



California
State College

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Talents which perish without use . . .

“By that part of our plan which prescribes the selection of the youths of genius from among the classes of the poor, we hope to avail the State of those talents which nature has sown as liberally among the poor as the rich, but which perish without use, if not sought for and cultivated . . .”

— THOMAS JEFFERSON

Administrative

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HAROLD F. ALDERFER *First Deputy Superintendent*
GEORGE W. HOFFMAN *Deputy Superintendent*
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KYRL W. RICHARDS — *Director of Southwestern Regional Instructional Materials Center*
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Introduction

The College and Its Purpose

The California State College is a state supported institution established and maintained to help provide the schools of Pennsylvania with well trained, competent teachers. The program for teachers provides the student with a background in general education that is characteristic of educated men and women everywhere, a thorough training in the selected area of specialization and well designed courses in professional education. In addition, the college offers a variety of co-curricular activities of a social-cultural-academic nature designed to provide the student with the opportunity to develop his potentialities as an individual.

To these ends the Commonwealth of Pennsylvania has provided the buildings, the professional and the non-professional staff through many years of legislative support. The several fees paid by students represent only a portion of the cost of operating the college. Public support is the primary source of college funds.

As a result of its financial interest, the Commonwealth has established control of the state colleges through the Department of Public Instruction. Since there are fourteen such institutions the Department and the Board of College Presidents coordinate certain activities common to all state controlled schools. In addition, each school has a Board of Trustees which assists the President in administration. Other supervision and control comes from such state agencies as the State Council of Education, the Auditor General, the Department of Property and Supplies and the General State Authority. Each state college has the support of many vital agencies whose resources may be utilized at any time.

The curriculum at California is established in broad outline by the Department of Public Instruction by means of its several councils and study groups. The special curricula are assigned to each college with California being assigned Industrial Arts, Atypical Education, Elementary and Secondary Education. Students may elect to specialize in any of these areas or their subdivisions. Other state colleges offer additional specializations.

In order that additional study opportunities might be made available the college sponsors Summer Tours which make available low cost travel-study trips for interested persons.

Another constantly expanding feature of the state college is its in-service program for teachers in the service area. Under the leadership of its several departments, the college sponsors evening programs for college students and experienced teachers wherein exchanges of experiences result in a more effective college program and a stimulated public school program.

The faculty at California represents a geographic cross-section of the United States, a long list of colleges and universities, and many years of graduate training. In addition to instruction and extra-curricular activities, many members of the staff are engaged in writing and research in their field of interest.

Additional information on the faculty, administrative procedures, curriculum and student life are to be found in the appropriate division of the **Bulletin**.

The California State College has had a history of continuous growth in stature, size and influence since its early days as an academy. Founded by the public spirited citizens of the borough in 1852 it became a normal school under a state charter and in 1914 was acquired by the Commonwealth of Pennsylvania and thus became a state owned institution.

In 1928, the State Council of Education granted to the college the right to offer a four-year curriculum in elementary and secondary education. In 1929, the school became the State Teachers College and has graduated students with the degree of Bachelor of Science in Education since that time. In 1959, the State Legislature voted to delete the word Teachers from the school's title and, as a result, all of the fourteen state teachers colleges are now state colleges. California is now known as California State College.

The present prospects for future growth are exceptional. The college enrollment in 1961-62 was 2740 and a special program for teachers-in-service attracted more than 220 part-time students. A program of graduate education, initiated in 1961, leads to the degree of Master of Education and has approximately 180 students currently enrolled. In addition, a series of workshops and confer-

ences provide in-service training and professional stimulation for the college service area consisting of Washington, Fayette, Greene and Somerset Counties.

The college is located at California, Pennsylvania; a community of 7,500 persons located on the Monongahela River, 35 miles south of Pittsburgh; 16 miles from Uniontown; 25 miles from Washington, Pennsylvania; and 25 miles from Waynesburg. The college can be most easily reached over U. S. Route 40 which comes within four miles of California at Malden or over Pennsylvania Route 88. From the eastern part of the state alternate route 71 connecting with the Pennsylvania Turnpike at New Stanton offers easy access to Route 88 at Speers (near Charleroi).

The community is within easy reach of the lower Monongahela steel and coal producing region and is served by several bus lines. A network of secondary roads provide transportation for a large commuting population.

Objectives of the College

The teacher in the twentieth century is recognized as a more important figure in national life than at any other time in history. As a result, teacher preparation is being emphasized through a program for recruiting able students, by curriculum revision designed to provide competent teachers, and by a renewed emphasis upon content in teacher education.

California recognizes that a teacher must have a background of general knowledge, a mastery of his area of specialization, and adequate professional training. The California program of teacher education is designed to provide this training through its competent faculty and a revised curricular and co-curricular program.

To secure these goals the faculty and administrative staff, after long and free discussion, have adopted the following resolution:

The primary purpose for maintaining California State College, is to educate people for the teaching profession. To accomplish this goal we seek:

To provide the opportunity for a general education in those areas necessary to help students become responsible citizens and capable leaders in a democratic society.

