOUNG (1960) B.S. (Rhode Island) M.A. (Columbia)	Economics	Assistant Professor
BERENICE D'VORZON (1968) B.F.A. (Cranbrook Academy of Art) M.A. (Columbia)	Fine Arts	Assistant Professor (on leave)
PREM K. DWIVEDI (1971) B. Com., M. Com. (Allahabad, India)	Business Administration	Assistant Professor
THEODORE J. ENGEL (1966) B.B.A., M.A. (Miami)	Business Administration	Assistant Professor
MAHMOUD H. FAHMY (1968) B.A. (Alexandria, Egypt) M.A. (Columbia)	Education	Assistant Professor

Date following name is the year of appointment.

H. CUTLER FALL (1969) B.A. (Brown) M.A. (Yale) Ph.D. (California, Santa Barbara)	Music	Assistant Professor
RICHARD A. FULLER (1969) B.S. (New York) M.A. (Columbia)	Fine Arts	Assistant Professor
JOHN W. FURLOW, JR. (1970) A.B. (Middlebury) M.A. (Michigan)	History	Assistant Professor
PHYLLIS W. FURST (1971) B.A. (Ursinus) M.A. (Lehigh)	Sociology	Assistant Professor
HERBERT GARBER (1965) B.A. (New York) M.A., Ed.D. (Columbia)	Music	Assistant Professor
EDWARD V. GEIST (1969) B.A. (Columbia) M.A., Ph.D. (Virginia)	English	Assistant Professor
GEORGE GERA (1958) B.S. (Bloomsburg) M.A. (Columbia)	Business Education	Assistant Professor
R. WILLIAM GRAFF (1972) B.S., M.S., Ph.D. (Purdue)	Engineering	Assistant Professor
A. MICHAEL GREENWALD (1970) A.B. (Princeton) A.M., LL.B. (Harvard)	English	Assistant Professor
CHARLES S. GURDIN, JR. (1969) B.A. (Michigan) J.D. (Toledo)	Business Administration	Assistant Professor
STANLEY S. GUTIN (1959) B.A., M.A. (Maryland) Ph.D. (Pennsylvania)	English	Assistant Professor
PATRICIA M. HEAMAN B.A. (Wilkes) M.A., Ph.D. (Pennsylvania)	English	Assistant Professor
ROBERT J. HEAMAN (1969) B.A. (Detroit) M.A., Ph.D. (Michigan)	English	Assistant Professor
DONALD A. HENSON (1970) B.A., M.A., Ph.D. (Purdue)	Philosophy	Assistant Professor
KLAUS HOLM (1970) B.S. (New York) M.F.A. (Yale)	Theater Arts	Assistant Professor

Date following name is the year of appointment.

CLYDE R. HOUSEKNECHT (1972) B.A. (Lycoming) M.S. (Pennsylvania State) Ph.D. (Minnesota)	Biology	Assistant Professor
BETTY L. JAHR (1968) B.A. (St. Xavier) M.S. (Ohio)	Mathematics	Assistant Professor
JOHN G. JARDINE (1970) B.A. (Santa Clara) M.A. (Marquette)	Philosophy	Assistant Professor
EDWIN L. JOHNSON (1966) B.A. (Wilkes) M.A. (Bucknell)	Education	Assistant Professor
WALTER KABY (1968) B.S., M.S. (Kharkov Institute of Technology)	Engineering	Assistant Professor
MEADE KEMRER (1972) B.A. (Lycoming) M.A. (Temple)	Sociology	Assistant Professor
ANNE V. KISH (1960) B.A. (Wilkes) M.A. (Scranton)	English	Assistant Professor
FREDERICK J. KROHLE (1965) B.A. (Wilkes) M.S. in L.S. (Drexel Institute of Technology)	Library	Assistant Professor
EDWARD B. LEVITON (1971) B.A. (Brooklyn) M.A. (SUNY, Binghamton)	Economics	Assistant Professor
RITA M. LYNCH (1971) B.S. (Misericordia) M.S. (Pennsylvania)	Nursing	Assistant Professor
HILDA A. MARBAN (1969) M.A. (Trinity) Ph.D. (Virginia)	Foreign Languages	Assistant Professor
ROY N. MARTIN (1971) B.A. (Cincinnati) M. Div. (Lexington Seminary)	Sociology	Assistant Professor
COLLEEN MAYOCK (1972) B.S. (College of St. Teresa) M.S. (Boston)	Nursing	Assistant Professor
JOHN F. MEYERS (1967) B.A. (Minnesota) M.A. (Clark)	History	Assistant Professor

Date following name is the year of appointment.

INGER MILLER (1968) Baccalaureate, Aarhus Cathedral School, Denmark B.A. (Wilkes) M.A. (Pennsylvania State)	Foreign Languages	Assistant Professor
WILLIAM J. MISTICHELLI (1963) B.A. (LaSalle) M.A. (Pennsylvania)	English	Assistant Professor
CHESTER N. MOLLEY (1964) B.A. (Wilkes) M.A. (Bucknell) Ph.D. (Pennsylvania State)	English	Assistant Professor
THOMAS J. MORAN (1970) B.S. (Wilkes) M.S. (Columbia)	Journalism	Assistant Professor
LEROY W. MORROW (1967) B.A. (Washington & Jefferson) Ph.D. (Wisconsin)	Physics	Assistant Professor
WALTER H. NIEHOFF (1968) B.A. (Lafayette) M.A. (Pennsylvania State)	Political Science	Assistant Professor
RAYMOND J. NUTAITIS (1969) B.S. (Wilkes) M.M. (Eastman School of Music)	Music	Assistant Professor
JOHN L. OREHOTSKY (1971) B.S. (Massachusetts Institute of Technology) M.S. (Polytechnic Institute of Brooklyn) Ph.D. (Syracuse)	Engineering	Assistant Professor
RICHARD S. ORLOWSKI (1969) B.A. (Bucknell) M.A. (Delaware)	Economics	Assistant Professor
WALTER A. PLACEK, JR. (1969) B.S. (Wilkes) M.Ed. (Pennsylvania State)	Physics	Assistant Professor
RICHARD T. REES (1972) B.S. (Wilkes) M.Ed., Ed.D. (Rutgers)	Education	Assistant Professor
JOSE M. RIBAS (1961) B.A., LL.B. (Barcelona) Ph.D. (Madrid)	Foreign Languages	Assistant Professor
J. PHILIP RICHARDS (1962) B.F.A. (Syracuse)	Fine Arts	Assistant Professor

Date following name is the year of appointment.

JOSEPH H. SALSBURG (1959) B.A. (Bucknell) A.M. (Columbia)	Mathematics	Assistant Professor
ROSENDO E. SANTOS, JR. (1968) B.M. (Philippines) M.M. (Catholic University of America)	Music	Assistant Professor
DORIS B. SARACINO (1960) B.S., M.S. (East Stroudsburg)	Physical Education	Assistant Professor
EVA E. SCHULER (1971) B.S.N., M.S.N. (Washington)	Nursing	Assistant Professor
ALBERT C. SERZAN (1967) B.A. (Yale) M.A.T. (Chicago)	Foreign Languages	Assistant Professor
KUO-KONG SHOW (1966) B.A. (Taiwan) M.A., Ph.D. (Pennsylvania)	History	Assistant Professor
J. GEORGE SILES (1963) B.A. (Wilkes) M.S. (Scranton)	Education	Assistant Professor
HERBERT B. SIMON (1969) B.A., M.A. (New York)	Fine Arts	Assistant Professor
RICHARD E. SOURS (1965) B.S. (Towson) M.S. (Michigan State) Ph.D. (Virginia)	Mathematics	Assistant Professor
ROBERT D. STETTEN (1968) B.A. (Lehigh) M.S. Psychology (Iowa) M.A. Political Science (Iowa) Ph.D. (Lehigh)	Psychology	Assistant Professor
WILLIAM G. SWARTCHILD, III (1969) B.A. (Harvard) M.A., Ph.D. (Columbia)	English	Assistant Professor
CHARLES H. SWEENEY (1966) B.A. (Mexico City) M.A. (Middlebury)	Foreign Languages	Assistant Professor
STEPHEN J. TILLMAN (1970) Sc.B., Ph.D. (Brown)	Mathematics	Assistant Professor
PAUL A. TORELLI (1969) B.A. (LaSalle) M.S., Ph.D. (Northwestern)	Mathematics	Assistant Professor

Date following name is the year of appointment.

PHILIP R. TUHY (1960) B.A. (Valparaiso) M.G.A. (Pennsylvania)	Political Science	Assistant Professor
WINSTON TURNER (1971) B.A. (Lake Forest) M.A. (DePaul)	Psychology	Assistant Professor
LESTER J. TUROCZI (1972) B.A., M.S., Ph.D. (Rutgers)	Biology	Assistant Professor
JOHN S. WASILESKI (1970) B.A. (Wilkes) M.A., Ph.D. (Pennsylvania State)	Mathematics	Assistant Professor
EDMOND A. WATTERS, III (1971) B.A., M.A. (Lehigh)	Education	Assistant Professor
RAYMOND M. WEINSTEIN (1969) B.B.A. (City College of New York) M.A., Ph.D. (UCLA)	Sociology	Assistant Professor
PAUL R. WERNER (1946) B.S. (Susquehanna) M.A. (New York)	Accounting	Assistant Professor
PAUL P. ZAVADA (1966) B.S. (Wilkes) C.P.A. (State of Pennsylvania)	Accounting	Assistant Professor
RODGER BEARDE (1971) B.S., M.Ed. (West Chester)	Physical Education	Instructor
LIZA BELIC (1969) B.A., M.A. (Zagreb)	Foreign Languages	Instructor
SANDRA L. BLOOMBERG (1971) B.A. (Wilkes)	Physical Education	Instructor
LILY DAVIS BYNON (1968) B.S. (Millersville) M.Ed. (Temple)	Education	Instructor
PHYLLIS S. CHENG (1971) B.S. (Wilkes)	Library	Instructor
LEWIS M. CHERE (1971) B.A. (Wilkes) M.A. (North Carolina)	Library	Instructor
NEIL M. COMO (1970) B.S.E.E., M.S.E.E. (Rensselaer Polytechnic) M.S. (Columbia)	Mathematics	Instructor
SALLY C. CONNOR (1971) B.A. (Pennsylvania)	Library	Instructor

Date following name is the year of appointment.

EUGENE S. DOMZALSKI (1969) B.S. (Wyoming) M.S. (Wilkes)	Physical Education	Instructor
KATHRYN GREGORY (1970) B.S., M.Ed. (Pennsylvania State)	Environmental Science	Instructor
MICHAEL HABERKORN (1972) B.Mus., M.Mus. (Illinois)	Music	Instructor
JON R. C. HOBROCK (1967) B.A. (Kenyon) M.S. (Lehigh)	Psychology	Instructor
JOSEPH H. KANNER (1949) B.A. (Bucknell) M.A. (New School for Social Research)	Psychology	Instructor
THOMAS F. KELLY (1969) B.A. (Wilkes) M.A. (Lehigh)	Economics	Instructor
MARY Z. KERR (1969) B.A. (Wellesley) M.A. (Rochester)	English	Instructor
ARVID W. LEKSTROM (1969) B.M., M.A. (Boston)	Foreign Languages	Instructor
MARY LOU LOVETTE (1968) B.S. (SUNY, Cortland) M.A. (SUNY, Binghamton)	Foreign Languages	Instructor
KATHLEEN MATICS (1970) B.A., M.A. (New York)	Fine Arts	Instructor
CHARLES M. MATTEI (1970) B.S., M.S. (Notre Dame)	Environmental Science	Instructor
TERESA B. McDONALD (1972) B.S. (Bloomsburg) M.P.A. (Pennsylvania State)	Political Science	Instructor
GAY F. MEYERS (1970) B.S. (Lock Haven)	Physical Education	Instructor
STANTON MILLER (1972) B.A. (SUNY, Binghamton) M.F.A. (California at Santa Barbara)	Fine Arts	Instructor
LEOTA NEVIL (1968) B.S. in Ed. (Bloomsburg)	Library	Instructor
ROBERT F. PASQUARELLI (1970) A.B. (Syracuse)	English	Instructor
PATRICIA Y. PISANESCHI (1969) B.A. (Wilkes) M.S. (Pennsylvania State)	Psychology	Instructor

Date following name is the year of appointment.

RICHARD PROBERT (1968) B.S. (Wilkes) M.M.E. (Indiana)	Music	Instructor
RICHARD G. RASPEN (1972) B.S. (Wilkes) M.Ed. (Bloomsburg)	Business Administration	Instructor
RUTH T. ROBERTS (1955) B.A. (Goucher)	English	Instructor
EDWARD J. ROKE (1972) B.A. (Wilkes) M.A. (Bucknell)	Psychology	Instructor
JOSEPH SKVARLA (1971) B.A. (Wilkes)	Physical Education	Instructor
MARGARET A. THOMPSON (1972) B.S. (Indiana State Teachers) M.Ed. (Pittsburgh)	Education	Instructor
CASIMIR TYBURSKI (1970) B.A. (Delaware)	English	Instructor
THEODORE M. VEREMEYCHIK (1971) B.S. (Indiana University of Pa.) M.M. (Miami)	Music	Instructor
WILLIAM J. WEBER (1970) B.S. (Maryland) M.M. (Catholic)	Music	Instructor
MICHAEL J. WORTH (1971) B.A. (Wilkes) M.A. (American University)	Economics	Instructor
CLIFFORD E. BALSHAW (1971) F.A.G.O. (Quilmant Organ School)	Music	Adjunct Professor
ABRAHAM D. BARRAS (1971) B.A. (Columbia) B.Rel. Ed., MHL., DHL. (Jewish Theological Seminary)	Religion	Adjunct Professor
MATT FLISS (1969) B.A. (Wilkes)	Education	Adjunct Professor
ALAN HUSBAND (1970) B.S. (Millersville) M.S. (Temple)	Education	Adjunct Professor
JOSEPH A. SKOK (1969) B.S. (Lock Haven) M.Ed. (Pennsylvania State)	Education	Adjunct Professor
EDWARD B. STOCKHAM (1970) A.B., Ph.D. (Pennsylvania)	Chemistry	Adjunct Professor

Date following name is the year of appointment.

Standing Committees of the Faculty

The following are the Faculty Committee assignments made for the academic year 1972-73. The President is *ex-officio* on all Committees except Committees on Academic Freedom.

Academic Standing

Robert S. Capin, *Chairman*
Robert DeYoung
Benjamin Fiester, Jr.
Herbert Garber
Stanley Holden
Jane K. Lampe
David Leach
Mary Lou Lovette
B. Hopkins Moses
George F. Ralston
Charles B. Reif
Ralph B. Rozelle
Joseph Salsburg
Donald W. Tappa
John P. Whitby

Admissions

Stanley Gutin, *Chairman*
Frederic E. Bellas
John J. Chwalek
Matt Fliss, *ad hoc*
Richard Rees
Herbert Simon
Richard Sours
John P. Whitby

Athletic

Cromwell E. Thomas, *Chairman*
Welton G. Farrar
Kathryn Gregory
Klaus Holm
Arthur J. Hoover
Raymond Nutaitis
John G. Reese
Charles Sweeney
John P. Whitby

Curriculum

Robert C. Riley, *Chairman*
Joel Berlatsky
Donald Henson
Thomas Kaska
Ruth McHenry
Umid Nejb
Robert Ogren
James Rodechko
Michael Seitz
Albert Serzan
Howard Swain
Stephen J. Tillman
William Weber
Robert Werner

Financial Aid

Wilbur Hayes, *Chairman*
Michael Barone
Betty L. Jahr
Harry Keller
John F. Meyers
Walter Placek
Richard Raspen

Graduate Studies

Alvan Bruch, *Chairman*
Reed Acheson
James Bohning
Harrie Caldwell
Robert Capin
Harold Cox
Franck G. Dart, II
Francis Donahoe
Stanley Holden
Bronis Kaslas
Philip Rizzo
Robert Werner
Bing K. Wong

Standing Committees of the Faculty

The President is *ex-officio* on all Committees except Committees on Academic Freedom.

Library

Cutler Fall, *Chairman*
 Dale E. Buehler
 Richard Fuller
 John Furlow
 Levere Hostler
 Frederick Krohle
 Arvid Lekstrom
 Charlotte V. Lord
 William Swartzchild
 Wagiha Taylor
 Winston Turner
 Edmond Watters

Student Life

George F. Ralston, *Chairman*
 Edward Baltruchitis
 Joseph Bellucci
 Theodore J. Engel
 Linda Hobrock
 Donald Jost
 John Labows
 Jane K. Lampe
 William Mistichelli
 James Moss
 Patricia Pisaneschi
 Richard Probert
 Richard Raspen
 Kuo-Kong Show
 James M. Toole

Student Publications

Welton Farrar, *Chairman*
 Angel Belic
 Joseph Bellucci
 James Berg
 Patricia M. Heaman
 Chester Colson
 David DeCosmo, *ad hoc*
 Stanley B. Kay
 Thomas J. Moran
 William Stine

Teacher Recognition and Effectiveness

William Stine, *Chairman*
 Michael Barone
 John Jardine
 Charlotte Lord
 John Orehotsky
 James Rodechko

Academic Freedom

a. MEDIATION

Samuel Rosenberg
 (Term Expires 1973)
 Alvan Bruch
 (Term Expires 1975)
 Robert Riley
 Term Expires 1975)
 James Bohning — *Alternate*
 (Term Expires 1973)

b. FACULTY-TRUSTEE

Owen Faut
 (Term Expires 1973)
 Welton Farrar
 (Term Expires 1974)
 Cromwell Thomas — *Alternate*
 (Term Expires 1973)

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FALL SEMESTER

WILKES-BARRE

PENNSYLVANIA



Serials

EUGENE SHEDDEN FARLEY
LIBRARY

SEP 8 1972

WILKES COLLEGE



EUGENE SHEDDEN FARLEY LIBRARY
WILKES COLLEGE
WILKES-BARRE, PA

Calendar

Registration for the Evening College is as follows:

Monday, September 18.....8:30 a.m. to 4:30 p.m.
Tuesday, September 19.....8:30 a.m. to 4:30 p.m.
Wednesday, September 20.....8:30 a.m. to 4:30 p.m.
Thursday, September 21.....8:30 a.m. to 8:00 p.m.
Friday, September 22.....8:30 a.m. to 8:00 p.m.
Monday, September 25.....Classes begin at 6:00 p.m.
Monday, November 6.....Progress reports
Wednesday, November 22..Thanksgiving recess begins at 10:00 p.m.
Monday, November 27.....Thanksgiving recess ends at 6:00 p.m.
Thursday, December 21.....Christmas recess begins at 10:00 p.m.
Thursday, January 4.....Christmas recess ends at 6:00 p.m.
Thursday, January 11.....Classes end at 10:00 p.m.
Monday, January 15, through
Thursday, January 18.....Examination period

For further information write to:

Bernard J. Vinovrski
Director of Evening and Summer College
Wilkes College
Wilkes-Barre, Pennsylvania 18703
Phone 824-4651, Ext. 303. After 5 p.m., call 824-4656

Wilkes College

Bulletin



EVENING SESSION

Fall Semester
1972

WILKES-BARRE, PENNSYLVANIA

AN EDUCATED MAN

*seeks truth, for without truth there can be
no understanding;*

*possesses vision, for he knows that vision
precedes all great attainments;*

*is aware of the diversity of ideas and beliefs
that exist among men;*

*has faith in the power of ideals to shape the
lives of men;*

*knows that man's progress requires intellec-
tual vigor, moral courage, and physical
endurance;*

*cultivates inner resources and spiritual
strength, for they enrich his daily liv-
ing and sustain him in times of crisis;*

has ethical standards by which he lives;

respects the religious convictions of all men;

*participates constructively in the social, eco-
nomic, and political life of the com-
munity;*

*communicates ideas in a manner that assures
understanding, for understanding
unites men in their search for truth.*

Formulated and adopted by the
faculty as a guide to learning.

WILKES COLLEGE

Wilkes College had its beginnings in 1933 when Bucknell University, responding to a request of community leaders, established its Junior College in Wilkes-Barre. On June 26, 1947, Bucknell University Junior College came to an end and Wilkes College received its charter as a four-year liberal arts college. The College has grown steadily to its current enrollment of approximately 2600 full-time day students and 1000 evening students engaged in undergraduate, graduate, and continuing education programs.

From its inception the college has been dedicated to these twin goals—a sound and stimulating intellectual experience for students and a program of service to the community.

AN INDEPENDENT COLLEGE

It was inevitable that the new college should be non-sectarian, for its purpose was to serve all students equally and its supporters wished the College to integrate itself with all constructive efforts in the community. It was believed that these ends could be served best by an independent college that was interdenominational in its influence and non-denominational in its control.

