

# WILKES COLLEGE *Bulletin*

1971-1972



WILKES-BARRE  
PENNSYLVANIA



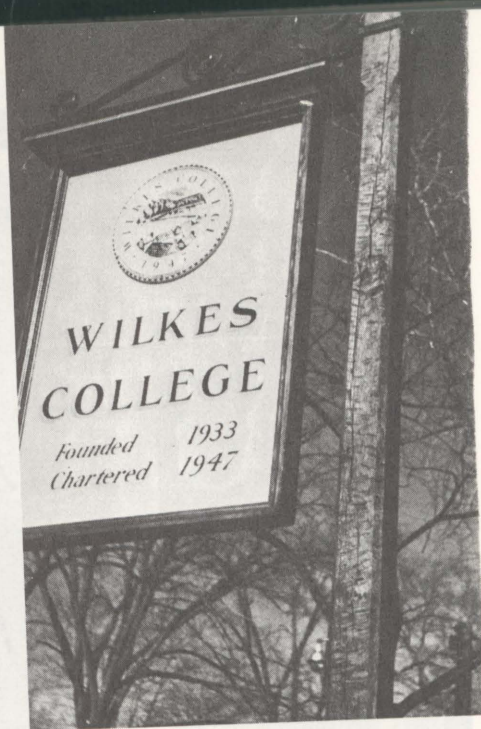
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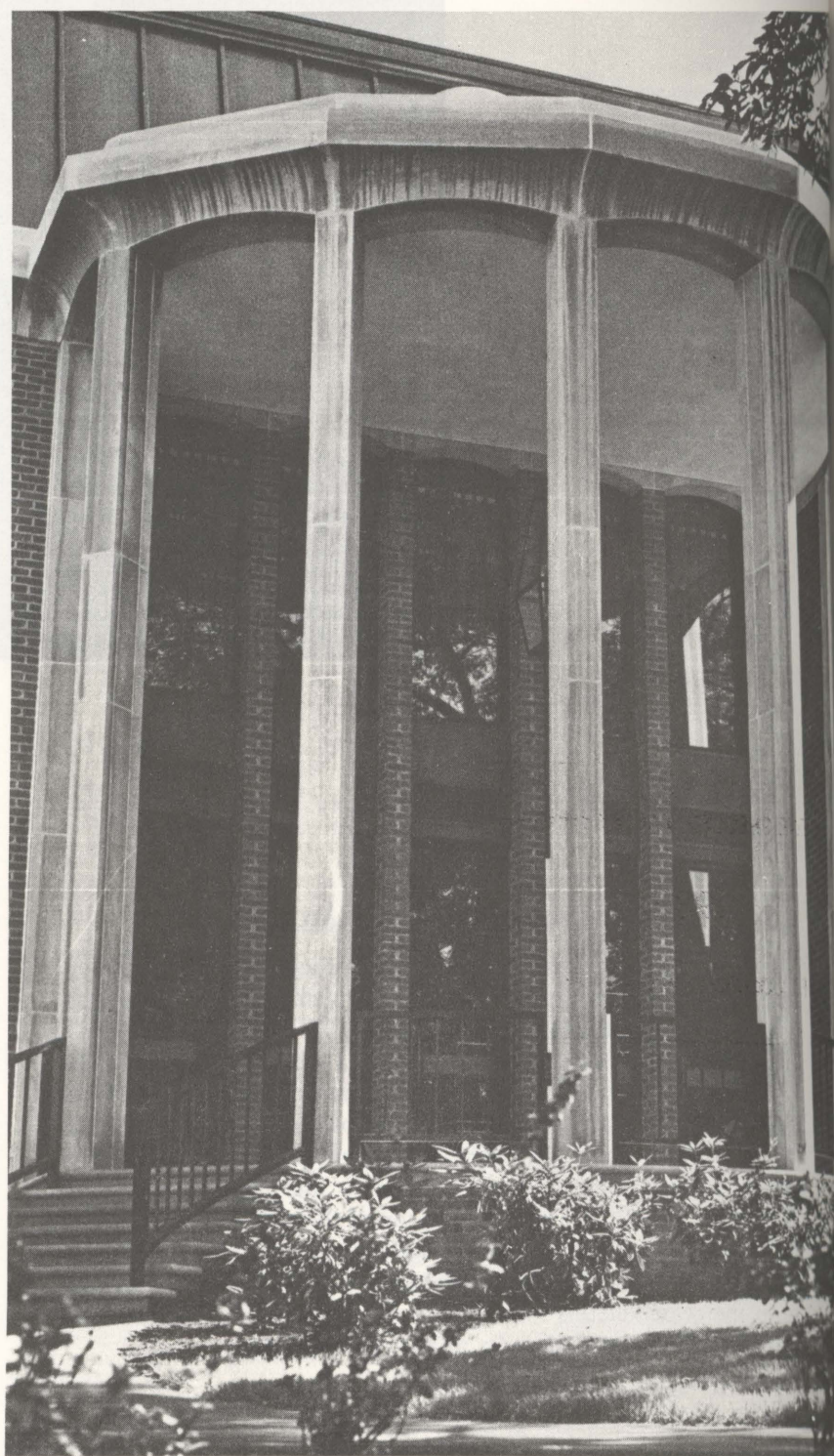
'... unity  
amidst  
diversity ...'



THE COLLEGE MACE

THE 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 S. Farley Library

# WILKES COLLEGE *Bulletin*

EUGENE SHEDDEN FARLEY LIBRARY

1933

WILKES COLLEGE WILKES-BARRE PA.

1971-1972

FALL AND SPRING

SEMESTERS — 1971-72

Wilkes-Barre, Pennsylvania 18703

VOL. XX

AC 717 824-4651



## College Calendar

TREASURE  
ROOM

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1971-1972

### FALL SEMESTER — 1971-72

<i>Freshman Orientation</i>	Tuesday, September 7 to Saturday, September 11
<i>Registration—Upperclassmen</i>	Friday, September 10
<i>Classes Begin</i>	Monday, September 13
<i>Progress Reports</i>	Saturday, October 23
<i>Pre-registration for Seniors and Juniors</i>	Monday, November 1 to Friday, November 5
<i>Pre-registration for Sophomores</i>	Monday, November 8 to Friday, November 12
<i>Pre-registration for Freshmen</i>	Monday, November 15 to Friday, November 19
<i>Thanksgiving Recess</i>	Friday, November 19, 5:00 p.m. to Monday, November 29, 8:00 a.m.
<i>Christmas Vacation</i>	Friday, December 17, 5:00 p.m. to Monday, January 3, 8:00 a.m.
<i>Classes Resume</i>	Monday, January 3, 8:00 a.m.
<i>Classes End for Fall Semester</i>	Friday, January 7, 5:00 p.m.
<i>Examination Period</i>	Monday, January 10 to Wednesday, January 19 (9 days)
<i>First Semester Ends</i>	Wednesday, January 19

## College Calendar

### SPRING SEMESTER — 1972

<i>Registration</i>	Friday, January 28
<i>Classes Begin</i>	Monday, January 31
<i>Report on Incomplete Grades for previous term</i>	Wednesday, February 16
<i>Progress Reports</i>	Saturday, March 11
<i>Spring Vacation</i>	Friday, March 24, 5:00 p.m. to Monday, April 3, 8:00 a.m.
<i>Classes Resume</i>	Monday, April 3, 8:00 a.m.
<i>Pre-registration for Juniors</i>	Monday, April 3 to Friday, April 7
<i>Pre-registration for Sophomores</i>	Monday, April 10 to Friday, April 14
<i>Pre-registration for Freshmen</i>	Monday, April 17 to Friday, April 21
<i>Classes End for Spring Term</i>	Friday, May 12, 5:00 p.m.
<i>Examination Period</i>	Monday, May 15 to Wednesday, May 24 (9 days)
<i>Baccalaureate</i>	Sunday, June 4, 11:00 a.m.
<i>Commencement</i>	Sunday, June 4, 5:00 p.m. Ralston Field
<i>Report on Incomplete Grades for Spring Term 1972</i>	Wednesday, June 21, 1972

(The College issues a supplementary Summer Bulletin)

76-135952



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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 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. The Chemistry curriculum is approved by the American Chemical Society.



## Wilkes College

### 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.*

## Admissions

## 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. 111 — Analysis I (Calculus).

### 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.



### ENTRANCE EXAMINATIONS

All candidates for admission to the freshman class will be required to take entrance examinations. The Admissions Committee considers these test results in relation to the applicant's secondary school transcript and the record of performance during the secondary school years.

### 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 Committee meets and acts upon all applications. Notification of action by the Committee 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 dropped 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 Chairman 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 \$875.00 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.

### 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:

- One dollar for the first copy.
- Seventy-five cents for the second copy.
- Fifty cents for the third copy.
- 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 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 re-

quired of all resident students is prepaid as part of the dormitory charge. 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. A recent addition to this policy gives students twenty-one years of age or older permission to live off campus, and seniors with parental consent have the same privilege.

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 will be 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 schol-

arships 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.

#### *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.

**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 Laventhol, 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 550 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*

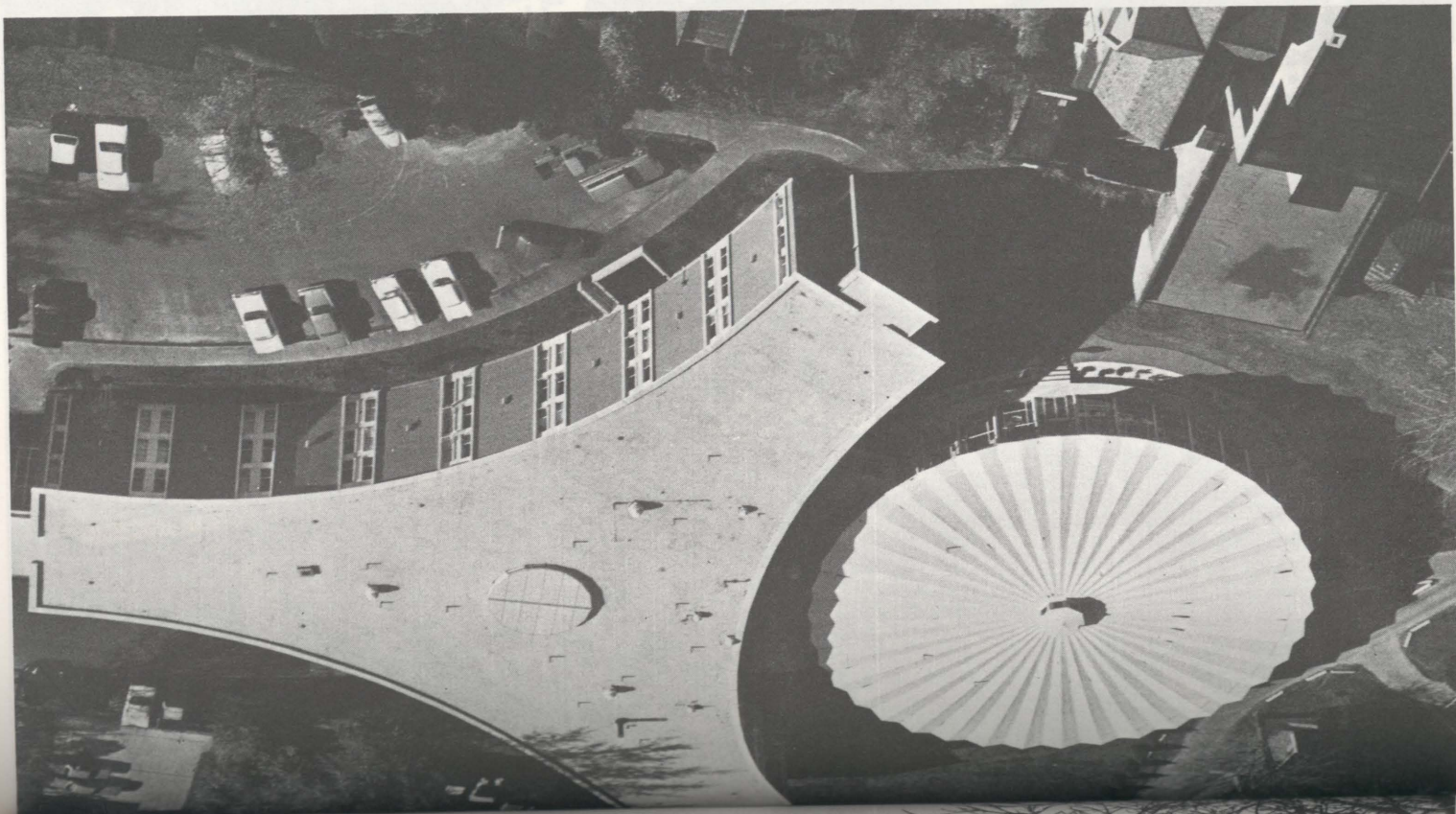
*THE W. S. CARPENTER MEMORIAL FUND* was established in 1965 by W. S. Carpenter, Jr. and his sons in memory of W. S. Carpenter, who was born in Wilkes-Barre on April 5, 1853, and lived in this community during his entire active business life. The fund was given to strengthen the work of the science division 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* has been 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.



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



*Main Dining Hall provides service for students and faculty.*

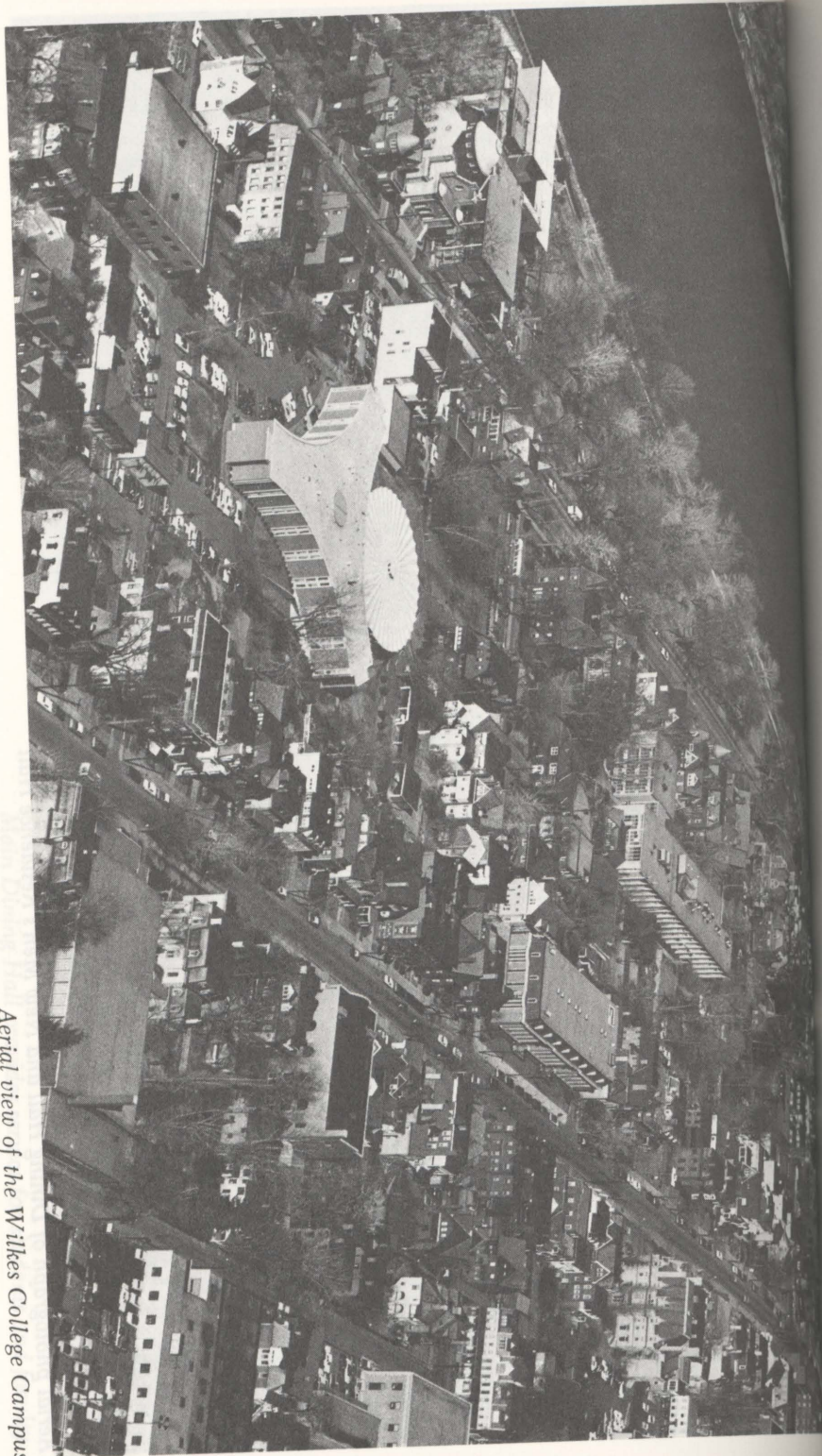


*Main Dining Hall provides service for students and faculty.*



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





Aerial view of the Wilkes College Campus

## The Facilities of the College

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

### WILKES COLLEGE LIBRARY

## Buildings and Plant

The 1917 Kirby Hall, the former residence of Mr. and Mrs. John Kirby, has been used as the College library. The building, then named the Kirby Home for Education, was presented to the College in 1911 as a gift of Allen Kirby, son of Wilkes College's first president. It is presently being used by the Modern Foreign Language Department and contains the language laboratory, established by a gift of the graduating class of 1962.

The new Eugene Sheldon Farley Library occupies the corner of North and South Franklin Streets. The four floors contain a large reading room, a study hall, faculty research offices, a computer center, a collection of tapes and records, a music room, a collection of films and slides, and a collection of records and tapes.

The new Wilkes College Library is a modern building of approximately 100,000 square feet. It contains a large reading room, a study hall, faculty research offices, a computer center, a collection of tapes and records, a music room, a collection of films and slides, and a collection of records and tapes.

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## 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.

Since 1947 Kirby Hall, the former residence of Mr. and Mrs. Fred Morgan Kirby, has been 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 corner of West South and South Franklin Streets. The four floors contain spacious reading rooms, 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 100,000 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 the ten nearby libraries (public and college) through the inter-library loan system.

An introduction to the uses of the library is given to every freshman during the freshman orientation week.

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 Admiral Harold R. Stark, former Chief of Naval Operations and currently 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.

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 Darte. 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, 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 the Pennsylvania Collegiate Choral Festivals and the Pennsylvania Intercollegiate Band Festivities. Nationally known music educators, clinicians, and performers have participated in workshop and classroom activities. During the winter and spring semesters *Town and Gown* concert series presents students and music faculty in instrumental and vocal programs before audiences from both 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 work of students and of local and professional artists is shown. The public is invited to the displays and exhibits. Opportunities are offered to the students to enter their work 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 edits the *Alumnus* and 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 \$50.00 per semester.

The College also maintains a United States Post Office substation in the new men's residence hall.

### 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 the fifth floor of Parrish 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 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 Chancellor 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 for one hour a week 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.



### 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, Debating, College Chorus, Collegians Male Chorus, Choralette Chorus and numerous brass, woodwind and percussion ensembles, Madrigal Singers, the College newspaper, the yearbook, 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.

### PUBLICATIONS

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.

### CONCERT AND LECTURE SERIES

A carefully selected Concert and Lecture Series is presented throughout the regular college year. All programs are held at the Center for the Performing Arts and are subject to change. They are open to the college family and the public without admission fee.

## 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 and chaperones.

### 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.

### FORMAL DANCES

Student organizations and clubs sponsor four formal affairs, open to the entire student body. The Homecoming Dance, for alumni and undergraduates; the Lettermen's Christmas Formal; Theta Delta Rho's Valentine Formal; and during Spring Weekend the Cinderella Ball have become traditions on campus.

### TDR AND LETTERMEN TEAS

Throughout the year TDR and the Lettermen sponsor 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 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. At the Ball at midnight on Saturday a senior, chosen by the student body by secret ballot, is crowned Cinderella Queen.

### 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.

### THE PRESIDENT'S PICNIC

On the Saturday before Commencement the graduating class is invited by the President to a picnic and outing in the country.



## 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, 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.

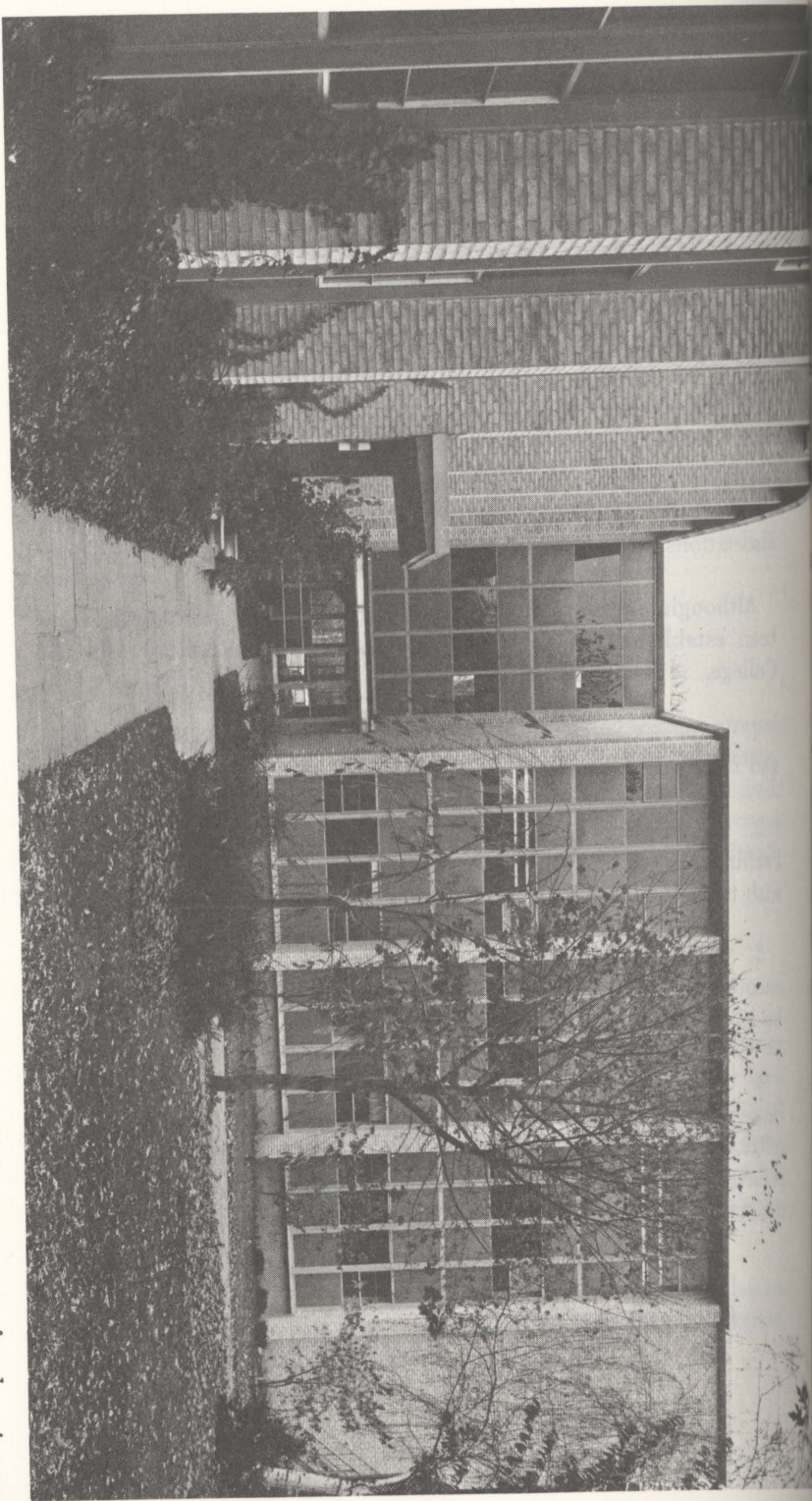
It is recognized that courtesy and consideration are the basis of good relations between individuals. Informal and friendly associations between students and faculty are a tradition on campus.