To develop their intellectual, social, physical, cultural, spiritual, and aesthetic potentialities.

To prepare students for teaching by requiring a mastery of professional knowledge and skills essential to all teaching and special proficiency in their areas of specialization.

To lead the student to develop a deep and abiding commitment to the concepts, methods, and procedures of a democratic society.

To help the student become a creative person capable of making critical judgments based upon knowledge and reason.

A secondary purpose of the college and faculty is to encourage the teaching profession to gain strength, prestige, and standards through research, faculty professional activities and continued evaluation.

To summarize: In educating a student at California State College, our goal is to help in the development of a person who will be generally educated, professionally oriented, creative, critical, and loyal.

Students come to California to become teachers and in addition to the standards established by the Admissions Committee, should possess a love of learning and a spirit of inquiry that will enable them to formulate questions, seek the solutions to such questions and join with enthusiasm as others seek to achieve similar goals.

Curricula

The program for the training of teachers at California is not greatly different than any good program of higher education. It incorporates the aims of a broad liberal education, the techniques of professional education and the academic training in depth that is required for success in any field of endeavor.

Instruction at California is planned to help each student to acquire the ability to communicate with others, to understand himself and his relationship to others, to appreciate the meaning of his historic past, to relate himself to the scientific world in which he lives and to develop aesthetically. The general education program is meant to be a quality program which will open the way to an interest in things intellectual which will permit the student to continue to learn from study and experience long after graduation.

Professional education courses are meant to be the means whereby the prospective teacher, through a combination of lecture, discussion, and experience develops the techniques for transmitting the concepts and information he acquires to the student he teaches. Since individual differences are so great and since learning takes place under a variety of handicaps and/or motivations, the good teacher is one who knows something of the above and adjusts to them to the mutual advantage of student and pupil.

The academic disciplines or other areas of specialization provide California students with education in depth. It is the ambition of each department to provide training that will serve as a firm foundation for teaching, future study, or additional independent achievement. The completion of a college education does not provide the student with all of the answers but only with the insight by which he continues the search.

Briefly, work at California consists of three inter-related groups of courses: the basic or general education courses, the professional or "education" courses, and the specialized courses. Together they help to equip students with the breadth of knowledge, the power of understanding, and the analytical ability to become able members of the profession and worthy citizens.

GRADUATE STUDIES

California State College offers work leading to the Master of Education degree with specialization in Elementary Education and Industrial Arts Education.

The program is available to qualified teachers-in-service and other graduate students who meet the standards approved by the college and the State Council of Education. Graduate work is offered during evenings and on Saturdays during each regular session. Graduate work is also offered during the summer sessions.

Graduate work at California is especially designed for the class room teacher and includes class room, laboratory, clinical and research experience that will add breadth and depth to the preparation of the teacher. The program for each person admitted to the graduate school will be planned in cooperation with the advisor and the graduate council and will be based upon the previous training and experience of the student. The graduate degree is meant to be a meaningful program for the classroom teacher and will be custom made for each individual candidate.

A minimum of thirty trimester hours is required of all students. Of these thirty hours, four to ten hours are in general, liberal, and professional education, sixteen to twenty-one are in the field of specialization and four to six hours are in research.

Since standards of proficiency described elsewhere must be met, it should be understood that requirements listed in the preceding paragraph constitute minimum requirements and do not guarantee graduation.

Admissions

Entrance requirements are established for the purpose of determining, insofar as possible, those persons who are most likely to succeed in college. By doing this, California State College is maintaining its obligation to those students who expect to graduate from a school whose standards are worthy of respect. Proper admission standards also help indicate to the prospective student his chances for college success.

Admissions standards are constantly being studied by the Admissions Committee composed of members of the faculty and administrative staff and are being raised to satisfy the exacting demands placed upon teacher education.

Education is an important and exacting job that makes it necessary for the teacher to possess qualities and abilities of a special type. The teacher must be academically sound, must be physically able, and must possess character and personality traits that will enable him to represent the standards deemed desirable by our society. In keeping with these needs, the admissions program at California State College is summarized as follows:

1. General scholarship as evidenced by graduation from an approved secondary school or equivalent preparation as determined by the Credentials Evaluation Division of the Pennsylvania Department of Public Instruction.
2. Aptitude and ability to do college work as measured by a reliable test, such as the American Council on Education Psychological Examination, the School and College Ability Test, or College Boards. Students who score in the lower percentiles will not be admitted.
3. Satisfactory character and personality traits as well as proper attitudes and interests as determined by the high school principal, guidance director, or other school official acquainted with the student.
4. Health and physical condition as evidenced by a health examination by the student's family physician reported on the adopted form and approved by the College physi-

cian. No student who has, in the opinion of the college, disabilities which would impair his service as a teacher will be admitted.