FREEDOM OF INQUIRY

Years have passed since Bucknell gave the control of the Junior College to a local Board of Trustees, guided by the late Gilbert S. McClintock, and events of these years demonstrate the wisdom of their decision. With responsibility came a pressing desire to strengthen the work of the faculty, united in their faith that the intellectual and spiritual resources of the student are vigorous where the creative mind is free.

UNITY AMIDST DIVERSITY

A college that wishes to serve all groups requires both a definite philosophy and a working policy. Wilkes College has been guided by the thought that unity in our community, our nation, and our world requires not only great vision but warm understanding of peoples. In its small circle Wilkes College brings together students of many faiths,

backgrounds, and countries. It encourages them to maintain their convictions and their loyalties. It encourages them to create friendships based upon respect for differences, and to adhere to those ideals which create unity and good will amidst diversity.

While academic work is the basis of the College program, the faculty recognizes that academic training will be of little importance unless students emerge as men and women of strong faith and fine character. In the words of John Stuart Mill, "Before you can make men doctors and lawyers, you must first make them men."

Wilkes College is committed to education as a way of life.

A COOPERATIVE EFFORT

The original concept of community effort has been strengthened with the passing of the years and with growing experience. It has been clearly demonstrated that the students, the College, and the community all benefit from cooperative effort. This cooperative relationship, with its emphasis on trained intelligence and extended planning, has resulted in cooperative action.

DECADES OF GROWTH

Because of their interest and faith, friends have multiplied their support during the past decades and the campus has expanded steadily so that it now includes most of the properties facing the River Campus. Fortunately, a growing endowment has kept pace with the expansion of the campus.

ACCREDITATION

Wilkes is accredited by the Department of Public Instruction of the State of Pennsylvania and the Middle States Association of Colleges and Secondary Schools. The Accounting curriculum has been accredited by the Certified Public Accounting Examiners of the State of New York.

EVENING COLLEGE

INFORMATION

CURRICULA

UNDERGRADUATE PROGRAM

To meet the needs of ambitious men and women who desire the help which may come from college instruction, Wilkes College offers a wide program of Evening courses from which selections may be made according to individual tastes and requirements.

The courses offered by the Evening College are designed for their special value to the following groups:

1. Those employed in business or governmental organizations who desire and need training to fit them for advancement.
2. Men and women who wish to prepare themselves by study and training for work in a new field.
3. Teachers, nurses and those in other professions who desire additional training in one or more subjects in order to meet the professional requirements demanded of them.
4. Business executives who are interested in the study of problems relating to business administration and the economy of the nation and the world.
5. Those who wish to prepare for the profession of accounting and aspire to qualify for a certification by the Commonwealth of Pennsylvania as Certified Public Accountants.
6. Individuals wishing to broaden their knowledge or to increase their skill in certain fields for their personal satisfaction and improvement.
7. Men and women seeking a college degree through attendance in the Evening College.

Except where designated in the course schedule, classes for courses offered in the evening will be scheduled on Monday through Thursday between the hours of 6:00 p.m. and 10:00 p.m.

ADMISSIONS

Evening College students who wish to work toward a degree shall make application for admission as a degree candidate when they first

register. Students who enrolled without any plan to earn a degree, but who conclude in consequence of their experience in the evening school that they wish to earn a degree, must apply for admission to the degree program when they complete thirty hours of work in the Evening Division. When this application is made, the student's record will be examined to determine his eligibility and his prospects of successful achievement. This will be followed by a personal interview with the Director of the Evening Division and a recommendation will then be submitted to the Office of Admissions.

If the student is accepted as a degree candidate, he will be notified by the Office of Admissions. If the student is not accepted as a degree candidate, he may petition to continue as a special student. This will offer him a further opportunity to demonstrate his ability to benefit from continued study.

Students who have been refused admission to the regular day school are not encouraged to seek admission to the Evening Division. However, if written permission is granted by the Dean of Admissions a student may apply for admission to the Evening Division as a special student.

No student listed as an academic failure at this or any other college may be permitted to register in the Evening Division within a year following his failure. After the lapse of a year the student from another college may submit an application for admission. The Wilkes student who has been denied the privilege of continuing his studies must apply to the Academic Standing Committee for re-admission.

Students who wish to transfer from another institution must provide a transcript of all previous college work.

Students who do not satisfy the usual educational requirements for admission to degree programs may qualify by demonstrating their competence. This can be done by passing the qualifying examinations for a secondary school diploma and by demonstrating their proficiency in evening classes. The Director of the Evening Division will inform the student of the steps that are needed to qualify him for admission.

Under the regulations of the Veteran's Administration, a student who does not qualify as a degree candidate may follow one of two programs. He may pursue college work from a planned list of courses approved by the Veteran's Administration; or, he may earn the high school equivalent diploma by passing the United States Armed Forces Institute (USAFI) and/or the General Equivalency Diploma (GED) tests in order to apply for admission as a degree candidate.

The Director of the Evening Division will act as advisor to all students enrolled on a part-time basis (Day or Evening Division) and to all students enrolled in the Evening Division on a full-time basis.

If a regular day student enrolls for an Evening Division course, he will retain his day school faculty advisor. If an Evening Division student enrolls in a day school course, he will be classified as a Special Student for the semester in which he is registered for a day school course. During this period he will retain his Evening Division advisor. Should he transfer to the day school, he will be assigned a regular faculty advisor.

RESEARCH AND GRADUATE CENTER

The Research and Graduate Center is an excellently equipped and staffed installation that is an integral part of the College complex. During the school term the Center will continue the various public and private research projects now in progress.

LABOR-MANAGEMENT TRAINING COURSES

To establish a climate for industrial redevelopment the College has pioneered a Labor-Management Training Program in which the needs of the individual and the company are analyzed.

Plans are arranged in consultation with officials, foremen, and other employees and are designed to meet the general and specific requirements of the particular group. Where several firms are confronted with common problems, special classes are organized to include representation of several companies.

INSTITUTE OF REGIONAL AFFAIRS

The Institute of Regional Affairs is a multi-purpose college organization which views regional problems as belonging to no simple academic discipline, but rather as a contemporary phenomenon spilling into many disciplines. The Institute was created to assure coordination of varied efforts in order to better understand and resolve complex and contemporary problems.

Its four-fold purpose is: education and training, community information, research, and consultation.

The underlying philosophy of the Institute of Regional Affairs is cooperation, rather than reform of partisanship.

FACILITIES

The College is located in Wilkes-Barre, Pennsylvania, in the heart of the picturesque and historic Wyoming Valley. This ideal location in the foothills of the Poconos offers abundant cultural and recreational facilities and affords close proximity and convenient transportation to the metropolitan areas of New York and Philadelphia.

THE LIBRARY

The Library will post its Fall schedule at the beginning of the semester.

Evening College students may borrow books from the Library by presenting their I.D. card.

THE BOOKSTORE

The Bookstore offers a complete stock of necessary textbooks and supplies. It will be open as follows:

Monday through Friday 8:30 a.m. to 4:30 p.m.
Saturday 9:00 a.m. to 12:00 noon

EXPENSES

Tuition — \$60 per semester hour credit.

All charges must be paid at the time registration forms are processed.

Books and supplies may be purchased at the bookstore and must be paid for at the time of purchase.

WITHDRAWAL

A student who withdraws from the evening session or drops courses after the first week must receive approval from the instructor and should give prompt written or verbal notice to the Director of the Evening and Summer College in order that their records may not unjustly show failure in courses.

Students in good standing who withdraw from the College will receive a refund of tuition under the following conditions: during the first six weeks of the evening session one-half of the tuition will be refunded upon request to the Director of Evening and Summer College, if the withdrawal is made for adequate and satisfactory reasons. After the first six weeks no refunds are allowed and the student is obligated for the full costs of the term. No student who is suspended or expelled shall be entitled to any refunds.

CHANGE OF SCHEDULE

Occasionally changes in the Evening College Schedule become necessary. Such a change may include the cancellation of one course or the addition of another. Therefore, the College reserves the right to cancel or reschedule any course due to insufficient enrollment or any other reason. Wherever possible, any change will be posted during registration. Students who have registered for courses that are subsequently cancelled or rescheduled will be notified as promptly as possible.



Certificate Of Achievement Program

IN

**ACCOUNTING
MANAGEMENT**

**BANKING
MARKETING**

Students of Business Administration, who hold full-time jobs while studying in the evening and summer college, are required to devote many years to their quest for a bachelor's degree. To encourage these business men and women, Wilkes College will award a "Certificate of Achievement" to those who earn 42 hours of credit in evening and summer school programs with at least 24 hours in Business Administration and 18 hours in General Education.

The Certificate of Achievement does not designate the completion of any recognized program. It gives recognition of achievement and notes that the recipient has completed a sequence of courses which may be credited toward the bachelor's degree should the student elect to continue his studies for the degree.

It is important to note that the courses in these programs are presently offered at the college and are now required for the Bachelor's degree in Commerce and Finance.

A student taking six credit hours of work in the Fall, Spring, and Summer sessions can complete the requirements for the certificate in two and one half years. A student who elects not to attend the summer sessions will require three and one half years to complete the program.

Call or write for brochure and further information.

EVENING COLLEGE

UNDERGRADUATE DIVISION

Fall Semester — 1972

Course	Description	Day & Hour	Room No.	Credit Hrs.
ACCOUNTING:				
Acct. 101E	Elementary Accounting I	T 6:30-9:30	Par. 35	3
Acct. 101E2	Elementary Accounting I	W 6:30-9:30	Par. 35	3
Acct. 102E	Elementary Accounting II (Pre: Acct. 101)	W 6:30-9:30	Par. 45	3
Acct. 111E	Intermediate Accounting I (Pre: Acct. 102)	M 6:30-9:30	Par. 35	3
Acct. 201E	Cost Accounting I (Pre: Acct. 112 or approval of instructor)	T 6:30-9:30	Par. 45	3
Acct. 221E	Taxes I (Pre: Acct. 112, 202, or approval of instructor)	Th 6:30-9:30	Par. 35	3
Acct. 231E	Auditing I (Pre: Acct. 202)	Th 6:30-9:30	Par. 45	3
Acct. 241E	Advanced Accounting I (Pre: Acct. 112)	M 6:30-9:30	Par. 45	3
BIOLOGY:				
Bio. 101E	Biological Science I	Th 6:30-9:30	Stark 306	3
Bio. 102E	Biological Science II (Pre: Bio. 101)	T 6:30-9:30	Stark 306	3
BUSINESS ADMINISTRATION:				
B.A. 209E	Business Correspondence and Reports (Pre: Eng. 102)	T 6:30-9:30	Par. 43	3
B.A. 225E	Corporation Finance (Pre: Econ. 102)	Th 6:30-9:30	Par. 25	3
B.A. 231E	Business Law-Introduction, Contracts, and Sales	T 6:30-9:30	Par. 34	3
B.A. 241E	Life Insurance (Pre: Approval of instructor)	M 6:30-9:30	Par. 23	3
B.A. 251E	Principles of Management I	W 6:30-9:30	Par. 23	3
BUSINESS EDUCATION:				
B.E. 105E	Elementary Shorthand	T 6:30-9:30	Par. 33	2
B.E. 107E	Elementary Typewriting (Fee \$10)	Th 6:30-9:30	Par. 33	2

Course	Description	Day & Hour	Room No.	Credit Hrs.
ECONOMICS:				
Econ. 101E	Principles of Economics I	Th 6:30-9:30	Par. 23	3
Econ. 101E2	Principles of Economics I	W 6:30-9:30	Par. 25	3
Econ. 102E	Principles of Economics II (Pre: Econ. 101)	M 6:30-9:30	Par. 25	3
Econ. 111E	Economic History	T 6:30-9:30	Par. 23	3
Econ. 201E	Money & Banking (Pre: Econ. 102)	W 6:30-9:30	Par. 34	3
Econ. 217E	Economics of Transportation (Pre: Econ. 102)	Th 6:30-9:30	Par. 34	3
Econ. 223E	Collective Bargaining (Pre: Econ. 102)	T 6:30-9:30	Par. 25	3
Econ. 225E	International Trade (Pre: Econ. 102)	W 6:30-9:30	Par. 43	3
Econ. 227E	Economic Geography of North America (Pre: Econ. 102)	M 6:30-9:30	Par. 34	3
Econ. 229E	Comparative Economic Systems (Pre: Econ. 102 or approval of instructor)	Th 6:30-9:30	Par. 43	3
Econ. 231E	Applied General Statistics (Pre: Approval of instructor)	T 6:30-9:30	Par. 53	3
Econ. 241E	Economic Analysis (Pre: Econ. 102)	M 6:30-9:30	Par. 43	3
Econ. 245E	Consumer Economics (Pre: Econ. 102)	W 6:30-9:30	Par. 53	3
ENGLISH:				
Eng. 101E	Composition I	M 6:30-9:30	Bdf. 12	3
Eng. 101E2	Composition I	T 6:30-9:30	Bdf. 12	3
Eng. 102E	Composition II (Pre: Eng. 101)	Th 6:30-9:30	Bdf. 12	3
Eng. 131E	Fundamentals of Speech	T 6:00-8:00	Bdf. 13	2
Eng. 151E	Western World Literature I (Pre: Eng. 102)	W 6:30-9:30	Bdf. 12	3
Eng. 410E	Studies in Medieval Literature	M 6:30-9:30	Bdf. Sem.	3
ENGINEERING:				
Ma.E. 102E	Materials Science (Pre: Approval of instructor)	Time and Place to be arranged		3
ENVIRONMENTAL SCIENCE:				
Env.Sci. 101E	Introductory Earth Science Lab Lab Fee \$20	Th 8:00-10:00 T 8:00-10:00	Stark 109 Stark 100	3

Course	Description	Day & Hour	Room No.	Credit Hrs.
FINE ARTS:				
F.A. 101E	Experiencing Art I	T 6:30-9:30	Pick. 203	3
FOREIGN LANGUAGES:				
FRENCH:				
Fr. 101E	Elementary French I	TTh 6:30-8:00	Kirby 203	3
Fr. 203E	Intermediate French I (Pre: Fr. 102 or equivalent)	TTh 8:00-9:30	Kirby 203	3
GERMAN:				
Ger. 101E	Elementary German I	TTh 6:30-8:00	Kirby 302	3
Ger. 203E	Intermediate German I (Pre: Ger. 102 or equivalent)	TTh 8:00-9:30	Kirby 302	3
SPANISH:				
Span. 101E	Elementary Spanish I	TTh 6:30-8:00	Kirby 208	3
Span. 203E	Intermediate Spanish I (Pre: Span. 102 or equivalent)	TTh 8:00-9:30	Kirby 208	3
HISTORY:				
Hist. 101E	History of Western Civilization I	M 6:30-9:30	Kirby 103	3
Hist. 102E	History of Western Civilization II	Th 6:30-9:30	Kirby 107	3
Hist. 353E	Early Modern Europe	W 6:30-9:30	Fkln. Sem.	3
Hist. 357E	History of Russia to 1815	M 6:30-9:30	Fkln. Sem.	3
Hist. 497E	Seminar—Ethnic & Racial Minorities in America	Th 6:30-9:30	Fkln. Sem.	3
JOURNALISM				
Jour. 101E	Basic News Writing I Fee \$10	W 6:30-9:30	Par. 33	3
MATHEMATICS:				
Math. 100E	Pre-Calculus Mathematics (Pre: Two years of secondary school math. in algebra and geometry)	MW 6:00-8:00	Miner 11	4
Math. 101E	Fundamentals of Mathematics	W 6:30-9:30	Miner 12	3
Math. 105E	Introductory Calculus I— For social and natural science students (Pre: At least 2 years of college prep. math. including algebra II and geometry)	MW 6:00-8:00	Miner 21	4

Course	Description	Day & Hour	Room No.	Credit Hrs.
Math. 111E	Analysis I (Calculus with Analytic Geometry)	MW 6:00-8:00	Miner 20	4
Math. 211E	Intermediate Analysis I— Introductory linear algebra and differential equations (Pre: 1 year of calculus)	TTh 6:00-8:00	Miner 20	4
Math. 261E	Introduction to Computer Science Fee \$20	Th 6:30-9:30	Stark 204	3
Math. 263E	Fortran Programming (Pre: Math. 261 or consent of instructor)	T 6:30-9:30	Stark 204	3
<p>In addition to the above courses, a number of senior-graduate courses will be offered. Generally, these courses will be scheduled twice per week in the late afternoon (4:00-5:30) or evening.</p> <p>Please consult the Graduate Office or the Department of Mathematics for this course listing.</p>				
MUSIC:				
Mus.101E	Introduction to the Materials and Literature of Music I	T 6:30-9:30	DDD 202	3
Applied Music Room and Hours to be arranged				1
<p>Note — It is important that all students who register for applied music through the evening college be advised to consult with Mr. William Gasbarro, department chairman, before completing their registration.</p>				
NURSING EDUCATION:				
N.E. 103E	History and Trends in Nursing	Th 4:00-7:00	Kirby 108	3
N.E. 106E	Supervision and Administration	M 4:00-6:00	Kirby 107	2
N.E. 112E	Field Experience in Supervision or Teaching	Time and place to be arranged		4
PHILOSOPHY:				
Phil. 101E	Introduction to Philosophy	Th 6:30-9:30	Kirby 103	3
Phil. 102E	Logic and Scientific Method	W 6:30-9:30	Kirby 102	3
Phil. 330E	Existentialism	M 6:30-9:30	Kirby 102	3
PHYSICAL EDUCATION:				
P.E. 105E	Hygiene	T 7:00-8:00	Miner 12	1
PHYSICS:				
Phys. 101E	Physical Science I	Th 6:30-9:30	Stark 114	3

Course	Description	Day & Hour	Room No.	Credit
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POLITICAL SCIENCE:

P.S. 101E	Political Science I	M 6:30-9:30	Par. 53	3
P.S. 223E	Comparative Government (Pre: P.S. 101-102)	T 6:30-9:30	Kirby 107	3
P.S. 253E	Land Use Planning Law (Pre: P.S. 251)	W 6:30-9:30	Kirby 107	3
P.S. 395E	Independent Research (Pre: Approval of department chairman)	Time and place to be arranged		3

PSYCHOLOGY:

Psy. 101E	General Psychology I	T 6:30-9:30	Kirby 102	3
Psy. 101E2	General Psychology I	Th 6:30-9:30	Kirby 102	3
Psy. 221E	Child Psychology (Pre: Psy. 101-102)	M 6:30-9:30	Stark 306	3
Psy. 232E	Human Behavior (Pre: Psy. 101-102)	W 6:30-9:30	Stark 306	3

RETAILING:

Ret. 101E	Principles of Retailing	W 6:30-9:30	Kirby 108	3
Ret. 212E	Purchases and Merchandising Control (Pre: B.A. 115 or approval of instructor)	T 6:30-9:30	Kirby 108	3

SOCIOLOGY:

Soc. 101E	Introduction to Sociology and Anthropology I	W 6:30-9:30	Par. 56	3
Soc. 251E	Fields of Social Work (Pre: Soc. 101-102, Psy. 101-102)	M 6:30-9:30	Par. 56	3

EVENING COLLEGE

GRADUATE DIVISION

Fall Semester — 1972

Course	Description	Instructor	Time	Room
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BUSINESS ADMINISTRATION:

Acct. 503	Managerial Accounting	Capin	To be announced	
B.A. 502	Management Science	Dwivedi	To be announced	
B.A. 511	Modern International Commerce	Taylor	To be announced	
B.A. 523	Management Seminar I	Szumilo	To be announced	
Econ. 473	Pre-Seminar	Werner	To be announced	
Econ. 506	Labor-Management Economics	Rosenberg	To be announced	
Econ. 533	The Labor Market	Werner	To be announced	

BIOLOGY:

Bio. 402	Cell Biology, Embry- ogenesis, and Diff.	Ogren	To be announced	
Bio. 460	Selected topics in Biology—Repro. Phys.	Acheson	To be announced	

CHEMISTRY:

Chem. 341	Elementary Phys. Chem. (Chem. Ed. students only)	Swain	MWF 9:00	Lab A T 2-5:00 Lab B Th 2-5:00
Chem. 411	Inorganic Chemistry	Faut	To be announced	
Chem. 431	Advanced Organic Chemistry I	Labows	To be announced	
Chem. 541	Chemical Thermodynamics & Statistical Thermo.	Swain	To be announced	

ENGLISH:

Eng. 330	Seventeenth Century Prose & Poetry	Kaska	TTh 4-5:30	Bdf. Sem
Eng. 410	Studies in Medieval Literature	Fiester	M 6-9:00	Bdf. Sem

EDUCATION:

Ed. 430	Developmental Reading	Siles	T 6-9:00	Chase 209
Ed. 510	Psychological Founda- tions of Education	Hammer	Th 6-9:00	Chase 209
Ed. 514	Historical Foundations of Education	Watters	W 6-9:00	Chase Theater

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Course	Description	Instructor	Time	Room
Ed. 520	Tests and Measurements	Bellucci	T 6-9:00	Kirby
Ed. 521	Statistics in Education	Bellucci	W 6-9:00	Kirby
Ed. 532A	Problems in Elementary Education: Math	Caldwell	Th 6-9:00	Chase Thea
Ed. 534	Elementary School Curriculum	Darte	M 6-9:00	Chase

HISTORY:

Hist. 327	History of the Foreign Policy of the U.S.	Leach	MWF 11:00	Fkn
Hist. 331	Colonial America	Meyers	MWTh 2:00	Fkn
Hist. 333	Age of Big Business	Cox	MWTh 9:00	Fkn
Hist. 353E	Early Modern Europe—1648	Berlatsky	W 6:30-9:30 P.M.	Fkn
Hist. 355	Europe—19th Century	Kaslas	MWTh 10:00	Kirby
Hist. 357E	Europe—20th Century	Kaslas	M 6:30-9:30 P.M.	Fkn
Hist. 381	History of Latin America	Furlow	TThF 8:00	Fkn
Hist. 497E	Seminar—Ethnic & Racial Minorities in America	Rodechko	Th 6:30-9:30 P.M.	Fkn

MATHEMATICS:

Math. 311	Functions of a Real Variable I	Wong	MW 4-5:30	Miner
Math. 331	Introduction to Abstract Algebra I	Tillman	TTh 4-5:30	Miner
Math. 343	Introduction to Geometry	Earl	MWF 9:00	Miner
Math. 351	Probability & Mathematical Statistics I	Richards	MWF 3:00	Miner
Math. 365	Partial Differential Equations	DeCosmo	MWF 11:00	Miner
Math. 441	Introduction to Topology I	Wasileski	MW 4-5:30	Miner
Math. 451	Advanced Statistics I	Mitra	TTh 4-5:30	Miner
Math. 511	Measure & Integration I	Sours	TTh 6-7:30	Miner

PHYSICS:

Phys. 401	Topics in Mathematical Physics	Hostler	To be announced
Phys. 511	Analytical Mechanics	Donahoe	To be announced
Phys. 530	Electricity & Magnetism	Hostler	To be announced
Phys. 551	Quantum Mechanics	Bellas	To be announced

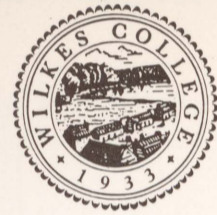
To-be-arranged classes will be scheduled on Monday, 25 September 1972 in Stark 109 at 7:00 p.m.