Although these relations are flexible, certain precedents have been established in the best interests of the individual and the College. A few are mentioned here:

1. The possession and use of liquor on campus are forbidden, and none will be served at college affairs.
2. Smoking is not permitted in classrooms or in the library. Facilities are available in various buildings for students who may wish to smoke during their free periods.
3. Although participation in at least one student activity is encouraged, each student is responsible for planning and utilizing his time effectively.
4. The faculty cooperates with students who miss classes because of illness, or as representatives of the College, or for special religious observances; in cases of excessive absence the student shall present his instructors with a note from the Deans. In all instances the student is expected to make up the work that is missed.



Stark Hall offers classroom and laboratory space for the sciences.



## The Academic Program

### Graduate Programs

#### WILSON COLLEGE DEGREE PROGRAMS

### Curricula

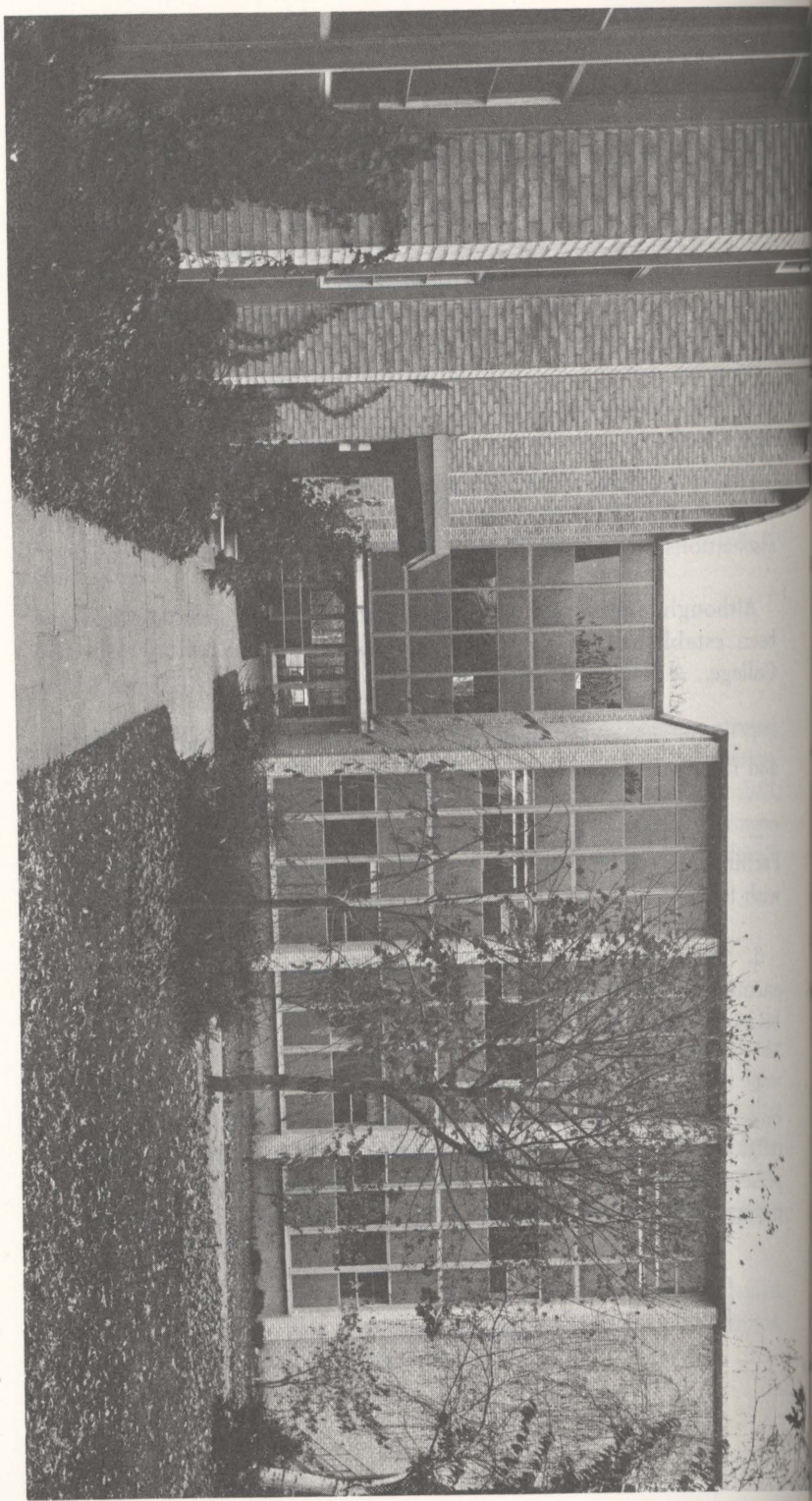
### Academic Requirements

### Graduation Requirements

Education leads men to seek answers to problems of significance and to induce new ideas and beliefs of intellectual development. There is no sense of intellectual stagnation or of a static state of affairs. The faculty encourages the student to cultivate a habit of independent thought and to develop a sense of responsibility for his own learning. The faculty encourages the student to cultivate a habit of independent thought and to develop a sense of responsibility for his own learning. The faculty encourages the student to cultivate a habit of independent thought and to develop a sense of responsibility for his own learning.



Stark Hall offers classroom and laboratory space for the sciences.



## The Academic Program

### Graduate Programs

#### COLLEGE DEGREE PROGRAMS

### 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.

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, 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.

## 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. Transfer 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 Commencement 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 L. J. VAN LAEYS AWARD IN JOURNALISM* is given to the graduate who has done the most creditable work in the field of journalism.

*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 that 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.

## The College and the Community

### Office of Community Services

### Wilkes-Barre Philharmonic Orchestra

### Fine Arts Fiesta

### Center for the Performing Arts



## 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 together 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 Public Instruction, Commonwealth of Pennsylvania.

#### 4. Other Activities

From time to time, the Psychology Department, the Sociology Department, the Education Department, and the Guidance Center have initiated and participated 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.

### Wilkes-Barre Philharmonic Orchestra

The Wilkes-Barre Philharmonic Orchestra, organized under the aegis of the College in the fall of 1951, presents a series of four symphony concerts annually. A number of the 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 on the public square each spring.

### Center for the Performing Arts

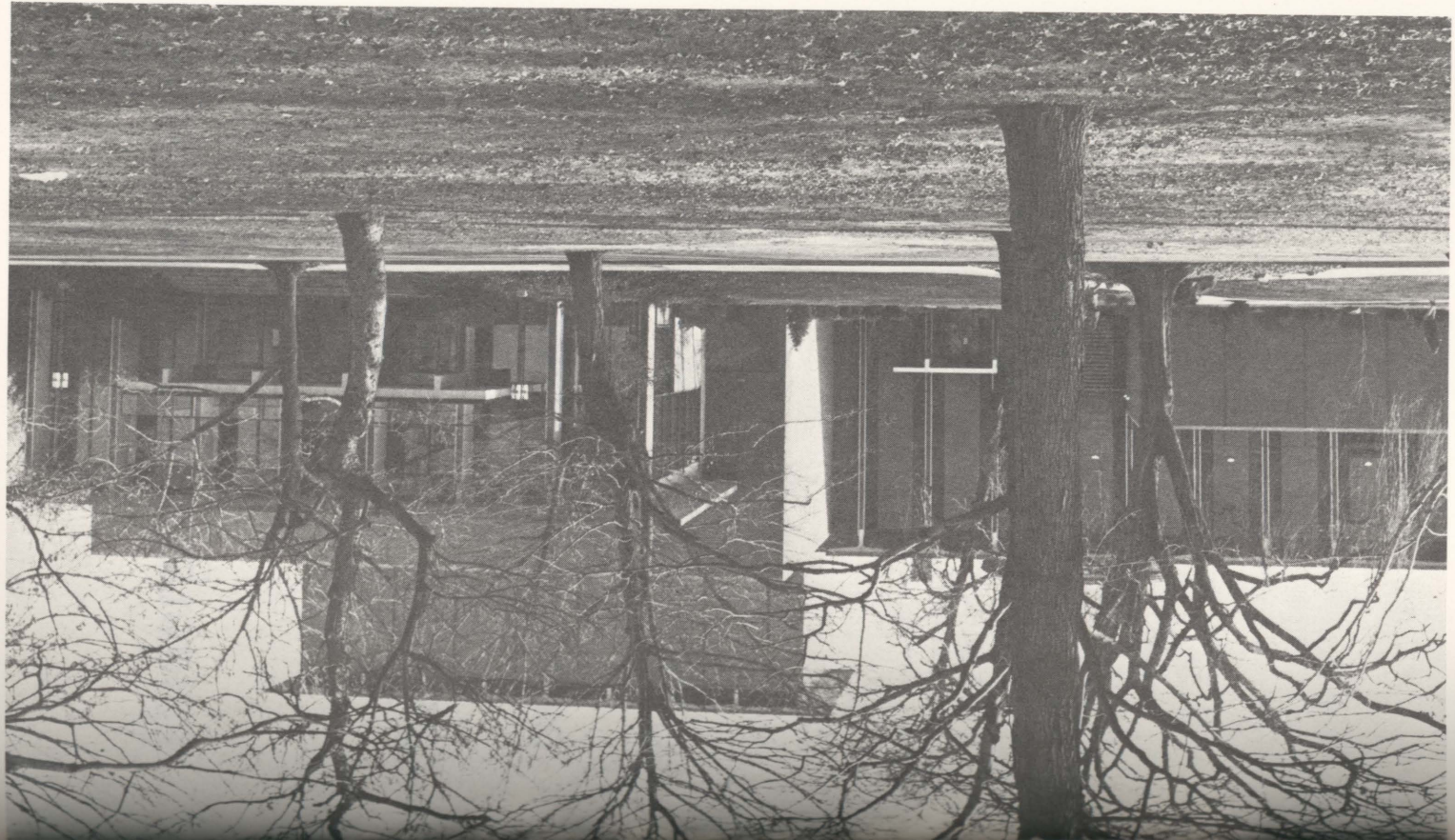
The Center for the Performing Arts provides a varied program of cultural and educational events for the Community as well as the College.

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

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



*Center for the Performing Arts and Dorothy Darte Music Center.*



*Weckesser Hall is the center for key administrative offices.*



*Weckesser Hall is the center for key administrative offices.*



*Center for the Performing Arts and Dorothy Darte Music Center.*



Circle 10 for the Graduate and Postgraduate Study Guide

## Undergraduate Programs

### Bachelor of Arts Degree

### Bachelor of Science Degree

### Degree Requirements

Science  
Biology  
Chemistry  
Physics

The President of Wilkes College



## 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 chairman.

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 the student 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.

#### AREAS

Humanities	Social Sciences	Sciences
English	Commerce and Finance	Biology
Fine Arts	Economics	Chemistry
Foreign Languages	Education	Physics
Mathematics	History	
Music	Political Science	
Philosophy - Religion	Psychology	
	Social Science	
	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
<b>Humanities</b>		
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 <sup>1</sup>	3	1 or 2
For. Lang. <sup>2</sup> 101, 102 — Elementary; For. Lang. <sup>2</sup> 203, 204 — Intermediate	6-12	1-2-3-4
<b>Mathematics, Science Electives</b>		
Math. <sup>3</sup> 101, 102 — Fundamentals; or Phys. 101, 102 — Physical Science; or Bio. 101, 102 — Biological Science; or Env. Sci. 101 — Earth Science, Env. Sci. 282 <sup>4</sup> — Space Science	12	1-2-3-4
<b>Social Science Electives</b>		
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
<b>Physical Education</b>		
Phys. Ed. 101, 102, 103, 104 — Physical Education	0	1-2-3-4
Phys. Ed. 105, 106 — Hygiene	2	1-2
	65	

<sup>1</sup> 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.

<sup>2</sup> 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.

<sup>3</sup> 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.

<sup>4</sup> 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	Fine Arts	Physics
Chemistry	Foreign Language	Political Science
Economics	History	Psychology
Education (Elementary and Secondary) <sup>1</sup>	Mathematics	Social Science
English	Music	Sociology
	Philosophy - Religion	

### 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.

<sup>1</sup> Students wishing to prepare for public school teaching should refer to pages 87-88 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                     | Engineering        |
| Chemistry                   | Music Education    |
| Commerce and Finance        | Medical Technology |
| (a) Accounting              | Nursing Education  |
| (b) Business Administration | Physics            |
| (c) Business Education      |                    |

### 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 80 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.



## 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 80)	3	Math., Science Elective (see page 80)	3
Fine Arts Elective (see page 80) <sup>1</sup>	3	Fine Arts Elective (see page 80) <sup>1</sup>	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 80)	3	Math., Science Elective (see page 80)	3
Social Science Electives (see page 80)	6	Social Science Electives (see page 80)	6
(Phil. 101 — Introduction) <sup>2</sup>	0	(Phil. 102 — Logic) <sup>2</sup>	0
P.E. 103 — Physical Education	0	P.E. 104 — Physical Education	0
	15		15
FIFTH SEMESTER		SIXTH SEMESTER	
Phil. 101 — Introduction <sup>2</sup>	3	Phil. 102 — Logic <sup>2</sup>	3
Major and electives <sup>3</sup>	12-13	Major and electives <sup>3</sup>	12-13
	15-16		15-16
SEVENTH SEMESTER		EIGHTH SEMESTER	
Major and electives	15-16	Major and electives	15-16

<sup>1</sup> 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 during the freshman year.

<sup>2</sup> Philosophy 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 Religion 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.

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

## Course Requirements in the Majors

Biology<sup>1</sup>

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 planning to major in biology should take courses in secondary school that prepare them to start the College mathematics program with the course in analysis, Math. 111. 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.

The B.A. curriculum is 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 97 is recommended for the student interested in a professional career in biology.

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

FIRST SEMESTER		SECOND SEMESTER	
Bio 103 — General Biology	4	Bio. 104 — General Biology	4
Chem. 201 — Principles of Chemistry	4	Chem. 202 — Chemical Equilibria	4
Eng. 101 — Composition	3	Eng. 102 — Composition	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
	16		16
THIRD SEMESTER		FOURTH SEMESTER	
Bio. 201 — Vertebrate Morphogenesis	4	Bio. 202 — Biology of Vertebrate Organs	4
Chem. 221 — Inorganic Quantitative Analysis	4	Chem. 232 — Organic Chemistry	4
For. Lang. 101 — Elementary	3	For. Lang. 102 — Elementary	3
Hist. 101 — World Civilization	3	Hist. 102 — World Civilization	3
Electives <sup>2</sup>	3-4	Electives <sup>2</sup>	3-4
P. E. 103 — Physical Education	0	P. E. 104 — Physical Education	0
	17-18		17-18

<sup>1</sup> 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.

<sup>2</sup> Electives must include: Ec., P.S., Psy., Soc. 101-102 — 12; Eng. 151, 152 — 6; Phil. 101, 102 — 6; F.A. 101 or Mus. 101 or Th. Arts 101 — 3; Bio. 311 and/or Bio. 331 and/or Bio. 111 (7th semester) and/or Bio. 302, 322, 332 (8th semester) — 4-8.



FIFTH SEMESTER		SIXTH SEMESTER	
Bio. 321 — Genetics	4	Biology Elective	3-8
For. Lang. 203 — Intermediate	3	Bio. 224 — Biological Techniques	1
Phys. 105 — Introduction	4	For. Lang. 204 — Intermediate	3
Electives <sup>1</sup>	6	Phys. 106 — Introduction	4
		Electives <sup>1</sup>	3-6
	17		14-17
SEVENTH SEMESTER		EIGHTH SEMESTER	
Bio. 397 — Seminar	1½	Bio. 397 — Seminar	1½
Electives <sup>2</sup>	15-17	Electives <sup>2</sup>	15-17
	15½-17½		15½-17½

### 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.

Exprience 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.

The B.S. curriculum listed on page 99 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 80 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	1
P. E. 105 — Personal Hygiene	1	P. E. 106 — Personal Hygiene	1
	15		15

<sup>1</sup> Electives must include: Ec., P.S., Psy., Soc. 101-102 — 12; Eng. 151, 152 — 6; Phil. 101, 102 — 6; F.A. 101 or Mus. 101 or Th. Arts 101 — 3.

<sup>2</sup> One semester is for professional, other must include Biology Elective(s) 3-8 credits.

THIRD SEMESTER		FOURTH SEMESTER	
Chem. 221 — Inorganic Quantitative Analysis	4	Chem. 232 — Organic Chemistry	4
Math. 211 — Intermediate Analysis I	4	Phys. 202 — General Physics II	4
Phys. 201 — General Physics I	4	Electives	9
Electives	6		17
	18		
FIFTH SEMESTER		SIXTH SEMESTER	
Chem. 233 — Organic Chemistry	4-5	Chem. 262 — Chemical Literature	2
Phys. 203 — General Physics III	3	Electives	15
Electives	9		17
	16-17		
SEVENTH SEMESTER		EIGHTH SEMESTER	
Chem. 261 — History of Chemistry	1	Electives	15-18
Electives	14-17		15-18
	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. 100, Math. 111 and 112.

### 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, or Political Science. Students who major in Economics or Political Science must complete 18 credits in History beyond 102.
- must elect Psych. 101-102.
- must elect Ed. 201, 202, and 330. (Note that Psych. 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/>		<hr/>		<hr/>		<hr/>	
16		16		15-16		15-16	
JUNIOR YEAR				SENIOR YEAR			
Semester I		Semester II		Semester I		Semester II	
Phil. 101	3	Phil. 102	3	Ed. 300 or		Elect. in Ed.	2
Ed. 291	2	Ed. 292	2	Ed. 310	15	Option	15
Psy. 221	3	Option	12-13	or		or	
Option	9-10			Option	15	Ed. 300 or	
				Ed. 391	2	Ed. 310	15
<hr/>		<hr/>		<hr/>		<hr/>	
17-18		17-18		15-17		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 80).

## 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.

## 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 <sup>1</sup> — Elementary	3	For. Lang. 102 <sup>1</sup> — 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 80)	3	Math., Science Elective (see page 80)	3
<hr/>		<hr/>	
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
F.A. 203 — Oil Painting I	3	F.A. 204 — Water Color Painting	3
F.A. 223 — History of Art I	3	F.A. 224 — History of Art II	3
P.E. 103 — Physical Education	0	P.E. 104 — Physical Education	0
Math., Science Elective <sup>2</sup> (see page 80)	3	Math., Science Elective <sup>2</sup> (see page 80)	3
<hr/>		<hr/>	
15		15	
FIFTH SEMESTER		SIXTH SEMESTER	
Phil. 101 — Introduction	3	F.A. 206 — Printmaking I <sup>3</sup>	3
F.A. 211 — Modeling & 3-D Design <sup>3</sup>	3	Social Science Electives (see page 80)	6
F.A. 213 — Metalwork & Jewelry <sup>3</sup>	3	F.A. 226 — History of Contemporary Art	3
Social Science Electives (see page 80)	6	Phil. 230 — Aesthetics	3
Elective	3	Elective (optional)	3
<hr/>		<hr/>	
18		15-18	
SEVENTH SEMESTER		EIGHTH SEMESTER	
F.A. 231 — Contemporary Design	2	F.A. 311 — Senior Exhibit <sup>4</sup>	2
F.A. 311 — Senior Exhibit <sup>4</sup>	2	F.A. 332 — Studio Problems	2
F.A. 212 — Ceramics <sup>3</sup>	3	Electives	11-12
Electives	8-9		
<hr/>		<hr/>	
15-16		15-16	

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

<sup>2</sup>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.

<sup>3</sup>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.

<sup>4</sup>Senior Exhibit will be scheduled either the seventh or eighth semesters.



### 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.

### Mathematics

Students who major in mathematics are required to complete twenty-four hours of courses numbered above 211, including Math. 212, 222, 311-312, 331, and 334, in addition to the general requirements for the B.A. degree (with the exception of Phil. 102 which is replaced by Math. 222 — Set Theory and Logic).

The B.S. curriculum listed on page 108 is recommended for the student interested in a professional career in mathematics.

Prospective elementary or secondary school teachers are advised to elect Math. 343 and 351-352.

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.

It is highly recommended that the prospective mathematics majors elect French, German, or Russian in high 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 recommended.

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

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

<sup>2</sup>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.

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

<sup>4</sup>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.



Music<sup>1</sup>

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 111 of this bulletin. The following are the course requirements for the music major.

## FIRST SEMESTER

Math. 101 — Fundamentals or	
Bio. 101 — Biological Science or	
Phys. 101 — Physical Science or	
Env. Sci. 101 — Earth Science	3
Eng. 101 — Composition	3
For. Lang. 101 — Elementary	3
Mus. 105 — Theory of Music	5
Applied Music <sup>2</sup>	1
Band, Orchestra, Chorus	1/2
P. E. 101 — Physical Education	0
P. E. 105 — Hygiene	1
	<hr/>
	16 1/2

## THIRD SEMESTER

For. Lang. 203 — Intermediate	3
Mus. 107 — Theory of Music	5
Applied Music <sup>2</sup>	1
Psy. 101 — Psychology	3
Hist. 101 — World Civilization	3
Math. 101 — Fundamentals or	
Bio. 101 — Biological Science or	
Phys. 101 — Physical Science or	
Env. Sci. 101 — Earth Science	3
Band, Orchestra, Chorus	1/2
P. E. 103 — Physical Education	0
	<hr/>
	18 1/2

## FIFTH SEMESTER

Eng. 151 — World Literature	3
Phil. 101 — Introduction	3
Mus. 109 — History of Music	3
Applied Music <sup>2</sup>	2
Soc. 101 — Sociology	3
Band, Orchestra, Chorus	1/2
	<hr/>
	14 1/2

## SECOND SEMESTER

Math. 102 — Fundamentals or	
Bio. 102 — Biological Science or	
Phys. 102 — Physical Science or	
Env. Sci. 282 — Space Science	3
Eng. 102 — Composition	3
For. Lang. 102 — Elementary	3
Mus. 106 — Theory of Music	5
Applied Music <sup>2</sup>	1
Band, Orchestra, Chorus	1/2
P. E. 102 — Physical Education	0
P. E. 106 — Hygiene	1
	<hr/>
	16 1/2

## FOURTH SEMESTER

For. Lang. 204 — Intermediate	3
Mus. 108 — Theory of Music	5
Applied Music <sup>2</sup>	1
Psy. 102 — Psychology	3
Hist. 102 — World Civilization	3
Math. 102 — Fundamentals or	
Bio. 102 — Biological Science or	
Phys. 102 — Physical Science or	
Env. Sci. 282 — Space Science	3
Band, Orchestra, Chorus	1/2
P. E. 104 — Physical Education	0
	<hr/>
	18 1/2

## SIXTH SEMESTER

Eng. 152 — World Literature	3
Phil. 230 — Aesthetics	3
Mus. 110 — History of Music	3
Applied Music <sup>2</sup>	2
Soc. 102 — Sociology	3
Band, Orchestra, Chorus	1/2
	<hr/>
	14 1/2

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

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

## SEVENTH SEMESTER

Applied Music <sup>1</sup>	2
Mus. 215 — Instrumentation	2
Mus. 217 — Analysis	2
Band, Orchestra, Chorus	1/2
Electives	9
	<hr/>
	15 1/2

## EIGHTH SEMESTER

Applied Music <sup>1</sup>	2
Mus. 216 — Arranging	2
Mus. 218 — Counterpoint	3
Band, Orchestra, Chorus	1/2
Electives	9
	<hr/>
	16 1/2

## Philosophy — Religion

A major in the combined fields of philosophy and religion consists of twenty-four hours in philosophy and religion courses beyond Philosophy 101 and 102. At least eighteen hours of the twenty-four hours must be taken in Philosophy. Philosophy-Religion majors must schedule courses in philosophy and religion 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 113 is recommended for the student interested in a professional career in physics.*

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. 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 94.

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



## 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

A major in psychology consists of twenty-four hours. Psychology 101 and 102 are not accepted toward a major; Sociology 255 and Education 202 are accepted. In addition to the general requirements, the department requires that the two-semester courses in mathematics, physics, and general biology be taken. In addition, English 131 or 132 or Theater Arts 131 and Psychology 215 are required.