5. Recommendation of two or more college staff members following a personal interview of the applicant.
6. For admission to special curricula the college may require the candidate to take an appropriate aptitude test in the special field in order to obtain further evidence of ability to succeed in the student's chosen field.

Requests for the proper forms for admission should be addressed to the Director of Admissions, California State College, California, Pennsylvania. A form for such requests may be found in the appendix of this bulletin. The following information applies to student categories as follows:

NEW APPLICANTS

1. File the following forms with the Director of Admissions, California State College, California, Pennsylvania:
 - (a) Application and Personnel Record (blue form) — BY THE APPLICANT. Your signature is required on this form.
 - (b) Medical Record (yellow form) — BY THE PHYSICIAN.
 - (c) Record of your secondary school work (white form) BY THE HIGH SCHOOL PRINCIPAL. Your high school record must include a recommendation and your class standing. If you are still attending High School, have your high school principal complete the form up to the present date.
2. It will also be necessary to send a deposit of \$10.00. This deposit must be sent along with the blue application form. This is a guarantee of the intention of the student to enter college for the term of trimester designated. It is deposited with the Revenue Department to the credit of the student's contingent fee. Check or Money Order for this amount must be drawn on the Commonwealth of Pennsylvania.

3. Arrange to take the Scholastic Aptitude Test Section of the College Boards. Have the scores sent to the Director of Admissions.

TRANSFERS FROM ANOTHER COLLEGE

1. File the application forms with the Director of Admissions, California State College, California, Pennsylvania, according to the above directions.
2. Send the advance \$10.00 deposit to the Business Manager, according to the above directions.
3. Submit an official transcript of the work taken at another college, together with a statement of honorable dismissal. This dismissal must be academically clear as well as being clear insofar as character is concerned. This information must be sent directly from the other college to the Director of Admissions, California State College, California, Pennsylvania.
4. Send your college board scores to the Director of Admissions.

REVISION

The testing and admissions program shall be reviewed each year by the Admission Committee. Proposed changes will be submitted to the Administrative Council and faculty for approval.

APPLICATION OF THE ADMISSION REQUIREMENTS

1. GENERAL SCHOLARSHIP

The applicant must have been graduated from a four-year high school of accredited standing or an institution judged by the Secondary Education Evaluation Division of the Department of Public Instruction, Harrisburg, Pennsylvania, to be the equivalent.

All applicants must make a satisfactory score on the admission examination.

2. **COMMAND OF ENGLISH** and other evidence of intellectual fitness. Students who demonstrate a lack of competency to carry college work in English Fundamentals or other subjects may be required to take remedial courses without credit.

3. CHARACTER AND PERSONALITY

The candidate must be recommended by the high school principal or guidance counselor of his secondary school for trustworthiness, initiative, industry, cleanliness and social adaptability.

4. HEALTH

The applicant must possess a clean bill of health, together with evidence of emotional stability, of absence of physical defects which would interfere with his successful performance of the duties of teaching, and of absence of a predisposition toward ill health. He must present a certificate of examination furnished by the College and signed by a physician legally qualified to practice medicine in the Commonwealth of Pennsylvania. This form will be checked by the examining physician at the College.

The student may be required to undergo re-examination.

The applicant may be rejected for:

- (a) Incurable defects or diseases of the heart, lungs, kidneys, digestive system, nervous system, skin, organs of the special senses, and the thyroid gland, and for epilepsy or nervous instability.
- (b) Defective vision of marked degree.
- (c) Permanently impaired hearing.
- (d) Marked speech defects.
- (e) Unsightly deformities.
- (f) Marked obesity.

Students with remedial defects may be accepted on condition that immediate treatment be undertaken for the removal of these defects.

ADMISSION OF OUT-OF-STATE AND FOREIGN STUDENTS

Out-of-state and foreign students may be admitted to the College when their admission and instruction does not interfere with the admission and instruction of students resident in the Commonwealth. In the cases of foreign students, admission will depend

upon acceptable clearance from the education authorities of the countries concerned and the Department of State of the United States.

TEACHERS IN SERVICE

Teachers in service need file only a single admission form for approval for part-time work.

POST-GRADUATES

Applicants who are graduates from other colleges and desire to attend California State College full time for certification purposes must file the three basic forms and a transcript from the other colleges attended. No admission test is needed; however, a personal interview with the faculty is required.

SUMMER SCHOOL

Summer school admission will be approved for:

1. Regularly enrolled full and part-time students in good standing.
2. Teachers in service who file the appropriate admission form.
3. Temporary transfer students from other colleges who have approval of their Dean of Instruction to pursue courses at California State College.
4. Entering freshmen who have been officially approved by the Admission Committee.

Student Welfare

LIVING ACCOMMODATIONS FOR MEN

Johnson Hall provides living accommodations for 123 men. Six hundred men are housed in approved homes, apartments, and fraternity houses in the community. A new dormitory to house 200 men will be opened in the fall of 1963.