For further information contact:
 Director of Graduate Studies
 Wilkes College
 Wilkes-Barre, Pa. 18703

1970 COLLECTION SPRING SEMESTER

WILKES-BARRE

PENNSYLVANIA



EUGENE SHEDDEN FARLEY LIBRARY

Calendar

Registration for the Evening College is as follows:

Monday, January 29	8:30 a.m. to 4:30 p.m.
Tuesday, January 30	8:30 a.m. to 4:30 p.m.
Wednesday, January 31	8:30 a.m. to 4:30 p.m.
Thursday, February 1	8:30 a.m. to 8:00 p.m.
Friday, February 2	8:30 a.m. to 8:00 p.m.
Monday, February 5	Classes begin at 6:00 p.m.
Saturday, March 17	Progress Reports
Thursday, April 12	Spring recess begins at 10:00 p.m.
Monday, April 23	Spring recess ends at 6:00 p.m.
Thursday, May 17	Classes end at 10:00 p.m.
Monday, May 21, through	
Thursday, May 24	Examination Period

For further information write to:

Bernard J. Vinovrski
Director of Evening and Summer College
Wilkes College
Wilkes-Barre, Pennsylvania 18703
Phone 824-4651, Ext. 303. After 5 p.m., call 824-4656

Wilkes College

Bulletin



EVENING SESSION

Spring Semester

1973

WILKES-BARRE, PENNSYLVANIA

AN EDUCATED MAN

*seeks truth, for without truth there can be
no understanding;*

*possesses vision, for he knows that vision
precedes all great attainments;*

*is aware of the diversity of ideas and beliefs
that exist among men;*

*has faith in the power of ideals to shape the
lives of men;*

*knows that man's progress requires intellec-
tual vigor, moral courage, and physical
endurance;*

*cultivates inner resources and spiritual
strength, for they enrich his daily liv-
ing and sustain him in times of crisis;*

has ethical standards by which he lives;

respects the religious convictions of all men;

*participates constructively in the social, eco-
nomic, and political life of the com-
munity;*

*communicates ideas in a manner that assures
understanding, for understanding
unites men in their search for truth.*

Formulated and adopted by the
faculty as a guide to learning.

WILKES COLLEGE

Wilkes College had its beginnings in 1933 when Bucknell University, responding to a request of community leaders, established its Junior College in Wilkes-Barre. On June 26, 1947, Bucknell University Junior College came to an end and Wilkes College received its charter as a four-year liberal arts college. The College has grown steadily to its current enrollment of approximately 2600 full-time day students and 1000 evening students engaged in undergraduate, graduate, and continuing education programs.

From its inception the college has been dedicated to these twin goals — a sound and stimulating intellectual experience for students and a program of service to the community.

AN INDEPENDENT COLLEGE

It was inevitable that the new college should be non-sectarian, for its purpose was to serve all students equally and its supporters wished the College to integrate itself with all constructive efforts in the community. It was believed that these ends could be served best by an independent college that was interdenominational in its influence and non-denominational in its control.

FREEDOM OF INQUIRY

Years have passed since Bucknell gave the control of the Junior College to a local Board of Trustees, guided by the late Gilbert S. McClintock, and events of these years demonstrate the wisdom of their decision. With responsibility came a pressing desire to strengthen the work of the faculty, united in their faith that the intellectual and spiritual resources of the student are vigorous where the creative mind is free.

UNITY AMIDST DIVERSITY

A college that wishes to serve all groups requires both a definite philosophy and a working policy. Wilkes College has been guided by the thought that unity in our community, our nation, and our world requires not only great vision but warm understanding of peoples. In its small circle Wilkes College brings together students of many faiths,

backgrounds, and countries. It encourages them to maintain their convictions and their loyalties. It encourages them to create friendships based upon respect for differences, and to adhere to those ideals that create unity and good will amidst diversity.

While academic work is the basis of the College program, the faculty recognizes that academic training will be of little importance unless students emerge as men and women of strong faith and fine character. In the words of John Stuart Mill, "Before you can make men doctors and lawyers, you must first make them men."

Wilkes College is committed to education as a way of life.

A COOPERATIVE EFFORT

The original concept of community effort has been strengthened with the passing of the years and with growing experience. It has been clearly demonstrated that the students, the College, and the community all benefit from cooperative effort. This cooperative relationship, with its emphasis on trained intelligence and extended planning, has resulted in cooperative action.

DECADES OF GROWTH

Because of their interest and faith, friends have multiplied their support during the past decades and the campus has expanded steadily so that it now includes most of the properties facing the River Common. Fortunately, a growing endowment has kept pace with the expansion of the campus.

ACCREDITATION

Wilkes is accredited by the Department of Public Instruction of the State of Pennsylvania and the Middle States Association of Colleges and Secondary Schools. The Accounting curriculum has been accredited by the Certified Public Accounting Examiners of the State of New York.

EVENING COLLEGE

INFORMATION

CURRICULA

UNDERGRADUATE PROGRAM

To meet the needs of ambitious men and women who desire the help which may come from college instruction, Wilkes College offers a wide program of Evening courses from which selections may be made according to individual tastes and requirements.

The courses offered by the Evening College are designed for their special value to the following groups:

1. Those employed in business or governmental organizations who desire and need training to fit them for advancement.
2. Men and women who wish to prepare themselves by study and training for work in a new field.
3. Teachers, nurses and those in other professions who desire additional training in one or more subjects in order to meet the professional requirements demanded of them.
4. Business executives who are interested in the study of problems relating to business administration and the economy of the nation and the world.
5. Those who wish to prepare for the profession of accounting and aspire to qualify for a certification by the Commonwealth of Pennsylvania as Certified Public Accountants.
6. Individuals wishing to broaden their knowledge or to increase their skill in certain fields for their personal satisfaction and improvement.
7. Men and women seeking a college degree through attendance in the Evening College.

Except where designated in the course schedule, classes for courses offered in the evening will be scheduled on Monday through Thursday between the hours of 6:00 p.m. and 10:00 p.m.

ADMISSIONS

Evening College students who wish to work toward a degree shall make application for admission as a degree candidate when they first

register. Students who enrolled without any plan to earn a degree, but who conclude in consequence of their experience in the evening school that they wish to earn a degree, must apply for admission to the degree program when they complete thirty hours of work in the Evening Division. When this application is made, the student's record will be examined to determine his eligibility and his prospects of successful achievement. This will be followed by a personal interview with the Director of the Evening Division and a recommendation will then be submitted to the Office of Admissions.

If the student is accepted as a degree candidate, he will be notified by the Office of Admissions. If the student is not accepted as a degree candidate, he may petition to continue as a special student. This will offer him a further opportunity to demonstrate his ability to benefit from continued study.

Students who have been refused admission to the regular day school are not encouraged to seek admission to the Evening Division. However, if written permission is granted by the Dean of Admissions, a student may apply for admission to the Evening Division as a special student.

No student listed as an academic failure at this or any other college may be permitted to register in the Evening Division within a year following his failure. After the lapse of a year the student from another college may submit an application for admission. The Wilkes student who has been denied the privilege of continuing his studies must apply to the Academic Standing Committee for re-admission.

Students who wish to transfer from another institution must provide a transcript of all previous college work.

Students who do not satisfy the usual educational requirements for admission to degree programs may qualify by demonstrating their competence. This can be done by passing the qualifying examinations for a secondary school diploma and by demonstrating their proficiency in evening classes. The Director of the Evening Division will inform the student of the steps that are needed to qualify him for admission.

Under the regulations of the Veteran's Administration, a student who does not qualify as a degree candidate may follow one of two programs. He may pursue college work from a planned list of courses approved by the Veteran's Administration; or, he may earn the high school equivalent diploma by passing the United States Armed Forces Institute (USAFI) and/or the General Equivalency Diploma (GED) tests in order to apply for admission as a degree candidate.

The Director of the Evening Division will act as advisor to all students enrolled on a part-time basis (Day or Evening Division) and to all students enrolled in the Evening Division on a full-time basis.

If a regular day student enrolls for an Evening Division course, he will retain his day school faculty advisor. If an Evening Division student enrolls in a day school course, he will be classified as a Special Student for the semester in which he is registered for a day school course. During this period he will retain his Evening Division advisor. Should he transfer to the day school, he will be assigned a regular faculty advisor.

RESEARCH AND GRADUATE CENTER

The Research and Graduate Center is an excellently equipped and staffed installation that is an integral part of the College complex. During the school term the Center will continue the various public and private research projects now in progress.

LABOR-MANAGEMENT TRAINING COURSES

To establish a climate for industrial redevelopment the College has pioneered a Labor-Management Training Program in which the needs of the individual and the company are analyzed.

Plans are arranged in consultation with officials, foremen, and other employees and are designed to meet the general and specific requirements of the particular group. Where several firms are confronted with common problems, special classes are organized to include representation of several companies.

INSTITUTE OF REGIONAL AFFAIRS

The Institute of Regional Affairs is a multi-purpose college organization which views regional problems as belonging to no simple academic discipline, but rather as a contemporary phenomenon spilling into many disciplines. The Institute was created to assure coordination of varied efforts in order to better understand and resolve complex and contemporary problems.

Its four-fold purpose is: education and training, community information, research, and consultation.

The underlying philosophy of the Institute of Regional Affairs is cooperation, rather than reform of partisanship.

FACILITIES

The College is located in Wilkes-Barre, Pennsylvania, in the heart of the picturesque and historic Wyoming Valley. This ideal location in the foothills of the Poconos offers abundant cultural and recreational facilities and affords close proximity and convenient transportation to the metropolitan areas of New York and Philadelphia.

THE LIBRARY

The Library will post its Fall schedule at the beginning of the semester.

Evening College students may borrow books from the Library by presenting their I.D. card.

THE BOOKSTORE

The Bookstore offers a complete stock of necessary textbooks and supplies. It will be open as follows:

Monday through Friday 8:30 a.m. to 4:30 p.m.

EXPENSES

Tuition — \$60 per semester hour credit.

All charges must be paid at the time registration forms are processed.

Books and supplies may be purchased at the bookstore and must be paid for at the time of purchase.

WITHDRAWAL

A student who withdraws from the evening session or drops courses after the first week must receive approval from the instructor and should give prompt written or verbal notice to the Director of the Evening and Summer College in order that their records may not unjustly show failure in courses.

Students in good standing who withdraw from the College will receive a refund of tuition under the following conditions: during the first six weeks of the evening session one-half of the tuition will be refunded upon request to the Director of Evening and Summer College, if the withdrawal is made for adequate and satisfactory reasons. After the first six weeks no refunds are allowed and the student is obligated for the full costs of the term. No student who is suspended or expelled shall be entitled to any refunds.

CHANGE OF SCHEDULE

Occasionally changes in the Evening College Schedule become necessary. Such a change may include the cancellation of one course or the addition of another. Therefore, the College reserves the right to cancel or reschedule any course due to insufficient enrollment or any other reason. Wherever possible, any change will be posted during registration. Students who have registered for courses that are subsequently cancelled or rescheduled will be notified as promptly as possible.



Certificate Of Achievement Program

IN

ACCOUNTING
MANAGEMENT

BANKING
MARKETING

Students of Business Administration, who hold full-time jobs while studying in the evening and summer college, are required to devote many years to their quest for a bachelor's degree. To encourage these business men and women, Wilkes College will award a "Certificate of Achievement" to those who earn 42 hours of credit in evening and summer school programs with at least 24 hours in Business Administration and 18 hours in General Education.

The Certificate of Achievement does not designate the completion of any recognized program. It gives recognition of achievement and notes that the recipient has completed a sequence of courses which may be credited toward the bachelor's degree should the student elect to continue his studies for the degree.

It is important to note that the courses in these programs are presently offered at the college and are now required for the Bachelor's degree in Commerce and Finance.

A student taking six credit hours of work in the Fall, Spring, and Summer sessions can complete the requirements for the certificate in two and one half years. A student who elects not to attend the summer sessions will require three and one half years to complete the program.

Call or write for brochure and further information.

EVENING COLLEGE

UNDERGRADUATE DIVISION

Spring Semester — 1973

Course	Description	Day & Hour	Room No.	Credit Hrs.
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ACCOUNTING:

Acct. 101E	Elementary Accounting I	T 6:30-9:30	Par. 45	3
Acct. 102E	Elementary Accounting II (Pre: Acct. 101)	Th 6:30-9:30	Par. 45	3
Acct. 102E-2	Elementary Accounting II (Pre: Acct. 101)	M 6:30-9:30	Par. 45	3
Acct. 111E	Intermediate Accounting I (Pre: Acct. 102)	W 6:30-9:30	Par. 45	3
Acct. 112E	Intermediate Accounting II (Pre: Acct. 111)	Th 6:30-9:30	Par. 35	3
Acct. 202E	Cost Accounting II (Pre: Accounting 201 or approval of instructor)	T 6:30-9:30	Par. 35	3
Acct. 222E	Taxes II (Pre: Acct. 221)	M 6:30-9:30	Kirby 107	3
Acct. 232E	Auditing II (Pre: Acct. 231)	M 6:30-9:30	Par. 35	3
Acct. 242E	Advanced Accounting II (Pre: Acct. 112 and approval of instructor)	W 6:30-9:30	Par. 35	3

BIOLOGY:

Bio. 102E	Biological Science II (Pre: Bio. 101)	Th 6:00-9:00	Stark 306	3
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BUSINESS ADMINISTRATION:

B.A. 114E	Salesmanship (Pre: Approval of instructor)	M 6:30-9:30	Par. 34	3
B.A. 115E	Mathematics of Business and Finance	M 6:30-9:30	Par. 43	3
B.A. 216E	Advertising	W 6:30-9:30	Par. 34	3
B.A. 220E	Real Estate (Pre: Econ. 102)	Th 6:30-9:30	Par. 34	3
B.A. 222E	Marketing (Pre: Econ. 102)	T 6:30-9:30	Par. 43	3
B.A. 232E	Business Law — Agency, Partnerships, Corporations, and Real Property (Pre: B.A. 231)	T 6:30-9:30	Par. 34	3

Course	Description	Day & Hour	Room No.	Credit Hrs.
B.A. 234E	Business Law — Property (Pre: B.A. 231, 232, Acct. 102)	W 6:30-9:30	Par. 53	3
B.A. 240E	Property Insurance (Pre: B.A. 232, or approval of instructor)	M 6:30-9:30	Par. 23	3
B.A. 244E	Time and Motion Study	Th 6:30-9:30	Par. 43	3
B.A. 252E	Principles of Management II (Pre: B.A. 251)	W 6:30-9:30	Par. 43	3

BUSINESS EDUCATION:

Bus. Ed. 106E	Intermediate Shorthand (Pre: Bus. Ed. 105 or approval of instructor)	TTh 6:00-8:00	Par. 33	2
Bus. Ed. 108E	Intermediate Typewriting (Pre: Bus. Ed. 107 or approval of instructor)	TTh 8:00-10:00	Par. 33	2

ECONOMICS:

Econ. 101E	Principles of Economics I	Th 6:30-9:30	Par. 23	3
Econ. 102E	Principles of Economics II (Pre: Econ. 101)	T 6:30-9:30	Stark 109	3
Econ. 102E-2	Principles of Economics II (Pre: Econ. 101)	Th 6:30-9:30	Par. 56	3
Econ. 202E	Theory of Money (Pre: Econ. 201)	M 6:30-9:30	Kirby 208	3
Econ. 212E	Government and Business (Pre: Econ. 102, P.S. 101)	Th 6:30-9:30	Par. 25	3
Econ. 228E	Economic Geography of Asia, Africa, and Latin America (Econ. 227 is not a prerequisite)	W 6:30-9:30	Par. 25	3
Econ. 230E	Business Cycles (Pre: Approval of instructor)	W 6:30-9:30	Par. 23	3
Econ. 232E	Economic Statistics (Pre: Econ. 231)	T 6:30-9:30	Par. 53	3
Econ. 236E	Public Finance (Pre: Econ. 102, P.S. 101)	T 6:30-9:30	Par. 25	3

ENGLISH:

Eng. 101E	Composition I	M 6:30-9:30	Bdf. 12	3
Eng. 102E	Composition II (Pre: Eng. 101)	Th 6:30-9:30	Bdf. 12	3
Eng. 131E	Fundamentals of Speech	T 6:00-8:00	Bdf. 12	2
Eng. 152E	Western World Literature II (Pre: Eng. 151)	W 6:30-9:30	Bdf. 12	3
Eng. 405E	Studies in Linguistics	T 6:00-9:00	Bdf. Sem.	3

Course	Description	Day & Hour	Room No.	Credit
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ENVIRONMENTAL SCIENCE:

E.S. 282E	Space Science (Pre: E.S. 101) Lab: Fee \$20	W 6:30-10:00	Stark 109	3
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FINE ARTS:

F.A. 101E	Experiencing Art I	MW 6:00-7:30	Pick. 203	3
F.A. 205E	Advanced Painting (Pre: F.A. 202)	W 6:30-10:30	Pick. 103	3
F.A. 397E	Teaching Art in the Elementary Classroom	T 5:30-8:30	Pick. 203	3

(This course recommended for Juniors & Seniors in the Elementary Education Program) Fulfills F.A. 101 requirement \$10 Materials Fee

FOREIGN LANGUAGES:

Fr. 102E	Elementary French II (Pre: Fr. 101 or equivalent)	TTh 6:30-8:00	Kirby 203	3
Fr. 204E	Intermediate French II (Pre: Fr. 203 or equivalent)	TTh 8:00-9:30	Kirby 203	3

GERMAN:

Ger. 102E	Elementary German II (Pre: Ger. 101 or equivalent)	TTh 6:30-8:00	Kirby 302	3
Ger. 204E	Intermediate German II (Pre: Ger. 203 or equivalent)	TTh 8:00-9:30	Kirby 302	3

SPANISH:

Span. 102E	Elementary Spanish II (Pre: Span. 101 or equivalent)	TTh 6:30-8:00	Kirby 208	3
Span. 204E	Intermediate Spanish II (Pre: Span. 203 or equivalent)	TTh 8:00-9:30	Kirby 208	3

HISTORY:

Hist. 101E	History of World Civilization I	M 6:30-9:30	Stark 109	3
Hist. 102E	History of World Civilization II	Th 6:30-9:30	Fkln. 30	3
Hist. 102E-2	History of World Civilization II	M 6:30-9:30	Weck. An.	3

Course	Description	Day & Hour	Room No.	Credit Hrs.
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Hist. 354E	Early Modern Europe	W 6:30-9:30	Fkln. 30	3
Hist. 358E	History of Modern Russia	M 6:30-9:30	Fkln. 30	3
Hist. 371E	Historiography and Research (Approval of instructor)	T 6:30-9:30	Fkln. 30	3

JOURNALISM

Jour. 102E	Basic News Writing II (Pre: Journ. 101) Fee \$10	M 6:30-9:30	Par. 33	3
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MATHEMATICS:

Math. 100E	Pre-Calculus Mathematics (Pre: Two years of secondary school mathematics in algebra and geometry)	TTh 6:00-8:00	Miner 11	4
Math. 105E	Introductory Calculus I For Social and Natural Science students. (Pre: Geometry, Algebra II, and some knowledge of Trigonometry)	MW 6:00-8:00	Miner 11	4
Math. 264E	Cobol Programming (Pre: Math. 261 or consent of instructor) Fee: \$20	T 6:30-9:30	Stark 204	3

In addition to the above courses, a number of senior graduate courses will be offered. Generally, these courses will be scheduled twice per week in the late afternoon (4:00-5:30) or evening.