The major in psychology is designed for students who plan to continue the study of psychology on the graduate level, as well as for those whose interests lie in the teaching of psychology in colleges or in the application of the study to such fields as advertising, clinical work, business, education, and industrial personnel work. Students are cautioned that an undergraduate major in psychology does not qualify them for professional psychological work. No student can qualify as a psychologist without advanced graduate study; in a great many fields today, moreover, professional psychologists must hold the degree of Doctor of Philosophy.

## 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 395. 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.

Course Requirements for  
B.S. Degree ProgramsBiology<sup>1</sup>

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. 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

Bio. 103 — General Biology	4
Chem. 201 — Principles of Chemistry	4
Eng. 101 — Composition	3
Math. 111 — Analysis I	4
P. E. 101 — Physical Education	0
P. E. 105 — Hygiene	1
	<hr/> 16

## THIRD SEMESTER

Bio. 201 — Vertebrate Morphogenesis	4
Chem. 221 — Inorganic Quantitative Analysis	4
Eng. 151 — World Literature	3
Hist. 101 — World Civilization	3
For. Lang. 101 — Elementary	3
P. E. 103 — Physical Education	0
	<hr/> 17

## FIFTH SEMESTER

Bio. 321 — Genetics	4
Chem. 235 — Organic Chemistry	4
Ec., Psy., P.S., Soc. 101	3
For. Lang. 203 — Intermediate	3
Phys. 105 — Introduction	4
	<hr/> 18

## SECOND SEMESTER

Bio. 104 — General Biology	4
Chem. 202 — Chemical Equilibria	4
Eng. 102 — Composition	3
Math. 112 — Analysis II	4
P. E. 102 — Physical Education	0
P. E. 106 — Hygiene	1
	<hr/> 16

## FOURTH SEMESTER

Bio. 202 — Biology of Vertebrate Organs	4
Chem. 232 — Organic Chemistry	4
Eng. 152 — World Literature	3
Hist. 102 — World Civilization	3
For. Lang. 102 — Elementary	3
P. E. 104 — Physical Education	0
	<hr/> 17

## SIXTH SEMESTER

Biology Elective	3-4
Bio. 224 — Biological Techniques	1
Ec., Psy., P.S., Soc. 102	3
For. Lang. 204 — Intermediate	3
Phys. 106 — Introduction	4
Elective <sup>2</sup>	3
	<hr/> 17

<sup>1</sup>This degree meets the same general requirements as listed for B.A. Degree, page 84.  
<sup>2</sup>Elective must include one semester of Fine Arts options (see page 80) in sixth, seventh or eighth semester.



## SEVENTH SEMESTER

Biology Electives	3-8
Bio. 397 — Seminar	1/2
Phil. 101 — Introduction	3
Ec., Psy., P.S., Soc. 101	3
Elective	3-6
	17-18

## EIGHTH SEMESTER

Biology Electives	3-8
Bio. 397 — Seminar	1/2
Phil. 102 — Logic	3
Ec., Psy., P.S., Soc. 102	3
Elective	3-6
	17-18

## 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.

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.

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.

## 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
	15

## 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
	15

## Chemistry

## THIRD SEMESTER

Chem. 221 — Inorganic Quantitative Analysis	4
For. Lang. 101 — Elementary	3
Math. 211 — Intermediate Analysis I	4
Phys. 201 — General Physics I	4
P.E. 103 — Physical Education	0
	15

## FOURTH SEMESTER

Chem. 212 — Inorganic Chemistry	4
Chem. 232 — 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
	19

## FIFTH SEMESTER

Chem. 233 — Organic Chemistry	5
Chem. 341 — Elementary Physical Chemistry	4
Eng. 151 — World Literature	3
For. Lang. 203 — Intermediate	3
Phys. 203 — General Physics III	3
	18

## 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	3
Elective <sup>1</sup>	3
	15-18

## SEVENTH SEMESTER

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

## EIGHTH SEMESTER

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

<sup>1</sup>Electives 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	
P. E. 101 — Physical Education	0	Th. Arts 101 — Approach to	
P. E. 105 — Hygiene	1	Theater	3
	17	B.A. 115 — Mathematics of Business	3
		and Finance	3
		P. E. 102 — Physical Education	0
		P. E. 106 — Hygiene	1
			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. 233 — 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 <sup>1</sup>	3	Elective <sup>1</sup>	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 <sup>1</sup>	3
Elective <sup>1</sup>	3		15
	18		

<sup>1</sup> 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	
	16	Phys. 102 — Physical Science or	
		Env. Sci. 282 — Space Science	3
		P. E. 102 — Physical Education	0
		P. E. 106 — Hygiene	1
			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	
P. S. 101 — Political Science I or		and Finance	3
Soc. 101 — Sociology	3	P. S. 102 — Political Science II or	
P. E. 103 — Physical Education	0	Soc. 102 — Sociology	3
	16	P. E. 104 — Physical Education	0
			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
	18	Ec. 232 — Economic Statistics	3
		Phil. 102 — Logic	3
		B. A. 222 — Marketing	3
		Elective	3
			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		15
	18		

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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. 111 — Analysis I
B. A. 225 — Corporation Finance	Math. 112 — Analysis II
B. A. 226 — Investments	Math. 261 — Introduction to Computer Science
Ec. 202 — Theory of Money	Math. 264 — Cobol Programming
Ec. 225 — International Trade	
Ec. 236 — Public Finance	
Ec. 241 — Economic Analysis	

#### ECONOMICS

Ec. 212 — Government & Business	Ec. 229 — Comparative Economic Systems
Ec. 217 — Economics of Transportation	Ec. 230 — Business Cycles
Ec. 222 — American Labor Movement	Ec. 236 — Public Finance
Ec. 223 — Collective Bargaining	Ec. 241 — Economic Analysis
Ec. 224 — Economic Development	Ec. 245 — Consumer Economics
Ec. 225 — International Trade	Ec. 395-396 — Research
Ec. 227 — Economic Geography of North America, Europe and the Soviet Union	Math. 111 — Analysis I
Ec. 228 — Economic Geography of Asia, Africa and Latin America	Math. 112 — Analysis II
	Math. 261 — Introduction to Computer Science
	Math. 264 — Cobol Programming

#### MANAGEMENT AND INDUSTRIAL RELATIONS

Ec. 222 — American Labor Movement	Math. 111 — Analysis I
Ec. 223 — Collective Bargaining	Math. 112 — Analysis II
B. A. 240 — Property Insurance or B. A. 241 — Life Insurance	Math. 261 — Introduction to Computer Science
Psy. 242 — Psychological Tests or Psy. 243 — Industrial Psychology	Math. 264 — Cobol Programming
	Soc. 265 — Sociology of Industry
	P. S. 208 — Labor Legislation

#### MARKETING

B. A. 114 — Salesmanship	Math. 112 — Analysis II
B. A. 216 — Advertising	Math. 261 — Introduction to Computer Science
B. A. 240 — Property Insurance	Math. 264 — Cobol Programming
Ec. 217 — Economics of Transportation	Ret. 101 — Principles of Retailing
Ec. 224 — Economic Development	Ret. 214 — Retail Buying
Ec. 225 — International Trade	Soc. 265 — Sociology of Industry
Ec. 245 — Consumer Economics	Psy. 243 — Industrial Psychology
Math. 111 — Analysis I	

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

16-17

#### SECOND SEMESTER

Bus. Ed. 106 <sup>1</sup> — Intermediate Shorthand or Acct. 102 — Elementary II	2
Bus. Ed. 108 — Intermediate Typewriting	3
Eng. 102 — Composition	2
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

17-18

#### THIRD SEMESTER

Bus. Ed. 207 — Advanced Shorthand I or Acct. III — Intermediate I	3
Bus. Ed. 201 <sup>2</sup> — 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 <sup>3</sup> — Principles I	3-4
P. E. 103 — Physical Education	0

15-17

#### FOURTH SEMESTER

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

15-16

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

<sup>2</sup>Students following accounting sequence need not take third and fourth semesters of typewriting.

<sup>3</sup>Two-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 <sup>1</sup>	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
	15

## SEVENTH SEMESTER

Bus. Ed. 243 — Principles and Methods of Business Education <sup>2</sup>	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 — Approach to Theater	3
B. A. 209 — Business Correspondence & Reports	3
	16

## SIXTH SEMESTER

Acct. 112 — Intermediate II or Retailing Elective <sup>1</sup>	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
	15

## EIGHTH SEMESTER

Ed. 330 — Secondary Education Elective	12
	3
	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.

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.

<sup>1</sup> 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.

<sup>2</sup> Offered every other year.

## Engineering

## FRESHMAN YEAR

## COMMON TO ALL ENGINEERING PROGRAMS

## FIRST SEMESTER

Math. 111 — Analysis I	4
Chem. 201 — Introduction to the Principles of Chemistry	4
Eng. 101 — Composition	3
Engi. 107 — Introduction to Engineering	3
Liberal Arts Elective	3
P.E. 105 — Hygiene	1
P.E. 101 — Physical Education	0
	18

## SECOND SEMESTER

Math. 112 — Analysis II	4
Chem. 202 — Chemical Equilibria	4
Phys. 201 — General Physics I	4
Eng. 102 — Composition	3
Engi. 108 — Engineering Graphics	3
P.E. 106 — Hygiene	1
P.E. 102 — Physical Education	0
	19

## ELECTRICAL ENGINEERING

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

## THIRD SEMESTER

Math. 211 — Intermediate Analysis I	4
Phys. 202 — General Physics II	4
E.E. 211 — Circuit Theory I	3
M.E. 211 — Mechanics I. Statics	3
Math. 263 — Fortran Programming	3
	17

## FOURTH SEMESTER

Math. 212 — Intermediate Analysis II	4
Phys. 203 — General Physics III	3
E.E. 212 — Circuit Theory II	4
M.E. 212 — Mechanics II. Dynamics	3
Ma.E. 102 — Materials Science	3
Eng. 131 — Speech	2
	19

## FIFTH SEMESTER

E.E. 331 — Electromagnetic Fields I	4
E.E. 251 — Electronic Circuits I	4
E.E. 271 — Physical Electronics	3
Math., Science or Engi. Electives	3
Liberal Arts Elective <sup>1</sup>	3
	17

## SIXTH SEMESTER

E.E. 332 — Electromagnetic Fields II	4
E.E. 252 — Electronic Circuits II	4
E.E. 272 — Solid State Devices	3
Math., Science or Engi. Electives	3
Liberal Arts Elective <sup>1</sup>	3
	17

## SEVENTH SEMESTER

E.E. 335 — Energy Transmission and Radiation	3
E.E. 381 — Advanced Engineering Laboratory I	4
Engi. 397 — Seminar	1
Engineering or Science Elective	4
Liberal Arts Electives <sup>1</sup>	6
	18

## EIGHTH SEMESTER

E.E. 320 — Electromechanical Energy Conversion	4
E.E. 382 — Advanced Engineering Laboratory II	4
Engi. 397 — Seminar	1
Engineering or Science Elective	3
Liberal Arts Electives <sup>1</sup>	6
	18

<sup>1</sup> 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.<sup>1</sup>

## THIRD SEMESTER

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

17

## FOURTH SEMESTER

Math. 212 — Intermediate Analysis II	4
Phys. 203 — General Physics III	3
M.E. 212 — Mechanics II. Dynamics	3
Ma.E. 102 — Materials Science	3
Eng. 131 — Speech	2
Liberal Arts Elective	3
	<hr/>

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
	<hr/>

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
	<hr/>

18

## SEVENTH SEMESTER

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

16

## EIGHTH SEMESTER

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

19

<sup>1</sup> For Freshman year see page 105.

<sup>2</sup> English 151, 152 (Western World Literature) is a required elective.

## CIVIL ENGINEERING

Second year requirements for the two-year civil engineering program.<sup>1</sup>

## THIRD SEMESTER

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

17

## FOURTH SEMESTER

Math. 212 — Intermediate Analysis II	4
Phys. 203 — General Physics III	3
M.E. 212 — Mechanics II. Dynamics	3
C.E. 104 — Route Surveying	4
Ma.E. 102 — Materials Science	3
	<hr/>

17

## CHEMICAL ENGINEERING

Second year requirements for the two-year chemical engineering program.<sup>1</sup>

## THIRD SEMESTER

Math. 211 — Intermediate Analysis I	4
Phys. 202 — General Physics II	4
M.E. 211 — Mechanics I. Statics	3
Chem. 221 — Inorganic Quantitative Analysis	4
Liberal Arts Elective	3
	<hr/>

18

## FOURTH SEMESTER

Math. 212 — Intermediate Analysis II	4
Phys. 203 — General Physics III	3
M.E. 212 — Mechanics II. Dynamics	3
Chem. 232 — Organic Chemistry I	4
Ma.E. 102 — Materials Science	3
	<hr/>

17

## MECHANICAL ENGINEERING

Second year requirements for the two-year mechanical engineering program.<sup>1</sup>

## THIRD SEMESTER

Math. 211 — Intermediate Analysis I	4
Phys. 202 — General Physics II	4
M.E. 211 — Mechanics I. Statics	3
E.E. 211 — Circuit Theory I	3
Liberal Arts Elective	3
	<hr/>

17

## FOURTH SEMESTER

Math. 212 — Intermediate Analysis II	4
Phys. 203 — General Physics III	3
M.E. 212 — Mechanics II. Dynamics	3
Liberal Arts Elective	3
Ma.E. 102 — Materials Science	3
	<hr/>

16

<sup>1</sup> For Freshman year see page 105.



## 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.

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.

Students intending to pursue graduate studies in mathematics should elect Math. 314, 432 and 441-442. Those contemplating careers in industry are advised to take Math. 261 and 263 as early as possible in their programs. Students who foresee possible change to the B.A. program in order to prepare themselves as secondary or elementary school teachers are advised to elect Psy. 101-102 in their freshman year.

The following program lists the sequence of course requirements for the B.S. 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	3	For. Lang. 102 — Elementary	3
Elective <sup>1</sup>	3	Phys. 201 — General Physics I	4
Social Science Elective <sup>2</sup>	3	Social Science Elective <sup>2</sup>	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
	17		18

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

<sup>2</sup> Must elect one of these sequences: Ec., Psy., Soc., P.S. 101-102.

## THIRD SEMESTER

Eng. 151 — World Literature	3
For. Lang. 203 — Intermediate	3
Science Elective <sup>1</sup>	3-4
Math. 211 — Intermediate Analysis I	4
P.E. 103 — Physical Education	0
Phil. 101 — Introduction	3
	16-17

## FIFTH SEMESTER

Hist. 101 — World Civilization	3
Electives <sup>2</sup>	12-15
	15-18

## SEVENTH SEMESTER

Electives <sup>2</sup>	15-18
------------------------	-------

## FOURTH SEMESTER

Eng. 152 — World Literature	3
For. Lang. 204 — Intermediate	3
Science Elective <sup>1</sup>	3-4
Math. 212 — Intermediate Analysis II	4
Math. 222 — Set Theory and Logic	3
P.E. 104 — Physical Education	0
	16-17

## SIXTH SEMESTER

Hist. 102 — World Civilization	3
Electives <sup>2</sup>	12-15
	15-18

## EIGHTH SEMESTER

Electives <sup>2</sup>	15-18
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<sup>1</sup> Must be one of the following:

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

<sup>2</sup> 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 102.  
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., 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.

FIRST SEMESTER		SECOND SEMESTER	
Bio. 103 — General Biology	4	Bio. 104 — General Biology	4
Chem. 201 — Introduction	4	Chem. 202 — Chemical Equilibria	4
Eng. 101 — Composition	3	Eng. 102 — Composition	3
Math. 111 — Analysis I <sup>1</sup>	4	Math. 112 — Analysis II <sup>1</sup>	4
P.E. 101 — Physical Education	0	P. E. 102 — Physical Education	0
P. E. 105 — Personal Hygiene	1	P. E. 106 — Personal Hygiene	1
	16		16
THIRD SEMESTER		FOURTH SEMESTER	
Bio. 115 — Anatomy & Physiology	4	Bio. 116 — Anatomy & Physiology	4
Chem. 221 — Inorganic Quantitative Analysis	4	Chem. 232 — Organic Chemistry	4
Eng. 151 — World Literature	3	Eng. 152 — World Literature	3
Hist. 101 — World Civilization	3	Hist. 102 — World Civilization	3
For. Lang. 101 — Elementary	3	For. Lang. 102 — Elementary	3
P.E. 103 — Physical Education	0	P.E. 104 — Physical Education	0
	17		17
FIFTH SEMESTER		SIXTH SEMESTER	
Bio. 311 — Bacteriology	4	Bio. 312 — Bacteriology	4
Bio. 204 — Microtechnique	3	Elective	3
Phys. 105 — Introductory Physics	4	Phys. 106 — Introductory Physics	4
For. Lang. 203 — Intermediate	3	For. Lang. 204 — Intermediate	3
Ec., Psy., P.S., Soc. 101	3	Ec., Psy., P.S., Soc. 102	3
	17		17
SEVENTH SEMESTER <sup>2</sup>		EIGHTH SEMESTER <sup>2</sup>	
Clinical Chemistry	13 weeks	Haematology & Blood Bank	12 weeks
Microbiology	8 weeks	Histology	6 weeks
Urinalysis	4 weeks	Serology	7 weeks

<sup>1</sup> Students who have a math deficiency may register in a lower level math course with the permission of their adviser.

<sup>2</sup> To be taken at an affiliated school of medical technology. Fee \$50 each semester.

### Music Education <sup>1</sup>

FIRST SEMESTER		SECOND SEMESTER	
Eng. 101 — Composition	3	Eng. 102 — Composition	3
Bio. 101 — Biological Science or Phys. 101 — Physical Science or Env. Sci. 101 — Earth Science	3	Bio. 102 — Biological Science or Phys. 102 — Physical Science or Env. Sci. 282 — Space Science	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 <sup>2</sup>	1	Applied Music <sup>2</sup>	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. 105 — Hygiene	1
	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 <sup>2</sup>	1	Applied Music <sup>2</sup>	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
	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. 122 — Viola Class	2
Mus. Ed. 201 — Elementary School Methods	2	Mus. Ed. 202 — Secondary School Methods	2
Applied Music <sup>2</sup>	1	Applied Music <sup>2</sup>	1
Band, Orchestra, Chorus	1/2	Band, Orchestra, Chorus	1/2
Mus. 111 — Piano Class	2	Mus. 112 — Piano Class	2
	17 1/2		17 1/2

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

<sup>2</sup> 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. 123 — Violoncello and Bass Class	2	Mus. Ed. 125 — Percussion Class	2
Mus. Ed. 340 — Professional Semester in Music Education	8	Applied Music <sup>1</sup>	1
Applied Music <sup>1</sup>	1	Band, Orchestra, Chorus	1/2
Band, Orchestra, Chorus	1/2	Elective	6
Mus. 113 — Piano Class or elective	2-3	Mus. 114 — Piano Class or elective	2-3
	17 1/2-18 1/2		15 1/2-16 1/2

### 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 Graduate Nurse Examination.

FIRST SEMESTER		SECOND SEMESTER	
Eng. 101 — Composition	3	Eng. 102 — Composition	3
Hist. 101 — World Civilization	3	Hist. 102 — World Civilization	3
Bio. 103 — General Biology or Math. 101 — Fundamentals or Phys. 101 — Physical Science or Env. Sci. 101 — Earth Science	3-4	Bio. 104 — General Biology or Math. 102 — Fundamentals or Phys. 102 — Physical Science or Env. Sci. 282 — Space Science	3
Soc. 101 — Sociology or Psy. 101 — Psychology	3	N. E. 104 — Community Resources	2
N. E. 103 — History, Trends in Nursing	3	Soc. 102 — Sociology or Psy. 102 — Psychology	3
Elective	2-3	N. E. 106 — Supervision	2
	17-19	Elective (optional) <sup>2</sup>	2-3
			16-19
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 Psy. 101 — Psychology <sup>3</sup>	3	Soc. 102 — Sociology or Psy. 102 <sup>3</sup> — 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

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

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

<sup>3</sup> P.S. 101, P.S. 102, Ec. 101, Ec. 102 may be substituted as electives.

### 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 student 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	Hist. 102 — World Civilization	3
Phys. 201 — General Physics I	4	Phys. 202 — General Physics II	4
P.E. 105 — Hygiene	1	P.E. 106 — Hygiene	1
P. E. 101 — Physical Education	0	P. E. 102 — Physical Education	0
	15		15
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 <sup>1</sup> — Elementary	3	Ger. 102 <sup>1</sup> — Elementary	3
Chem. 201 — Introduction to the Principles of Chemistry	4	Chem. 202 — Chemical Equilibria	4
P. E. 103 — Physical Education	0	P. E. 104 — 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 <sup>1</sup> — Intermediate	3	Ger. 205 <sup>1</sup> — Scientific	3
Eng. 151 — World Literature	3	Eng. 152 — World Literature	3
	16		16

<sup>1</sup> 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.



Page 114 — DEGREE PROGRAMS

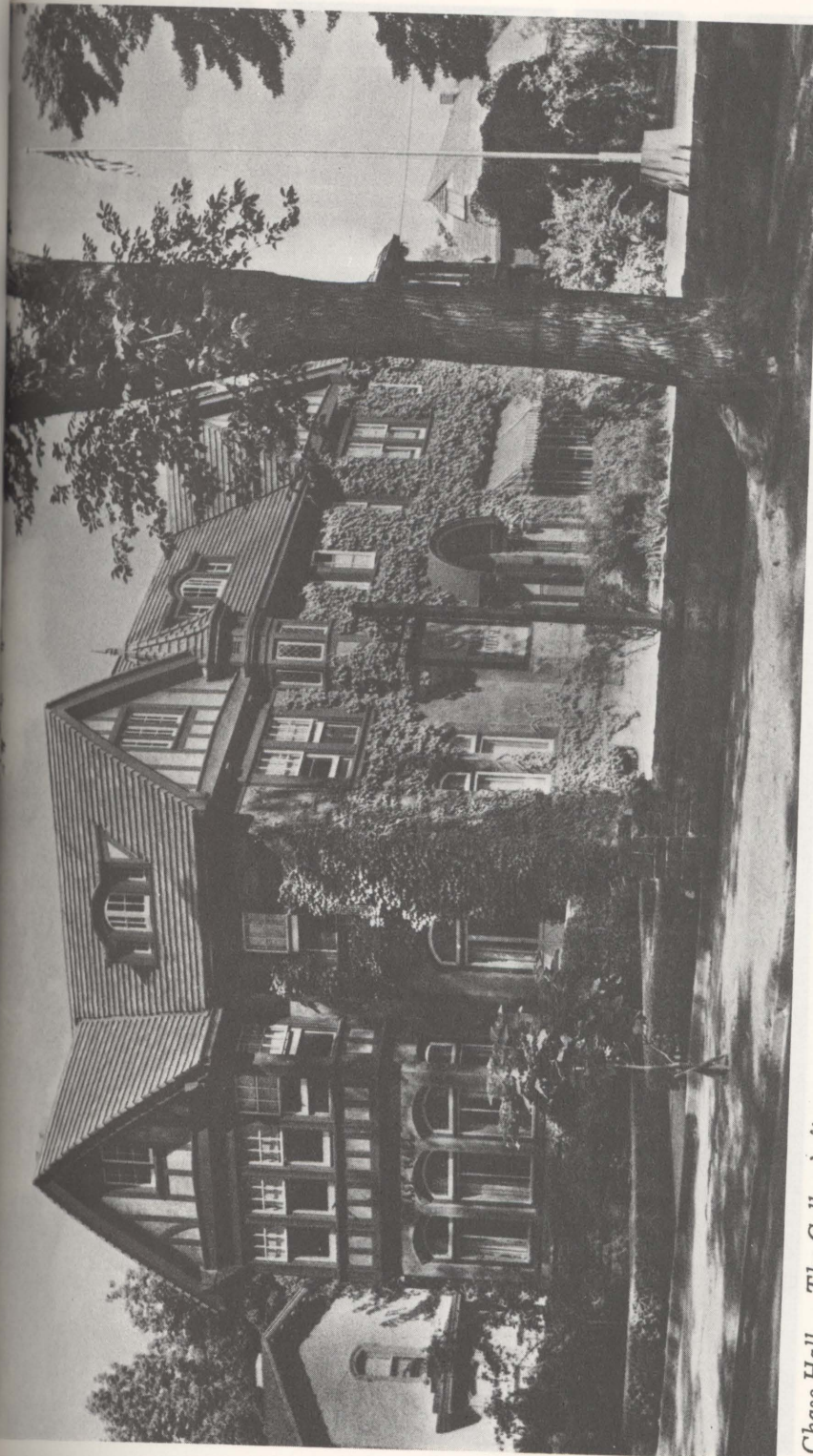
SEVENTH SEMESTER

Phys. 361 — Atomic Physics	4
Advanced Math. Elective	3
Eng. 131 — Fundamentals of Speech	2
Electives <sup>1</sup>	6-8
	15-17

EIGHTH SEMESTER

Phys. 380 — Nuclear Physics	4
Advanced Math. Elective	3
Electives <sup>1</sup>	8-10
	15-17

<sup>1</sup> Students contemplating graduate study in Physics should elect Phys. 351 — Quantum Mechanics.