All dormitory assignments are made by the Dean of Men. Men living in town are required to find their own housing, to make all arrangements with, and pay rentals directly to, the householder. A copy of the Community Housing Directory will be sent to new students or is available in the office of the Dean of Men. All housing agreements should be in writing and be signed by the householder, the student, and his parents.

Rentals for rooms in town should not exceed the official dormitory rate for similar accommodations. Rates for single rooms or for units with cooking facilities will be slightly higher.

In dormitory rooms and in most homes, bed linen is provided and laundered. Students must provide blankets and arrange for their personal laundry. Two commercial laundramats operate in the community.

Students who room in town may arrange to board in the college dining room by registering for dining room service and paying the established dining room fee.

FOR WOMEN

North, South, and Dixon Halls, campus dormitories for women, house 230 students. Recent remodelling has made these dormitories comfortable, safe, and convenient. Women's dormitories are supervised by members of the Student Personnel staff under the direction of the Dean of Women.

The Georgian Dining Room is located on the first floor of Dixon Hall. The commuting women's room is in North Hall.

THE FLECK HOTEL is a recently reconditioned, privately owned building to which freshman women are assigned. Supervision

is provided by a house mother under the direction of the Dean of Women. Residents of Fleck Hotel board in the college dining room. Room rentals are paid directly to the hotel, boarding fees to the Commonwealth of Pennsylvania.

A modern dormitory for women is now under construction and will be opened in the fall of 1963.

FOR WOMEN LIVING IN TOWN

Women who reside in homes in town will be registered in the college as commuters. The student and her parents will be fully responsible for making *all* arrangements with the householder. The college will assume only those responsibilities normally assumed for commuting women.

FOR COMMUTING STUDENTS

Students who commute are assigned to locker space in one of two rooms reserved for such purposes. The men are located in the ground floor of Dixon Hall and the women in the ground floor of North Hall. Lounge and study space is also provided in Vulcan Lounge.

PROFESSIONAL LABORATORY EXPERIENCES

To supplement the classroom preparation of teachers a program of experiences in teacher-related activities is provided and becomes a part of the college record of each student. With the cooperation of the faculty members who teach Professional Education courses, each student maintains a record of all campus or off-campus activities in church or community, business or industry or recreation or camp work. Each record is then examined from time to time as a basis for the evaluation of student growth. Laboratory experiences records are filed with the Director of Guidance and are available to prospective employers through the Placement Office.

Many organizations provide co-curricular opportunities in the general area of athletics, dramatics, forensics, journalism, student government, music and recreation. A complete list of such organizations is available in the student handbook (Vulcan) and a student is guided to his area of special interest through the orientation program. Student activities are considered an adjunct to the academic program and not a substitute for it.

STUDENT ACTIVITIES

The Student Activities Program of the College is an integral part of the student's college career in developing initiative, cooperative effort and leadership. The college encourages and promotes a varied program through the offices of the Dean of Men, Dean of Women and the Director of Student Activities in establishing and supporting both subject-centered as well as recreational activities. All students are expected to take an active part in the co-curricular program as a requirement for advanced standing.

The realization of individual assets and potentialities often require activity beyond the classroom. As a result California maintains approximately 45 co-curricular activities to provide each student with an opportunity for the development of social, cultural, aesthetic, intellectual and physical qualities essential for good citizenship, good teaching and the self-esteem of the individual. Opportunities for real self-government are provided through the many organizations as well as through Student Congress, Student Cabinet, Board of Directors of the S. A. A., Inc., (Student Activities Association), The Women's Day Council, The Men's Day Council, The Dormitory Councils and other agencies for students to exercise leadership. In addition to these organizations the advent of sororities and fraternities, both service and social, have provided the students with additional mediae to express themselves, not only through the respective organizations but through the Inter-fraternity Council and the Panhellenic Council.

ADVISORY SYSTEM

The College gives special attention to the new student through interviews, counseling, and testing. Efforts are made to appraise the interests and abilities of each student. Results of these data and anecdotal records are available to all counseling personnel concerned. While the whole faculty assists, upon request, with the guidance program, certain members have been assigned the following responsibilities:

1. The Dean of Instruction and Directors of Curriculum assume responsibility for educational guidance: selection of curriculums, course requirements, certification requirements, student load.

2. The Director of Guidance administers the testing program and works with students who have academic difficulties.
3. The Deans of Personnel are responsible for social adjustments: housing, organization of commuting students, religious activities, social activities and development of study programs.
4. Director of Student Activities establishes and maintains the master calendar of co-curricular activities, coordinating this program with the curricular program of the college. Through the student activities fund he serves as an advisor to the student government in determining and carrying out the request of student body activities. The scheduling and planning of activities also falls in the realm of the Director's office.
5. A Veteran's Clerk has been designated as Veterans' Adviser to deal with special problems relating to veterans.
6. Each department meets regularly with its majors and provides advisement of these students. The schedule of office hours of all faculty members is posted in the Office of the Dean of Instruction. Students are encouraged to consult their professors at frequent intervals during the trimester.
7. Health guidance is the primary responsibility of the resident nurse and college physician.