Please consult the Graduate Office or the Department of Mathematics for this course listing.

MUSIC:

Mus. 101E	Introduction to the Materials and Literature of Music I	T 6:30-9:30	DDD 202	3
Applied Music			Room and hours to be arranged	1

Note: It is important that all students who register for applied music through the Evening College be advised to consult with Mr. William Gasbarro, Department Chairman, before completing their registration.

Course	Description	Day & Hour	Room No.	Credit Hrs.
NURSING EDUCATION:				
N.E. 106E	Supervision and Administration	M 4:00-6:00	Kirby 103	2
N.E. 107E	Principles and Methods in Nursing Education (Pre: Psych. 102 or approval of instructor)	T 4:00-6:00	Kirby 103	2
N.E. 108E	Multi-Sensory Techniques in Nursing Education (Pre: N.E. 107 may be taken concurrently)	T 6:00-7:00	Kirby 109	1
Ed. 351E	Educational Measurements	W 4:00-6:00	Kirby 103	2

PHILOSOPHY:

Phil. 101E	Introduction to Philosophy	M 6:30-9:30	Kirby 102	3
Phil. 102E	Logic and Scientific Method	W 6:30-9:30	Kirby 108	3
Phil. 397E	Seminar: Advanced Philosophy of Religion (Pre: Approval of instructor)	T 6:30-9:30	Kirby 108	3

PHYSICAL EDUCATION:

P.E. 106E	Hygiene	T 7:00-8:00	Miner 21	1
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PHYSICS:

Phys. 102E	Physical Science II (Pre: Phys. 101)	Th 6:30-9:30	Stark 114	3
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POLITICAL SCIENCE:

P.S. 102E	Political Science II	M 6:30-9:30	Par. 53	3
P.S. 210E	Government of Metropolitan Areas (Pre: P.S. 101 and 102)	W 6:30-9:30	Kirby 107	3
P.S. 222E	International Relations (Pre: P.S. 101 and 102)	Th 6:30-9:30	Kirby 107	3
P.S. 396E	Independent Research (Pre: Approval of Department Chairman)	Time and place to be arranged		1-3

PSYCHOLOGY:

Psy. 101E	General Psychology I	Th 6:30-9:30	Kirby 102	3
Psy. 102E	General Psychology II (Pre: Psy. 101)	W 6:30-9:30	Kirby 102	3

Course	Description	Day & Hour	Room No.	Credit Hrs.
Psy. 242E	Psychological Tests (Pre: Psy. 101 and 102)	M 6:30-9:30	Stark 306	3
Psy. 331E	Abnormal Psychology (Pre: Psy. 221, 232, and permission of Dept. Chairman)	W 6:30-9:30	Stark 306	3

RETAILING:

Ret. 224E	Recent Trends and Developments in Retailing	Th 6:30-9:30	Par. 53	3
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SOCIOLOGY:

Soc. 102E	Introduction to Sociology and Anthropology II	W 6:30-9:30	Par. 56	3
Soc. 200E	The Family (Pre: Soc. 101 and 102 or approval of instructor)	M 6:30-9:30	Par. 56	3
Soc. 275E	Sociology of Minorities (Pre: Soc. 101 and 102, Psy. 101 and 102)	T 6:30-9:30	Stark 114	3

EVENING COLLEGE

GRADUATE DIVISION

Spring Semester — 1973

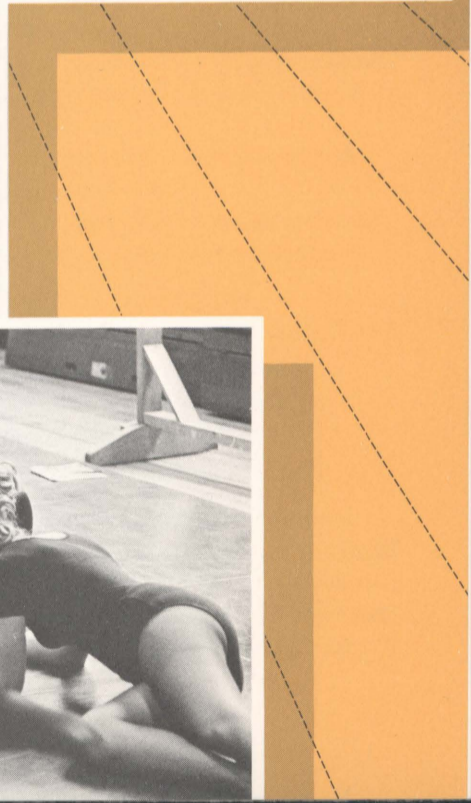
Course	Description	Credit Hrs.
BIOLOGY:		
Bio. 411	Physiology of Bacteria	3
Bio. 422	Advances in Ecological Research	3
Bio. 460	Fortran Programming for Biologists	2
BUSINESS ADMINISTRATION:		
Econ. 501	Managerial Economics	3
Econ. 505	Managerial Statistics	3
Econ. 507	Business and Society	3
Econ. 473	Pre-Seminar	1
Acct. 543	Accounting Policies and Practices	3
B.A. 512	Price Policy and Procedure	3
B.A. 524	Management Seminar II	3
CHEMISTRY:		
Chem. 342	Intermediate Physical Chemistry	3
Chem. 376	Advanced Analytical Chemistry	3
Chem. 432	Advanced Organic Chemistry II	3
Chem. 440	Quantum Chemistry	3
Chem. 544	Kinetics	3
EDUCATION:		
Ed. 510	Psychological Foundations of Education	3
Ed. 513	Comparative Foundations of Education	3
Ed. 520	Tests and Measurements	3
Ed. 532B	Problems in Elementary Education: Science	3
Ed. 532D	Problems in Elementary Education: Social Studies	3
Ed. 541	Secondary School Curriculum	3
ENGLISH:		
English 335	Milton (Undergraduate and Graduate)	3
English 405	Studies in Linguistics (Graduate and Undergraduate by permission)	3

Course	Description	Credit Hrs.
ENVIRONMENTAL SCIENCE:		
E.S. 401	Dynamic Geology	3
HISTORY:		
Hist. 327	American Foreign Policy (Day Course)	3
Hist. 332	American National Period (Day Course)	3
Hist. 334	20th Century America (Day Course)	3
Hist. 354E	Early Modern Europe	3
Hist. 356	20th Century Europe (Day Course)	3
Hist. 358E	Modern Russia	3
Hist. 371E	Historiography	3
Hist. 382	Latin America (Day Course)	3
MATHEMATICS:		
Math. 312	Functions of a Real Variable II	3
Math. 314	Functions of a Complex Variable	3
Math. 334	Linear Algebra	3
Math. 352	Problems in Mathematical Statistics II	3
Math. 364	Numerical Analysis	3
Math. 432	Introduction to Abstract Algebra II	3
Math. 442	Introduction to Topology II	3
Math. 480	Topics in Mathematics — Games Theory	3
Math. 452	Advanced Statistics II	3
Math. 512	Measure and Integration	3
PHYSICS:		
Phys. 402	Topics in Mathematical Physics	3
Phys. 531	Electricity & Magnetism	3
Phys. 550	Quantum Mechanics	3

For further information contact:
 Director of Graduate Studies
 Wilkes College
 Wilkes-Barre, Pa. 18703



Wilkes
1973
Summer
College



FUGENE SULLIVAN FARLEY LIBRARY

CALENDAR

DAY SESSIONS - 1973

FIRST SESSION

Registration — Thursday, June 14 and Friday, June 15
Weckesser Hall — 8:30 a.m. to 8:00 p.m.
Session Begins — Monday, June 18
Session Ends — Friday, July 20 — (including final examination)

SECOND SESSION

Registration — Thursday, July 19 and Friday, July 20
Weckesser Hall — 8:30 a.m. to 8:00 p.m.
Session Begins — Monday, July 23
Session Ends — Friday, August 24 — (including final examination)

EIGHT - WEEK EVENING SESSION

Registration — Thursday, June 14 and Friday, June 15
Weckesser Hall — 8:30 a.m. to 8:00 p.m.
Session Begins — Monday, June 18
Session Ends — Friday, August 10 — (including final examination)

SPECIAL SESSION

Registration — Thursday, June 7 and Friday, June 8
Weckesser Hall — 8:30 a.m. to 4:30 p.m.
Session Begins — Monday, June 11
Session Ends — Friday, July 20 — (including final examination)

Registration — Thursday, July 19 and Friday, July 20
Weckesser Hall — 8:30 a.m. to 8:00 p.m.
Session Begins — Monday, July 23
Session Ends — Friday, August 31 — (including final examination)

For Further Information Write To:

Director of Evening and Summer College
Wilkes College
Wilkes-Barre, Pennsylvania 18703
Phone: 824-4651 Ext. 303 (After 5:00 p.m.: call 824-4656)

In order to minimize the possibility of cancelling courses, the preliminary registration form on the back cover should be completed and forwarded to the Director of Evening and Summer College as soon as possible. The preliminary registration does not obligate the registrant to take the course.

WILKES COLLEGE Bulletin

SUMMER SESSIONS
1973



Wilkes-Barre • Pennsylvania

An
Educated
Man

seeks truth, for without truth there can be no understanding;

possesses vision, for he knows that vision precedes all great attainments;

is aware of the diversity of ideas and beliefs that exist among men;

has faith in the power of ideals to shape the lives of men;

knows that man's progress requires intellectual vigor, moral courage, and physical endurance;

cultivates inner resources and spiritual strength, for they enrich his daily living and sustain him in times of crisis;

has ethical standards by which he lives;

respects the religious convictions of all men;

participates constructively in the social, economic, and political life of the community;

communicates ideas in a manner that assures understanding, for understanding unites men in their search for truth.

*Formulated and adopted by the
faculty as a guide to learning.*

Wilkes College

Wilkes College had its beginnings in 1933 when Bucknell University, responding to a request of community leaders, established its Junior College in Wilkes-Barre. On June 26, 1947, Bucknell University Junior College came to an end and Wilkes College received its charter as a four-year liberal arts college. The College has grown steadily to its current enrollment of approximately 2,400 full-time day students and 1,000 adults in the Evening College and special classes.

From its inception the College has been dedicated to these twin goals — a sound and stimulating intellectual experience for students and a program of service to the community.

AN INDEPENDENT COLLEGE

It was inevitable that the new College should be non-sectarian, for its purpose was to serve all students equally and its supporters wished the College to integrate itself with all constructive efforts in the community. It was believed that these ends could be served best by an independent college that was interdenominational in its influence and non-denominational in its control.

FREEDOM OF INQUIRY

Years have passed since Bucknell gave the control of the Junior College to a local Board of Trustees, guided by the late Gilbert S. McClintock, and events of these years demonstrate the wisdom of their decision. With responsibility came a pressing desire to strengthen the work of the faculty, united in their faith that the intellectual and spiritual resources of the student are vigorous where the creative mind is free.

UNITY AMIDST DIVERSITY

A college that wishes to serve all groups requires both a definite philosophy and a working policy. Wilkes College has been guided by the thought that unity in our community, our nation, and our world requires not only great vision but warm understanding of peoples. In its small circle Wilkes College brings together students of many faiths, backgrounds, and countries. It encourages them to maintain their convictions and their loyalties. It encourages them to create friendships based upon respect for differences, and to adhere to those ideals that create unity and good will amidst diversity.

While academic work is the basis of the College program, the faculty recognizes that academic training will be of little importance unless students emerge as men and women of strong faith and fine character. In the words of John Stuart Mill, "Before you can make men doctors and lawyers, you must first make them men."

A COOPERATIVE EFFORT

The original concept of community services has been strengthened with the passing of the years and with growing experience. It has been clearly demonstrated that the students, the College, and the community all benefit from cooperative effort. This cooperative relationship, with its emphasis on trained intelligence and extended planning, has resulted in cooperative action.

DECADES OF GROWTH

Because of their interest and faith, friends have multiplied their support during the past decades and the campus has expanded steadily so that it now includes most of the properties facing the River Common. Fortunately, a growing endowment has kept pace with the expansion of the campus.

ACCREDITATION

Wilkes is accredited by the Department of Public Instruction of the State of Pennsylvania, the Middle States Association of Colleges and Secondary Schools, Certified Public Accounting Examiners of the State of New York, and the American Chemical Society.

SUMMER COLLEGE

Information

Curricula

UNDERGRADUATE PROGRAM

The summer program is designed for men and women interested in accelerating degree work, and for recent high school graduates interested in beginning their college careers. Courses are open to Wilkes College students, students of other colleges, and non-matriculated students.

Course load is limited to six semester hours of credit for each day session. Students are cautioned to exercise judgment and care in scheduling both days and evening courses.

Most classes for courses offered during the day sessions will meet five days per week during the morning hours as follows:

First Period — 8:00 A.M. to 9:50 A.M.

Second Period — 10:10 A.M. to 12:00 Noon

Except where designated in the course schedule, classes for courses offered during the eight-week evening session will be scheduled on Monday, Tuesday, and Thursday evenings between the hours of 6:00 P.M. and 10:00 P.M.

The College reserves the right to cancel any course due to insufficient enrollment or any other reason. Students who have registered for courses that are subsequently cancelled because of insufficient enrollment will be notified as promptly as possible.

ADMISSION

Admission to the summer program is granted to:

- a) all Wilkes College students currently in good standing;
- b) high school graduates who have been admitted as degree candidates to the Wilkes regular program;
- c) high school graduates who have been admitted as full-time students in the regular program of an accredited college other than Wilkes;

- d) all students in good standing at their respective colleges who furnish official confirmation of that status sent by the dean of their college to the director of the Wilkes summer session;
- e) students who enroll in the summer session upon special invitation by Wilkes Committee on Admissions.

Non-Wilkes summer session students who desire to become degree candidates here will have to qualify for admission or transfer into the college's regular program via the procedures outlined by the Committee on Admissions. Such procedures must be initiated through the office of Mr. John Whitby, Director of Admissions.

TRANSFER OF CREDITS

Credits earned in the Wilkes College summer session may be transferred to other institutions. Students may, at the conclusion of the course, request this service by filling out a card indicating to which institution credits earned shall be transferred.

WITHDRAWAL

Withdrawal from classes after the first week is inadvisable except in extenuating circumstances.

A student who withdraws from the summer session or drops courses after the first week *must* receive permission from the instructor and the Director of the Evening and Summer College in order that their records may not unjustly show failure in courses.

Students in good standing who withdraw from the College will receive a refund of tuition under the following conditions: During the first week of the day sessions and during the first two weeks of the eight-week evening session one-half of the tuition will be refunded upon written request to the Director of Evening and Summer College, if the withdrawal is made for adequate and satisfactory reasons. After the periods designated no refunds are allowed and the student is obligated for the full costs of the term. No student who is suspended or expelled shall be entitled to any refunds.

Facilities

The College is located in Wilkes-Barre, Pennsylvania, in the heart of the picturesque and historic Wyoming Valley. This ideal location in the foothills of the Poconos offers abundant cultural and recreational facilities and affords close proximity and convenient transportation to the metropolitan areas of New York and Philadelphia.

DORMITORY AND DINING FACILITIES

Dormitory and dining facilities will be available for both male and female students. The cost for these services may be found under *Expenses*. Arrangements for dormitory accommodations may be made with the Director of Evening and Summer College.

THE LIBRARY

The Library will post its Summer schedule at the beginning of the first day session.

THE BOOKSTORE

The Bookstore offers a complete stock of necessary textbooks and supplies. It will be open as follows:

Monday through Friday 8:30 a.m. to 4:30 p.m.

Expenses

The student may expect to incur the following expenses for the summer session:

Tuition — \$60.00 per credit hour.

Dormitory — (Exclusive of meals) \$15.00 per week.

Linen Service — \$5.00 per day session (required for dormitory students).

Dining Facilities — Dining Hall will be open Monday thru Friday. Meals may be taken on a pay-as-you-go basis.

All charges must be paid at the time registration forms are processed. Charges for the second session may be paid no later than July 21, 1973. Books and supplies may be purchased at the bookstore and must be paid for at the time of purchase.

SUMMER SESSION SCHEDULE OF COURSES

FIRST SESSION SCHEDULE

June 18 - July 20, 1973 — Monday through Friday

COURSE	DESCRIPTION	ROOM	HOUR	CR.
ACCOUNTING:				
Acct. 101S	Elementary Accounting I	Par. 35	8:00-9:50	3
BIOLOGY:				
Biol. 101S	Biological Science I	St. 306	10:10-12:00	3
BUSINESS ADMINISTRATION:				
B.A. 216S	Advertising	Par. 8	10:10-12:00	3
B.A. 240S	Property Insurance (Pre: B.A. 232 or app. of instr.)	Par. 23	8:00-9:50	3
B.A. 241S	Life Insurance	Par. 23	10:10-12:00	3
B.A. 251S	Principles of Management I	Par. 25	8:00-9:50	3
CHEMISTRY:				
Chem. 105S	General Chemistry	St. 114	8:00-9:50	4
	Laboratory (M-W-TH) Breakage deposit \$10 - Fee \$20	St. 203	12:00-3:00	
Chem. 201S	Intro. to the Principles of Chem.	St. 204	8:00-9:50	4
	Laboratory (M-W-TH) Breakage deposit \$10 - Fee \$20	St. 231	12:00-3:00	
Chem. 232S	Organic Chemistry I (Pre: Chem. 221, or app. of instr.)	St. 204	10:10-12:00	4
	Laboratory (T-W-TH) Breakage deposit \$10 - Fee \$20	St. 202	1:00-4:00	
ECONOMICS:				
Econ. 101S	Principles of Economics I	Par. 34	8:00-9:50	3
Econ. 111S	Economic History	Weck. A.	8:00-9:50	3

COURSE	DESCRIPTION	ROOM	HOUR	CR.
Econ. 201S	Money and Banking (Pre: Econ. 102)	Par. 34	10:10-12:00	3
Econ. 223S	Collective Bargaining (Pre: Econ. 102)	Par. 25	10:10-12:00	3
Econ. 231S	Applied General Statistics (Pre: Approval of instructor)	Weck. A.	10:10-12:00	3
EDUCATION:				
Ed. 201S	Introduction to Education (Pre: Sophomore standing)	Kby. 103	8:00-9:50	3
Ed. 202S	Educational Psychology (Pre: Psy. 102 & Jr. standing)	Kby. 103	10:10-12:00	3
Ed. 291S	Communications Skills in Elem. Ed. (June 18 - July 9) (Pre: Ed. 201, 202)	Ch. Th.	12:00-2:00	2
Ed. 292S	The Sciences in the Elem. School (July 11 - July 31) (Pre: Ed. 201, 202)	Ch. Th.	12:00-2:00	2
Ed. 352S	Guidance (Pre: Ed. 202)	Kby. 108	10:10-12:00	3
Ed. 391S	Instructional Strategy & Evaluation (August 2 - August 21) (Pre: Ed. 202, Psy. 221)	Ch. Th.	12:00-2:00	2
<i>Special Course: Germany</i>				
Workshop: Education in Modern Germany. (This course includes travel to Germany, will have limited enrollment and an extra fee; registration is by permission of the instructor. Deadline for applications is April 10. Contact the Education Department)				
ENGINEERING:				
Engi. 211S	Mechanics I Statics (Pre: Phys. 201 and Math. 111)	St. 154	8:00-9:50	3
E.E. 211S	Circuit Theory I (Pre: Math. 112)	St. 132	10:10-12:00	3
Ma.E. 202S	Materials Science (Pre: Chem. 201)	St. 154	10:10-12:00	3