Chase Hall — The College's first campus administration building.



Page 114 — DEGREE PROGRAMS

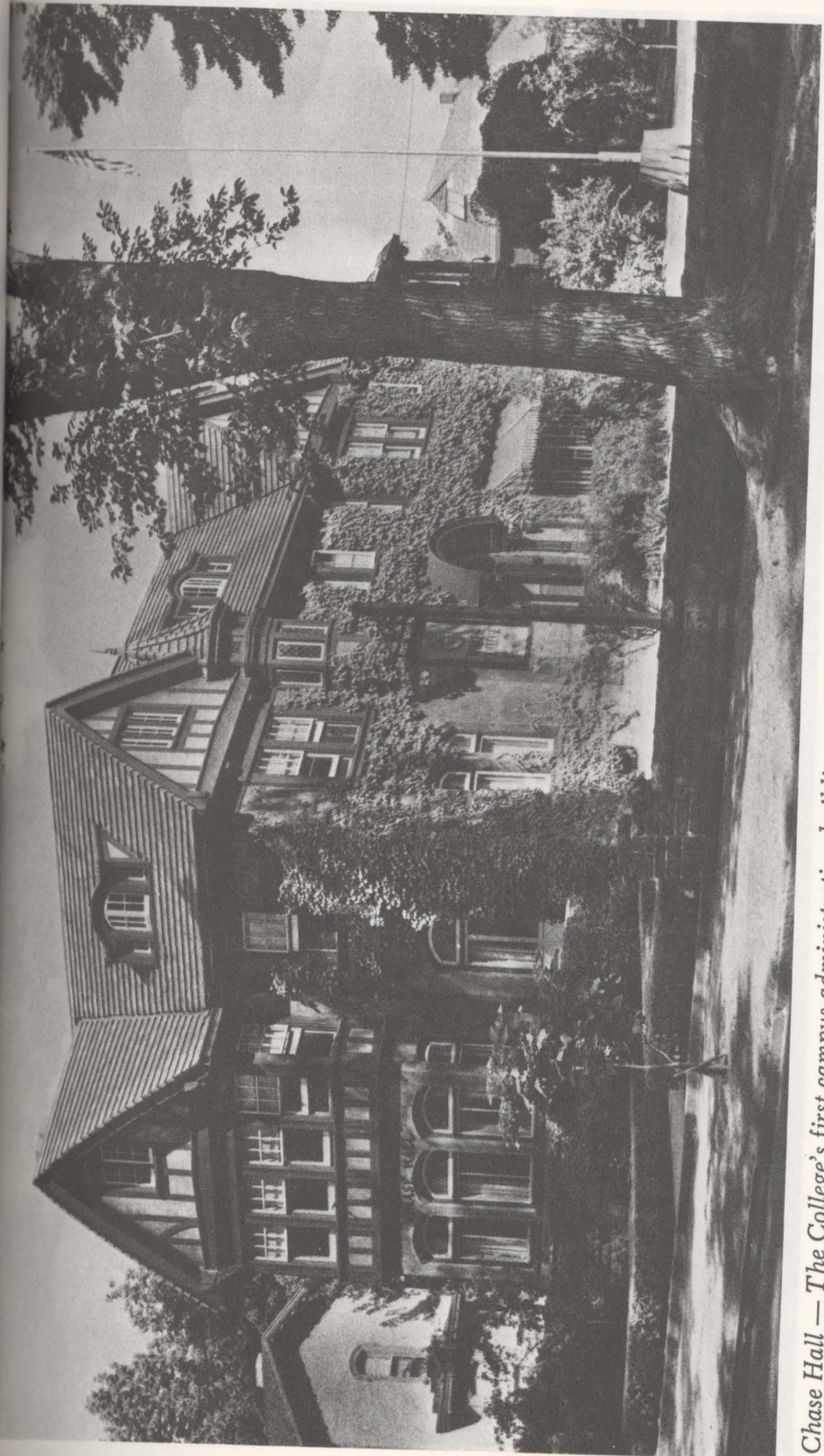
SEVENTH SEMESTER

Phys. 361 — Atomic Physics	4
Advanced Math. Elective	3
Eng. 131 — Fundamentals of Speech	2
Electives <sup>1</sup>	6-8
	15-17

EIGHTH SEMESTER

Phys. 380 — Nuclear Physics	4
Advanced Math. Elective	3
Electives <sup>1</sup>	8-10
	15-17

<sup>1</sup> Students contemplating graduate study in Physics should elect Phys. 351 — Quantum Mechanics.



Chase Hall — The College's first campus administration building.



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



## Courses of Instruction

### ACCOUNTING

## 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



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



## Courses of Instruction

### ACCOUNTING

#### Description of Courses

Acct. 101. Elementary Accounting I  
 Fundamental theory of debits and credits; problems of classification and recording; preparation of financial statements. Laboratory, four hours a week.

#### 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



**Conscience  
at  
Wilkes**

MAMA:

Child, when do you think is the time to love somebody the most; when they done good and made things easy for everybody? Well, then, you ain't through learning — because that ain't the time at all. It's when he's at his lowest and can't believe in hisself 'cause the world done whipped him so. When you starts measuring somebody, measure him right, child, measure him right. Make sure you done taken into account what hills and valleys he come through before he got to wherever he is.

LORRAINE HANSBERRY  
*A Raisin In The Sun* (Act III)

## Description of Courses

### ACCOUNTING

Professor Rosenberg, chairman; Associate Professor Capin; Assistant Professors Curtis, P. Werner, Zavada; Instructors Pawlenok, Carver, Mulcahy.

#### Acct. 101. Elementary Accounting I

Fundamental theory of debits and credits; problems of classification and interpretation of financial data; technique of recording; preparation of financial statements. Class, two hours a week; laboratory, four hours a week.

*Three credits*

#### Acct. 102. Elementary Accounting II

A continuation of Accounting 101. Principles of partnership and corporation accounting; introduction to departmental, manufacturing, and branch accounting; financial analyses of statements. Class, two hours a week; laboratory, four hours a week.

Prerequisite: Acct. 101.

*Three credits*

#### Acct. 111. Intermediate Accounting I

A comprehensive analysis of the accounting process and the financial statements. Intermediate problems pertaining to Cash, Receivables, Inventories, Current Liabilities, and Investments in Stocks. Class, two hours a week; laboratory, four hours a week.

Prerequisite: Acct. 102.

*Three credits*

#### Acct. 112. Intermediate Accounting II

A continuation of Intermediate Accounting I. Intermediate problems pertaining to Investments in Bonds and Funds, Plant and Equipment, Intangibles, Long-Term Liabilities, and Stockholders Equity; financial statement analysis and Fund and Cash Flow Reporting. Class, two hours a week; laboratory, four hours a week.

Prerequisite: Acct. 111.

*Three credits*



### 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.<sup>1</sup>

Three credits

## BIOLOGY

Professor Reif chairman; Professors Cohen, Michelini; Associate Professors Ogren, Kimball, Tappa, Mizianty, Hayes; Assistant Professors Acheson, Martinez; Instructor Schonwetter.

### 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

<sup>1</sup> Or the equivalent.



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. 103-104. General Biology**

This course surveys both the plant and animal kingdoms, outlines the history of biology, the organization of matter, the structure of representative plants and animals, and the methods of classification. It considers the basic principles of physiology, genetics, embryology, evolution, and ecology. Lecture, three hours a week; laboratory, three hours a week. Fee: \$20 each course.

*Four 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*

#### **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. 201. Vertebrate Morphogenesis**

Vertebrate Morphogenesis is a study of the development and general morphological characteristics of selected vertebrates. The taxonomy and evolution of Phylum Chordata will be emphasized. Lecture, two hours a week; laboratory, six hours a week. Fee: \$20.

Prerequisite: Bio. 104.

*Four 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. 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. 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. Cytology**

A study of the organelles and molecular architecture of the cell. A study of cellular interactions and the biochemistry and physiology of cell cytoplasm, organelles and nuclei. Lecture, two hours a week; laboratory, four hours a week. Fee: \$20.

*Four 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 Rosenberg, chairman; Professor R. Werner; Associate Professors Elliot, Farrar; Assistant Professors Gera, Engel, Copley, Chesler, Gurdin, Orlowski, Anaza; Instructors Roberts, Szumilo.

### 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 Rosenberg, chairman; Assistant Professor Gera; Instructor Dolbear.

#### **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**

Associate Professor Bohning, chairman; Professors Rozelle, Swain; Associate Professors Salley, Faut, Stine, Labows; Assistant Professor Stockham; Instructor Buckman.

**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. 230. 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. 230. 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. 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. 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. 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 Rosenberg, chairman; Professor R. Werner; Associate Professors Elliot, Farrar; Assistant Professors DeYoung, Engel, Chesler, Orłowski, Anaza, W. Taylor, Vereda; Instructors Szumilo, 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. 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; Professors Jesse, Darte; Associate Professors West, Barone, Caldwell; Assistant Professors Siles, Fahmy, Bellucci, Johnson; Instructors Bynon, Brandschain, DiSibio.

**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. 202, Psy. 221.

*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. 202, Psy. 221.

*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.

Prerequisite: Ed. 201 and Ed. 202.

*Three credits*

**Ed. 299. Principles of Elementary Education**

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

Prerequisite: Ed. 201 and Ed. 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.

Prerequisite: Ed. 299, Math. 234 and 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 secondary 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. 107. 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. 108. 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. 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

dependance, impedance matching and transformers (Smith Charts). Feedback systems and stability. Introduction to random signal and noise; correlation functions and spectra. Three hours class and one three-hour discussion-laboratory a week. Fee: \$20.

Prerequisite: Phys. 202, E.E. 211.

Four 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: Phys. 202 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 complete 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.

Prerequisites: E.E. 331, 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.

Prerequisites: E.E. 251, 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. 251, 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.

Prerequisites: E.E. 211, E.E. 331.

*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.

Three 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: Approval of the department chairman is required.

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

### Materials Engineering

### Ma. E. 102. 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 crystal structure analysis. Three hours class and one three-hour laboratory a week. Fee: \$20.

Prerequisite: Ma.E. 211.

Three 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. 102.

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.)

**Mechanical Engineering****M.E. 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, Math 111.

Three credits

**M.E. 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: M. E. 211.

Three credits



## ENGLISH

Professor Fiester, chairman; Professor Rizzo; Associate Professors Groh, Lord, Terry; Assistant Professors Gutin, Kaska, DeArment, Mistichelli, F. Allen, Heaman, Swartchild, M. Allen, Boyle, Greenwald, Craddock, Holm, Moran, Kish; Instructors Molley, R. Roberts, Geist, Tyburski, Williams, Pasquarelli.

### 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 Speech<sup>1</sup>

A basic course in the preparation and delivery of short speeches.  
*Two credits*

### Eng. 132. Argumentation & Debate<sup>1</sup>

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*

<sup>1</sup> 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. 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*

### 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. News Writing I**

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. News Writing II**

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



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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 picturiza-

DESCRIPTION OF COURSES — Page 165

tion, 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**

Professor Bruch, coordinator; Associate Professor El Ashry; 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 to three credits. (Maximum of three credits per student.)



## FINE ARTS

Professor Colson, chairman; Assistant Professors P. Richards, D'Vorzon, Fuller, Jacobs, Simon, Casilli.

### 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, graffito, 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 Professor Disque; Assistant Professors A. Belic, Ribas, deCubas, Marban, Sweeney, Fernandez; Instructors Serzan, 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. 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 pre-

sending 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. 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. 204 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. 204 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, White, 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 and Pennsylvania 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. 221-222. 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. 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, and P.S. 102. 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. 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

A survey of Latin American history from colonial times to the present. Problems discussed include the influence of Spanish colonialism in the area, the problems of independent government 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, Wilks, J. Wasileski, Tillman; Instructors Kravitz, 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. 111-112. Analysis I and II

Calculus or functions of a real variable. Topics include: functions, limits and continuity, differentiation, integration and their applications, infinite sequences and series.

Prerequisite: Math. 100 or fulfillment of the mathematics requirements for entrance into the programs of biology, chemistry, engineering, mathematics, and physics.

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 department chairman.

*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.

*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.

*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

**MUSIC<sup>1</sup>**

Professor Gasbarro, chairman; Associate Professor Chapline; Assistant Professors Garber, Santos, Fall, Nutaitis, A. Liva; Instructors Probert, Weber, Joseph, Balshaw.

**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

<sup>1</sup>There 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.  
*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 Wilkes-Barre Philharmonic 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 EDUCATION<sup>1</sup>**

**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 wood-winds 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, French horn, trombone, baritone, and tuba, with demonstration of the class teaching of these instruments.

No prerequisite.

*Two credits*

<sup>1</sup> There 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 EDUCATION**

Associate Professor McHenry, chairman; Professor Jessee; Instructors Knaub, Porter, Rowlands.

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 — RELIGION

Professor S. Vujica, chairman; Associate Professors Kay, Williams; 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. 310. 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. 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. 350. 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. 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.)*

**Religion****Rel. 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*

**Rel. 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*



### Rel. 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*

### Rel. 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. Hygiene<sup>1</sup>

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 him to understand and appreciate 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*

<sup>1</sup>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 Acoustics. 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. Electronics**

A study of vacuum tubes, transistors, and their application in circuits for rectification, amplification, oscillation, switching, etc. 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 first and second laws of thermodynamics, Carnot cycle, entropy, and an introduction to statistical mechanics. Three hours lecture-discussion.

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. Class, three hours.

Prerequisite: Math. 362 or approval of the instructor.

*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.

Prerequisites: 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.

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. For example, theory of electrical and thermal conductivity, semiconductors, bonding in solids, point defects, dislocation, magnetic properties, etc. Class, three hours.

Prerequisites: 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. Class, three hours 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.

Prerequisite: Phys. 472.

*Three credits*

**POLITICAL SCIENCE**

Associate Professor Sugiyama; Assistant Professors Tuhy, Niehoff, Kwalwasser.

**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 basis 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, 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. More attention will be given to learning, perception, and the emotions.

Prerequisite: Psy. 101 and 102. Some background in biology or physiology would be desirable.

Three credits

**Psy. 203. Psychologic Theory**

A comprehensive survey of classical and contemporary theories and their relationship to empirical research. Special emphasis is placed on attempts to reconcile and translate these theories into operational descriptions.

Prerequisite: Psy. 101 and 102.

Three credits

**Psy. 206. Systematic Psychology**

A historical introduction to the various points of view in recent psychology, followed by a study of the theories of such leaders in the field as Watson, Freud, McDougall, Thorndike, and Kohler.

Prerequisite: Psy. 101 and 102 and one other course in psychology.

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 ex-



periments 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.

*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. 243 and 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. 242.

*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 Rosenberg, 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 Professor Weinstein; Instructors O'Connor, 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 inter-



action; 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. 395. 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. 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*

### **Soc. 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.)*





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

## Personnel of the College

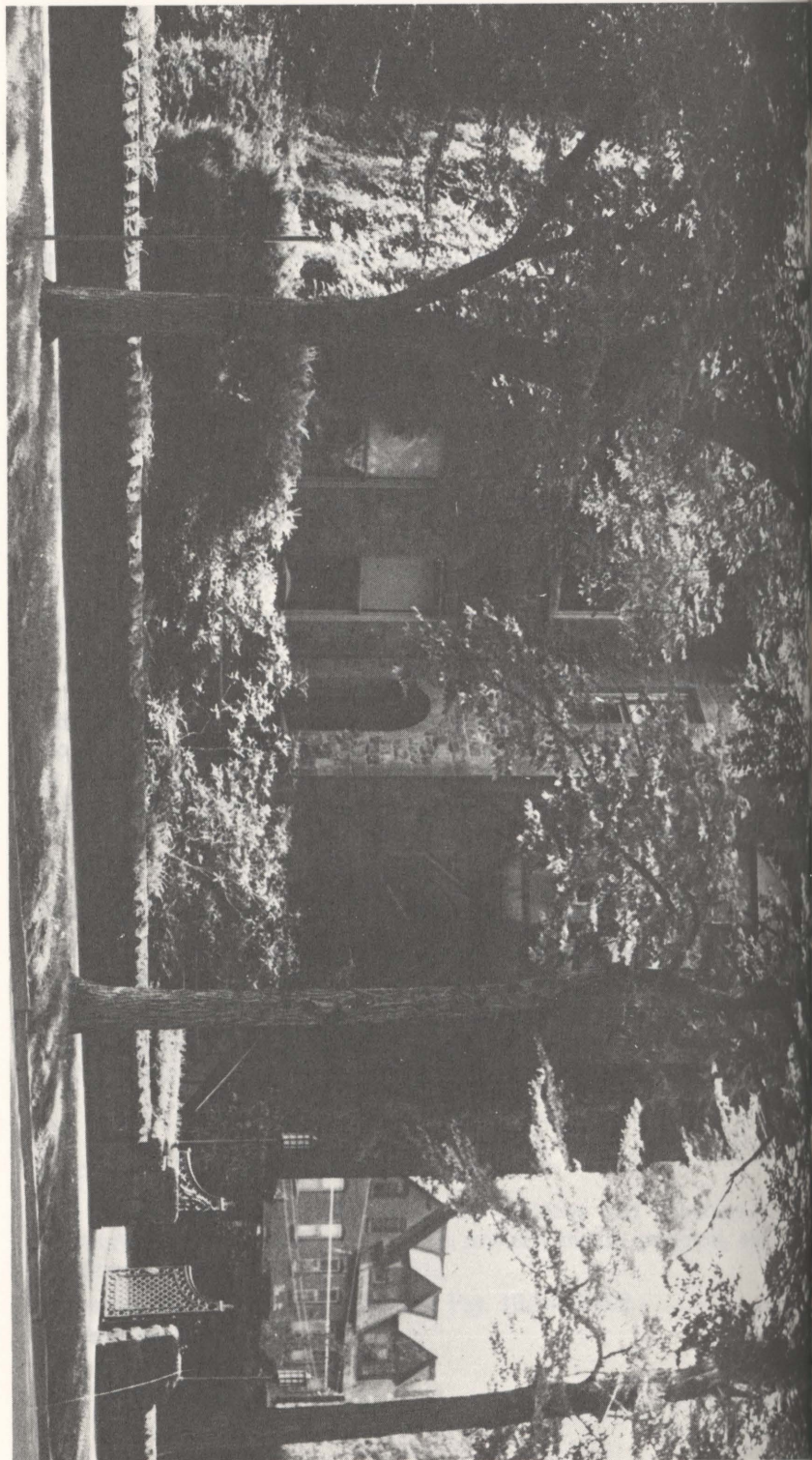
### Board of Trustees

### Administration

### Faculty



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



## Personnel of the College

### Board of Trustees

### Administration

### Faculty



## Commitment 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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DONALD F. CARPENTER	FRANCIS J. MICHELINI, <i>President</i>
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ALFRED EISENPREIS	F. ELLSWORTH PARKHURST
MRS. EBERHARD L. FABER	RICHARD L. PEARSALL
EUGENE S. FARLEY, <i>Chancellor</i>	JOHN A. PERKINS
JOHN B. FARR	HON. FRANK L. PINOLA
ALAN GLOVER	HON. MAX ROSENN
ANDREW HOURIGAN, JR.	AARON WEISS
JOSEPH J. KOCYAN, M.D.	JOSEPH A. WIENDL
MRS. ELY LANDAU	

### TERM OF OFFICE

#### Expiring June, 1972

DONALD F. CARPENTER	JOHN A. PERKINS
WILLIAM L. CONYNGHAM	HON. FRANK L. PINOLA
MRS. ELY LANDAU	AARON WEISS
F. ELLSWORTH PARKHURST	JOSEPH A. WIENDL
RICHARD L. PEARSALL	

#### Expiring June, 1973

ALFRED EISENPREIS	CHARLES H. MINER, JR.
EUGENE S. FARLEY, <i>Chancellor</i>	KENNETH G. NORTHROP
ALAN GLOVER	HON. MAX ROSENN
ANDREW HOURIGAN, JR.	JOSEPH J. SAVITZ
ROBERT MELSON	LOUIS SHAFFER

#### Expiring June, 1974

BENJAMIN BADMAN, JR.	MRS. EBERHARD L. FABER
NOEL CAVERLY	JOHN B. FARR
FRED R. DAVIS	THOMAS H. KILEY
MRS. RICHARD M. EHRET	JOSEPH J. KOCYAN, M.D.



## Committee Appointments

### Executive

LOUIS SHAFFER, *Chairman*  
 THOMAS H. KILEY, *Vice-Chairman*  
 DONALD F. CARPENTER  
 NOEL CAVERLY  
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 FRED R. DAVIS  
 JOHN B. FARR  
 EUGENE S. FARLEY, *Chancellor*  
 FRANCIS J. MICHELINI, *President*  
 CHARLES H. MINER, JR.  
 RICHARD L. PEARSALL  
 HON. FRANK L. PINOLA  
 JOSEPH J. SAVITZ

### Finance

NOEL CAVERLY, *Chairman*  
 FRED R. DAVIS  
 EUGENE S. FARLEY, *Chancellor*  
 ANDREW HOURIGAN, JR.  
 THOMAS H. KILEY  
 ROBERT MELSON  
 AARON WEISS

### Instruction

WILLIAM L. CONYNGHAM, *Chairman*  
 MRS. EBERHARD L. FABER  
 ALAN GLOVER  
 CHARLES H. MINER, JR.  
 F. ELLSWORTH PARKHURST  
 JOSEPH J. SAVITZ

### Nominations

JOHN B. FARR, *Chairman*  
 DONALD F. CARPENTER  
 ALFRED EISENPREIS  
 EUGENE S. FARLEY, *Chancellor*  
 JOSEPH J. KOCYAN, M.D.

### Planning and Development

RICHARD L. PEARSALL, *Chairman*  
 WILLIAM L. CONYNGHAM  
 FRED R. DAVIS  
 ALFRED EISENPREIS  
 EUGENE S. FARLEY, *Chancellor*  
 THOMAS H. KILEY  
 CHARLES H. MINER, JR.  
 KENNETH G. NORTHROP  
 JOSEPH J. SAVITZ  
 AARON WEISS

### Faculty-Trustee Committee on Academic Freedom

WILLIAM L. CONYNGHAM  
 THOMAS H. KILEY

Ex Officio on all Committees — LOUIS SHAFFER and  
 FRANCIS J. MICHELINI

## Office of the Chancellor

EUGENE S. FARLEY (1936)  
 B.S. (Pennsylvania State)  
 M.A., Ph.D. (Pennsylvania)

*Chancellor*

THOMAS F. KELLY (1969)  
 B.A. (Wilkes)

*Assistant in Development*

ARTHUR J. HOOVER (1955)  
 B.S. (Wilkes)  
 M.Ed. (Pennsylvania State)

*Director of Alumni Relations*

## Officers of Administration

FRANCIS J. MICHELINI (1955)  
 B.S. (Seton Hall)  
 M.S. (Delaware)  
 Ph.D. (Pennsylvania)

*President*

RALPH B. ROZELLE (1962)  
 B.S. (Wilkes)  
 Ph.D. (Alfred)

*Director of Graduate Studies*

GEORGE F. RALSTON (1946)  
 B.A. (North Carolina)  
 M.A. (Columbia)

*Dean of Student Affairs*

JOHN P. WHITBY (1947)  
 B.S. (Bloomington)  
 M.S. (Columbia)

*Dean of Admissions*

ALEX PAWLENOK (1967)  
 B.S. (Wilkes)

*Comptroller*

CHARLES R. ABATE (1966)  
 B.S. (Wilkes)

*Business Manager*

JOHN J. CHWALEK (1946)  
 B.S. (East Tennessee)  
 M.A. (Columbia)

*Director of Placement*

JANE KATHLEEN LAMPE (1969)  
 B.A. (Rosary)  
 M.A. (Michigan)  
 M.Ed. (Virginia)

*Dean of Women*

B. HOPKINS MOSES (1967)  
 B.A., M.A. (Syracuse)  
 LL.D. (Parsons)

*Registrar*

STANLEY J. HOLDEN (1963)  
 B.A. (Brooklyn)  
 Ph.D. (Alfred)

*Director of Research Services  
and Coordinator of  
Scientific Research*

Date following name is the year of appointment.