RELIGIOUS ADVANTAGES

Though affiliations with particular sects are avoided by the authorities of the college, every endeavor is made to interest students in religious work and to develop a clean, wholesome, moral atmosphere. On Wednesday evenings the "Student Fellowship" meets. Students may attend the churches of their choice on Sunday mornings. Other organizations with religious affiliation are listed in the Student Handbook.

CHURCHES

There are churches of the following denominations in California: Baptist, Christian, Methodist, Nazarene, Presbyterian, and Roman Catholic. A Jewish Synagogue is also located in the Borough.

SOCIAL LIFE

Through receptions, parties, teas, dances, and other social events held frequently during the college year, every possible effort is made to bring about a wholesome and homelike atmosphere among the students. The Colonial Room and the Vulcan Lounge aid considerably in developing a stimulating social life. The whole program is designed to stress the importance of a teacher's being prepared to meet the social amenities.

Through the Student Union Building Committee comprising both student and administrative personnel of the college, there is now in the process of planning a Student Union Building which will serve as a social, educational and cultural center of the college. The progress to date indicates that this building will become a reality in the near future as a part of the rapid expansion program of the college.

Complete information about the rules and regulations that govern dormitory students may be obtained from the Dean of Men or the Dean of Women. The Vulcan, the student handbook which is issued annually and given to each student upon registration in September, contains detailed information concerning activities and organizations.

Fees, Expenses and Financial Aid

COLLEGE EXPENSES

Fees, Deposits, and Repayments

The uniform schedule of fees, deposits and repayments established for the State Colleges is subject to change when authorized by the Boards of Trustees of the State Colleges and approved by the Superintendent of Public Instruction.

ENROLLMENT FEE

This fee covers registration, keeping of the student records and the library, student welfare, health services, (other than extra nurses and quarantine) and laboratory fees.

The Enrollment Fee must be paid in full on registration day.

ROOM AND BOARD FEES

Full-time students . . . \$272 per Trimester (Room \$128; Board \$144)

Part-time students \$17.00 per week (Room \$8; Board \$9)

This fee covers room and board and limited laundry. No reduction in the rates will be made for laundry done at home or for the absence of a student who goes home for several days at one time.

Transient lodging fee is \$1.00 per night per person.

Transient meals can be purchased from the College Catering system.

Fees for Room and Board or Board only, may be paid quarterly. The first payment of \$136.00 for Room and Board or \$72.00 for Board only must be paid on registration day. The balance will be due on or before the end of the first eight weeks of the trimester.

ACTIVITY FEE

Full-time Students \$20.00 per Trimester

This fee, under the control of the Student Activity Association as approved by the Board of Trustees, covers membership in the Association, admission to lectures, entertainments and athletic

contests, subscription to the college newspaper and certain other activities as defined by the Student Congress. Part-time students, including those taking extension courses, may secure the benefits of the activity program by paying the activity fee. Check should be made payable to the Student Activities Fund. This fee is due on the date of registration.

Checks or money orders must be written in the exact amount of your payment.

Make checks or money orders payable as follows:

Enrollment Fee, Room and Board or Board only:

To Commonwealth of Pennsylvania

Activity Fee: To Student Activities Fund

LATE REGISTRATION FEE

Each student who enrolls after the date officially set for registration, will be charged an additional enrollment fee of \$1.00 per day until he is in regular attendance, provided that the total amount of the late fee shall not exceed \$5.00.

FEES FOR OUT-OF-STATE STUDENTS

Full-time students whose legal residence is outside of the Commonwealth of Pennsylvania shall be charged enrollment fee of \$288.00 per trimester.

If an out-of-state student is enrolled in a special curriculum, he shall pay the special curriculum fee in addition to the fee of \$288.00 per trimester.

The basic fee for Part-time or Summer Session out-of-state student, is \$15.00 per trimester hour with a minimum basic fee of \$45.00.

DAMAGE FEE

Students shall be responsible for damage, breakage, or loss, and the return of college property.

TRANSCRIPT FEE

The first official transcript of record is issued without cost. A fee of \$1.00 is charged for each subsequent transcript.

INFIRMARY FEE

A boarding student who is ill is entitled to three days of infirmary service without charge. After that time he charge is \$1.00 per day.

Commuting students admitted to the Infirmary are charged \$3.00 per day from the time of admission. This covers board and nursing service.

In no case does the infirmary fee include special nursing care or medical service.

DEGREE FEE

A fee of \$5.00 must be paid by each candidate for a degree. No student is considered to have met the requirements for graduation until this fee has been paid. This fee is payable upon notification from the Registrar, that the student is cleared for graduation.

DELINQUENT ACCOUNTS

All fees are payable in advance. No student may be enrolled or graduated, or receive trimester grade reports or a transcript of his record until all previous charges have been paid.