COURSE	DESCRIPTION	ROOM	HOUR	CR.
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ENGLISH:

Eng. 100S	Writing Workshop	Bdf. 12	8:00-9:50	3
Eng. 100S-2	Writing Workshop	Bdf. 12	10:10-12:00	3
Eng. 101S	Composition I	Bdf. 13	8:00-9:50	3
Eng. 151S	Western World Literature I (Pre: Eng. 102)	Bdf. 13	10:10-12:00	3
Eng. 151S-2	Western World Literature I (Pre: Eng. 102)	Bdf. 14	10:10-12:00	3
Eng. 151S-3	Western World Literature I (Pre: Eng. 102)	Bdf. 14	8:00-9:50	3
Eng. 213S	Chaucer (Pre: Eng. 152)	Bdf. Sem.	8:00-9:50	3
Eng. 470S	Studies in Modern British Lit.	Bdf. Sem.	10:10-12:00	3

ENVIRONMENTAL SCIENCE:

E.S. 101S	Introductory Earth Science Laboratory. Fee \$20	St. 109 To be arranged	10:10-12:00	3
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FINE ARTS:

F.A. 101S	Experiencing Art I	Pick. 203	10:10-12:00	3
F.A. 202S	Drawing and Composition (Pre: F.A. 201)	Pick. 103	10:10-12:00	3
F.A. 206S	Print Making (Pre: F.A. 202)	Pick. 103	8:00-9:50	3
F.A. 226S	History of Contemporary Art	C.A. 201	8:00-9:50	3
F.A. 397S	Seminar—Teaching Art in the Elementary School Classroom Note: This course may be substituted for F.A. 101 for those students in the B.A. program in Elementary Education.	Pick. 203	8:00-9:50	3

FOREIGN LANGUAGES:**French:**

Fr. 101S	Elementary French I	Kby. 203	8:00-9:50	3
Fr. 203S	Intermediate French I (Pre: Fr. 102 or equivalent)	Kby. 203	10:10-12:00	3

COURSE	DESCRIPTION	ROOM	HOUR	CR.
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German:

Ger. 101S	Elementary German I	Kby. 303	8:00-9:50	3
Ger. 203S	Intermediate German I (Pre: Ger. 102 or equivalent)	Kby. 303	10:10-12:00	3

Spanish:

Span. 101S	Elementary Spanish I	Kby. 208	8:00-9:50	3
Span. 203S	Intermediate Spanish I (Pre: Span. 102 or equivalent)	Kby. 208	10:10-12:00	3

HISTORY:

Hist. 101S	History of World Civilization I	Church H.	8:00-9:50	3
Hist. 358S	Modern Russia	Fkln. 14	8:00-9:50	3
Hist. 497S	Seminar:—American Intellectual History since 1865	Fkln. 14	10:10-12:00	3

MATHEMATICS:

Math. 100S	Pre-Calculus Mathematics (Algebra and Trigonometry)	Mi. 11	8:00-9:50	4
Math. 101S	Fundamentals of Mathematics I	Mi. 12	8:00-9:50	3
Math. 103S	Mathematics for Elementary School Teachers I (Not open to students with credits in Math. 101-102)	Mi. 12	10:10-12:00	3
Math. 232S	Abstract Algebra for Elementary School Teachers (Pre: Math. 104 or app. of instr.)	Mi. 21	8:00-9:50	3

MUSIC:

Mus. 101S	Introduction to the Materials and Literature of Music I	Darte 323	8:00-9:50	3
Mus. 102S	Introduction to the Materials and Literature of Music II	Darte 323	10:10-12:00	3
Applied Mus.	Please arrange this course with Mr. Gasbarro, Department of Music, prior to registration.	Darte 323	8:00-9:50	3
		Darte 323	10:10-12:00	3

NURSING EDUCATION:

N.E. 112S	Field Experience in Supervision or Teaching	250 S. River	Hrs. t.b.a.	4
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COURSE	DESCRIPTION	ROOM	HOUR	CR.
PHILOSOPHY:				
Phil. 240S	Social and Political Philosophies	Kby. 102	10:10-12:00	3
PHYSICS:				
Phys. 105S	Introductory Physics Laboratory. Fee: \$20 (June 11-July 20, Special Session)	St. 114 St. 103	10:00-11:30 Hrs. t.b.a.	4
POLITICAL SCIENCE:				
P.S. 101S	Political Science I	Fkln. 30	8:00-9:50	3
P.S. 205S	State Government (Pre: P.S. 101 and 102)	Fkln. 30	10:10-12:00	3
PSYCHOLOGY:				
Psy. 101S	General Psychology I	Par. 56	8:00-9:50	3
Psy. 221S	Child Psychology (Pre: Psy. 101 and 102)	Par. 56	10:10-12:00	3
Psy. 232S	Human Behavior (Pre: Psy. 101 and 102)	Par. 45	10:10-12:00	3
READING:				
	Reading Improvement for Pre-Freshmen	Reading Clinic Room	10:10-12:00	0
SOCIOLOGY:				
Soc. 101S	Introduction to Sociology and Anthropology I	Par. 53	10:10-12:00	3
Soc. 270S	People and Cultures of the World (Pre: Soc. 101 and 102)	Par. 43	8:00-9:50	3
Soc. 273S	Introduction to Archaeology (Pre: Soc. 101, 102, or approval of instructor)	Par. 43	10:10-12:00	3
THEATRE ARTS:				
Th. Arts 101S	Approach to Theatre	Room t.b.a. in Darte	10:00-12:00	3

SECOND SESSION SCHEDULE

July 23 - August 24, 1973 — Monday through Friday

COURSE	DESCRIPTION	ROOM	HOUR	CR.
ACCOUNTING:				
Acct. 102S	Elementary Accounting II (Pre: Acct. 101)	Par. 35	8:00-9:50	3
BIOLOGY:				
Biol. 102S	Biological Science II (Pre: Bio. 101)	St. 306	10:10-12:00	3
BUSINESS ADMINISTRATION:				
B.A. 115S	Mathematics of Business & Finance	Par. 35	10:10-12:00	3
B.A. 222S	Marketing. (Pre: Econ. 102)	Par. 34	10:10-12:00	3
B.A. 252S	Principles of Management II (Pre: B.A. 251)	Par. 25	8:00-9:50	3
CHEMISTRY:				
Chem. 106S	Organic and Biological Chemistry (Pre: Chem. 105)	St. 204	8:00-9:50	4
	Laboratory (M-W-TH) Breakage Deposit \$10 - Fee: \$20	St. 203	12:00-3:00	
Chem. 202S	Chemical Equilibria (Pre: Chem. 201)	St. 204	10:10-12:00	4
	Laboratory (M-W-TH) Breakage Deposit \$10 - Fee: \$20	St. 231	1:00-4:00	
Chem. 235S	Organic Chemistry IIa (Pre: Chem. 232)	Kby. 103	10:10-12:00	4
	Laboratory (T-W-TH) Breakage Deposit \$10 - Fee: \$20	St. 202	1:00-4:00	
ECONOMICS:				
Econ. 102S	Principles of Economics II (Pre: Econ. 101)	Par. 34	8:00-9:50	3
Econ. 232S	Applied General Statistics (Pre: Econ. 231)	Weck. A.	10:10-12:00	3

COURSE	DESCRIPTION	ROOM	HOUR	CR.
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EDUCATION:

Ed. 391S	Instructional Strategy & Evaluation (August 2 - August 21) (Pre: Ed. 202, Psy. 221)	Ch. Th.	12:00-2:00	2
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ENGINEERING:

Engi. 212S	Mechanics II Dynamics (Pre: Engi. 211)	St. 154	8:00-9:50	3
E.E. 212S	Circuit Theory II Laboratory (Pre: Phys. 202 and E.E. 211)	St. 132 To be arranged	10:10-12:00	3
Ma.E. 242S	Physical Metallurgy (Pre: Ma.E. 202)	St. 154	10:10-12:00	3

ENGLISH:

Eng. 102S	Composition II (Pre: Eng. 101)	Bdf. 12	8:00-9:50	3
Eng. 152S	Western World Literature II (Pre: Eng. 151)	Darte 101	8:00-9:50	3
Eng. 152S-2	Western World Literature II (Pre: Eng. 151)	Bdf. 13	10:10-12:00	3
Eng. 152S-3	Western World Literature II (Pre: Eng. 151)	Bdf. 12	10:10-12:00	3
Eng. 221S	Shakespeare (Pre: Eng. 152)	Bdf. 13	8:00-9:50	3
Eng. 480S	Studies in American Literature	Darte 101	10:10-12:00	3

ENVIRONMENTAL SCIENCE:

E.S. 282S	Space Science. (Pre: E.S. 101) Laboratory. Fee: \$20	St. 109 St. 100	10:10-12:00 Hrs. t.b.a.	3
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FINE ARTS:

F.A. 101S	Experiencing Art I	Pick. 203	10:10-12:00	3
F.A. 203S	Oil Painting	C.A. 201	10:10-12:00	3
F.A. 207S	Advanced Print Making (Pre: F.A. 206)	Pick. 103	8:00-9:50	3
F.A. 226S	History of Contemporary Art	Pick. 203	8:00-9:50	3

COURSE	DESCRIPTION	ROOM	HOUR	CR.
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FOREIGN LANGUAGES:

French:

Fr. 102S	Elementary French II (Pre: Fr. 101)	Kby. 203	8:00-9:50	3
Fr. 204S	Intermediate French II (Pre: Fr. 203)	Kby. 203	10:10-12:00	3

German:

Ger. 102S	Elementary German II (Pre: Ger. 101)	Kby. 303	8:00-9:50	3
Ger. 204S	Intermediate German II (Pre: Ger. 203)	Kby. 303	10:10-12:00	3

Spanish:

Span. 102S	Elementary Spanish II (Pre: Span. 101)	Kby. 208	8:00-9:50	3
Span. 204S	Intermediate Spanish II (Pre: Span. 203)	Kby. 208	10:10-12:00	3

HISTORY:

Hist. 102S	History of World Civilization II	Church H.	8:00-9:50	3
Hist. 208S	American History since 1865	Fkln. 14	8:00-9:50	3
Hist. 497S	Seminar—Political Development of China in the 20th Century	Fkln. 14	10:10-12:00	3

MATHEMATICS:

Math. 100S	Pre-Calculus Mathematics (Pre: Algebra and Trigonometry)	Mi. 11	10:10-12:00	4
Math. 102S	Fundamentals of Mathematics II (Pre: Math. 101)	Mi. 12	8:00-9:50	3
Math. 104S	Mathematics of Elementary School Teachers II (Pre: Math. 103)	Mi. 12	10:10-12:00	3
Math. 243S	Geometry for Elementary School Teachers (Pre: Math. 104 or app. of instr.)	Mi. 21	8:00-9:50	3

COURSE	DESCRIPTION	ROOM	HOUR	CR.
MUSIC:				
Mus. 101S	Introduction to the Materials and Literature of Music I	Darte 323	8:00-9:50	3
Mus. 102S	Introduction to the Materials and Literature of Music II	Darte 323	10:10-12:00	3
Applied Mus.	Please arrange this course with Mr. Gasbarro, Department of Music, prior to registration.	Darte 323	8:00-9:50	3
			10:10-12:00	3
				1
PHILOSOPHY:				
Phil. 210S	Ethics	Kby. 102	8:00-9:50	3
R.S. 212S	Contemporary Trends in Religious Thought	Kby. 102	10:10-12:00	3
PHYSICS:				
Phys. 106S	Introductory Physics Laboratory. Fee: \$20 (July 23 - August 31 — Special Session)	St. 114	10:00-11:30	4
		St. 103	Hrs. t.b.a.	
POLITICAL SCIENCE:				
P.S. 102S	Political Science II	Par. 43	10:10-12:00	3
P.S. 212S	Management of Municipalities	Par. 43	8:00-9:50	3
PSYCHOLOGY:				
Psy. 102S	General Psychology II (Pre: Psy. 101)	Par. 56	8:00-9:50	3
Psy. 201S	Advanced General Psychology (Pre: Psy. 101 and 102)	Par. 53	8:00-9:50	3
Psy. 206S	History of Psychology (Pre: Psy. 215)	Par. 53	10:10-12:00	3
READING:				
	Reading Improvement for Pre-Freshmen	Reading Clinic Room	10:10-12:00	0
SOCIOLOGY:				
Soc. 102S	Introduction to Sociology and Anthropology II	Par. 56	10:10-12:00	3

EVENING SESSION SCHEDULE

June 18 - August 10, 1973 — Monday, Tuesday and Thursday

COURSE	DESCRIPTION	ROOM	HOUR	CR.
ACCOUNTING:				
Acct. 101E	Elementary Accounting I	Par. 35	6:00-7:45	3
Acct. 102E	Elementary Accounting II (Pre: Acct. 101)	Par. 35	8:00-9:45	3
Acct. 221E	Taxes. (Pre: Acct. 112 and Acct. 202 or app. of instr.)	Par. 45	8:00-9:45	3
BUSINESS ADMINISTRATION:				
B.A. 209E	Business Correspondence and Reports. (Pre: Eng. 102)	Par. 34	6:00-7:45	3
B.A. 251E	Principles of Management I	Par. 34	8:00-9:45	3
BUSINESS EDUCATION:				
B.E. 105E	Elementary Shorthand I	Par. 25	8:00-9:45	2
B.E. 107E	Elementary Typewriting I. Fee: \$10	Par. 33	6:00-7:45	2
ECONOMICS:				
Econ. 101E	Principles of Economics I	Par. 25	6:00-7:45	3
ENGLISH:				
Eng. 101E	Composition I	Bdf. 12	6:00-7:45	3
Eng. 131E	Fundamentals of Speech	Bdf. 13	6:00-7:30 (M-TH)	2
Eng. 151E	Western World Literature I (Pre: Eng. 102)	Bdf. 12	8:00-9:45	3
FINE ARTS:				
F.A. 397E	Seminar—Teaching Art in the Elementary School Classroom	Pick. 203	6:00-7:45	3
Note: This course may be substituted for F.A. 101 for those students in the B.A. program in Elementary Education.				

COURSE	DESCRIPTION	ROOM	HOUR	CR.
HISTORY:				
Hist. 102E	History of World Civilization II	Weck. A.	6:00-7:45	3
JOURNALISM:				
Jour. 101E	Basic News Writing. Fee: \$10	Par. 33	8:00-9:45	3
MATHEMATICS:				
Math. 100E	Pre-Calculus Mathematics (Pre: Algebra and Trigonometry)	Mi. 11	6:00-7:45 (M-T-W-TH)	4
Math. 101E	Fundamentals of Math. I	Mi. 12	6:00-7:45	3
Math. 102E	Fundamentals of Math. II (Pre: Math. 101)	Mi. 11	8:00-9:45	3
Math. 103E	Mathematics for Elementary School Teachers I (Not open to students with credits in Math. 101-102)	Mi. 20	6:00-7:45	3
Math. 104E	Mathematics for Elementary School Teachers II (Pre: Math. 103)	Mi. 12	8:00-9:45	3
Math. 105E	Introductory Calculus I (Pre: Geometry, Algebra II, and some knowledge of Trig.)	Mi. 21	6:00-7:45 (M-T-W-TH)	4
Math. 106E	Introductory Calculus II (Pre: Math. 105)	Mi. 21	8:00-9:45 (M-T-W-TH)	4
Math. 111E	Analysis I. (Pre: Math. 100 or at least three years of secondary school Math. including geom- etry, algebra II, and topics in trigonometry).	Mi. 22	6:00-7:45 (M-T-W-TH)	4
Math. 112E	Analysis II (Pre: Math. III)	Mi. 22	8:00-9:45 (M-T-W-TH)	4
Math. 150E	Elementary Statistics (Tentative)	Room t.b.a.	6:00-7:45	4
Math. 211E	Intermediate Analysis I (Pre: Math. 112)	Room t.b.a.	6:00-7:45 (M-T-W-TH)	4
Math. 212E	Intermediate Analysis II (Pre: Math. 112)	Room t.b.a.	8:00-9:45 (M-T-W-TH)	4
Math. 314E	Functions of a Complex Variable (Pre: Math. 311 or app. of instr.)	Room t.b.a.	8:00-9:45	3

COURSE	DESCRIPTION	ROOM	HOUR	CR.
Math. 331E	Introduction to abstract Algebra I (Pre: Math. 222)	Room t.b.a.	6:00-7:45	3
Math. 334E	Linear Algebra (Pre: Math. 222 or app. of instr.)	Room t.b.a.	6:00-7:45	3
Math. 414E	Functions of a Complex Variable II (Pre: Math. 314 or app. of instr.)	Room t.b.a.	8:00-9:45	3
Math. 480E	Topics in Mathematics (Pre: Approval of instructor)	Room t.b.a.	6:00-7:45	3
Math. 541E	Functional Analysis (Pre: Math. 441)	Room t.b.a.	6:00-7:45	3
PHILOSOPHY:				
Phil. 101E	Introduction to Philosophy	St. 109	6:00-7:45	3
Phil. 102E	Logic and Scientific Method	St. 109	8:00-9:45	3
PHYSICAL EDUCATION:				
P.E. 105E	Hygiene	Weck. A.	6:00-8:00 (Wed. only)	1
P.E. 106E	Hygiene	Weck. A.	6:00-8:00 (Wed. only)	1
P.E. 105-106	Hygiene	Weck. A.	6:00-8:00 (Wed. only)	2
MUSIC:				
Mus. 101E	Introduction to the Materials and Literature of Music I	Darte 323 Darte 323	6:00-7:45 8:00-9:45	3 3
Mus. 102E	Introduction to the Materials and Literature of Music II	Darte 323 Darte 323	6:00-7:45 8:00-9:45	3 3
Applied Mus.	Please arrange this course with Mr. Gasbarro, Department of Music, prior to registration.			1
POLITICAL SCIENCE:				
P.S. 101E	Political Science I	Fkln. 30	6:00-7:45	3
P.S. 102E	Political Science II (Pre: P.S. 101)	Fkln. 30	8:00-9:45	3
P.S. 251E	The Role of Planning in Urban Development (Pre: P.S. 101 and 102)	Fkln. 14	8:00-9:45	3
P.S. 395E	Independent Research (Pre: App. of Dept. Chairman)	Fkln. 14	6:00-7:45	3

COURSE	DESCRIPTION	ROOM	HOUR	CR.
PSYCHOLOGY:				
Psy. 101E	General Psychology I	Par. 45	6:00-7:45	3
Psy. 245E	Clinical Psychology (Pre: Psy. 242)	Par. 56	6:00-7:45	3
Psy. 331E	Abnormal Psychology (Pre: Psy. 221, 232, and app. of Department Chairman)	Par. 56	8:00-9:45	3

SECRETARIAL STUDIES:

See: Business Education

SOCIOLOGY:

COURSE	DESCRIPTION	ROOM	HOUR	CR.
Soc. 101E	Introduction to Sociology and Anthropology I	Par. 53	6:00-7:45	3
Soc. 102E	Introduction to Sociology and Anthropology II	Par. 53	8:00-9:45	3

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GRADUATE COURSE OFFERINGS, SUMMER 1973

COURSE	DESCRIPTION	ROOM	HOUR	CR.
Registration:	June 14 and 15th		8:30 a.m. to 8:00 p.m.	
Pre-Session:	May 29 to June 15			
First Session:	June 18 to July 20			
Second Session:	July 23 to August 24			
Evening Session:	June 18 to August 10			

BIOLOGY:

Bio. 404	Floristic and Faunistic Biology To be offered July 23 to August 24 and open only to M.S. in Bio. Ed. people.			3 credits
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BUSINESS ADMINISTRATION (All Evening Courses)

Econ. 474	Pre-Seminar	Dr. Werner		No credit
B.A. 511	Modern International Commerce	Dr. Taylor		3 credits
B.A. 502	Management Science	Mr. Engel		3 credits

COURSE	DESCRIPTION	ROOM	HOUR	CR.
Acct. 503	Managerial Accounting	Mr. Capin		3 credits
B.A. 521	Organizational Theory	Mr. Dwivedi		3 credits
Econ. 507	Business and Society	Mr. Leviton		3 credits
EDUCATION:				
<i>Pre-Session:</i>				
Ed. 534	Elementary School Curriculum		6:00 to 9:00 p.m.	3 credits
<i>First Session:</i>				
First Period				
Ed. 510	Psychological Foundations of Ed.		8:00 to 10:00 a.m.	3 credits
Ed. 512	Social Foundations of Education			3 credits
Ed. 520	Tests and Measurements			3 credits
Ed. 532A	Problems in Elementary Ed.: Math.			3 credits
Second Period				
Ed. 511	Philosophical Foundations of Ed.		10:00 to 12:00 Noon	3 credits
Ed. 530	Diagnosis and Correction of Reading Difficulties			3 credits
Ed. 532B	Problems in Elementary Education: Science			3 credits
Ed. 542	Extra-curricular Activities			3 credits
<i>First Session:</i>				
Ed. 595A	Special Course Workshop: Education in Modern Germany. (This course includes travel to Germany, will have lim- ited enrollment and an extra fee; registration is by permission of the instructor).			3 credits
<i>Second Session:</i>				
First Period				
Ed. 510	Psychological Foundations of Ed.		8:00 to 10:00 a.m.	3 credits
Ed. 515	Educational Planning in Developing Nations			3 credits
Ed. 532C	Problems in Elementary Ed: Language Arts			3 credits
Second period				
Ed. 531	Practicum in Reading Instruction		10:00 to 12:00 Noon	3 credits
Ed. 540I	Special Methods in Secondary School Instruction: Social Sci.			3 credits
Ed. 596A	Workshop: Negotiations in Ed.			3 credits

COURSE	DESCRIPTION	ROOM	HOUR	CR.
<i>Second Session:</i>				
Special Courses				
Ed. 596B	Workshop: Process Ed. in Science M-T-Th-F 9:00 to 12:00 Noon, W 9:00 to 3:00 p.m.			3 credits
Ed. 595-6C	Workshop: Sex Education in the Schools — 8:30 to 4:30 daily			6 credits
ENGLISH:				
<i>First Session:</i>				
Eng. 470	Studies in Modern British Lit.			3 credits
<i>Second Session:</i>				
Eng. 480	Studies in American Literature			3 credits
HISTORY:				
<i>First Session:</i>				
Hist. 358	Modern Russia Dr. Kaslas		8:00 to 10:00 a.m.	3 credits
Hist. 497	Seminar in American Int. Hist. Dr. Leach		10:00 to 12:00 Noon	3 credits
<i>Second Session:</i>				
Hist. 497	Seminar—Political Development of China in the 20th Century Dr. Show		10:00 to 12:00 Noon	3 credits
MATHEMATICS: (All Evening Courses)				
Math. 541	Functional Analysis			3 credits
Math. 414	Functions of a Complex Variable II			3 credits
Math. 314	Functions of a Complex Variable			3 credits
Math. 331	Introduction to Abstract Algebra I			3 credits
Math. 334	Linear Algebra			3 credits
Math. 480	Topics in Mathematics			3 credits

For further information contact:
 Dr. Harold E. Cox
 Director of Graduate Studies
 Franklin Hall, Wilkes College
 Wilkes-Barre, Pennsylvania 18703
 Telephone: (717) 824-4651

PRELIMINARY REGISTRATION FORM

Completion and filing of this form with the Director of Evening and Summer College, Wilkes College, Wilkes-Barre, Pennsylvania 18703, will enable the Director to determine course demand. If advance demand does not warrant giving a particular course, the prospective student filing this form will be promptly notified. The completion and filing of this form does not, in any way, obligate the prospective student.