Page 230 — OFFICERS OF ADMINISTRATION

THOMAS J. MORAN (1970) B.S. (Wilkes) M.S. (Columbia)	Director of Public Relations
RICHARD RASPEN (1967) B.S. (Wilkes)	Director of Financial Aid
LINDA HOBROCK (1969) B.S. (Bowling Green) M.Ed. (Lehigh)	Assistant Dean of Women
JOEL I. ROME (1969) B.A. (Dickinson) M.Ed. (Springfield)	Assistant Dean of Men
JAMES A. MOSS (1970) B.A. (Wilkes) B.D. (Colgate) S.T.M. (Union Theological)	Assistant to Dean — Student Affairs
JOSEPH J. CHISARICK (1970) B.S. (Wilkes) C.P.A. (State of Pennsylvania)	Assistant Comptroller
DAVID WILLIAMS (1970) B.S. (Wilkes)	Director of Computer Center
GEORGE G. PAWLUSH (1969) B.S. (Wilkes)	Director of Sports Information
DONALD R. JOST (1970) B.A., M.A. (Michigan State)	Director of Housing

College Services

ROBERT M. KERR B.S. (Bucknell) M.D. (Jefferson)	College Physician
JOSEPH H. KANNER B.A. (Bucknell) M.A. (New School for Social Research)	Director of Testing Service
MILDRED GITTINS	Manager of the Bookstore
NELSON F. CARLE	Superintendent of Buildings and Grounds
MADELYN YANKOVICH, R.N. Nesbitt School of Nursing Massachusetts Eye & Ear Infirmary	College Nurse

Date following name is the year of appointment.

## Faculty

In alphabetical order, with date of appointment following the name.

FRANCIS J. MICHELINI (1955) B.S. (Seton Hall) M.S. (Delaware) Ph.D. (Pennsylvania)	Administration	President
FREDERIC E. BELLAS (1961) B.S., M.S., Ph.D. (Pennsylvania State)	Physics	Professor
ALVAN BRUCH (1962) B.S. (Chicago) M.S., Ph.D. (New York)	Environmental Science	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
STANLEY J. HOLDEN (1963) B.A. (Brooklyn) Ph.D. (Alfred)	Physics	Professor

Date following name is the year of appointment.



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RUTH W. JESSEE (1952) B.S., M.A. (Columbia) Ed.D. (Pennsylvania)	Nursing Education	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
NADA K. VUJICA (1947)* B.A., M.A. (Zagreb) M.A. in L.S. (Marywood)	Library	Professor
STANKO M. VUJICA (1947) B.A. (Zagreb) M.A. (Innsbruck) Ph.D. (Zagreb)	Philosophy and Religion	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

Date following name is the year of appointment.

\* Died, June 10, 1971

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MICHAEL J. BARONE (1964) B.S. (Wilkes) M.S. (Bucknell)	Education	Associate Professor
ANGEL BELIC (1968) LL.D. (Zagreb) Ph.D. (Rome, Italy)	Foreign Languages	Associate Professor
JAMES J. BOHNING (1959) B.S. (Valparaiso) M.S. (New York) Ph.D. (Northeastern)	Chemistry	Associate Professor
HARRIE E. CALDWELL (1970) B.S. (Edinboro State) M.S., Ph.D. (Syracuse)	Education	Associate Professor
ROBERT S. CAPIN (1959) B.S. (Wilkes) C.P.A. (State of Pennsylvania) M.B.A. (Lehigh)	Accounting	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

Date following name is the year of appointment.



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
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
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 Education	Associate Professor
SHASHANKA S. MITRA (1969) B.S., M.S. (Calcutta, India) Ph.D. (Washington)	Mathematics	Associate Professor
THOMAS J. MIZIANTY (1965) B.S. (Scranton) M.S., Ph.D. (Delaware)	Biology	Associate Professor (on leave)
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

Date following name is the year of appointment.

FRANCIS J. SALLEY (1950) B.S. (St. Joseph's) M.S. (Pennsylvania)	Chemistry	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
YASUSHI SUGIYAMA (1967) B.A., M.A. (Florida) Ph.D. (Maryland)	Political Science	Associate Professor
DONALD W. TAPPA (1965) B.S. (Brooklyn) M.A. (Williams) Ph.D. (Yale)	Biology	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
ROBERT A. WEST (1962) B.A. (Bucknell) M.A. (Columbia)	Education	Associate Professor
ROY E. WILLIAMS (1967) B.A. (Eastern Nazarene) S.T.B. (Temple) Ph.D. (Drew)	Philosophy and Religion	Associate Professor
JOHN A. ANAZA (1970) B.S. (Ibadan, Nigeria) M.A. (Southern Illinois) Ph.D. (Nebraska)	Economics	Assistant Professor
REED D. ACHESON (1969) B.A. (Monmouth) Ph.D. (Cincinnati)	Biology	Assistant Professor

Date following name is the year of appointment.



FRANK C. ALLEN (1969) B.A. (Maryland) M.A. (New York) Ph.D. (Maryland)	English	Assistant Professor
MARGARET V. ALLEN (1969) B.A. (Ursuline) M.A. (Chicago) Ph.D. (Tulane)	English	Assistant Professor
FRANK G. BAILEY (1968) B.S. (Pennsylvania) M.S. (Stevens) M.A. (Columbia) Ph.D. (Polytechnic Institute of Brooklyn)	Physics	Assistant Professor
VICTOR F. BAIZ (1970) Ph.B. (Dickinson) M.A. (Bucknell)	Education	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
JOEL BERLATSKY (1970) B.A. (Carleton) M.A. (Brown) Ph.D. (Northwestern)	History	Assistant Professor
PATRICIA M. BOYLE (1966) B.A. (Wilkes) M.A., Ph.D. (Pennsylvania)	English	Assistant Professor
DALE A. BUEHLER (1962) B.A. (Franklin & Marshall) M.S. in L.S. (Drexel Institute of Technology)	Library	Assistant Professor
MARIE BYCZKOWSKI (1968) B.A. (Douglass) M.A. in L.S. (Rutgers)	Library	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

Date following name is the year of appointment.

E. SHELDON CURTIS (1952) B.S.C. (Washington & Lee)	Accounting	Assistant Professor
WARREN E. DEARMENT (1964) B.A. (Dickinson) M.A. (Pittsburgh)	English	Assistant Professor
JAMES G. DECOSMO (1962) B.S. (West Chester) M.S. (Adelphi)	Mathematics	Assistant Professor (on leave)
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
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
H. CUTLER FALL (1969) B.A. (Brown) M.A. (Yale) Ph.D. (California, Santa Barbara)	Music	Assistant Professor
FRANCISCO F. FERNANDEZ (1971) Fulbright Exchange Teacher—Spain	Foreign Languages	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
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

Date following name is the year of appointment.



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GEORGE GERA (1958) B.S. (Bloomsburg) M.A. (Columbia)	Business Education	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
ROBERT J. HEAMAN (1969) B.A. (Detroit) M.A., Ph.D. (Michigan)	English	Assistant Professor
DONALD A. HENSON (1970) B.A., M.A. (Purdue)	Philosophy	Assistant Professor
KLAUS HOLM (1970) B.S. (New York) M.F.A. (Yale)	Theater Arts	Assistant Professor
ELLEN D. JACOBS (1969) B.A. (Chicago) M.S. (Illinois Institute of Technology)	Fine Arts	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
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

Date following name is the year of appointment.

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MARSHA H. KWALWASSER (1971) B.A. (Brooklyn) M.A. (Yale)	Political Science	Assistant Professor
EDWARD B. LEVITON (1971) B.A. (Brooklyn) M.A. (SUNY, Binghamton)	Economics	Assistant Professor
ANNE VANKO LIVA (1970) (Juilliard)	Music	Assistant Professor
RITA M. LYNCH (1971) B.S. (Misericordia) M.S. (Pennsylvania)	Nursing Education	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
WILLIAM G. MARTIN, JR. (1971) B.A., M.A. (Bob Jones)	Theater Arts	Assistant Professor
ROBERT M. MARTINEZ (1971) B.S. (Niagara) Ph.D. (California, Berkeley)	Biology	Assistant Professor
JOHN F. MEYERS (1967) B.A. (Minnesota) M.A. (Clark)	History	Assistant Professor
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
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
SATYANSHU K. MUKHERJEE (1971) B.A., M.A. (Agra, India)	Sociology	Assistant Professor

Date following name is the year of appointment.



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
JOSE M. RIBAS (1961) B.A., LL.B. (Barcelona) Ph.D. (Madrid)	Foreign Languages	Assistant Professor (on leave)
J. PHILIP RICHARDS (1962) B.F.A. (Syracuse)	Fine Arts	Assistant Professor
JOSEPH H. SALSBERG (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
ROLAND C. SCHMIDT, JR. (1962) B.S. (Bloomsburg) M.S. (Scranton)	Physical Education	Assistant Professor
KUO-KONG SHOW (1966) B.A. (Taiwan) M.A. (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

Date following name is the year of appointment.

RICHARD E. SOURS (1965) B.S. (Towson) M.S. (Michigan State)	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
FRANK A. SZUMILO (1970) B.S. (Wilkes) M.S. (Lehigh)	Business Administration	Assistant Professor
WAGHA ABDEL-GAWAD TAYLOR (1969) B.A. (Alexandria) M.A. (Brown) Ph.D. (Clark)	Economics	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
PHILIP R. TUHY (1960) B.A. (Valparaiso) M.G.A. (Pennsylvania)	Political Science	Assistant Professor
JACINTO VEREDA (1970) B.B.A. (Bowling Green State) Ph.D. (Pennsylvania)	Commerce and Finance	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

Date following name is the year of appointment.



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DEAN G. WHITE (1968) B.A., M.A. (Virginia) Ph.D. (Dublin, Ireland)	History	Assistant Professor
CHARLES E. WILKS (1969) B.A., M.A., Ph.D. (Texas)	Mathematics	Assistant Professor
PAUL P. ZAVADA (1966) B.S. (Wilkes) C.P.A. (State of Pennsylvania)	Accounting	Assistant Professor
RODGER BEARDE (1971) B.S. (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
ROBERT S. BRANDSCHAIN (1968) B.A. (Vermont) M.Ed. (Temple)	Education	Instructor
BARBARA BUCKMAN (1968) B.S., M.S. (Wilkes)	Chemistry	Instructor
LILY DAVIS BYNON (1968) B.S. (Millersville) M.Ed. (Temple)	Education	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
LORNA C. DARTE (1969) B.A. (George Washington) M.S. in L.S. (Drexel Institute of Technology)	Library	Instructor
ROBERT A. DiSIBIO (1971) B.S., M.Ed. (California State)	Education	Instructor
ANTONIA K. DOLBEAR (1969) B.S. (Misericordia)	Business Education	Instructor
EUGENE S. DOMZALSKI (1969) B.S. (Wyoming)	Physical Education	Instructor
HELMUT ELLRICH (1971) Fulbright Exchange Teacher — Germany	Foreign Languages	Instructor

Date following name is the year of appointment.

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GAY M. FOSTER (1970) B.S. (Lock Haven)	Physical Education	Instructor
KATHRYN GREGORY (1970) B.S., M.Ed. (Pennsylvania State)	Environmental Science	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)	Economics	Instructor
MARY Z. KERR (1969) B.A. (Wellesley) M.A. (Rochester)	English	Instructor
JUDITH E. KRAVITZ (1964) B.S. (Pennsylvania State) M.Ed. (Temple)	Mathematics	Instructor
ELAINE H. LACEY (1970) B.A. (Pennsylvania State) M.L.S. (Rutgers)	Library	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
CHESTER N. MOLLEY (1964) B.A. (Wilkes) M.A. (Bucknell) Ph.D. (Pennsylvania State)	English	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
RUTH T. ROBERTS (1955) B.A. (Goucher)	English	Instructor
SARAH SCHONWETTER (1962) B.S., M.S. (Temple)	Biology	Instructor
ALBERT C. SERZAN (1967) B.A. (Yale) M.A.T. (Chicago)	Foreign Languages	Instructor
JOSEPH SKVARLA (1971) B.A. (Wilkes)	Physical Education	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
<hr/>		
CLIFFORD E. BALSHAW (1971) F.A.G.O. (Quilman 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 (UPWARD BOUND)	Adjunct Professor
JOSEPH A. SKOK (1969) B.S. (Lock Haven) M.Ed. (Pennsylvania State)	EDUCATIONAL DEVELOPMENT CENTER	Adjunct Professor
<hr/>		
EDWARD B. STOCKHAM (1971) A.B., Ph.D. (Pennsylvania)	Chemistry and Health Sciences	Adjunct Assistant Professor

Date following name is the year of appointment.

## Faculty Committees

The following are the Faculty Committee assignments made for the academic year 1971-72. The President is *ex-officio* on all Committees except Committees on Academic Freedom.

### Academic Standing

Robert S. Capin, *Chairman*  
Benjamin Fiester, Jr.  
Herbert Garber  
Eugene L. Hammer  
Robert Heaman  
Stanley Holden  
Jane K. Lampe  
David Leach  
B. Hopkins Moses  
George F. Ralston  
Charles B. Reif  
Ralph B. Rozelle  
Joseph Salsburg  
John P. Whitby

### Admissions

Reed Acheson, *Chairman*  
Frederic E. Bellas  
John J. Chwalek  
George Elliot  
Mahmoud H. Fahmy  
Stanley Gutin  
Herbert Simon  
John P. Whitby

### Athletic

Cromwell E. Thomas, *Chairman*  
Joel Berlatsky  
Barbara Buckman  
Welton G. Farrar  
Klaus Holm  
Arthur J. Hoover  
John G. Reese  
Charles Sweeney  
Stanko Vujica  
Robert West  
John P. Whitby

### Curriculum

Robert C. Riley, *Chairman*  
Donald Henson  
Thomas Kaska  
Ruth McHenry  
Umid Nejib  
Robert Ogren  
James Rodechko  
Francis Salley  
Michael Seitz  
J. George Siles  
Yasushi Sugiyama  
Stephen J. Tillman  
William Weber  
Robert Werner

### Financial Aid

Wilbur Hayes, *Chairman*  
Margaret Allen  
Michael Barone  
Warren E. DeArment  
John F. Meyers  
Raymond Nutaitis  
Walter Placek  
Richard Raspen

### Graduate Studies

Harold Cox, *Chairman*  
Frank Allen  
James Bohning  
Alvan Bruch  
Francis G. Darte, II  
Francis Donahoe  
Eugene L. Hammer  
Stanley Holden  
David Leach  
Samuel A. Rosenberg  
Ralph B. Rozelle  
Donald Tappa  
Robert Werner  
Bing K. Wong



## Faculty Committees

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  
Arvid Lekstrom  
Charlotte V. Lord  
Howard Swain  
William Swartchild  
Wagiha Taylor

## Research and Service

Stanley Holden, *Chairman*  
Benjamin Fiester, Jr.  
David Leach  
Ralph B. Rozelle  
Yasushi Sugiyama

## Student Life

George F. Ralston, *Chairman*  
Joseph Bellucci  
Robert S. Capin  
Theodore J. Engel  
Linda Hobrock  
Donald Jost  
John Labows  
Jane K. Lampe  
William Mistichelli  
James Moss  
Patricia Pisaneschi  
Richard Probert  
Richard Raspen  
Joel Rome  
James M. Toole

## Student Publications

Welton Farrar, *Chairman*  
Angel Belic  
Joseph Bellucci  
James Berg  
Patricia Boyle  
Chester Colson  
Stanley B. Kay  
Thomas Moran  
William Stine

## Academic Freedom

- a. MEDIATION
  - Samuel Rosenberg
  - Alvan Bruch
  - Thomas Kaska
  - Robert Riley (*Alternate*)
- b. FACULTY-TRUSTEE
  - Owen Faut
  - Eugene Hammer
  - Charles B. Reif (*Alternate*)

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# WILKES COLLEGE *Bulletin*

1971-1972

Evening  
College



WILKES-BARRE  
PENNSYLVANIA



## Calendar

### Registration for the Evening College is as follows:

Wednesday, September 8 ..... 9:00 a.m. to 8:00 p.m.  
Thursday, September 9 ..... 9:00 a.m. to 8:00 p.m.  
Friday, September 10 ..... 9:00 a.m. to 8:00 p.m.  
Saturday, September 11 ..... 9:00 a.m. to 12:00 noon  
Monday, September 13 ..... Classes begin at 6:00 p.m.  
Saturday, October 9 ..... Report on incomplete grades  
Saturday, October 23 ..... Progress Reports  
Thursday, November 18 ..... Thanksgiving recess, 10:00 p.m.  
Monday, November 29 ..... Classes resume, 6:00 p.m.  
Thursday, December 16 ..... Christmas recess, 10:00 p.m.  
Monday, January 3 ..... Classes resume, 6:00 p.m.  
Thursday, January 6 ..... Classes end, 10:00 p.m.  
Monday, January 10, through  
Thursday, January 13 ..... Examination period

### For further information write to:

Director of Evening and Summer College  
Wilkes College  
Wilkes-Barre, Pennsylvania 18703  
Phone: (AC 717) 824-4651. (After 5:00 p.m., call 824-4656)

## Wilkes College

### *Bulletin*



## EVENING SESSION

**Fall Semester  
1971 - 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 2400 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-Wednesday or Tuesday-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 or 44 hours of credit in evening and summer school programs with at least 24 hours in Business Administration and a minimum of 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.



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Course	Description	Day & Hour	Room No.	Credit Hrs.
<b>ACCOUNTING:</b>				
Acct. 101E	Elementary Accounting I	MW 6:30-8:00	Par. 35	3
Acct. 101E-2	Elementary Accounting I	TTh 6:30-8:00	Par. 35	3
Acct. 101E-3	Elementary Accounting I	TTh 8:00-9:30	Par. 45	3
Acct. 102E	Elementary Accounting II (Pre: Acct. 101)	MW 6:30-8:00	Par. 34	3
Acct. 111E	Intermediate Accounting I (Pre: Acct. 102)	TTh 8:00-9:30	Par. 25	3
Acct. 201E	Advanced Cost Accounting I (Pre: Acct. 112)	MW 6:30-8:00	Par. Annex	3
Acct. 221E	Taxes I (Pre: Acct. 102-202)	MW 6:30-8:00	Par. 45	3
Acct. 231E	Auditing Practice I (Pre: Acct. 202)	MW 8:00-9:30	Par. 25	3
Acct. 241E	Advanced Accounting I (Pre: Acct. 112)	MW 6:30-8:00	Par. 25	3
<b>BIOLOGY:</b>				
Bio. 101E	Biological Science I	MW 6:30-8:00	Stark 109	3
Bio. 102E	Biological Science II	TTh 6:30-8:00	Stark 109	3
<b>BUSINESS ADMINISTRATION:</b>				
B.A. 209E	Correspondence & Reports (Pre: Eng. 102)	TTh 6:30-8:00	Par. 56	3
B.A. 225E	Corporation Finance (Pre: Econ. 102)	TTh 8:00-9:30	Par. 43	3
B.A. 231E	Business Law — Introduction & Contracts (Pre: Econ. 102)	MW 8:00-9:30	Par. 56	3
B.A. 233E	Business Law — Partnerships & Corporations (Pre: B.A. 231)	TTh 8:00-9:30	Par. 56	3
B.A. 241E	Life Insurance (Pre: Approval of instructor)	MW 6:30-8:00	Par. 43	3
B.A. 251E	Principles of Management I	TTh 6:30-8:00	Par. 45	3
<b>BUSINESS EDUCATION:</b>				
B.E. 105	Elementary Shorthand	MW 6:00-8:00	Par. 33	2
B.E. 107	Elementary Typewriting	MW 8:00-10:00	Par. 33	2

Course	Description	Day & Hour	Room No.	Credit Hrs.
<b>ECONOMICS:</b>				
Econ. 101E	Principles of Economics I	MW 6:30-8:00	Kirby 302	3
Econ. 101E-2	Principles of Economics I	TTh 8:00-9:30	Weck. Annex	3
Econ. 102E	Principles of Economics II (Pre: Econ. 101)	MW 6:30-8:00	Par. 23	3
Econ. 111E	Economic History	TTh 8:00-9:30	Par. 23	3
Econ. 201E	Money & Banking (Pre: Econ. 102)	MW 8:00-9:30	Kirby 302	3
Econ. 217E	Economics of Transportation (Pre: Econ. 102)	TTh 6:30-8:00	Par. 34	3
Econ. 223E	Collective Bargaining (Pre: Econ. 102)	MW 8:00-9:30	Par. 23	3
Econ. 225E	International Trade (Pre: Econ. 102)	TTh 8:00-9:30	Par. 34	3
Econ. 227E	Economic Geography of North America (Pre: Econ. 102)	MW 6:30-8:00	Par. 56	3
Econ. 229E	Comparative Economic Systems (Pre: Econ. 102 or approval of instructor)	MW 8:00-9:30	Par. 43	3
Econ. 231E	Applied General Statistics (Pre: Approval of instructor)	TTh 6:30-8:00	Weck. Annex	3
Econ. 241E	Economic Analysis (Pre: Econ. 102)	TTh 6:30-8:00	Par. 23	3
Econ. 245E	Consumer Economics (Pre: Econ. 102)	TTh 8:00-9:30	Par. Annex	3
<b>EDUCATION:</b>				
Ed. 351	Educational Measurements (Pre: Ed. 202)	Th 4:00-6:00	Kirby 107	3
<b>ENGLISH:</b>				
Eng. 101E	Composition I	MW 6:30-8:00	Bdf. 12	3
Eng. 101E-2	Composition I	TTh 6:30-8:00	Bdf. 12	3
Eng. 101E-3	Composition I	MW 8:00-9:30	Bdf. 12	3
Eng. 102E	Composition II (Pre: Eng. 101)	TTh 6:30-8:00	Bdf. 13	3
Eng. 131E	Fundamentals of Speech	M 4:00-6:00	Kirby 203	2
Eng. 151E	Western World Literature	MW 6:30-8:00	Bdf. 14	3
<b>ENGINEERING:</b>				
Ma.E. 102	Materials Science (Approval of instructor)	Time and Place to be arranged.		3
M.E. 211	Mechanics I, Statics (Approval of instructor)	Time and Place to be arranged.		3