A late fee of \$1.00 per day will be charged provided that the total amount of the late fee shall not exceed \$5.00.

REFUNDS

Refunds will not be made to a student who has been dismissed temporarily or indefinitely suspended, or who has voluntarily withdrawn from the College. Repayment of any part of the advance registration deposit will not be made for any cause whatsoever.

Refund will be made for personal illness when this is certified by an attending physician or for other reasons approved by the Board of Trustees, to the amount of the housing and enrollment fees paid by the student for the part of the trimester which he does not spend in the college.

Letters requesting refunds should be addressed to the President of the college.

To withdraw from classes, Dormitory or the Dining Room, the student MUST first contact the proper officials of the college.

The officials to be contacted are as follows:

- (A) Classes — Director of Admissions
- (B) Dormitory or Dining Room — Dean of Women or
Dean of Men

Any other method of withdrawal cannot be approved and charges for Room and Board will remain intact.

PAYMENT OF BILLS

Enrollment fees, room and board and special fees must be paid at the Business Office. Upon payment, an official Revenue Receipt will be given to the student. Payment by check, bank draft, Express or Post Office money order made payable to the Commonwealth of Pennsylvania in the exact amount you are to pay, is preferred.

The Student Activity Fee must be paid on registration day at the Office of the Accountant for The Student Activities Fund. Upon payment, an official Activities Receipt will be given to the student. Payment by check, bank draft, Express or Post Office money order made payable to the Student Activities Fund in the exact amount of the fee you are to pay, is preferred.

Book Store business is conducted on a cash basis. Payment by check, bank draft, Express or Post Office money order made payable to the College Book Store, is preferred.

MATRICULATION CARDS

Upon completing registration, students are given matriculation cards which entitle them to admission to the classes for which they have registered. These cards must be carried at all times and presented when requested.

COST OF BOOKS

The estimated cost of textbooks is \$50.00 to \$65.00 a trimester for students in the Elementary and Secondary Curriculums. Students in the Industrial Arts curriculum may expect to spend \$90.00 for the trimester in which they take Introductory Mechanical Drawing, and \$65.00 each succeeding trimester. Students may purchase books, materials and other supplies through the College Book Store on a cash basis.

SUMMARY OF FULL TIME TRIMESTER FEES

COMMUTING STUDENTS

<i>Elementary or Secondary</i>	<i>Atypical Education</i>
Enrollment Fee\$125.00	Enrollment Fee\$135.00
Activity Fee 20.00	Activity Fee 20.00
<i>Industrial Arts</i>	
Enrollment Fee\$143.00	
Activity Fee 20.00	

DORMITORY STUDENTS

<i>Elementary or Secondary</i>	<i>Atypical Education</i>
Enrollment Fee\$125.00	Enrollment Fee\$135.00
Room and Board 272.00	Room and Board 272.00
Activity Fee 20.00	Activity Fee 20.00
<i>Industrial Arts</i>	
Enrollment Fee\$143.00	
Room and Board 272.00	
Activity Fee 20.00	

DINING ROOM ONLY

<i>Elementary or Secondary</i>	<i>Atypical Education</i>
Enrollment Fee\$125.00	Enrollment Fee\$143.00
Board Only 144.00	Board Only 144.00
Activity Fee 20.00	Activity Fee 20.00
<i>Industrial Arts</i>	
Enrollment Fee\$143.00	
Board Only 144.00	
Activity Fee 20.00	

SUMMARY OF PART-TIME STUDENT FEES

Elementary and Secondary — \$12.50 per trimester hour
Atypical Education — \$12.50 per trimester hour plus \$5.00 per session.
Industrial Arts — \$12.50 per trimester hour plus \$1.00 per week.
Minimum charge for a Part-time student is \$37.50 plus special fees.

Views . . .