PRE-REGISTRATION

A statement of your academic standing must be submitted by your dean or registrar prior to registration.

Name

Address

City State Zip

College or University
now attending

.....

1st Semester Course No.	2nd Semester Course No.	Evening Course No.
.....
.....

.....

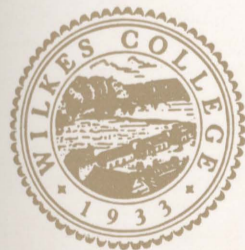
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Will you require dormitory accommodations? Yes No

WILKES COLLEGE *Bulletin*

1972-1973

Graduate
Division




WILKES-BARRE
PENNSYLVANIA

PLACE
STAMP
HERE

Wilkes College
Summer Sessions
Wilkes-Barre, Penna. 18703



 LLEWELLYN & MAHOONEY
Manufacturers of Fine Printing

ACADEMIC CALENDAR

FALL SEMESTER 1972

Graduate Registration	Wednesday and Thursday, 20 and 21 September 1972, 8 A.M. to 4 P.M.; Friday, 22 September 1972, 8 A.M. to 8 P.M.
Classes Begin	Monday, 25 September 1972
Thanksgiving Recess	Wednesday, 22 November 1972, 10 P.M. to Monday, 27 November 1972, 8 A.M.
Christmas Recess	Friday, 22 December 1972, 10 P.M. to Thursday, 4 January 1973, 8 A.M.
Last Day to submit application for January degree	Friday, 8 December 1972
Examinations	15 January to 20 January 1973

SPRING SEMESTER 1973

Graduate Registration	30, 31 January, 1 February 1973, 8 A.M. to 4 P.M.; 2 February 1973, 8 A.M. to 8 P.M.
Classes Begin	Monday, 5 February 1973
Last day to report incomplete grades for Fall Semester	Friday, 23 February 1973
Spring Vacation	Friday, 13 April 1973, 10 P.M. to Monday, 23 April 1973, 8 A.M.
Last Date to submit application for June degree	Friday, 4 May 1973
Classes End	Friday, 18 May 1973, 10 P.M.
Last day to file applications for assistantships	Friday, 18 May 1973
Examination Period	Monday, 21 May through Saturday, 26 May 1973.
Spring Semester Ends	Saturday, 26 May 1973
Commencement	Sunday, 3 June 1973
Last day to report incomplete grades for Spring Semester	Monday, 25 June 1973

The Graduate Division

General Information

The Graduate Division of Wilkes College was established in 1959 when the College Board of Trustees authorized Graduate Study in the Departments of Chemistry and Physics. The first Master of Science degrees were conferred in 1965.

The graduate programs are designed to provide the opportunity for completion of a Master's Degree in one or two years of full-time study. Cycling of graduate courses allows a full-time student to plan for continuous progress in his program.

The programs also allow businessmen, engineers, scientists, and teachers employed in the region to continue their studies without interrupting their employment. To permit a combination of work and study, many classes are scheduled to meet during late afternoon and early evening hours.

Graduate Degree Programs

Graduate degree programs are currently offered as follows:

DEGREE	CONCENTRATION
Master of Business Administration	Business Administration
Master of Science	Biology Chemistry Mathematics Physics
Master of Science in Education	Education Elementary Education English History Mathematics Biology Chemistry Physics

The programs are approved by the Pennsylvania State Department of Education.

Admission

Application Procedure

A person interested in doing graduate work at Wilkes College should contact the Director of Graduate Studies and obtain from him the forms and information needed to proceed with his application. He must fill out the "Application for Graduate Admission" form and arrange for the submission of an official transcript of all previous college work. Some departments also require letters of recommendation and Graduate Record Examination scores or the scores of other advanced tests used in their fields. The completed application and supporting documents should be in the hands of the Dean of Graduate Studies not later than one month before the student intends to begin his graduate studies at Wilkes College (two months for international students).

General Remarks Concerning Admission

As a general rule only well-qualified men and women who have completed a bachelor's degree will be considered for admission to the graduate division. It is expected that candidates for admission shall have above-average performance during their undergraduate years and shall show evidence of intellectual and temperamental fitness for graduate study.

The Graduate Record Examination is required of all applicants for admission to the graduate departments of biology and chemistry. Applicants for the M.B.A. degree must take the Admission Test for Graduate Study in Business.

All applicants for admission to graduate programs other than those listed above are recommended to take the Graduate Record Examination and to forward their scores to the college in support of their applications. If the applicant fails to satisfy the requirements of demonstrated above-average performance in his major field, the Graduate Record Examination is mandatory.

Specific departmental requirements established for each area of study are to be found herein. Each applicant should consult these requirements prior to filing an application.

A student whose background is judged to be deficient in any specific area of his field of study or whose undergraduate grades are below average may be asked to remedy the deficiency by taking one or more courses at the undergraduate level, without graduate credit.

Categories of Admission

Regular admission is granted to students who have demonstrated an acceptable level of academic work in their undergraduate program and are prepared for work at the graduate level in their field of specialization.

Provisional admission is granted to students who satisfy the general admission requirements but have undergraduate deficiencies. Each department determines its own mechanism for removal of these deficiencies before regular admission is given.

Special admission is granted to non-degree students. Admission is for one year only. A maximum of twelve credits taken while a student is on special admission status may be applied to a master's degree.

Students will be assigned academic advisors immediately upon their acceptance to the graduate division.

Seniors at Wilkes College may be permitted to enroll in certain graduate courses with the approval of the chairman of their undergraduate department and the Director of Graduate Studies. Credit for such courses will ordinarily be at the undergraduate level. Under certain conditions an undergraduate student may be permitted to register for graduate credit. In no case will a student be given both undergraduate and graduate credit for any course.

General Academic Information

Degree Requirements

Students may be awarded the Master of Science degree upon satisfaction of all general college requirements for graduation and the following specific requirements:

1. Admission to graduate study as a regular student
2. Satisfactory completion of a total of thirty credit hours, said hours to be completed within six calendar years preceding the date of the granting of the degree
3. Maintenance of a minimum average of 3.0 for all graduate work. A student who is given regular admission and who receives more than eleven credits with the grade of 2 or below, or more than three credits with the grade of 0 will be ineligible to receive the master's degree
4. Completion of specific departmental requirements
5. Completion of specific thesis requirements of the individual departments to include the following, where applicable:
 - a. Acceptance by an advisor and an Advisory Committee before completion of nine hours of graduate study
 - b. Submission and acceptance of an outline of the student's program and his tentative thesis title before the beginning of the third semester
 - c. Submission of an acceptable thesis in the required format and quantity of copies not later than May 15 preceding the commencement at which the degree is to be conferred.
 - d. Completion of arrangements for publication of the thesis, if so directed, satisfactory to the Advisory Committee

Specific departmental requirements for graduate degrees will be found under the listings of the individual departments.

Transfer Credits

A maximum of six semester hours of graduate credit taken on campus or through extension in a different but recognized institution may be transferred for credit towards the master's degree. All transfer credits must be approved by the Director of Graduate Studies and the Chairman of the department to which the student has applied for admission.

Grade Regulations

Numerical grades are given for graduate work:

- 4 — Academic achievement of outstanding quality

- 3 — Academic achievement of acceptable quality in meeting requirements for graduation
- 2 — Academic achievement of quality below the average required for graduation
- 0 — Academic achievement below the minimum required for course credit

A grade of "X" indicates assigned work yet to be completed in a given course. Except in thesis work, grades of "X" will be given only in exceptional circumstances, beyond the student's control, such as illness. In these cases, it is the responsibility of the student to notify the faculty member. Grades of "X" must be removed through satisfactory completion of all course work within four weeks of the end of the examination period. Failure to complete required work within this time period will result in the conversion of the grade to 0. Further extensions of the time allowed for completion of the work will be granted only by the Director of Graduate Studies.

Regulations For Withdrawal

A grade of W indicates an authorized withdrawal from a course. A graduate student wishing to withdraw from a course must secure a withdrawal form from the Graduate Studies Office, and have it approved by the instructor, the faculty advisor and the Director of Graduate Studies. Failure to secure authorized withdrawal for a course not completed will result in a grade of 0.

Regulations Concerning Thesis Research

All graduate students shall select a major advisor under whose direction he wishes to pursue his thesis research before completing nine hours of graduate study if a thesis is required. Following acceptance of the candidate, the advisor shall appoint two other members of the Graduate Faculty to serve with him as the student's Advisory Committee.

When a thesis is required, the student, in consultation with his Advisory Committee, shall submit to the Committee on Graduate Studies an outline and a tentative thesis title before completing more than twelve semester hours of graduate study.

Part-time students employed in laboratories on a full-time basis may be permitted to conduct their thesis research in these

laboratories if a mutually satisfactory agreement can be reached by the student, the laboratory staff, and the college. In such cases, a qualified member of the staff of the employer shall be named by the Director of Graduate Studies to serve as a member of the student's Advisory Committee. He shall also be appointed an adjunct professor of the college and shall supervise the day-to-day progress of the student's research.

Students engaged in active thesis research but not formally registered for thesis or other credit courses during a semester will be required to pay a \$10 fee to cover advisory functions. This fee does not include any which may be assessed by the individual departments for materials and/or use of equipment.

Transcripts

Transcripts are provided by the Office of Graduate Studies. They are issued only upon written request of the student, and should be requested at least three weeks prior to the date needed. The student requesting a transcript in person must present valid identification.

Transcripts given directly or mailed to students do not carry the university seal and are not official. The seal is attached only when the transcript is mailed directly from the university to another college or authorized agency.

A transcript of work completed at any college or high school other than Wilkes College must be obtained directly from that institution.

There is no charge for the first transcript requested. The student will pay one dollar for each additional transcript.

When requests for more than one transcript are given on the same order, the charge will be:

- a. One dollar for the first copy.
- b. Seventy-five cents for the second copy.
- c. Fifty cents for the third copy.
- d. Twenty-five cents for each copy thereafter.

Fees and Expenses

All payments for tuition, room and board, fees etc., are due prior to final registration.

Payment of all charges for tuition, fees, room, and board is to be made at the Finance Office, Parrish Hall, before registration. Several plans have been developed to assist students who do not have the cash in hand, and it is suggested these plans be considered when special assistance is needed. Students may consult with the Director of Financial Aid for information regarding scholarship and loan programs.

Subject to the regulations concerning refunds, the total tuition is considered fully earned by the college upon completion of registration of the student.

Tuition Cost per Semester: \$70 per credit hour.

A \$10 per credit hour scholarship will be granted to those engaged in teaching or who intend to become active in education.

Thesis Research Fee \$10 per semester.

(See under regulations concerning thesis research for information.)

Graduation Fee \$25

(Charged to all graduating students in their last semester.)

Individual departments have the right to charge laboratory and breakage fees as appropriate.

Financial Aid and Assistantships

The college has available a number of teaching and research assistantships for selected graduate students. Recipients of these assistantships will take two or three graduate courses per semester and will assist either in instructional or research work in their major departments. Applications for assistantships for the fall term must be made to the graduate school before the preceding May 15. Generally, research assistants will be able to write theses based on work done under their assistantships.

A number of counselorships in undergraduate college dormitories are available each year to graduate students. These counselorships usually carry with them remission of room costs.

Refunds

Students in good standing who withdraw from the College will receive a refund of tuition under the following conditions:

During the first six weeks of a term one-half of the tuition will be refunded upon request if the withdrawal is made for adequate and satisfactory reasons. After the first six weeks no refunds are allowed and the student is obligated for the full costs for the term.

Refund of dormitory charges will not be allowed except under conditions beyond the control of the student.

No student who is suspended or expelled shall be entitled to any refunds.

International Students

Dates of Application

All credentials must be received by the dates listed below if an applicant is to be considered for admission:

- Fall semester — By July 15
- Spring semester — By November 30
- Summer session — By April 30

Language Proficiency

All applicants who are not native speakers of English must submit scores on the Test of English as a Foreign Language (TOEFL) before they may be considered for admission. Normally, a combined score of 520 or above will be evidence of sufficient facility in the English language. Students who score between 450 and 520 may be admitted with the provision that they take a special course in English as a second language. This course does not carry graduate credit. Wilkes College does not have facilities for dealing with those whose knowledge of the English language is weak and normally cannot admit anyone scoring below 450.

Credentials

Because of extreme shortages of space and funds, Wilkes College can accept only those international applicants with especially high qualifications. Some graduate programs, for example, are able to consider only students with first class or honors degrees.

Immigration Regulations

The Immigration and Naturalization Service of the United States Department of Justice requires a certificate of eligibility (Form I-20A) to be initiated by the university and completed by the student prior to his application for a student visa to study in this country. Any extension of stay or employment while in the United States must have prior approval of the regional office of the Immigration and Naturalization Service.

Economic Considerations

Total expenses for one academic year at Wilkes College will be approximately \$3,000. All graduate programs take longer than one academic year. The minimum would be a year and a summer session. In most cases three full semesters would be required as a minimum and in many cases two full years would be devoted to working for a master's degree. The student should therefore be prepared to spend as much as \$6,000, in addition to transportation, on his graduate education at Wilkes College.

Fellowship and assistantship money is extremely limited and in many cases is not available to international students because of legal restrictions.

Confirmation of Acceptance

All entering international students must inform the Dean of Graduate Studies by the following deadlines of their intention to accept or decline admission to Wilkes College:

- Fall semester — By August 15
- Spring semester — By December 31
- Summer session — By May 31

Arrival Dates

The required dates of arrival for 1972-1973 are given below. Immediately upon his arrival the student should contact both his Graduate Studies Director and the Foreign Students' Advisor.

Fall semester, 1972 — 22 September 1972
Spring semester, 1973 — 1 February 1973

Additional Courses

Students may be required to take certain courses for undergraduate credit not applicable to the master's degree. In some cases these courses will be specified in the admissions letter but a Graduate Program Director may make additional requirements if a student is found to be deficient in the English language or in background knowledge in his field.

Foreign Students' Advisor

The Dean of Student Affairs, 2nd floor, Weckesser Hall, serves as advisor on nonacademic matters to all international students. Services provided include counseling on housing, visa problems and other difficulties in adjusting to life in the United States. All international students should register with the Foreign Students' Advisor as soon as they arrive.

Accounting

See under Business Administration, page 21.

Biology

Master of Science

Master of Science in Education

Admission

An applicant for the M.S. degree in biology must present at least twenty-four undergraduate credits in biology, regardless of the major in which his Baccalaureate Degree was granted.

The candidate must have credits for at least one year of physics and two years of chemistry. A working knowledge of calculus is also required. Applicants deficient in any of the above requirements must take the courses for no credit in the undergraduate school.

An applicant for the M.S. in Education must present at least forty undergraduate credits in biology and related sciences.

All applicants must take the Graduate Record Examination and forward scores in support of their application.

Students deficient in any of the above may at the discretion of the Biology Department and the Director of Graduate Studies be granted provisional admission.

Degree Requirements

Two graduate programs are offered in biology leading to the degree of Master of Science, or Master of Science in Education with major in biology. Information on requirements for the Master of Science degree is given below. Requirements for the Master of Science in Education with major in biology are listed under Education on page 29.

The program leading to the Master of Science Degree in Biology includes three distinct requirements: course work, independent laboratory research, and a reading knowledge of one foreign language.

A candidate for the Master of Science Degree in Biology must have a minimum of eighteen 400-level credits for graduation. These 400-level credits will include six for thesis. A maximum of nine 300-level credits will be allowed. A candidate must have completed three credits in biochemistry or must take them at the college for credit.

The candidate must demonstrate a reading knowledge of a foreign language, either through examination or by successful completion of two years of language in undergraduate school.

Following completion of eighteen of the twenty-four required credit hours of course work, a graduate student may make a written request of his advisor to take the comprehensive examination on the fundamental principles of biology.

A graduate student in the Department of Biology is considered to be a candidate for the degree, Master of Science, after he has completed 24 credit hours of course work, fulfilled the language requirements, has passed the comprehensive written examination, and submitted the outline of his thesis.

To qualify for the degree a candidate must present an acceptable thesis and must pass an oral examination in the subject area of his research.

Courses of Instruction

Biology 311 Bacteriology. 3 credits

Biology 311 covers generally the morphology and identification of bacteria. Laboratory work includes microscopy, techniques of making media, methods of sterilization, and the culturing of bacteria. Fee: \$20.

Biology 312 Bacteriology. 3 credits

Biology 312 covers the relationship of bacteria to disease, immunity, serology, and the pathogenic organisms. Laboratory work continues with special stains, identification of unknowns, isolation of bacteria from natural sources, and techniques used in applied bacteriology. Class, two hours a week; laboratory, six hours a week. Fee: \$20.

Prerequisite: Biology 311.

Biology 321 Genetics. 3 credits

Genetics is the study of the inheritance of normal characters and the variation of those characters in plants and animals. The laboratory work concerns primarily studies of inheritance in the fruit fly. Class, two hours a week; laboratory, three hours a week. Fee: \$20.

Biology 322 Ecology. 3 credits

Ecology is the study of the relationship between organisms, singly and collectively, and their environments, including the biotic and physical factors of the environments. Class, two hours a week; laboratory and field trips, three hours a week. Fee: \$20.

Biology 331 Physiology. 3 credits

Physiology is the study of the physical and chemical activities characteristic of all living organisms. Laboratory work includes experiments involving living forms. Class, two hours a week; laboratory, six hours a week. Fee: \$20.

Biology 332 Evolutionary Mechanisms. 3 credits

Evolutionary Mechanisms is a study of how new species of organisms are derived from previously existing species. Emphasis is placed upon the processes of organic evolution and the development of the evolutionary ideas. Lecture, three hours a week.

Prerequisite: Biology 321 or permission of instructor.

Biology 402 Cell Biology, Embryogenesis, and Differentiation. 3 credits

Advanced study of current experiments, problems, and concepts in embryonic development with emphasis on the following topics: cytology, gametogenesis, fertilization, cleavage, comparative gastrulation, differentiation, and regeneration. Experimental laboratory work is available under Special Topics.