Course	Description	Day & Hour	Room No.	Credit Hrs.
<b>ENVIRONMENTAL SCIENCE:</b>				
Env. Sci. 101E	Environmental Science — Introductory Earth Science Lab Lab fee \$20	T 8:00-10:00 Th 8:00-10:00	Stark 109 Stark 100	3
<b>FINE ARTS:</b>				
F.A. 101E	Experiencing Art I	T 5:00-8:00	Con. An. 101	3
<b>HISTORY:</b>				
Hist. 101E	History of Western Civilization	TTh 5:30-7:00	Stark 204	3
Hist. 102E	History of Western Civilization	MW 8:00-9:30	Stark 204	3
Hist. 241E	British History (Approval of instructor)	Th 5:30-8:30	Kirby 109	3
Hist. 333E	Age of Big Business (Approval of instructor)	T 5:30-8:30	Fkn. 30	3
Hist. 353E	Early Modern Europe (Approval of instructor)	W 5:30-8:30	Weck. Annex	3
Hist. 355E	Nineteenth Century Europe (Approval of instructor)	MW 6:30-8:30	Fkn. 30	3
Hist. 381	Latin America	T 5:30-8:30	Kirby 109	3
Hist. 497	Seminar (China's Foreign Relations) (Approval of instructor)	Th 5:30-8:30	Fkn. 30	3
<b>JOURNALISM:</b>				
Jour. 101E	Basic News Writing Fee \$10	TTh 6:30-8:00	Par. 33	3
<b>LANGUAGES:</b>				
Fr. 101E	Elementary French	MW 8:00-9:30	Kirby 103	3
Fr. 203E	Intermediate French (Pre: Fr. 102)	MW 6:30-8:00	Kirby 103	3
Ger. 101E	Elementary German	MW 6:30-8:00	Kirby 303	3
Ger. 203E	Intermediate German (Pre: Ger. 102)	MW 8:00-9:30	Kirby 303	3
Russ. 101E	Elementary Russian	TTh 4:00-5:30	Kirby 203	3
Russ. 203E	Intermediate Russian (Pre: Russ. 102)	TTh 6:30-8:00	Kirby 108	3
Span. 101E	Elementary Spanish	TTh 6:30-8:00	Kirby 203	3
Span. 203E	Intermediate Spanish (Pre: Span. 102)	TTh 8:00-9:30	Kirby 203	3

Course	Description	Day & Hour	Room No.	Credit Hrs.
<b>MATHEMATICS:</b>				
Math. 100E	Pre-Calculus Mathematics (Pre: two years of high school math)	MW 6:00-8:00	Miner 12	4
Math. 101E	Fundamentals of Mathematics	MW 6:30-8:00	Miner 11	3
Math. 111E	Analysis I (Calculus with Analytic Geometry) (Pre: Math. 105 or both Math 107-109, or equivalent)	MW 6:00-8:00	Miner 21	4
Math. 261	Introduction to Computer Sciences Fee \$20	TTh 6:30-8:00	Miner 22	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.				
<b>MUSIC:</b>				
Mus. 101E	Introduction to the Materials & Literature of Music I	TTh 6:30-8:00	Darte 202	3
Applied Mus.		Hrs. 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.				
<b>NURSING EDUCATION:</b>				
N.E. 103E	Trends in Nursing	MTh 4:00-5:30	Kirby 108	2
N.E. 106E	Supervision & Administration	M 4:00-6:00	Kirby 107	2
N.E. 112E	Field Experience in Supervising or Teaching	Hrs. to be arranged		4
N.E. 113E	Medical & Surgical Nursing I	Th 6:00-8:00	Kirby 107	2
N.E. 114E	Medical & Surgical Nursing II	Th 8:00-10:00	Kirby 107	2
Ed. 351E	Educational Measurements (Pre: Ed. 202)	Th 4:00-6:00	Kirby 107	3
<b>PHILOSOPHY:</b>				
Phil. 101E	Introduction to Philosophy	TTh 8:00-9:30	Fkn. 14	3
Phil. 102E	Logic & Scientific Method	TTh 6:30-8:00	Fkn. 14	3



Course	Description	Day & Hour	Room No.	Credit Hrs.
<b>PHYSICAL EDUCATION:</b>				
P.E. 105E	Hygiene	T 7:00-8:00	Miner 21	1
<b>PHYSICS:</b>				
Phys. 101E	Physical Science	MW 6:30-8:00	Stark 114	3
<b>POLITICAL SCIENCE:</b>				
P.S. 101E	Political Science I	TTh 6:30-8:00	Kirby 303	3
P.S. 223E	Comparative Government (Pre: P.S. 101-102)	TTh 8:00-9:30	Kirby 108	3
P.S. 251E	The Role of Planning in Urban Development (Pre: P.S. 101-102)	MW 8:00-9:30	Par. 34	3
<b>PSYCHOLOGY:</b>				
Psy. 101E	General Psychology I	TTh 6:30-8:00	Kirby 102	3
Psy. 101E-2	General Psychology I	TTh 8:00-9:30	Kirby 102	3
Psy. 221E	Child Psychology (Pre: Psy. 101-102)	MW 6:30-8:00	Kirby 208	3
Psy. 232E	Human Behavior (Pre: Psy. 101-102)	MW 8:00-9:30	Kirby 208	3
<b>RETAILING:</b>				
Ret. 101E	Principles of Retailing	TTh 8:00-9:30	Kirby 208	3
Ret. 210E	Elements of Merchandise	TTh 6:30-8:00	Kirby 208	3
<b>SECRETARIAL STUDIES:</b>				
(See Business Education)				
<b>SOCIOLOGY:</b>				
Soc. 101E	Introduction to Sociology & Anthropology	MW 6:30-8:00	Kirby 102	3
Soc. 251E	Comparative Social Welfare Systems (Pre: Soc. 101-102, Psy. 101-102)	TTh 6:30-8:00	Kirby 302	3

## GRADUATE COURSES

### Fall Semester — 1971-1972

#### Biology

Bio. 432	Comparative Physiology
Bio. 451	Invertebrate Biology

#### Chemistry

Chem. 341	Elementary Physical Chemistry
Chem. 411	Advanced Inorganic Chemistry
Chem. 440	Quantum Chemistry
Chem. 531	Stereochemistry

#### Physics

Phys. 401	Topics in Mathematical Physics
Phys. 511	Analytical Mechanics
Phys. 531	Electricity and Magnetism
Phys. 551	Quantum Mechanics

#### Business Administration

Econ. 474	Pre-Seminar
Econ. 506	Labor-Management Economics
Acct. 503	Managerial Accounting
Bus. Adm. 502	Management Science
Bus. Adm. 511	Modern International Commerce
Bus. Adm. 524	Management Seminar II
Bus. Adm. 552	Financial Management

#### English

Eng. 345	Early English Novel
Eng.	Modern Novel



### History

Hist. 333	Age of Big Business
Hist. 353	Early Modern Europe
Hist. 355	Europe in the Nineteenth Century
Hist. 381	History of Latin America
Hist. 497	Seminar — China's Foreign Relations
Hist. 395	Independent Research

### Mathematics

Math. 311	Functions of a Real Variable
Math. 331	Introduction to Abstract Algebra I
Math. 343	Introduction to Geometry
Math. 413	Functions of Several Variables
Math. 441	Introduction to Topology I
Math. 480	Topics in Number Theory
Math. 531	Modern Algebra

### Education

Ed. 402	Elementary Classroom Methods
Ed. 403	Intern Teaching
Ed. 430	Developmental Reading
Ed. 510	Psychological Foundations of Education
Ed. 513	Comparative Foundations of Education
Ed. 514	Historical Foundations of Education
Ed. 520	Tests and Measurements
Ed. 532A	Problems in Elementary Education (Math.)
Ed. 532C	Problems in Elementary Education (Lang. Arts)
Ed. 534	Elementary School Curriculum

### TEMPLE UNIVERSITY GRADUATE PROGRAM

Wilkes College cooperates with Temple University in offering a General Education Program for Teachers (G.E.P.T.) leading to the Degree of Master of Science in Education. The program is open to anyone who meets the academic requirements and is interested in exposure to a broad-base general education program. The following course is being offered this semester:

G.E. 401 Changing Perspectives in the Humanities



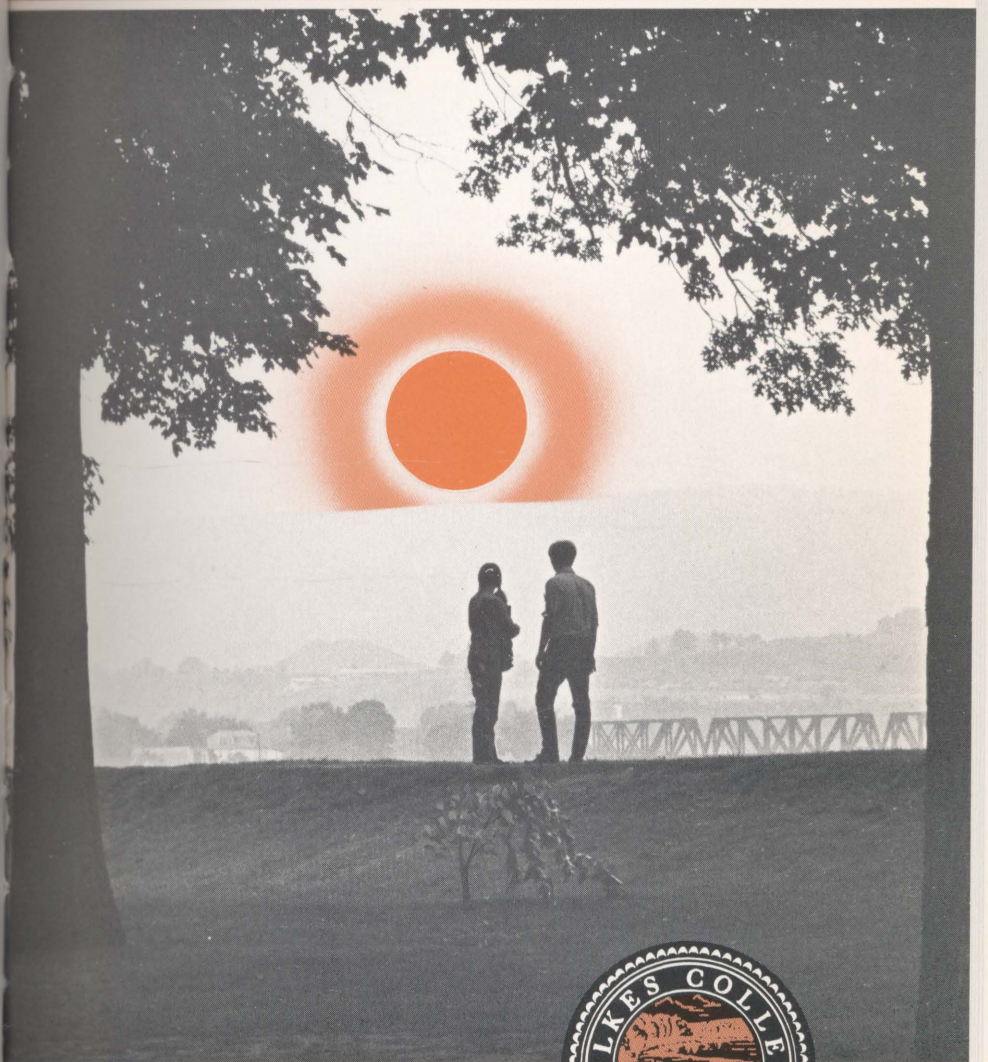
Registration: Saturday, September 11 at 8:45 a.m.; to be followed by the first class. (Parrish 35)



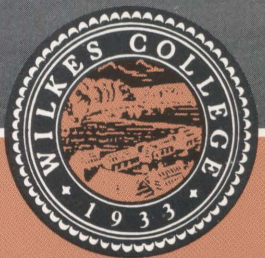
Further information on all Graduate Courses can be obtained at the Graduate School Office at Wilkes College. (824-4651, Ext. 243).



**WILKES EVENING COLLEGE**  
**1972 BULLETIN**  
**SPRING SEMESTER**



WILKES-BARRE,



PENNSYLVANIA



*Wilkes College*

*Bulletin*



*EVENING SESSION*

*Spring Semester*

*1972*

WILKES-BARRE, PENNSYLVANIA



## Calendar

### Registration for the Evening College is as follows:

Wednesday, January 26 ..... 9:00 a.m. to 8:00 p.m.  
Thursday, January 27 ..... 9:00 a.m. to 8:00 p.m.  
Friday, January 28 ..... 9:00 a.m. to 8:00 p.m.  
Saturday, January 29 ..... 9:00 a.m. to 12 noon  
Monday, January 31 ..... Classes begin at 6:00 p.m.  
Wednesday, February 16 ..... Submit incomplete grades  
Saturday, March 11 ..... Progress reports  
Thursday, March 23 ..... Easter recess begins at 10:00 p.m.  
Monday, April 3 ..... Easter recess ends at 6:00 p.m.  
Thursday, May 11 ..... Classes end at 10:00 p.m.  
Monday, May 15, to Thursday, May 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 5:00 p.m., call 824-4656



## AN EDUCATED MAN

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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-Wednesday or Tuesday-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 Spring 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

### Spring Semester — 1972

Course	Description	Day & Hour	Room No.	Credit Hrs.
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#### ACCOUNTING:

Acct. 101E	Elementary Acct. I	MW 8:00-9:30	Par. 25	3
Acct. 101E-2	Elementary Acct. I	TTh 6:30-8:00	Par. 35	3
Acct. 102E	Elementary Acct. II (Pre: Acct. 101)	MW 8:00-9:30	Par. 35	3
Acct. 102E-2	Elementary Acct. II (Pre: Acct. 101)	TTh 6:30-8:00	Par. 45	3
Acct. 111E	Intermediate Acct. I (Pre: Acct. 102)	TTh 6:30-8:00	Par. 25	3
Acct. 112E	Intermediate Acct. II (Pre: Acct. 111)	TTh 8:00-9:30	Par. 35	3
Acct. 202E	Cost Accounting II (Pre: Acct. 201)	MW 6:30-8:00	Par. 45	3
Acct. 222E	Taxes II (Pre: Acct. 221)	MW 8:00-9:30	Par. 45	3
Acct. 232E	Auditing II (Pre: Acct. 231)	MW 8:00-9:30	Par. Annex	3
Acct. 242E	Advanced Acct. II (Pre: Acct. 112 and permission of instructor)	MW 6:30-8:00	Par. 35	3

#### BIOLOGY:

Bio. 101E	Biological Science	MW 6:30-8:00	Stark 302	3
Bio. 102E	Biological Science	TTh 6:30-8:00	Stark 302	3

#### BUSINESS ADMINISTRATION:

B.A. 114E	Salesmanship (Pre: Approval of instructor)	MW 6:30-8:00	Par. 34	3
B.A. 216E	Advertising	MW 8:00-9:30	Par. 34	3
B.A. 220E	Real Estate (Pre: Econ. 102)	TTh 6:30-8:00	Kirby 107	3
B.A. 222E	Marketing (Pre: Econ. 102)	TTh 6:30-8:00	Par. 53	3

Course	Description	Day & Hour	Room No.	Credit Hrs.
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B.A. 232E	Business Law—Agency Partnerships, Corporation Real Property (Pre: B.A. 231)	MW 8:00-9:30	Par. 53	3
B.A. 233E	Business Law—Property (Pre: B.A. 231, 232, Acct. 102)	MW 8:00-9:30	Par. 23	3
B.A. 240E	Property Insurance (Pre: B.A. 232 or approval of instructor)	MW 6:30-8:00	Par. 23	3
B.A. 244E	Time and Motion Study	TTh 8:00-9:30	Par. 56	3
B.A. 252E	Principles of Management II (Pre: B.A. 251)	TTh 8:00-9:30	Par. 34	3

#### BUSINESS EDUCATION:

Bus. Ed. 106E	Intermediate Shorthand (Pre: Bus. Ed. 105)	TTh 6:30-8:00	Par. 33	2
Bus. Ed. 108E	Intermediate Typewriting (Pre: Bus. Ed. 107) Lab Fee \$10	TTh 8:00-9:30	Par. 33	2

#### ECONOMICS:

Econ. 101E	Principles of Economics I	TTh 8:00-9:30	Weck. An.	3
Econ. 102E	Principles of Economics II (Pre: Econ. 101)	MW 6:30-8:00	Par. 43	3
Econ. 102E-2	Principles of Economics II (Pre: Econ. 101)	TTh 6:30-8:00	Par. 43	3
Econ. 202E	Theory of Money (Pre: Econ. 201)	TTh 6:30-8:00	Kirby 109	3
Econ. 212E	Government and Business (Pre: Econ. 102, P.S. 101)	MW 6:30-8:00	Par. 25	3
Econ. 228E	Economic Geography of Asia, Africa, Latin America (Econ. 227 is <b>not</b> a prerequisite)	MW 6:30-8:00	Par. 53	3
Econ. 230E	Business Cycles (Pre: Approval of instructor)	TTh 8:00-9:30	Par. 43	3
Econ. 232E	Economic Statistics (Pre: Econ. 231)	TTh 6:30-8:00	Weck. An.	3
Econ. 236E	Public Finance (Pre: Econ. 102, P.S. 101)	TTh 6:30-8:00	Par. 34	3

#### EDUCATION:

Ed. 351E	Educational Measurements (Pre: Ed. 202)	Th 4:00-6:00	Kirby 109	2
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Course	Description	Day & Hour	Room No.	Credit Hrs.
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#### ENGLISH:

Eng. 101E	Composition	MW 6:30-8:00	Bdf. 13	3
Eng. 102E	Composition (Pre: Eng. 101)	MW 8:00-9:30	Bdf. 13	3
Eng. 102E-2	Composition (Pre: Eng. 101)	TTh 6:30-8:00	Bdf. 13	3
Eng. 131E	Fundamentals of Speech	M 4:00-6:00	Bdf. 14	2
Eng. 152E	Western World Literature (Pre: Eng. 151)	MW 6:30-8:00	Bdf. 14	3
Eng. 405E	Studies in Linguistics (Graduate course open to undergraduates)	M 6:00-9:00	Bdf. 12	3

#### ENGINEERING:

Ma. E. 102E	Materials Science (Approval of instructor)	Time and place to be arranged		3
E. E. 212E	Circuit Theory II (Approval of instructor)	Time and place to be arranged		3
Ma. E. 242E	Physical Metallurgy (Approval of instructor)	Time and place to be arranged		3

#### ENVIRONMENTAL SCIENCE:

Env. Sci. 232E	Hydrology Laboratory Lab Fee \$20	T 6:00-8:00 Th 6:00-8:00	Stark 109 Stark 100	3
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#### FINE ARTS:

F. A. 101E	Experiencing Art I	T 5:00-8:00	Con. An. 101	3
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#### FOREIGN LANGUAGES:

French 102E	Elementary French II (Pre: French 101)	MW 8:00-9:30	Kirby 103	3
French 204E	Intermediate French II (Pre: French 203)	MW 6:30-8:00	Kirby 103	3
German 102E	Elementary German II (Pre: German 101)	MW 6:30-8:00	Kirby 303	3
German 204E	Intermediate German II (Pre: German 203)	MW 8:00-9:30	Kirby 303	3
Spanish 102E	Elementary Spanish II (Pre: Spanish 101)	TTh 6:30-8:00	Kirby 103	3
Spanish 204E	Intermediate Spanish II (Pre: Spanish 203)	TTh 8:00-9:30	Kirby 103	3

Course	Description	Day & Hour	Room No.	Credit Hrs.
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#### HISTORY:

Hist. 101E	History of World Civilization	MW 8:00-9:30	Stark 204	3
Hist. 102E	History of World Civilization	TTh 5:30-7:00	Stark 204	3
Hist. 334E	Twentieth Century America	T 5:30-8:30	Fkn. 14	3
Hist. 354E	Early Modern Europe (1648-1815)	W 5:30-8:30	Fkn. 14	3
Hist. 356E	Europe in the Twentieth Century	M 5:30-8:30	Fkn. 14	3
Hist. 371E	Historiography and Research (Approval of instructor)	M 5:30-8:30	Fkn. 30	3
Hist. 497E	Seminar	Th 5:30-8:30	Fkn. 30	1-3

#### JOURNALISM

Jour. 102E	Journalism II (Pre: Jour. 101 or permission of instructor) Lab Fee \$10	MW 6:30-8:00	Par. 33	3
Jour. 102E-2	Journalism II (Pre: Jour. 101 or permission of instructor) Lab Fee \$10	MW 8:00-9:30	Par. 33	3

#### MATHEMATICS:

Math. 100E	Pre-Calculus Mathematics (Pre: Two years of secondary school mathematics in algebra and geometry)	TTh 6:00-8:00	Miner 12	4
Math. 101E	Fundamentals of Math. I	TTh 6:30-8:00	Miner 11	3
Math. 102E	Fundamentals of Math. II (Pre: Not open to students with credits in Math. 103,104)	MW 6:30-8:00	Miner 12	3
Math. 112E	Analysis II Calculus or functions of a real variable (Pre: Math. 111)	MW 6:00-8:00	Miner 11	4
Math. 263E	Fortran Programming (Pre: Math. 261 or approval of instructor)	Time and place to be arranged		3
Math. 264E	Cobol Programming (Pre: Math. 261 or approval of instructor)	Time and place to be arranged		3

#### MUSIC:

Music 101E	Introduction to the Materials and Literature of Music I	TTh 6:30-8:00	DDD 202	3
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Course	Description	Day & Hour	Room No.	Credit Hrs.
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Applied Music Please arrange this course with Mr. Gasbarro, chairman, Music Department

#### NURSING EDUCATION:

N. E. 103E	History and Trends in Nursing	MTh 4:00-5:30	Kby. 107	3
N. E. 107E	Principles and Methods in Nursing Education (Pre: Psy. 102 or permission of instructor)	M 4:00-6:00	Kby. 109	2
N. E. 108E	Multi-Sensory Techniques in Nursing Education (Pre: N.E. 107 may be taken concurrently)	T 4:00-5:00	Kby. 107	1
N. E. 112E	Field Experience in Supervision or Teaching	Hours to be arranged		4
N. E. 114E	Medical and Surgical Nursing (N.E. 113 is <b>not</b> a prerequisite)	Th 6:00-8:00	Kby. 108	2

#### PHILOSOPHY:

Phil. 101E	Introduction to Philosophy	MW 8:00-9:30	Kby. 102	3
Phil. 102E	Logic and Scientific Method	TTh 8:00-9:30	Kby. 208	3
Phil. 210E	Ethics	TTh 6:30-8:00	Kby. 208	3

#### PHYSICAL EDUCATION:

P.E. 106E	Hygiene	T 7:00-8:00	Miner 21	1
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#### PHYSICS:

Physics 102E	Physical Science (Pre: Phys. 101 or approval of instructor)	MW 6:30-8:00	Stark 114	3
Physics 392E	Advanced Laboratory (Pre: Phys. 203, Math. 212)	Hours to be arranged		1-2

#### POLITICAL SCIENCE:

P. S. 102E	Political Science II	TTh 6:30-8:00	Kirby 303	3
P. S. 222E	International Relations (Pre: P.S. 101 - 102)	TTh 6:30-8:00	Kirby 203	3
P. S. 252E	Fundamentals of Urban Design (Pre: P.S. 251)	MW 8:00-9:30	Kirby 302	3

Course	Description	Day & Hour	Room No.	Credit Hrs.
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#### PSYCHOLOGY:

Psy. 102E	General Psychology	TTh 6:30-8:00	Kirby 102	3
Psy. 102E-2	General Psychology	TTh 8:00-9:30	Kirby 102	3
Psy. 201E	Advanced General Psychology (Learning and Motivation) (Pre: Psy. 101 - 102)	MW 6:30-8:00	Kirby 108	3
Psy. 232E	Human Behavior (Pre: Psy. 101 - 102)	MW 6:30-8:00	Stark 109	3
Psy. 242E	Psychological Tests (This course is a pre-requisite for Psy. 243, 245)	MW 8:00-9:30	Stark 109	3

#### RETAILING:

Ret. 214E	Retail Buying (Pre: Approval of instructor)	MW 6:30-8:00	Kirby 107	3
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#### SECRETARIAL STUDIES:

(See Business Education)

#### SOCIOLOGY AND ANTHROPOLOGY:

Soc. 102E	Introduction to Sociology and Anthropology II	MW 6:30-8:00	Kirby 208	3
Soc. 265E	Sociology of Industry (Pre: Soc. 101, 102 and Econ. 101, 102, or permission of instructor)	TTh 6:30-8:00	Kirby 302	3
Soc. 275E	Sociology of Minorities (Pre: Soc. 101, 102 and Psy. 101, 102)	TTh 8:00-9:30	Par. 23	3



## GRADUATE COURSE OFFERINGS

### Spring Semester 1972

#### Biology

Biology	302	Cytology
Biology	312	Bacteriology
Biology	322	Ecology
Biology	332	Evolutionary Mechanisms
Biology	397	Seminar
Biology	421	Current Concepts in Genetics
Biology	432	Comparative Physiology

#### Business Administration

Acct.	541	Advanced Accounting Problems
Econ.	473	Pre-Seminar
Econ.	501	Managerial Economics
Econ.	505	Managerial Statistics
Econ.	534	Labor Seminar
B.A.	507	Business Society
B.A.	512	Price Policy and Procedure
B.A.	521	Organizational Theory
B.A.	551	Investment and Portfolio Management

#### Chemistry

Chemistry	342	Intermediate Physical Chemistry
Chemistry	334	Organic Quantitative Analysis
Chemistry	376	Advanced Analytical Chemistry
Chemistry	536	Selected Topic in Organic Chemistry — Biochemistry
Chemistry	542	Spectroscopy

#### Education

Ed.	404	Interim Teaching
Ed.	436	Children's Literature
Ed.	510	Psychological Foundations of Education
Ed.	511	Philosophical Foundations of Education

Ed.	512	Social Foundations of Education
Ed.	520	Tests and Measurements
Ed.	530	Diagrams and Correction of Reading Difficulties
Ed.	533A	Problems in Elementary Education, Mathematics
Ed.	539	Seminar in Elementary Education
Ed.	541	Secondary School Curriculum
Ed.	596	Workshop

#### English

English	366	Later English Novels
English	405	Studies in Linguistics

#### History

History	334	Twentieth Century America
History	354	Early Modern Europe
History	356	Europe in the Twentieth Century
History	371	Historiography
History	497	Seminar

#### Mathematics

Math.	312	Functions of a Real Variable II
Math.	314	Functions of a Complex Variable
Math.	334	Linear Algebra
Math.	352	Probability and Mathematical Statistics II
Math.	364	Numerical Analysis
Math.	432	Introduction to Abstract Algebra II
Math.	442	Introduction to Topology II
Math.	470	Readings in Mathematics
Math.	480	Topics in Mathematics
Math.	532	Modern Algebra II

#### Physics

Physics	402	Topics in Mathematical Physics
Physics	511	Analytical Mechanics
Physics	531	Electricity and Magnetism
Physics	540	Statistical Mechanics
Physics	571	Solid State Theory



### TEMPLE UNIVERSITY GRADUATE PROGRAM

Wilkes College cooperates with Temple University in offering a General Education Program for Teachers (G.E.P.T.) leading to the Degree of Master of Science in Education. The program is open to anyone who meets the academic requirements and is interested in exposure to a broad-base general education program. The following course is being offered this semester:

G.E. 402 — Changing Perspectives in the Humanities.