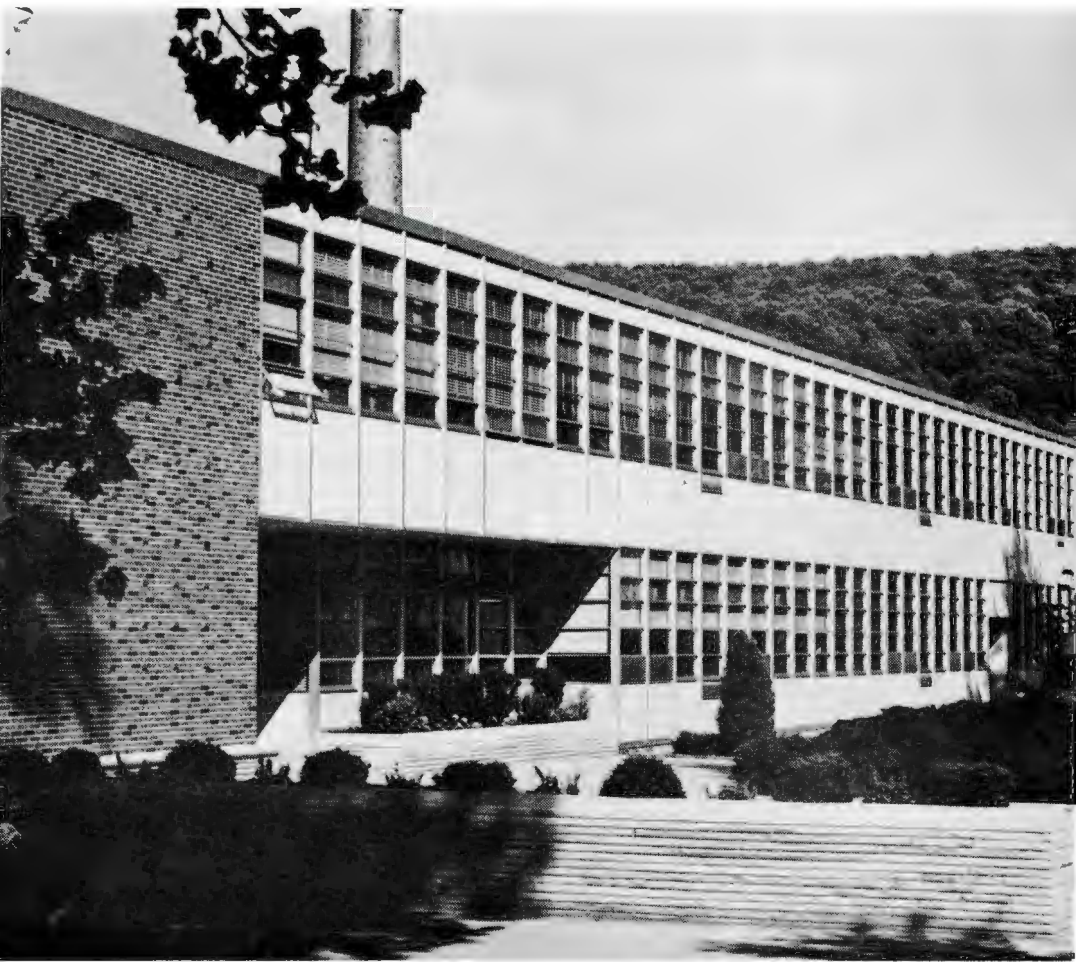
The Campus

CALIFORNIA STATE COLLEGE
CALIFORNIA, PENNSYLVANIA

<i>page i</i>	The new Science Building
<i>page ii</i>	The J. Albert Reed Library
<i>page iii</i>	Entrance to the J. Albert Reed Library
<i>page iv</i>	Dixon Hall — a dormitory for women
<i>page v</i>	Johnson Hall — a dormitory for men
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photography by —