Biology 411 Physiology of Bacteria. 3 credits

This course includes such topics in advanced bacteriology as: cell structure, nutrition, metabolism, and factors which influence the rates of growth, fermentation, and death.

Prerequisites: one semester of bacteriology, bio-chemistry.

Biology 421 Current Concepts in Genetics. 3 credits

Developments in genetics are studied by means of a review of the current literature. Topics include gene structure and function.

Prerequisite: undergraduate genetics.

Biology 422 Advances in Ecological Research. 3 credits

This course will consist of a review of selected contemporary ecological topics. Areas to be covered will include: population dynamics, prey-predator relationships, competition, the ecological niche, and human ecology. These areas will be discussed with reference to a review of selected ecosystems.

Biology 432 Comparative Physiology. 3 credits

An analysis of life processes in invertebrate and vertebrate animals with readings, discussions, and demonstrations. Nerve excitation, muscle contraction, and humoral mediation of synapses are emphasized.

Prerequisite: undergraduate physiology.

Biology 441 Immunology and Immunochemistry. 3 credits

This course is concerned with the biologic mechanisms and chemistry of reactants and mediators associated with natural and acquired states of immunity, tissue and blood serum responses to infection and immunization, and related patho-physiologic alterations of hypersensitivity phenomena in vertebrate animals and man. A background in microbiology, physiology, and biochemistry is advisable. Students lacking formal prerequisite courses but who are otherwise qualified in biology or chemistry may register through special arrangement with the instructor.

Biology 451 Invertebrate Biology. 3 credits

The classification and biology of the invertebrate organisms with special emphasis on protozoa, helminths, mollusca, and arthropoda. Parasitic and free living forms will be studied.

Prerequisite: undergraduate zoology.

Biology 460 Selected Topics in Biology. 1 to 3 credits each semester

Selected topics in biology which are of special interest to the Staff and are designed to complement research.

Biology 590 Thesis 6 credits

Chemistry

Master of Science Master of Science in Education

Admission

For admission to graduate study in chemistry, the applicant shall have a Baccalaureate Degree in Chemistry from an accredited institution or the equivalent. Requirements include courses in physical chemistry and qualitative organic analysis, as well as one advanced chemistry course. A working knowledge of calculus and ordinary differential equations is also required. Students deficient in any phase of chemistry may, at the discretion of the Chemistry Faculty, be granted provisional admission.

All applicants must take the Graduate Record Examination and forward scores in support of their application. Foreign students must also supply TOEFL scores.

Degree Requirements

Two graduate programs are offered in chemistry leading to the degree of Master of Science or Master of Science in Education with major in chemistry. Information on requirements for the Master of Science degree is given below. Requirements for the Master of Science in Education with major in chemistry are listed under Education on page 29.

All candidates for the Master of Science Degree in Chemistry are required to complete satisfactorily Chemistry 411, 431, and 440. A minimum of 18 credits in 400- and 500-level graduate chemistry courses is required, exclusive of dissertation credit. The remainder of the required credits may be obtained in 400- or 500-level graduate biology, physics, or mathematics courses, with 300-level courses in these departments acceptable only on specific petition to the chemistry department.

Chemistry courses listed below at the 300-level are only available to those candidates for the M.S. degree in Secondary

Education or other M.S. candidates with approval of their department.

Departmental requirements in chemistry allow two options with respect to the dissertation. It may be on an original research problem, or it may be a critical survey and evaluation of the literature on a specified subject. In the first instance, 24 hours of course work are required, and six hours credit is allowed for research. No graduate credit is allowed for the second option. Therefore, 30 credit hours of course work are necessary to fulfill the degree requirements. The research thesis is strongly recommended.

Courses of Instruction

Chemistry 341 Elementary Physical Chemistry.

3 credits

The first, second, and third laws of thermodynamics are emphasized. The topics of electrochemistry, chemical kinetics, the phase rule, and the states of matter are introduced. Class, three hours a week; laboratory (optional), three hours a week. Breakage deposit required. Fee: \$20.

Prerequisite: Permission of instructor.

Chemistry 342 Intermediate Physical Chemistry.

3 credits

Electrochemistry, electrokinetic phenomena, kinetic molecular theory, statistical mechanics, chemical kinetics, and the states of matter are studied in detail. Quantum mechanics and radiochemistry are introduced. Class, three hours a week; laboratory (optional), three hours a week. Breakage deposit required. Fee: \$20.

Prerequisite: Permission of instructor.

Chemistry 352 Biochemistry.

3 credits

A study of the nature and metabolism of proteins, carbohydrates, lipids, and other physiological substances. Emphasis is placed on the mechanism of enzymatic catalysis. Class, three hours a week.

Prerequisite: Permission of instructor.

Chemistry 376 Advanced Analytical Chemistry.

3 credits

The theory and application of modern techniques and instructional procedures, such as spectrophotometric, electroanalytical, and chromatographic. Theory and practice of analysis of more complex materials. Class, two hours a week; laboratory, six hours a week. Breakage deposit required. Fee: \$20.

Prerequisite: Chemistry 342.

Chemistry 411 Advanced Inorganic Chemistry.

3 credits

Systematic chemistry of the elements, introduction to ligand field theory, chemistry of the first transition series and π - acceptor compounds.

Chemistry 431-432 Advanced Organic Chemistry I and II.

3 credits each

A detailed study of modern theories of mechanism and structure. Topics include nucleophilic and electrophilic substitution, elimination reactions, molecular rearrangements, carbonyl reactions, stereochemistry, kinetics.

Chemistry 440 Quantum Chemistry.

3 credits

The experimental foundations and the mathematical formulation of the quantum theory, including the quantum mechanics of simple systems, the hydrogen atom, and approximate methods. The use of symmetry properties is applied to molecular orbital theory.

Chemistry 516 Selected Topics in Inorganic Chemistry.

(Offered on sufficient demand) 3 credits

Selected topics in Inorganic chemistry which are of special interest to the Staff and are designed to complement research.

Chemistry 531 Stereochemistry.

3 credits

A detailed study of symmetry classifications, stereoisomerism, optical activity and conformational analysis, including related theory and experimental applications of ORD, CD, and NMR.

Chemistry 536 Selected Topics in Organic Chemistry. 3 credits

Selected topics in organic chemistry which are of special interest to the Staff and are designed to complement research.

Chemistry 541 Chemical Thermodynamics and Statistical Thermodynamics. 3 credits

The First, Second, and Third Laws of thermodynamics are studied in detail. Statistical thermodynamics is also thoroughly treated, using the Fermi-Dirac, Bose-Einstein, and Maxwell-Boltzmann statistics.

Chemistry 542 Spectroscopy. 3 credits

The theory of absorption and emission of radiation, including microwave, Raman, and infrared spectra of molecules and electronic spectra of atoms and molecules. Other topics may include magnetic resonance spectroscopy, Mossbauer spectroscopy, and fluorescence and phosphorescence spectroscopy.

Chemistry 544 Kinetics. 3 credits

A review of the analysis of kinetic results and the measurement of reaction rates. Emphasis is placed on the theoretical interpretation of elementary gas phase reactions, liquid solution kinetics, rapid reactions, and enzyme kinetics.

Chemistry 546 Selected Topics in Physical Chemistry. (Offered on sufficient demand) 3 credits

Selected topics in physical chemistry which are of special interest to the Staff and are designed to complement research.

Chemistry 590 Thesis. 6 credits

Business Administration

Master of Business Administration

The curriculum leading to the Master of Business Administration Degree provides an opportunity for specialization in a selected field but is concerned mainly with advanced study of broad business concepts and relationships. The purposes are:

1. to develop professional managers with emphasis on the foundation, organization, operation, and control of business enterprises;
2. to develop individuals trained in research and constructive business leadership.
3. to enable individuals to create and evaluate alternative courses of action as a procedure for making decisions.

Admission

A candidate for the M.B.A. degree who is a graduate of an approved college or university and who has had basic courses in accounting, business law, corporation finance, economics, marketing, money and banking, and statistics will probably have an adequate background to complete requirements for a degree in two years.

Background Undergraduate Course Requirements for Candidates in Master of Business Administration Program:

Accounting	1 year
Business Law	1 semester
Economics	1 year Principles 1 semester Micro Theory
Statistics	1 year of Math or 1 year of Statistics
Corporation Finance	1 semester
Money and Banking	1 semester
Marketing	1 semester

The program is designed to provide business education at the master's level not only for those who have had undergraduate training in business and economics, but also for interested engineers, scientists, and others who have a minimum amount of background education in this area. For those who have background deficiencies, pre-seminar courses are listed. These courses are intended to provide the necessary background and also act as refresher courses for those who have been away from formal coursework for a number of years.

All candidates for this degree are required to take the Admission Test for Graduate Study in Business.

Each student upon admission to the program will be assigned an adviser to guide him in the program.

Degree Requirements

All candidates for the Master of Business Administration Degree are required to complete satisfactorily Economics 501, Business Administration 502, Accounting 503 or Accounting 504, Economics 505, Economics 506, and Business Administration 507. A total of 30 credits of graduate work in 500-level courses is required.

A graduate student in Business Administration is required to pass successfully a written comprehensive examination covering the broad field of business administration. This examination is given once during the fall semester and once during the spring semester.

Students who are registered for or plan to complete their final graduate course work for the Degree of Master of Business Administration during the next semester may take this examination. A student who fails the comprehensive examination may retake it only once.

Courses of Instruction

BUSINESS ADMINISTRATION

Approval of the instructor and faculty adviser is a prerequisite for all courses.

Economics 473-4 Pre-Seminars (no graduate credit)

Seminars which provide review and training to a minimal level, on the current state of knowledge in respective fields.

CORE COURSES (18 semester hours required)

Economics 501 Managerial Economics 3 credits

Problems of the firm. Price and output determination with analysis of cost and demand functions in markets of various types and under various conditions of business. The course will deal with the application of economic theory to business practice.

Business Administration 502 Management Science 3 credits

This course familiarizes the student with the general field of management theory. It surveys the current literature and practice. It is designed to give a broad view of management as a science and art.

Accounting 503 Managerial Accounting 3 credits

A thorough examination of financial statements and uses of accounting data for effective managerial planning and control. Topics include valuation factors; cost, expense and revenue concepts; cost control; capital expenditure planning; the price-level problem and other decision-making guides.

Accounting 504 Accounting Theory and Thought 3 credits

Analysis of the development of modern accounting concepts; interpreting and effectively communicating data based upon the relationship of modern accounting concepts and related economic considerations.

Economics 505 Managerial Statistics 3 credits

An introductory graduate course in techniques, limits, and areas of application of statistical techniques.

Economics 506 Labor-Management Economics 3 credits

A course dealing with issues and trends in collective bargaining and industrial relations today. The shifting roles and relationships of labor management and government will be dealt with. Problems of maintaining the labor force and the social aspects of industry will be dealt with.

Business Administration 507 Business and Society 3 credits

This course deals with the problems of the responsible business manager in a private enterprise society, particularly those problems dealing with policy-making and administration when both economic and non-economic factors are involved. Questions are raised as to the kinds of responsibility and the extent of responsibility business managers have to the goals of our society, to the communities in which they operate, to the people they employ, and to governmental policies, as well as to the stockholders of their own firms.

I MARKETING SPECIALIZATIONS

Business Administration 511 Modern International Commerce 3 credits

This course is designed to introduce the student to the practical principles and methods of international marketing. Subjects covered will include the development and management of exports and imports, channels of trade, the mechanics of international finance, foreign credits, technical procedures and documentation, and the legal aspects of trade.

Business Administration 512 Price Policy and Procedure 3 credits

This course describes the basic pricing process, relates it to pricing decisions, and attempts to provide a systematic pricing

program for managers to follow. Topics covered will include internal and external factors in pricing decisions, legal and ethical aspects of pricing, normative pricing models, and the special problems of manufacturers and distributors.

Business Administration 513 Human Behavior and the Marketing Process 3 credits

This course deals with the behavior of man in social groupings and as an individual entity. Processes such as learning, perception, motives, personality, and intelligence will be studied particularly as they relate to marketing problems and procedures.

Business Administration 514 Market Research and Experimentation (Seminar) 3 credits

This course deals with the experimental techniques that can be applied to the planning, execution, and analysis of marketing problems. Modern concepts of statistical decision theory and survey techniques are included.

II MANAGERIAL SCIENCE

Business Administration 521 Organizational Theory 3 credits

This course is concerned with the human relations aspects of organizations. It draws on the newer research in organization theory to analyze groups and individual behavior. It gives emphasis to the problems of managers at different levels of responsibility in regard to leadership, mobilization of resources, rationalization, planning, motivation, and dynamic administration.

Business Administration 522 Quantitative Aspects of Management 3 credits

This course examines the quantitative aspects of management. It analyzes the optimization of management decisions in the operation of the firm. It applies the new tools and techniques of game theory, linear and non-linear programming, input-output analysis, and other mathematical and statistical approaches to operational problems faced by the firm.

Business Administration 523 Management Seminar I 3 credits

This seminar brings to bear current management techniques on a variety of problems. Students will be guided in theoretical readings and will apply their knowledge in seminar discussions.

Business Administration 524 Management Seminar II 3 credits

This seminar has a research orientation. Research, objectives, techniques, and methodology will be dealt with.

Business Administration 572 Management Development Seminar. 3 credits

This seminar area will deal with techniques of management training, problems, pitfalls, objectives, and the current state of the art.

III LABOR

Economics 531 Industrial Relations and the Law 3 credits

An in-depth study of labor legislation both federal, state, and local. Emphasis will be placed on recent N.L.R.B. decisions and precedents.

Economics 532 Wage Determination and Administration 3 credits

A study of economic and institutional forces determining wages. Wage theories are analyzed. Problems of wage administration will be dealt with.

Economics 533 The Labor Market 3 credits

Economic and non-economic forces influencing labor supply and demand will be studied. Determinants of the labor force, unemployment, labor mobility, and the functioning of the labor market will be investigated.

Economics 534 Labor Seminar 3 credits

This seminar deals with current issues and theoretical concepts in industrial relations.

Economics 571 Labor-Management Seminar 3 credits

This seminar will deal with labor-management conflict and successful problem-solving techniques. The orientation and approach will be that of the concerned public.

IV ACCOUNTING

Accounting 541 Advanced Problems 3 credits

A comprehensive review of technical and professional accounting problems. Review of the structure and content of the Uniform C.P.A. examination.

Accounting 542 Financial and Tax Planning 3 credits

Analysis of federal tax regulations and interpretations. Stress will be placed upon the timing of business transactions and the tax implication in choosing financial alternatives.

Accounting 543 Accounting Policies and Practices 3 credits

This course considers the ethical questions and legal implications in the performance of the accounting function; reporting data to management, governmental agencies, and other interested parties.

Accounting 544 Controllership 3 credits

Review of the controllership function and the role of the controller in the planning and coordination of the large business organization. Attention will be directed to the effective use of accounting information and facilities.

Accounting 545 Professional Seminar 3 credits

Discussion of current accounting research, literature and theory, consideration of the role of the accountant in management advisory services.

V FINANCE

Business Administration 551 Investment and Portfolio Management 3 credits

A study of the various types of corporation and government securities coupled with an examination of the machinery of investment. Particular emphasis will be given to the investment alternatives relating to portfolio management decisions.

Business Administration 552 Financial Management 3 credits

A study of financial management problems of business. Attention is given to the control of current funds, working capital operations, and estimating the need for funds; the problem of long-term capital funds and expansion, and the choice between risk and profitability in the capital structure are also considered.

Business Administration 554 Managerial Finance Seminar 3 credits

Problems in managerial finance. Special topics.

Business Administration 590 Thesis 3 or 6 credits

Education

Master of Science in Education

Purpose

Graduate study in Education is offered primarily to enable teachers to enhance their preparation for classroom leadership. Study in various academic fields is required as well as in professional courses. Sufficient flexibility is provided, however, to permit others interested in education to arrange programs of study appropriate to their interests.

Programs are offered in Education, Elementary Education, and Secondary Education, with major in Biology, Chemistry, English, History, Mathematics, or Physics.

Special Features of the Program

The program is arranged so that students may pursue the degree on a full- or part-time basis. Late afternoon and evening classes are offered to enable full-time teachers within a reasonable distance from Wilkes-Barre to take courses toward fulfillment of degree requirements during the academic year. Credits may also be earned during the summer sessions.

Admission

For admission to graduate study in education, the applicant must have a baccalaureate degree from an accredited institution or the equivalent with an appropriate major.

Applicants who wish to pursue master's work in secondary education must satisfy academic departmental requirements as well as requirements of the Education Department.

Applicants who wish to pursue master's work in elementary education must present adequate preparation in academic disciplines as well as satisfy requirements of the Education Department.

Students deficient in any phase of requirements may, at the discretion of the academic department, the Education Department, and the Director of Graduate Studies, be granted provisional admission. Deficiencies must be made up satisfactorily before full admission to graduate study will be granted.

Degree Requirements

All candidates for the Master of Science in Education degree must complete a program of thirty credits; at least twelve credits must be in education, six in Area I and three in Area II.

A candidate for the Master of Science in Education degree who majors in one of the secondary school teaching subjects must complete eighteen credits in the appropriate academic department; three of the twelve credits in education must be in Area IV.

A candidate for the Master of Science in Education degree who majors in elementary education must take three courses in the Education 532 series and Education 534.

A candidate for the Master of Science in Education degree who majors in education must take Education 522, must earn nine credits in one Area in education beyond the twelve-credit basic requirement, and must complete a thesis for which three credits may be granted.

Certification courses in Area 0 are not accepted for degree requirement credit. Transcripts will show credit for these courses for certification purposes only.

Program of Study

Each student develops a program of study which will satisfy requirements for the degree. The program must be approved by his advisor and by the Education Department. To facilitate securing this approval, students in secondary education are assigned a co-advisor in the Education Department.

Courses of Instruction

EDUCATION

AREA 0 – CERTIFICATION COURSES

Education 400 General Secondary School Methods. 3 credits

An introduction to principles, methods, and materials appropriate for secondary school instruction. Required for interim certification.

Education 401-02 Elementary Classroom Methods.
3 credits each semester

An introduction to principles, methods, and materials appropriate for elementary school instruction. Education 401 is prerequisite to 402.

Prerequisite: Interim certification.

Education 403-04 Intern Teaching.
3 credits each semester

Beginning teachers holding the interim certificate are assigned to supervisors who work with them to facilitate their introduction to classroom teaching.

Prerequisite: Interim certification.

Section A Elementary
Section B Secondary

Education 405 Introduction to Reading Instruction.
3 credits

A foundations course in reading instruction.

AREA I – FOUNDATIONS OF EDUCATION

Education 510 Psychological Foundations of Education. 3 credits

A study of human development and learning, application of psychological principles in the practice of education.

Education 511 Philosophical Foundations of Education. 3 credits

An examination of philosophical issues which bear upon American education. The problem of relating theory to practice is considered.

Education 512 Social Foundations of Education.
3 credits

An introduction to the history, scope, materials and methods of the sociological analysis of education. Instruction includes the concepts of culture, socialization, stratification, social control and change as they relate to formal education.

Education 513 Comparative Foundations of Education. 3 credits

An analytic study of educational patterns in contemporary societies. Educational policies and institutions are studied in their cultural context. Educational patterns of developed and developing nations are described, analyzed and compared; examples from each pattern are examined.

Education 514 Historical Foundations of Education. 3 credits

A survey of the great landmarks of Western education from antiquity to the recent past. The development of primary, secondary, and higher education; objectives; curricula; methods; and systems of education are considered. Attention is given to some contemporary problems in their historical perspectives.

Education 515 Educational Planning in Developing Nations 3 credits

An analytical study of educational patterns in developing nations. Educational systems are described, analyzed and compared with particular attention to planning and system analysis.

AREA II — PROFESSIONAL SKILLS IN EDUCATION

Education 520 Tests and Measurements. 3 credits

Study of characteristics, construction, and use of various standardized and non-standardized measuring instruments; statistics through basic correlation.

Education 521 Statistics in Education. 3 credits

Correlation and regression through statistical inference.
Prerequisite: Education 520 or equivalent.

Education 522 Research in Education 3 credits

An introduction to research, techniques for gathering and presenting data.
Prerequisite: Education 520 or equivalent.

AREA III — ELEMENTARY EDUCATION

Education 430 Developmental Reading 3 credits

An advanced course in techniques and materials of reading instruction.
Prerequisite: Education 405 or equivalent.

Education 436 Children's Literature 3 credits

A study of methods and materials appropriate for elementary school instruction in literature.

Education 530 Diagnosis and Correction of Reading Difficulties. 3 credits

A study of methods and materials for detection, analysis, and remediation of reading disabilities.
Prerequisite: Permission of the instructor.