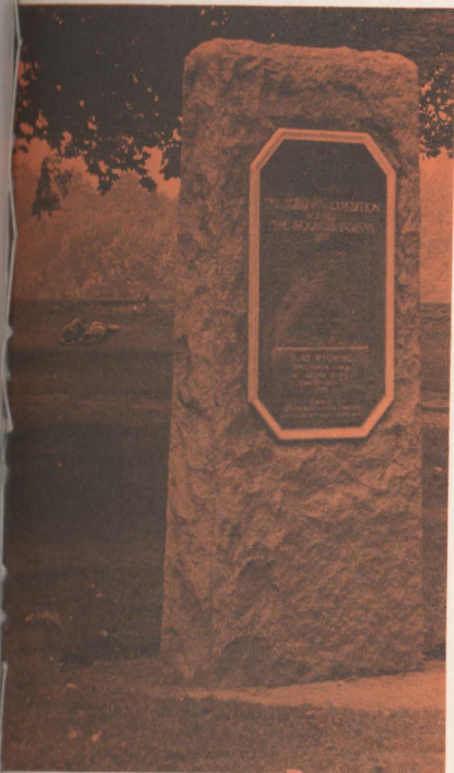
### REGISTRATION:

Saturday, January 29, at 8:45 a.m.; to be followed by the first class (Parrish 35).

Further information on all Graduate Courses can be obtained at the Graduate School Office at Wilkes College (824-4651, Extension 243).



WILKES  
1972



SUMMER  
COLLEGE



## CALENDAR

### DAY SESSIONS—1972

#### FIRST SESSION

REGISTRATION — Monday, June 12, thru Friday, June 16  
Weckesser Hall — 8:30 a.m. to 4:30 p.m.  
SESSION BEGINS — Monday, June 19  
SESSION ENDS — Friday, July 21  
(Including Final Examination)

#### SECOND SESSION

REGISTRATION — Thursday, July 20, and Friday, July 21  
Weckesser Hall — 8:30 a.m. to 4:30 p.m.  
SESSION BEGINS — Monday, July 24  
SESSION ENDS — Friday, August 25  
(Including Final Examination)

#### EIGHT - WEEK EVENING SESSION

REGISTRATION — Thursday, June 15, and Friday, June 16  
Weckesser Hall — 8:30 a.m. to 8:00 p.m.  
SESSION BEGINS — Monday, June 19  
SESSION ENDS — Friday, August 11  
(Including Final Examination)

#### SPECIAL SESSION

REGISTRATION — Thursday, June 8, and Friday, June 9  
Weckesser Hall — 8:30 a.m. to 4:30 p.m.  
SESSION BEGINS — Monday, June 12  
SESSION ENDS — Friday, July 21  
REGISTRATION — Thursday, July 20, and Friday, July 21  
SESSION BEGINS — Monday, July 24  
SESSION ENDS — Thursday, 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

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 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 day 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. — 4:30 p.m.

#### Expenses

The student may expect to incur the following expenses for the summer session:

TUITION — \$60 per credit hour.

DORMITORY (Exclusive of meals) — \$75 per day session.

LINEN SERVICE — \$5 per day session (required for dormitory students).

DINING FACILITIES — Dining Hall will be open Monday through 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 22, 1972. 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 19 - July 21, 1972 — Monday through Friday

COURSE	DESCRIPTION	ROOM	HOURL	CR.
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#### ACCOUNTING:

Acct. 101S	Elementary Accounting I	Par. 35	8:00-9:50	3
Acct. 241S	Advanced Accounting I (Pre: Acct. 112)	Par. 45	8:00-9:50	3

#### BIOLOGY:

Biol. 101S	Biological Science I	St. 302	10:10-12:00	3
Biol. 103S	General Biology I	St. 306	10:10-12:00	4
	Laboratory MTTh	St. 304	1:00-4:00	
	Breakage Deposit \$10			
	Fee \$20			

#### BUSINESS ADMINISTRATION:

B.A. 225S	Corporation Finance (Pre: Econ. 102)	Par. 23	8:00-9:50	3
B.A. 240S	Property Insurance (Pre: B.A. 232 or approval of instructor)	Par. 25	8:00-9:50	3
B.A. 241S	Life Insurance (Approval of instructor)	Par. 25	10:10-12:00	3
B.A. 251S	Principles of Management I	Par. 23	10:10-12:00	3

#### CHEMISTRY:

Chem. 201S	Introduction to the Principles of Chemistry (June 12-July 21)	St. 204	10:00-11:30	4
	Laboratory MTTh	St. 231	1:00-4:00	
	Breakage Deposit \$10			
	Fee \$20			
Chem. 232S	Organic Chemistry I (June 12-July 21) (Pre: Chem. 221 or permission of instructor)	St. 139	10:00-11:30	4
	Laboratory MTW	St. 202	1:00-4:00	
	Breakage Deposit \$10			
	Fee \$20			

## SCHEDULE OF COURSES — Page 11

COURSE	DESCRIPTION	ROOM	HOURL	CR.
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Chem. 341S	Elementary Physical Chemistry Mon. thru Fri. (June 19-Aug. 11) (Pre: Chem. 221, Math. 211, Phys. 152, or permission of instructor)	St. 237	8:00-9:00	4
	Laboratory Wed. only		9:00-12:00	
	Breakage Deposit \$10			
	Fee \$20			

#### ECONOMICS:

Econ. 101S	Principles of Economics I	Kby. 303	10:10-12:00	3
Econ. 111S	Economic History	Par. 43	10:10-12:00	3
Econ. 201S	Money and Banking (Pre: Econ. 102)	Par. 45	10:10-12:00	3
Econ. 217S	Economics of Transportation (Pre: Econ. 102)	Par. 34	10:10-12:00	3
Econ. 223S	Collective Bargaining (Pre: Econ. 102)	Par. 34	8:00-9:50	3
Econ. 231S	Applied General Statistics (Pre: Approval of instructor)	Par. 35	10:10-12:00	3
Econ. 236S	Public Finance (Pre: Econ. 102, P.S. 101)	Par. 43	8:00-9:50	3
Econ. 245S	Consumer Economics (Pre: Econ. 102)	Kby. 303	8:00-9:50	3

#### EDUCATION:

Ed. 201S	Introduction to Education (Pre: Sophomore standing)	Kby. 107	8:00-9:50	3
Ed. 202S	Educational Psychology (Pre: Psy. 102 and Junior standing)	Kby. 107	10:10-12:00	3
Ed. 352S	Guidance (Pre: Ed. 202)	Kby. 208	10:10-12:00	3

#### ENGLISH:

Eng. 100S	Pre-College English	Kby. 102	10:10-12:00	0
Eng. 100S-2	Pre-College English	Bdf. 12	8:00-9:50	0
Eng. 101S	Composition I	Bdf. 12	10:10-12:00	3
Eng. 131S	Fundamentals of Speech	Bdf. Sem.	8:00-9:15	2
Eng. 151S	Western World Literature (Pre: Eng. 102)	Bdf. 13	8:00-9:50	3
Eng. 151S-2	Western World Literature (Pre: Eng. 102)	Darte 101	8:00-9:50	3
Eng. 151S-3	Western World Literature (Pre: Eng. 102)	Darte 101	10:10-12:00	3



COURSE	DESCRIPTION	ROOM	HOURL	CR.
Eng. 153S	Survey of English Literature (Pre: Eng. 102)	Bdf. 13	10:10-12:00	3
Eng. 204S	History of the English Language (Pre: Eng. 152)	Kby. 109	8:00-9:50	3
Eng. 213S	Chaucer (Pre: Eng. 152)	Bdf. 14	10:10-12:00	3
Eng. 381S	American Literature I (Pre: Eng. 152)	Bdf. 14	8:00-9:50	3
Eng. 450S	Literature and Society: Studies in Tennyson, Arnold, and Carlyle (Pre: Open to advanced undergraduate students by permission of instructor)	Bdf. Sem.	10:10-12:00	3

**ENVIRONMENTAL SCIENCE:**

Env. Sci. 101S	Introductory Earth Science Laboratory Fee \$20	St. 109	10:00-12:30	3
Env. Sci. 251S	Meteorology (Pre: Env. Sci. 101) Laboratory Fee \$20	St. 100	10:00-12:30	3
Env. Sci. 395	Independent Research Note: May include apprenticeship in quality measurements in the water, air, and rock laboratories.	Hours to be arranged		1-3

**FINE ARTS:**

F.A. 101S	Experiencing Art I	Pick. 203	10:10-12:00	3
F.A. 102S	Experiencing Art II (Pre: F.A. 101)	Pick. 103	10:10-12:00	3
F.A. 206S	Print Making (Pre: F.A. 202)	Pick. 203	8:00-9:50	3
F.A. 207S	Advanced Print Making (Pre: F.A. 206)	Pick. 103	8:00-9:50	3
F.A. 212S	Ceramics (Pre: Permission of instructor)	C.A. 102	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.	C.A. 201	8:00-9:50	1-3

COURSE	DESCRIPTION	ROOM	HOURL	CR.
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**HISTORY:**

Hist. 101S	History of World Civilization I	Fkln. 14	8:00-9:50	3
Hist. 354S	Early Modern Europe	Fkln. 14	10:10-12:00	3
Hist. 497S	Seminar (American Urban Politics since 1865) (Pre: Approval of Department Chairman)	Fkln. Sem.	8:00-9:50	3

**FOREIGN LANGUAGES:****FRENCH:**

Fr. 101S	Elementary French I	Kby. 103	8:00-9:50	3
Fr. 203S	Intermediate French I (Pre: Fr. 102 or equivalent)	Kby. 103	10:10-12:00	3

**GERMAN:**

Gr. 101S	Elementary German I	Kby. 108	8:00-9:50	3
Gr. 203S	Intermediate German I (Pre: German 102 or equivalent)	Kby. 108	10:10-12:00	3

**RUSSIAN:**

Russian 101S	Elementary Russian I	Miner 20	8:00-9:50	3
Russian 203S	Intermediate Russian I (Pre: Russian 102 or equivalent)	Miner 20	10:10-12:00	3

**SPANISH:**

Span. 101S	Elementary Spanish I	Kby. 203	8:00-9:50	3
Span. 203S	Intermediate Spanish I (Pre: Span. 102 or equivalent)	Kby. 203	10:10-12:00	3

**MATHEMATICS:**

Math. 100S	Pre-Calculus Mathematics (Algebra and Trigonometry)	Miner 11	10:10-12:30	4
Math. 101S	Fundamentals of Mathematics I	Miner 12	8:00-9:50	3
Math. 103S	Mathematics for Elementary Teachers (Not open to students with credits in Math 101-102)	Miner 11	8:00-9:50	3
Math. 232S	Abstract Algebra for Elementary School Teachers (Pre: Math. 104 or permission of instructor)	Miner 12	10:10-12:00	3



COURSE	DESCRIPTION	ROOM	HOURL	CR.
<b>MUSIC:</b>				
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 Music	Please arrange this course with Mr. Gasbarro, Chairman, Department of Music.	Darte 323	8:00-9:50	3
<b>NURSING EDUCATION:</b>				
N.E. 112S	Field Experience in Supervision or Teaching	Hours to be arranged		4
<b>PHILOSOPHY:</b>				
Phil. 101S	Introduction to Philosophy	Kby. 302	8:00-9:50	3
Phil. 250S	Ancient and Medieval Philosophy	Kby. 302	10:10-12:00	3
<b>PHYSICS:</b>				
Phys. 101S	Physical Science	St. 114	10:10-12:00	3
Phys. 203S	General Physics III (Pre: Phys. 202)	St. 107	10:10-12:00	3
<b>POLITICAL SCIENCE:</b>				
P.S. 101S	Political Science I	Kby. 208	8:00-9:50	3
P.S. 211S	Intergovernmental Relations (Pre: P.S. 101 and 102)	Kby. 109	10:10-12:00	3
<b>PSYCHOLOGY:</b>				
Psy. 101S	General Psychology I	Par. 56	8:00-9:50	3
Psy. 221S	Child Psychology (Pre: Psy. 101, 102)	Par. 56	10:10-12:00	3
<b>READING:</b>				
	College Reading and Study Skills (June 19-July 21)	Kby. 102	8:00-9:50	0
<b>SOCIOLOGY:</b>				
Soc. 101S	Introduction to Sociology and Anthropology I	Par. 53	8:00-9:50	3
Soc. 235S	Crime and Juvenile Delinquency (Pre: Soc. 230 or permission of instructor)	Par. 53	10:10-12:00	3

SECOND SESSION SCHEDULE  
July 24 - August 25, 1972 — Monday through Friday

COURSE	DESCRIPTION	ROOM	HOURL	CR.
<b>ACCOUNTING:</b>				
Acct. 102S	Elementary Accounting II (Pre: Acct. 101)	Par. 35	8:00-9:50	3
Acct. 242S	Advanced Accounting II (Pre: Acct. 112 and permission of instructor)	Par. 45	8:00-9:50	3
<b>BIOLOGY:</b>				
Biol. 102S	Biological Science II (Pre: Bio 101)	St. 302	10:10-12:00	3
Biol. 104S	General Biology II (Pre: Bio. 103)	St. 306	10:10-12:00	4
	Laboratory Breakage Deposit \$10 Fee \$20	MTTh St. 304	1:00-4:00	
<b>BUSINESS ADMINISTRATION:</b>				
B.A. 216S	Advertising	Par. 25	8:00-9:50	3
B.A. 222S	Marketing (Pre: Econ. 102)	Par. 23	8:00-9:50	3
B.A. 252S	Principles of Management II (Pre: B.A. 251)	Par. 23	10:10-12:00	3
<b>CHEMISTRY:</b>				
Chem. 202S	Chemical Equilibria (July 24-Aug. 31) (Pre: Chem. 201)	St. 204	10:00-11:30	4
	Laboratory Breakage Deposit \$10 Fee \$20	MTTh St. 231	1:00-4:00	
Chem. 235S	Organic Chemistry IIa (July 24-Aug. 31) (Pre: Chem. 232)	St. 139	10:00-11:30	4
	Laboratory Breakage Deposit \$10 Fee \$20	MTW St. 202	1:00-4:00	
<b>ECONOMICS:</b>				
Econ. 102S	Principles of Economics II (Pre: Econ. 101)	Par. 34	8:00-9:50	3
Econ. 232S	Applied General Statistics (Pre: Econ. 231)	Par. 35	10:10-12:00	3



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COURSE	DESCRIPTION	ROOM	HOUR	CR.
<b>ENGLISH:</b>				
Eng. 102S	Composition II (Pre: Eng. 101)	Bdf. 12	10:10-12:00	3
Eng. 152S	Western World Literature II (Pre: Eng. 151)	Bdf. 12	8:00-9:50	3
Eng. 152S-2	Western World Literature II (Pre: Eng. 151)	Darte 101	8:00-9:50	3
Eng. 152S-3	Western World Literature II (Pre: Eng. 151)	Darte 101	10:10-12:00	3
Eng. 154S	Survey of English Literature (Pre: Eng. 153)	Bdf. 14	10:10-12:00	3
Eng. 221S	Shakespeare (Pre: Eng. 152)	Bdf. 13	8:00-9:50	3
Eng. 382S	American Literature II (Pre: Eng. 152)	Bdf. 14	8:00-9:50	3
Eng. 420S	Spenser and the Traditions of Renaissance Humanism (Pre: Approval of Department Chairman)	Bdf. Sem.	10:10-12:00	3
<b>ENVIRONMENTAL SCIENCE:</b>				
Env. Sci. 211S	Geology (Pre: Env. Sci. 101) Fee \$20	St. 109	10:00-12:30	3
Env. Sci. 251S	Meteorology (Pre: Env. Sci. 101) Fee \$20	St. 100	10:00-12:30	3
Env. Sci. 396S	Independent Research Note: May include apprenticeship in quality measurements in the water, air, and rock laboratories.	To be arranged		1-3
<b>HISTORY:</b>				
Hist. 102S	History of World Civilization	Fkln. 14	8:00-9:50	3
Hist. 207S	American and Penna. History to 1865	Fkln. 14	10:10-12:00	3
Hist. 358S	History of Modern Russia	Kby. 102	8:00-9:50	3
Hist. 497S	Seminar: American Intellectual History since 1865	Fkln. 30	8:00-9:50	3

SCHEDULE OF COURSES — Page 17

COURSE	DESCRIPTION	ROOM	HOUR	CR.
<b>FOREIGN LANGUAGES:</b>				
<b>FRENCH:</b>				
Fr. 102S	Elementary French II (Pre: Fr. 101)	Kby. 103	8:00-9:50	3
Fr. 204S	Intermediate French II (Pre: Fr. 203)	Kby. 103	10:10-12:00	3
<b>GERMAN:</b>				
Gr. 102S	Elementary German II (Pre: Gr. 101)	Kby. 108	8:00-9:50	3
Gr. 204S	Intermediate German II (Pre: Gr. 203)	Kby. 108	10:10-12:00	3
<b>RUSSIAN:</b>				
Russian 102S	Elementary Russian II (Pre: Russian 101)	Miner 20	8:00-9:50	3
Russian 204S	Intermediate Russian II (Pre: Russian 203)	Miner 20	10:10-12:00	3
<b>SPANISH:</b>				
Span. 102S	Elementary Spanish II (Pre: Span. 101)	Kby. 203	8:00-9:50	3
Span. 204S	Intermediate Spanish II (Pre: Span. 203)	Kby. 203	10:10-12:00	3
<b>MUSIC:</b>				
Music 101S	Introduction to the Materials and Literature of Music I	Darte 323	8:00-9:50	3
Music 101S-2	Introduction to the Materials and Literature of Music I	Darte 323	10:10-12:00	3
Music 102S	Introduction to the Materials and Literature of Music II	Darte 323	8:00-9:50	3
Music 102S-2	Introduction to the Materials and Literature of Music II	Darte 323	10:10-12:00	3
Applied Music	Please arrange this course with Mr. Gasbarro, Chairman, Department of Music.			



COURSE	DESCRIPTION	ROOM	HOUR	CR.
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**MATHEMATICS:**

Math. 102S	Fundamentals of Math. II (Pre: Math. 101)	Miner 11	8:00-9:50	3
Math. 104S	Mathematics for Elementary Teachers II (Not open to students with credits in Math. 101-102)	Miner 12	8:00-9:50	3
Math. 243S	Geometry for Elementary School Teachers (Pre: Math. 104 or consent of instructor)	Miner 12	10:10-12:00	3

**PHILOSOPHY:**

Phil. 102S	Logic and Scientific Method	Kby. 108	8:00-9:50	3
Rel. 212S	Contemporary Trends in Religious Thought	Kby. 108	10:10-12:00	3

**PHYSICS:**

Phys. 102S	Physical Science (Pre: Phys. 101)	St. 114	10:10-12:00	3
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**POLITICAL SCIENCE:**

P.S. 102S	Political Science II (Pre: P.S. 101)	Par. 43	8:00-9:50	3
P.S. 207S	Public Administration (Pre: P.S. 101 and 102)	Par. 43	10:10-12:00	3

**PSYCHOLOGY:**

Psy. 102S	General Psychology II (Pre: Psy. 101)	Par. 56	10:10-12:00	3
Psy. 203S	Psychologic Theory (Pre: Psy. 101 and 102)	Par. 53	10:10-12:00	3
Psy. 206S	Systematic Psychology (Pre: Psy. 101 and 102)	Par. 56	8:00-9:50	3

**SOCIOLOGY:**

Soc. 102S	Introduction to Sociology and Anthropology II	Par. 53	8:00-9:50	3
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**EVENING SESSION SCHEDULE**

June 19 - August 11, 1972 — Monday, Tuesday, Thursday

COURSE	DESCRIPTION	ROOM	HOUR	CR.
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**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

**BUSINESS ADMINISTRATION:**

B.A. 115E	Mathematics of Business and Finance	Par. 23	6:00-7:45	3
B.A. 209E	Business Correspondence and Reports (Pre: Eng. 102)	Par. 34	6:00-7:45	3
B.A. 226E	Investments (Pre: B.A. 225)	Par. 23	8:00-9:45	3
B.A. 251E	Principles of Management I	Par. 34	8:00-9:45	3

**BUSINESS EDUCATION:**

B.E. 105E	Elementary Shorthand	Par. 25	6:00-7:45	2
B.E. 107E	Elementary Typewriting Laboratory \$10	Par. 33	8:00-9:45	2

**ECONOMICS:**

Econ. 101E	Principles of Economics I	Kby. 102	8:00-9:45	3
Econ. 102E	Principles of Economics II (Pre: Econ. 101)	Par. 45	6:00-7:45	3

**ENGINEERING:**

E.E. 211E	Circuits Theory I (Pre: Math. 112)	Room to be arranged	6:00-7:45	3
Ma. E. 102E	Materials Science (Pre: Chem. 201)	Room to be arranged	6:00-7:45	3

**ENGLISH:**

Eng. 101E	Composition I	Bdf. 12	6:00-7:45	3
Eng. 102E	Composition II (Pre: Eng. 101)	Bdf. 13	6:00-7:45	3
Eng. 131E	Fundamentals of Speech	Bdf. 14	8:00-9:45 (M-Th)	2
Eng. 151E	Western World Literature I (Pre: Eng. 102)	Bdf. 12	8:00-9:45	3



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COURSE	DESCRIPTION	ROOM	HOUR	CR.
Eng. 152E	Western World Literature II (Pre: Eng. 151)	Bdf. 13	8:00-9:45	3
<b>ENVIRONMENTAL SCIENCE:</b>				
Env. Sci. 211E	Geology (Pre: Env. Sci. 101) Fee \$20	St. 139	6:00-7:45	3
Env. Sci. 282E	Space Science (Pre: Env. Sci. 101) Fee \$20	St. 139	8:00-9:45	3
<b>FINE ARTS:</b>				
F.A. 101E	Experiencing Art I	Pick. 203	6:00-7:45	3
F.A. 205E	Advanced Painting (Pre: F.A. 203)	Pick. 103	6:00-7:45	3
<b>HISTORY:</b>				
Hist. 101E	History of World Civilization I	Fkln. 14	6:00-7:45	3
Hist. 102E	History of World Civilization II	Weck. An.	8:00-9:45	3
Hist. 208E	American History since 1865	Weck. An.	6:00-7:45	3
<b>JOURNALISM:</b>				
Jour. 101E	Basic News Writing Laboratory fee \$10	Par. 33	6:00-7:45	3
<b>MATHEMATICS:</b>				
Math. 100E	Pre-Calculus Mathematics (Algebra and Trigonometry)	Miner 11	8:00-9:45 (M-T-W-Th)	4
Math. 101E	Fundamentals of Math. I	Kby. 103	8:00-9:45	3
Math. 102E	Fundamentals of Math. II (Pre: Math. 101)	Kby. 107	6:00-7:45	3
Math. 111E	Analysis I (Calculus)	Miner 20	8:00-10:00 (M-T-W-Th)	4
Math. 112E	Analysis II (Calculus) (Pre: Math. 111)	Miner 21	6:00-8:00 (M-T-W-Th)	4
Math. 212E	Intermediate Analysis II (Multivariable Calculus) (Pre: Math. 211)	Miner 22	8:00-10:00 (M-T-W-Th)	4
Math. 261E	Introduction to Computer Science Fee \$20	St. 109	6:00-7:45*	3

SCHEDULE OF COURSES — Page 21

COURSE	DESCRIPTION	ROOM	HOUR	CR.
Math. 314E	Functions of a Complex Variable	Miner 22	8:00-10:00*	3
Math. 331E	Introduction to Abstract Algebra I	Miner 11	6:00-8:00*	3
Math. 334E	Linear Algebra	Miner 12	6:00-8:00*	3
Math. 480E	Topics in Lattice Theory or Boolean Algebra (Pre: Consent of instructor)	Miner 12	8:00-10:00*	3
Math. 542E	Algebraic Topology	Miner 20	6:00-8:00*	3
*Time subject to change to suit convenience of students.				
<b>MUSIC:</b>				
Music 101E	Introduction to the Materials and Literature of Music I	Darte 323 Darte 323	6:00-7:45 8:00-9:45	3 3
Music 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 Music	Please arrange this course with Mr. Gasbarro, Chairman, Department of Music.			
<b>PHYSICAL EDUCATION:</b>				
P.E. 106E	Hygiene	Week. An.	6:00-7:30 (Wednesday only)	1
<b>PHYSICS:</b>				
Phys. 391E	Advanced Laboratory in Astronomy (Pre: Phys. 203, Math. 212)	Room to be arranged	8:00-9:45	1-2
<b>POLITICAL SCIENCE:</b>				
P.S. 101E	Political Science I	Par. 53	8:00-9:45	3
P.S. 223E	Comparative Government (Pre: P.S. 101 and 102)	Kby. 102	6:00-7:45	3
<b>PSYCHOLOGY:</b>				
Psy. 232E	Human Behavior (Pre: Psy. 101 and 102)	Par. 53	6:00-7:45	3
Psy. 242E	Psychological Tests (Pre: Psy. 101 and 102)	Par. 56	6:00-7:45	3
Psy. 331E	Abnormal Psychology (Pre: Psy. 221, 232, and permission of department head)	Par. 56	8:00-9:45	3



COURSE	DESCRIPTION	ROOM	HOUR	CR.
<b>SECRETARIAL STUDIES:</b>				
	See: Business Education			
<b>SOCIOLOGY:</b>				
Soc. 101E	Introduction to Sociology and Anthropology I	Par.43	6:00-7:45	3
Soc. 230E	Social Problems (Pre: Soc. 101 and 102)	Par. 43	8:00-9:45	3

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**GRADUATE COURSE OFFERINGS**  
SUMMER 1972

COURSE	DESCRIPTION
<b>BIOLOGY:</b>	
Biology 400*	Chemical Physiology
Biology 404*	Faunistic and Floristic Biology
*Restricted to students in the M.S. in Biology Education program.	
<b>BUSINESS ADMINISTRATION:</b>	
Economics 473	Pre-Seminar
Bus. Adm. 522	Quantitative Aspects
Economics 532	Wage Determination and Administration
Accounting 542	Financial and Tax Planning
Economics 571	Labor-Management Seminar
<b>EDUCATION:</b>	
Education 405	Introduction to Reading Instruction
Education 510	Psychological Foundations of Education
Education 513	Comparative Foundations of Education
Education 520	Tests and Measurements
Education 522	Research in Education
Education 531	Practicum in Reading
Education 532A	Problems in Elementary Education: Math.

COURSE	DESCRIPTION
Education 532D	Problems in Elementary Education: Social Studies
Education 532B	Problems in Elementary Education: Science
Education 534	Elementary School Curriculum
Education 539	Seminar in Elementary Education: The Exceptional Child
Education 549	Seminar in Secondary Education: Instructional Strategies
Education 595	Workshop: Elementary School Science
<b>ENGLISH:</b>	
English 420	Spenser and Traditions of Renaissance Humanism
English 450	Literature and Society: Studies in Tennyson, Arnold, and Carlyle
<b>HISTORY:</b>	
History 497	Seminar in American Urban Politics since 1865
History 497	Seminar in American Intellectual History since 1865
<b>MATHEMATICS:</b>	
Mathematics 314	Functions of a Complex Variable
Mathematics 331	Introduction to Abstract Algebra I
Mathematics 334	Linear Algebra
Mathematics 480	Topics in Lattice Theory or Boolean Algebra
Mathematics 542	Algebraic Topology

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For further information contact:

Dr. Ralph Rozelle  
Director of Graduate Studies  
Stark Hall, Wilkes College  
Wilkes-Barre, Pennsylvania 18703  
Telephone 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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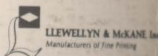
Will you require dormitory accommodations?      Yes ☐    No ☐





Wilkes College  
Summer Sessions  
Wilkes-Barre, Penna. 18703


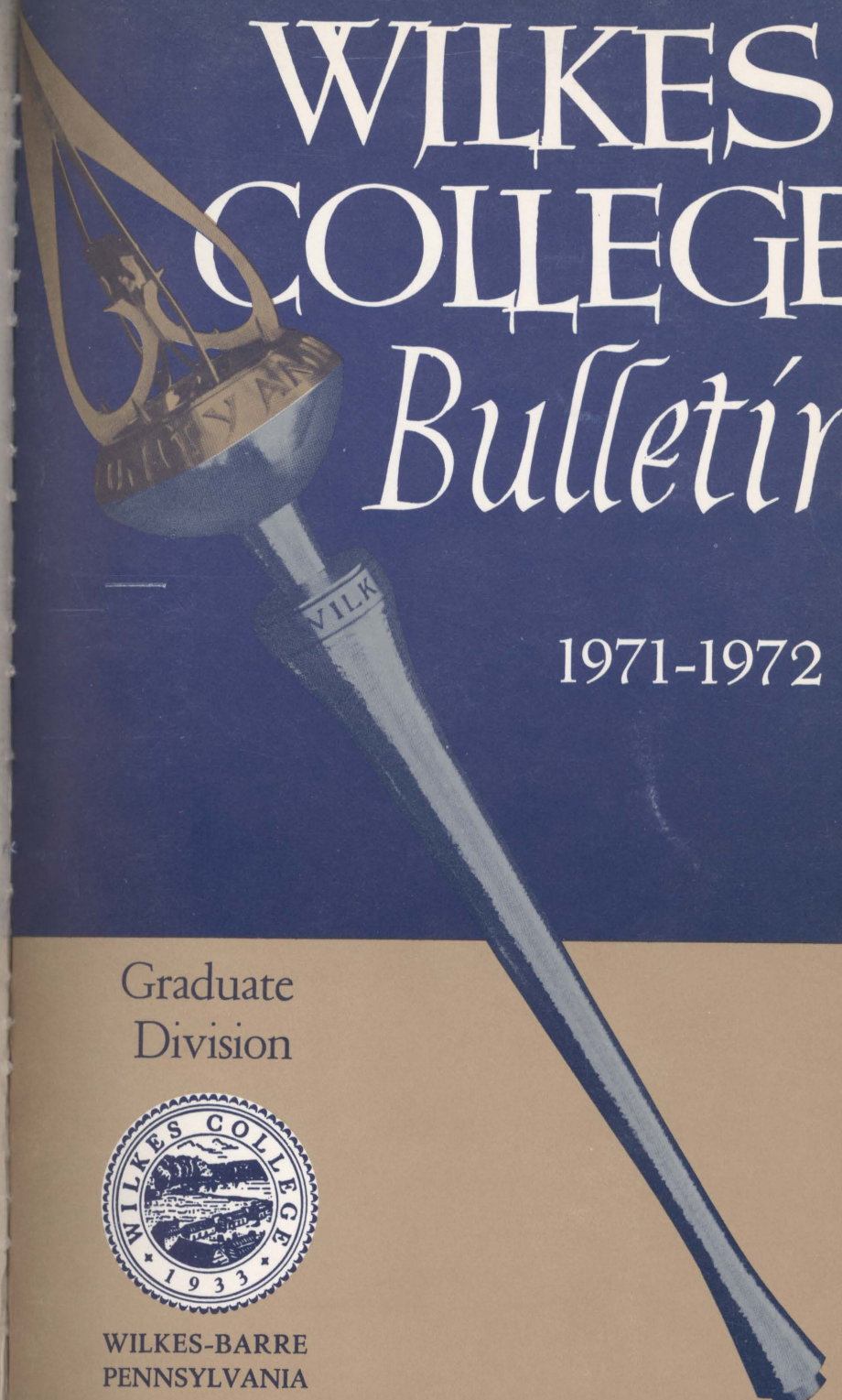
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# WILKES COLLEGE *Bulletin*

1971-1972

Graduate  
Division



WILKES-BARRE  
PENNSYLVANIA



## FALL SEMESTER 1971-72

Freshman Orientation	Pending. No set date as yet.
Registration— Upperclassmen	Friday, September 10.
Classes Begin	Monday, September 13.
Progress Reports	Saturday, October 23.
Pre-registration for Seniors and Juniors	Monday, November 1, to Friday, November 5.
Pre-registration for Sophomores	Monday, November 8, to Friday, November 12.
Pre-registration for Freshmen	Monday, November 15, to Friday, November 19.
Thanksgiving Recess	Friday, November 19, 5:00 p.m. to Monday, November 29, 8:00 a.m.
Christmas Vacation	Friday, December 17, 5:00 p.m. to Monday, January 3, 8:00 a.m.
Classes Resume	Monday, January 3, 8:00 a.m.
Classes End	Friday, January 7, 5:00 p.m.
Examination Period	Monday, January 10, to Wednes- day, January 19 (9 days).
First Semester Ends	Wednesday, January 19.



## SPRING SEMESTER 1972

Registration	Monday, Tuesday, Wednesday, January 24, 25, 26 — 8:30 a.m. to 4:30 p.m.; Thursday, Friday, Janu- ary 27 & 28, 8:30 a.m. to 8:00 p.m.
Classes Begin	Monday, January 31.
Report on Incomplete Grades, previous term	Wednesday, February 16.
Progress Reports	Saturday, March 11.
Spring Vacation	Friday, March 24, 5:00 p.m. to Monday, April 3, 8:00 a.m.
Classes Resume	Monday, April 3, 8:00 a.m.
Pre-registration for Juniors	Monday, April 3, to Friday, April 7.
Pre-registration for Sophomores	Monday, April 10, to Friday, April 14.
Pre-registration for Freshmen	Monday, April 17, to Friday, April 21.
Classes End	Friday, May 12, 5:00 p.m.
Examination Period	Monday, May 15, to Wednesday, May 24 (9 days).
Baccalaureate	Sunday, June 4, 5:00 p.m.
Commencement	Monday, June 5, 8:00 p.m. (Gymnasium)
Report on Incomplete Grades, Spring Term	Wednesday, June 21, 1972.

## SUMMER COLLEGE

An extensive program of graduate courses will be offered during the summer of 1972 and will be available in two consecutive 5-week day sessions and one 8-week evening session. Some effort will be made to coordinate the schedule with the public school schedules. The calendar and the specific courses to be offered will be released at a later date.



# The Graduate Division

## General Information

The Graduate Division 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 College Board of Trustees authorized expansion of the Graduate Program into the field of biology in 1966, and education and business administration in 1969. A Master of Science Degree with a major in mathematics was approved in 1971.

The graduate programs are approved by the Department of Education of Pennsylvania.

The graduate programs are designed to provide the opportunity for completion of a Master's Degree in one to 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, classes may meet during the early evening hours. Under these circumstances such courses usually consist of two 1½-hour evening sessions or one 3-hour session per week and carry 3 hours of credit.

## Cooperative Graduate Programs

Wilkes College is cooperating with a number of institutions in the *Lehigh Regional Consortium* for graduate teacher education to provide professional graduate education on the master's level for elementary and secondary classroom teachers.

Wilkes also cooperates with Temple University to offer a master's program for teachers. This program leads to a Master of Science Degree in General Education and is accepted by the Commonwealth for permanent certification of classroom teachers. Candidates may register and take courses at the College with all credits granted by Temple University.

## Admission

As a general rule only well qualified men and women who have completed a normal four-year program leading to the 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.

It is recommended that applicants take the Graduate Record Examination and forward their scores to the college in support of their applications. If an applicant fails to satisfy the requirement of demonstrated above average performance in his major field, the Graduate Record Examination is mandatory. In the graduate departments of biology and chemistry, the Graduate Record Examination is required of all applicants. Applicants for the M.B.A. must take the Admission Test for Graduate Study in Business.

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.

Admission may be granted under the following categories:

1. Regular — 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;
2. Provisional — 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;
3. Special — granted to non-degree students. Admission is for one year only. A maximum of 12 credits taken while a student is on special admission status may be applied to a Master's Degree.

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 a 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.

### Academic Requirements

A total of 30 credits is required for the Master's Degree. These required credits must be obtained within six calendar years preceding the granting of the degree. No more than six graduate credits may be accepted for transfer from another institution.

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 minimum average of 3.0 is required for graduation with the master's degree. A student who is given regular admission and who receives more than 11 credits of 2 or below or who receives more than one grade of 0 in graduate courses shall be ineligible to receive the master's degree.

Departmental requirements in chemistry and physics 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 Department of Biology requires that all candidates present a thesis based on an original research problem.

The Department of English requires that all candidates, upon completion of 18 hours of course work in English, success-

fully pass a written examination based on a reading list developed by the candidate and his academic adviser.

All graduate students shall select a major adviser under whose direction he wishes to pursue his dissertation research before completing nine hours of graduate study if a dissertation is required. Following acceptance of the candidate, the adviser shall appoint two other members of the Graduate Faculty to serve with him as the student's Advisory Committee.

Students in the programs leading to either an M.S. in Education degree or M.B.A. degree will be assigned advisers immediately upon their acceptance to the Graduate School.

When a dissertation is required, the student, in consultation with his Advisory Committee, shall submit to the Committee on Graduate Studies an outline and a tentative dissertation title, before completing more than 12 semester hours of graduate study.

Part-time students employed in laboratories on a full-time basis may be permitted to conduct their dissertation 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.

### Admission to Candidacy

A student shall automatically be considered a candidate for the degree when he has successfully completed the required courses and has submitted the outline of his graduate program and dissertation title where applicable.

### Degree Requirements

Following are the requirements for the Master of Science Degree:

1. Admission to graduate study.



2. Acceptance by an adviser and an advisory committee where applicable.
3. Submission and acceptance of an outline of the student's program and his tentative dissertation title where applicable. This should be done before the beginning of the third semester.
4. Completion of course requirements.
5. Completion of specific departmental requirements.
6. Submission of an acceptable thesis, in an acceptable form and in the required number, not later than May 15 preceding the commencement at which the degree is to be conferred (chemistry, physics and biology only).
7. Completion of arrangements satisfactory to the Advisory Committee for publication of the thesis, if so directed.
8. Satisfaction of all general college requirements for graduation.

### **Fees and Financial Assistance**

The tuition charge is \$70 per credit hour.

A \$20 per credit hour scholarship will be granted to those engaged in teaching or who intend to become active in education.

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 February 15. Generally, research assistants will be able to write dissertations 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.

## **Master of Science Degree Programs Biology**

### **Admission**

An applicant for admission to graduate study in biology must present at least 24 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 in physics and the following courses in chemistry: general chemistry, one semester of analytical chemistry, and organic chemistry. Applicants deficient in any of the above requirements must take the courses for no credit in the undergraduate school.

A working knowledge of calculus is also required.

Students deficient in any of the phases may at the discretion of the Biology Department and the Director of Graduate Studies be granted provisional admission.

### **Degree Requirements**

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 either French, German, Italian, or Russian, either through examination or by successful completion of two years of language in undergraduate school.

Following completion of 18 of the 24 required credit hours of course work, a graduate student may make a written request of his adviser 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 397 Topics in Biology.** 1 credit each semester

A study of the history of biology is designed as a correlating effort in the field of biology through an historical approach.

### **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 470 Thesis.**

6 credits

**Course Sequence\***

Fall 1971

Biology 432 — Comparative Physiology

Biology 451 — Invertebrate Biology

Spring 1972

Biology 421 — Current Concepts in Genetics

Biology 441 — Immunology and Immunochemistry

Biology 460 — Selected Topics in Biology

Fall 1972

Biology 402 — Cell Biology

Biology 460 — Selected Topics — Endocrinology

Spring 1973

Biology 411 — Physiology of Bacteria

Biology 422 — Advances in Ecological Research

\*All 300-series courses are offered each year.



## Chemistry

### 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.

### Degree Requirements

All candidates for the Master of Science Degree in Chemistry are required to complete satisfactorily Chemistry 431, 440 and 411. A minimum of 18 credits in 400-level or 500-level graduate chemistry courses is required, exclusive of dissertation credit. The remainder of the required credits may be obtained in mathematics or physics. Physics 401, 402, Topics in Mathematical Physics 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  $\pi$  — 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. Group theory is introduced and the use of symmetry properties is applied to molecular orbital theory.

**Chemistry 516 Selected Topics in Inorganic Chemistry.** 3 credits

Topics of interest, probably in theoretical inorganic chemistry or transition-metal chemistry.

**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

First, Second, and Third Laws of thermodynamics and classical and quantum statistical thermodynamics. Applications to physical chemical processes.

**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 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

**Course Sequence**

Fall 1971

Chemistry 341 — Elementary Physical Chemistry  
Chemistry 411 — Advanced Inorganic Chemistry  
Chemistry 440 — Quantum Chemistry  
Chemistry 531 — Stereochemistry

Spring 1972

Chemistry 342 — Intermediate Physical Chemistry  
Chemistry 352 — Biochemistry  
Chemistry 376 — Advanced Analytical Chemistry  
Chemistry 516 — Topics in Inorganic Chemistry  
Chemistry 536 — Topics in Organic Chemistry  
Chemistry 542 — Spectroscopy

Fall 1972

Chemistry 341 — Elementary Physical Chemistry  
Chemistry 411 — Advanced Inorganic Chemistry  
Chemistry 431 — Advanced Organic Chemistry I  
Chemistry 541 — Thermodynamics

Spring 1973

Chemistry 342 — Intermediate Physical Chemistry  
Chemistry 352 — Biochemistry  
Chemistry 376 — Advanced Analytical Chemistry  
Chemistry 432 — Advanced Organic Chemistry II  
Chemistry 440 — Quantum Chemistry  
Chemistry 544 — Kinetics



## Mathematics

### 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

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 15 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:* Senior standing and 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**

### **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**

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

## 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 MARKETING**

**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

## **Master of Science in Education Degree Programs**

### **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.

The following programs are offered with majors in: Biology, Chemistry, Elementary, English, History, Mathematics, and 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

A candidate for the Master of Science Degree in Secondary Education must complete 30 credits, 18 of which must be taken in his academic major subject field.

A candidate for the Master of Science Degree in Education with a major in Elementary Education must complete 30 credits, at least 12 of which must be in education; the remaining 18 credits may be taken either in academic fields or in education.

Education courses taken to fulfill provisional certification requirements may not be used to fulfill master's degree requirements.

## Program of Study

Each student develops a program of study which will satisfy requirements for the degree he seeks. The 12 credits required in education must be distributed as follows: 6 credits in Area I, 3 credits in Area II, and 3 credits in Area III or IV. The student's program must be approved by his adviser and by the Education Department. To facilitate securing this approval, students in secondary education are assigned a co-adviser in the Education Department.

## Courses of Instruction

### EDUCATION

#### AREA O — 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.

**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 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 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

### Courses of Instruction

**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.

## History

### 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. (For graduate students — select problems) *Prerequisites:* History 107 and 108.

**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. (For graduate students — select problems)

*Prerequisites:* History 101, 102, 107, and 108.

**History 331 Colonial America.**

3 credits

Discovery, exploration, and settlement; development of social, political, religious, and intellectual institutions; independence and political reorganization. (For graduate students — select problems)

*Prerequisites:* History 107 and 108.

**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. (For graduate students — select problems)

*Prerequisites:* History 107 and 108.



**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. (For graduate students — select problems)

*Prerequisites:* History 107 and 108.

**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. (For graduate students — select problems)

*Prerequisites:* History 107 and 108.

**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. (For graduate students — select problems)

**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. (For graduate students — select problems)

*Prerequisites:* History 101 and 102.

**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. (For graduate students — select problems)

*Prerequisites:* History 101 and 102.

**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. (For graduate students — select problems)

*Prerequisites:* History 101 and 102.

**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. (For graduate students — select problems)

*Prerequisites:* History 101 and 102.

**History 371 Historiography.** 1 to 3 credits

An introduction to the aims, methods, and accomplishments of some of the most renowned historians of Europe and America. (Graduate students must take this course.)

*Prerequisite:* Consent of head of department.

**History 381 History of Latin America** 3 credits

A survey of the colonial period of Latin American history through the achievement of national independence. (For graduate students — select problems)



### **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. 1 to 3 credits per semester**

Presentations and discussions of selected topics.

*Prerequisite:* Approval of the department chairman.

### **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**

Harold E. Cox	<i>Professor of History, Chairman</i> Ph.D. (Virginia)
Ralph B. Rozelle	<i>Director of Graduate Studies</i> <i>Professor of Chemistry</i> Ph.D. (Alfred)
James J. Bohning	<i>Associate Professor of Chemistry</i> Ph.D. (Northeastern)
Alvan Bruch	<i>Professor of Environmental Science</i> Ph.D. (N.Y.U.)
Franck G. Darte, II	<i>Professor of Education</i> Ed.D. (Pennsylvania)
Francis J. Donahoe	<i>Professor of Physics</i> Ph.D. (Pennsylvania)
Frank Allen	<i>Assistant Professor of English</i> Ph.D. (Maryland)
Eugene L. Hammer	<i>Professor of Education</i> Ed.D. (Columbia)
Stanley Holden	<i>Professor of Physics</i> Ph.D. (Alfred)



David M. Leach	<i>Professor of History</i> Ph.D. (Rochester)
Philip L. Rizzo	<i>Professor of English</i> Ph.D. (Pennsylvania)
Samuel A. Rosenberg	<i>Professor of Economics</i> Ph.D. (North Carolina)
Donald W. Tappa	<i>Associate Professor of Biology</i> Ph.D. (Yale)
James M. Toole	<i>Associate Professor of Engineering</i> Ph.D. (Pennsylvania State)
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