Education 531 Practicum in Reading Instruction. 3 credits

This course places students in a clinical setting for detection, analysis, and remedial instruction of children with reading disabilities.
Prerequisite: Permission of the instructor.

Education 532-33 Problems in Elementary Education. 3 credits

Advanced study of materials and methodology appropriate for elementary classroom instruction.

- Section A Mathematics
- B Science
- C Language Arts
- D Social Studies
- E Special Subjects

Education 534 Elementary School Curriculum. 3 credits

A study of curricula offered in elementary schools, grade placement of content, articulation of subject matter areas, development of specialized programs.

Education 535 Nongraded Instruction in the Elementary School. 3 credits

A study of the rationale for nongrading, the nongraded curriculum, and instructional staffing design.

Prerequisite: Permission of the instructor.

Education 539 Seminar in Elementary Education. 3 credits

An advanced course dealing with some significant issues selected by the instructor. The seminar technique provides a review of major problems based on the current level of knowledge in the area.

AREA IV – SECONDARY EDUCATION

Education 540 Special Methods in Secondary School Instruction. 3 credits each semester

- | | | | |
|-----------|-----------------------|---|---------------------|
| Section A | Biology | | |
| B | Chemistry | | |
| C | Environmental Science | | |
| D | English | | |
| E | History | H | Reading |
| F | Mathematics | I | Social Sciences |
| G | Physics | J | Educational Theater |

Education 541 Secondary School Curriculum. 3 credits

A study of secondary school curricula, traditional programs, recent developments, provisions for innovation and individualization.

Education 542 Extra-curricular Activities. 3 credits

A study of the development of extra-curricular activities, organization and administration, the role of the sponsor, recent trends.

Education 549 Seminar in Secondary Education. 3 credits

An advanced course dealing with some significant issues selected by the instructor. The seminar technique provides a review of major problems based on the current level of knowledge in the area.

Prerequisite: Permission of instructor.

AREA IX – ADVANCED GENERAL COURSES

Education 590 Thesis 3 credits

Education 595-96 Workshop 3 credits each semester

Provides an opportunity for experienced teachers to develop study programs designed to meet their special needs. Students may receive credit more than once if there is no duplication in subject matter covered.

Education 597-98 Independent Study 3 credits each semester

Affords an opportunity for independent study of selected topics under faculty supervision.

English

Master of Science in Education

Courses of Instruction

Special Degree Requirements

Information on requirements of the Education Department for the Master of Science in Education, major in English, will be found under Education on page 29.

The Department of English requires that all candidates upon completion of eighteen hours of course work in English successfully pass a written examination based on a reading list developed by the candidate and his academic advisor.

English 310 Medieval English Literature. 3 credits

A study of English literature to 1500, exclusive of Chaucer and the drama.

English 320 Tudor Prose and Poetry. 3 credits

Study of English non-dramatic literature from 1485 to 1603.

English 321 Early English Drama. 3 credits

Study of the drama from the tenth century to 1642; reading of plays by pre-Elizabethan and Elizabethan dramatists exclusive of Shakespeare.

English 330 Milton and the Seventeenth Century. 3 credits

A study of the non-dramatic literature of the period with special emphasis on the poetry of John Milton.

English 341 Restoration and Eighteenth Century Drama. 3 credits

Study of the drama from 1660 to 1780.

English 343 Eighteenth Century Prose and Poetry. 3 credits

The chief poets and essayists of the eighteenth century. Includes Swift, Pope, and Johnson.

English 345 Early English Novel. 3 credits

English prose fiction of the sixteenth and seventeenth centuries; rise of the novel to the close of the eighteenth century.

English 354 Romantic Prose and Poetry. 3 credits

Study of Wordsworth, Coleridge, Shelley, Keats, and Byron, with related prose writers of the Romantic Period.

English 360 Victorian Prose and Poetry. 3 credits

Readings in Tennyson, Browning, Arnold, and other significant writers of the Victorian Age.

English 366 Later English Novel. 3 credits

The major novelists of the nineteenth and early twentieth centuries.

English 370 Modern Poetry. 3 credits

Study of the major English and American poetry of the twentieth century.

English 372 Modern Novel. 3 credits

Study of the major English and American novels of the twentieth century.

English 374 Modern Drama. 3 credits

Study of important dramatists, European and American, from the time of Ibsen.

English 400 Introduction to Research. 3 credits

An introductory course in research and bibliography designed to acquaint the graduate student with the resources and procedures used in literary research.

English 405 Studies in Linguistics. 3 credits

A study of generative transformational grammar as developed by Chomsky, Lees, and others resulting from work done by Harris and other structuralists.

English 410 Studies in Medieval Literature. 3 credits

The study of selected topics in Medieval English literature.

English 420 Studies in Renaissance Literature. 3 credits

A study of selected major figures of the English Renaissance.

English 440 Studies in Restoration and Eighteenth Century Literature. 3 credits

A study of selected topics in English literature from 1660 to 1800.

English 450 Studies in Romantic and Victorian Literature. 3 credits

A study of selected major English prose and poetry of the nineteenth century.

English 470 Studies in Modern British Literature. 3 credits

A study of selected major British authors of the twentieth century.

English 480 Studies in American Literature. 3 credits

A study of selected major movements and figures in American literature from the Puritans to contemporary authors.

English 497 Seminar in Special Problems. 1 to 3 credits

This course is designed for intensive research in any specific area of English or American literature.

Environmental Science

These courses may be taken by special students or may be applied towards graduate degrees offered by other departments. Students planning to apply these credits towards degree programs should secure the approval of their academic advisor prior to inclusion in their course of study.

Courses of Instruction

Environmental Science 401-402 Topics in Environmental Science I and II 3 credits each

A variety of geophysical processes are studied with special attention given the relevant mathematics and physics used in their analysis and description. Topics may include motion in a gravitational field, kinetic theory, hydrostatic stability, geochronology, radiative transfer processes, frictional boundary layer, and condensation and precipitation processes.

History

Master of Science in Education

Special Degree Requirements

Candidates for the degree of Master of Science in Education, major in history, must take at least nine hours of their work in courses numbered 371 or above. History 371 and Anthropology 397 are strongly recommended. The remaining hours must be chosen from among courses numbered 300 or above.

Information on requirements of the Education Department for the Master of Science in Education, major in history, will be found under Education on page 29.

Courses of Instruction

History 321-322 American Social and Intellectual History 3 credits each semester

A study of social and intellectual developments in the United States from the colonial period to the present time. During the first semester emphasis will be placed on the influence of the American environment during the colonial period and of expansion and sectional disputes in the federal period upon society and upon religious, economic, and political thought. During the second semester the influences of industrialization, the rise of nationalism, and the emergence of the United States as a World Power will be emphasized.

History 327-328 History of the Foreign Policy of the United States. 3 credits each semester

A study of the evolution of the several policies that give direction to the relations of the United States with other nations.

History 331 Colonial America. 3 credits

Discovery, exploration, and settlement; development of social, political, religious, and intellectual institutions; independence and political reorganization.

History 332 The National Period (American History) 3 credits

A study of the political and economic history of the United States from 1783 to 1865. Special attention will be given to the

evolution of sectional differences and the culmination of these differences in intersectional warfare.

History 333 The Age of Big Business. 3 credits

A study of the political and economic history of the United States from 1865-1914. Special attention will be paid to the period of congressional dominance and the restoration of presidential power at the turn of the century; the economic, social, and political consequences of the industrial revolution; and the rise of urban America.

History 334 Twentieth Century America. 3 credits

The emergence of the United States as an industrial, urban world power and the corresponding development of its political, economic, social, religious, and intellectual institutions.

History 353-354 Early Modern Europe 1648-1815 3 credits each

Topics include the absolutism of Louis XIV, the growth of Brandenburg-Prussia, the French Revolution and French Empire, the economic forces of mercantilism, and the early Industrial Revolution. The growth of science and the Enlightenment will receive careful attention.

History 355 Europe in the Nineteenth Century. 3 credits

A study of the political, social, and cultural development of Europe from the Congress of Vienna to World War I.

History 356 Europe in the Twentieth Century. 3 credits

Against a background of the internal and international developments of the leading powers, the class will study the origins and results of the two World Wars.

History 357 History of Russia to 1815. 3 credits

A brief review of demographic and geographic factors will

be used as background for a study of the political, social, and intellectual history of Russia from early times to 1815.

History 358 History of Modern Russia 3 credits

A thorough examination of nineteenth century Imperial Russia will serve as a basis for a detailed study of the development of Russia in the twentieth century. Emphasis will be on the origins and political, social, and cultural evolution of the Soviet State from its inception to the present.

History 371 Historiography 3 credits

An introduction to the aims, methods, and accomplishments of some of the most renowned historians of Europe and America.

Prerequisite: Approval of the instructor.

History 381 Colonial Latin America 3 credits

A survey of Latin American History from ancient times to 1820.

History 382 Latin America Since 1820 3 credits

A survey of Latin American History since 1820. Includes the evolution of independent national governments and international relations, particularly with the United States.

History 395-396 Independent Research.
1 to 3 credits per semester

Independent study and research for advanced students in the field of the major under the direction of a staff member. A research paper at a level significantly beyond a term paper is required.

Prerequisite: Approval of the department chairman.

Sociology 397 Seminar in Anthropology 3 credits

Presentation and discussion of selected topics.

History 497 Seminar in American and/or European History 3 credits per semester

Presentations and discussions of selected topics.

Prerequisite: Approval of the instructor.

Mathematics

Master of Science Master of Science in Education

The course of study is intended for:

- Students who plan to continue their studies beyond the master level
- teachers of secondary or junior college mathematics who seek to strengthen their subject-matter competence, and
- persons seeking a terminal master degree to further their career in industry or government.

Admission

An applicant should have a baccalaureate degree from an accredited college or university. He is expected to have completed courses in advanced calculus and in modern and linear algebra. Students with a weak mathematical background may be required to make up certain deficiencies before being admitted to candidacy.

Degree Requirements

Two graduate programs are offered in mathematics leading to the degree of Master of Science or Master of Science in Education, major in mathematics. Information on requirements for the Master of Science degree is given below. Requirements for the Master of Science in Education degree with major in mathematics are listed under Education on page 29.

Thirty credits of approved courses are required. All candidates are required to complete Math. 311-312, 331, and 334, or the equivalent, if they have not done so as an undergraduate. At least six credits, exclusive of those for the thesis, must be in courses numbered above 500. No more than twelve credits of the 300 level courses may be applied toward this degree.

Courses of Instruction

Mathematics 311-312 Functions of a Real Variable I and II 3 credits each

Topological preliminaries for analysis, sequences and series of functions, Riemann-Stieltjes integral, introduction to the Lebesgue integral, Fourier series.

Mathematics 314 Functions of a Complex Variable 3 credits

Complex functions, limit and continuity, analytic functions, Cauchy's integral theorem and formula, power series, Laurent expansion, residues.

Mathematics 331 Introduction to Abstract Algebra I 3 credits

A study of elementary number theory, groups, rings, and fields.

Mathematics 334 Linear Algebra 3 credits

Vector spaces, linear transformations, matrices, determinants, inner products, bilinear and quadratic forms, matrix polynomials.

Mathematics 343 Introduction to Geometry 3 credits

A study of selected topics from Euclidean geometry, affine geometry, projective geometry, and convexity.

Mathematics 351-352 Probability and Mathematical Statistics I and II 3 credits each

Random variables, probability distributions, expectation and limit theorems, estimation, testing statistical hypotheses, confidence intervals.

Mathematics 364 Numerical Analysis 3 credits

Numerical methods of differentiation, integration, solution to equations and of differential equations with emphasis on problems that lend themselves to solution on computers.

Mathematics 413 Functions of Several Variables 3 credits

A modern treatment of calculus of functions of several real variables. Topics include: Euclidean spaces, differentiation, integration on manifolds leading to the classical theorems of Green and Stokes.

Prerequisites: Mathematics 311 and 334.

Mathematics 414 Functions of a Complex Variable II 3 credits

A continuation of Mathematics 314. Topics include analytic continuation, Riemann surfaces, conformal mapping, the Riemann mapping theorem.

Prerequisite: Mathematics 314 or consent of instructor.

Mathematics 432 Introduction to Abstract Algebra II 3 credits

A continuation of Mathematics 331. Topics from General Commutative Algebra: Polynomial rings, ideals, field extensions and Galois Theory.

Prerequisite: Mathematics 331.

Mathematics 441 Introduction to Topology I 3 credits

Metric spaces, topological spaces, countability and separation axioms, compactness and connectedness, product spaces.

Prerequisite: Mathematics 311.

Mathematics 442 Introduction to Topology II 3 credits

A continuation of Mathematics 441. Hilbert spaces, Banach spaces, and Banach algebras. *Prerequisite:* Mathematics 441.

Mathematics 451-452 Advanced Statistics 3 credits each

Random variables, stochastic independence, sampling theory, order and sufficient statistics, testing statistical hypotheses, estimation, time series, analysis of variance, and multivariate distribution.

Prerequisites: Mathematics 311 or 351-352 or consent of instructor.

Mathematics 470 Readings in Mathematics 3 credits per semester

Individual study of an outstanding text under the supervision of a faculty member. Designed for students who have completed a substantial amount of course work in mathematics.

Prerequisite: Consent of department chairman.

Mathematics 480 Topics in Mathematics 3 credits per semester

A study of topics of special interest. It may be a continuation and intensive study of topics begun in the upper level courses in analysis, topology, algebra and probability.

Prerequisite: Consent of instructor.

Mathematics 511-512 Measure and Integration 3 credits each

An introduction to the general theory of measure and integration, topological measure spaces, L_p -spaces, Borel measure.

Prerequisite: Mathematics 312.

Mathematics 531-532 Modern Algebra I and II 3 credits each

Sylow theorems, Jordan-Holder theorem, Hilbert basis theorem, modules, tensor algebra, field theory and Galois theory, and selected topics such as semi-simple rings and modules, algebraic number theory, group representations, algebraic geometry.

Prerequisite: Mathematics 331 and 334.

Mathematics 541 Functional Analysis 3 credits

Topics include: Banach spaces, L_p -spaces, Hilbert spaces, topological vector spaces, and Banach algebras.

Prerequisite: Mathematics 441.

Mathematics 542 Algebraic Topology 3 credits

Polyhedra, simplicial homology theory, cohomology rings, and homotopy groups.

Prerequisite: Mathematics 441.

Mathematics 580 Topics in Mathematics 3 credits each

A wide range of topics in pure and applied mathematics may be offered upon demand.

Prerequisite: Consent of instructor.

Mathematics 590 Thesis 6 credits

Physics

Master of Science

Master of Science in Education

Admission

Applicants for admission to graduate study in physics must present at least 24 hours of undergraduate credit in physics. Proficiency in calculus and ordinary differential equations is assumed, and it is desirable that the student have some acquaintance with the use of complex variable theory.

Degree Requirements

Two graduate programs are offered in physics leading to the degree of Master of Science or Master of Science in Education with major in Physics. Information on requirements for the Master of Science degree is given below. Requirements for the Master of Science in Education degree with major in physics are listed under Education on page 29.

All candidates for the Master of Science Degree in Physics are required to complete satisfactorily Physics 511, Analytical Mechanics, Physics 530, Electricity and Magnetism, Physics 401-402, Topics in Mathematical Physics, and Physics 550-551, Quantum Mechanics. A minimum of 18 credits in graduate physics courses is required, exclusive of dissertation credits.

Courses of Instruction

Physics 401-402 Topics in Mathematical Physics. 3 credits each

Development of the solutions of various differential equations of physics and chemistry arising from thermodynamics and statistical mechanics, kinetic theory, hydrodynamics, etc.

Physics 405-406 Theoretical Physics I and II. 3 credits each

The great unifying principles of physics will be examined and applied in the special branches of physics. Aspects of mechanics, optics, electromagnetism, relativity, atomic and nuclear physics will be treated from many points of view. Familiarity with subject matter will be assumed. The object of this course will be to develop deeper insight into physical laws and greater flexibility of approach to physical problems.

Physics 430 Solid State Devices 3 credits

Atomic structure and energy band theory. Application of energy band theory. Fermi-Dirac statistics. Conduction theory. Intrinsic and impurity conduction. Semi-conductor properties and characteristics of p/n junctions. Transistors and transistor theory. Characteristics of transistors. High-current characteristics. Feedback effects.

Physics 471 Crystallography. 3 credits

Repetition theory and translational and rotational symmetry. Derivation of the crystal classes. Combination of symmetry operations involving reflections and inversions. The symmetrical plane and space lattices. The coordinate systems of crystallography and crystal forms. Practical determination of point-group symmetry. The algebra of operations. Space groups. Equivalent positions in space groups. The determination of space groups. Group Theory and its application to point symmetries.

Physics 472 X-Ray Diffraction 3 credits

X-rays and their properties. Directions and intensities of diffracted beams. Laue, Debye-Scherrer, Diffractometer, Rotating, Oscillating, Weissenberg and Precession Methods. Outline of crystal structure analysis. Fee: \$20. Laboratory: one period per week.

Prerequisite: Physics 471.

Physics 473 Crystalline Anisotropy. 3 credits

Groundwork of crystal physics and transformation of second-rank tensors. Paramagnetic and Diamagnetic susceptibility. Electric Polarization. Stress, strain and thermal expansion. Elasticity and fourth-rank tensors. Matrices. Thermodynamics of equilibrium thermal conductivity, and thermoelectricity.

Physics 511 Analytical Mechanics. 3 credits

The dynamics of particles and rigid bodies. Topics include central forces, orthogonal transformations, variational principles, Lagrange's equations, Hamiltonian method, etc.

Prerequisites: differential equations, undergraduate mechanics.

Physics 530-531 Electricity and Magnetism. 3 credits

A detailed analytical study of the laws of electrostatics, magneto-statics and electromagnetism. Topics include Laplace's equation, Poynting's flux, etc.

Physics 550-551 Quantum Mechanics. 3 credits each semester

The fundamental principles of quantum mechanics, according to both Schrodinger and Heisenberg formulations. Topics include variational methods, perturbation methods, the uncertainty principle, angular momentum, the hydrogen atom, radiation theory, and collision theory.

Prerequisites: Physics 511, Physics 401.

Corequisite: Physics 402.

Physics 540 Statistical Mechanics. 3 credits

The statistical theory of particles, both classical and quantum. Application to solid state and nuclear physics.

Corequisite: Physics 551.

Physics 571 Solid State Theory. 3 credits

An introduction to the theory of solids. Topics treated include crystal structure, point and line defects, superconductivity, the band theory of solids, etc.

Corequisite: Physics 550.

Physics 574 Semiconductivity. 3 credits

A detailed study of the theory of semiconductivity. Topics include statistical theory of rectification, transistor effect, etc.

Corequisite: Physics 571.

Physics 580-581 Nuclear Physics. 3 credits each semester

An introduction to the theory and practice of nuclear physics. Nuclear reactions, scattering theory, fission, fusion, etc.

Corequisite: Physics 551.

Physics 590 Thesis. 6 credits

Administration of the Graduate Program

Graduate programs at Wilkes College are the administrative responsibility of the Director of Graduate Studies. A Faculty Committee on Graduate Studies acts in an advisory capacity to the Director of Graduate Studies and is listed below.

Faculty Committee on Graduate Studies

Alvan Bruch	<i>Chairman of the Committee</i> <i>Professor of Environmental Science</i> Ph.D. (N.Y.U.)
Harold E. Cox	<i>Director of Graduate Studies</i> <i>Professor of History</i> Ph.D. (Virginia)
Reed Acheson	<i>Assistant Professor of Biology</i> Ph.D. (Cincinnati)
James J. Bohning	<i>Associate Professor of Chemistry</i> Ph.D. (Northeastern)
Robert Capin	<i>Professor of Accounting</i> M.B.A. (Lehigh); C.P.A.
Franck G. Darte, II	<i>Professor of Education</i> Ed.D. (Pennsylvania)

Francis J. Donahoe	<i>Professor of Physics</i> Ph.D. (Pennsylvania)
Eugene L. Hammer	<i>Professor of Education</i> Ed.D. (Columbia)
Stanley Holden	<i>Director of Research Services</i> <i>Professor of Physics</i> Ph.D. (Alfred)
Bronis Kaslas	<i>Professor of History</i> Ph.D. (Strasbourg)
Philip L. Rizzo	<i>Professor of English</i> Ph.D. (Pennsylvania)
Robert E. Werner	<i>Professor of Economics</i> Ph.D. (Wisconsin)
Bing K. Wong	<i>Professor of Mathematics</i> Ph.D. (Illinois)

Information on the graduate school may be obtained by writing to:

Director of Graduate Studies
Wilkes College
Wilkes-Barre, Pennsylvania 18703