WARREN S. KNIGHT '63

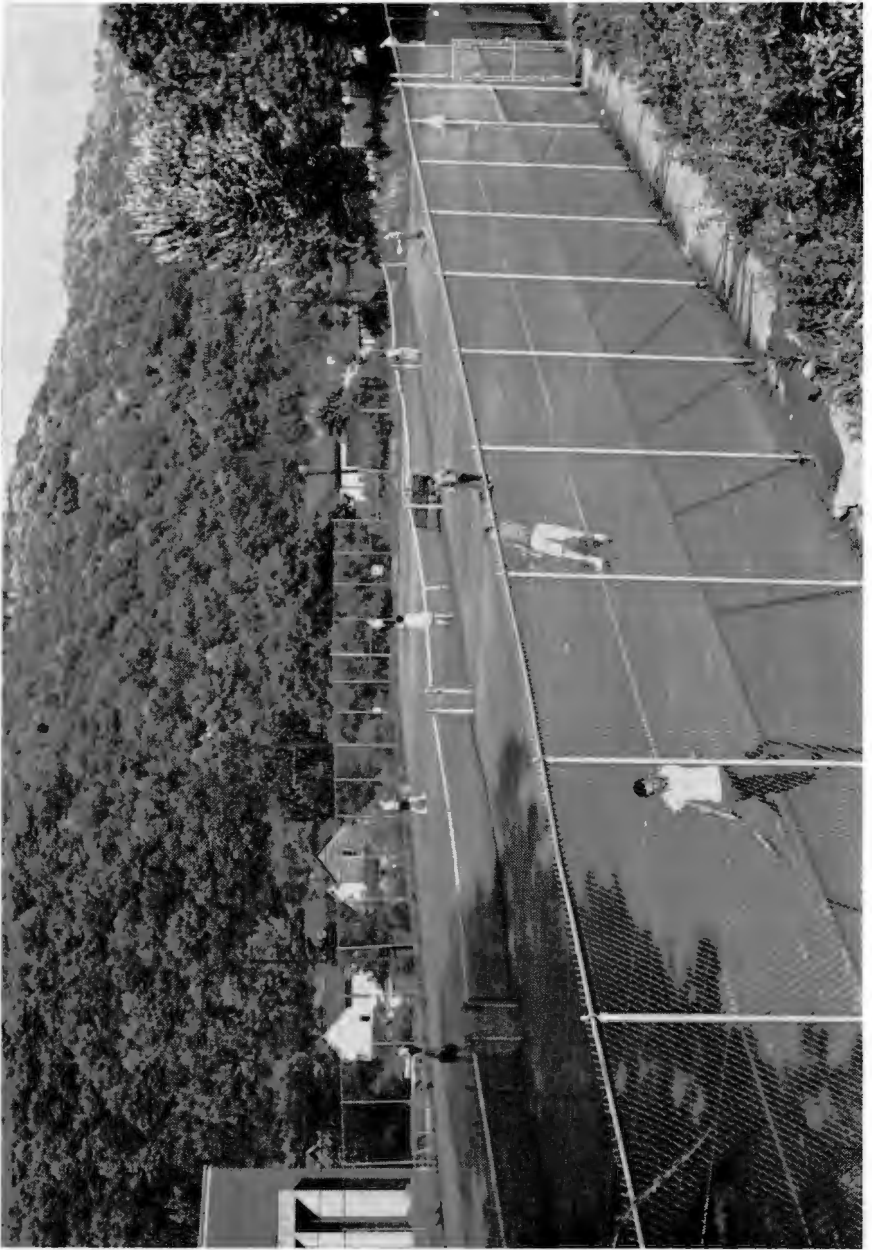




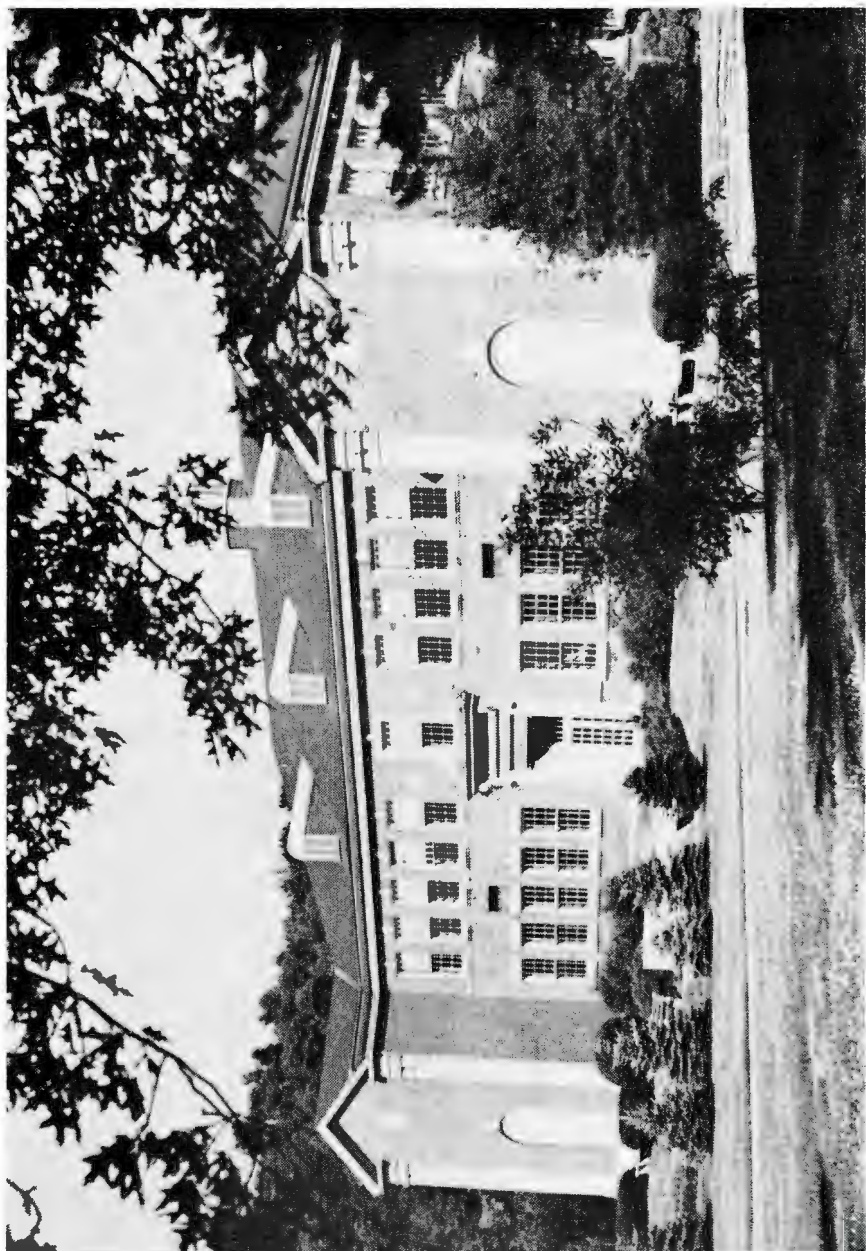






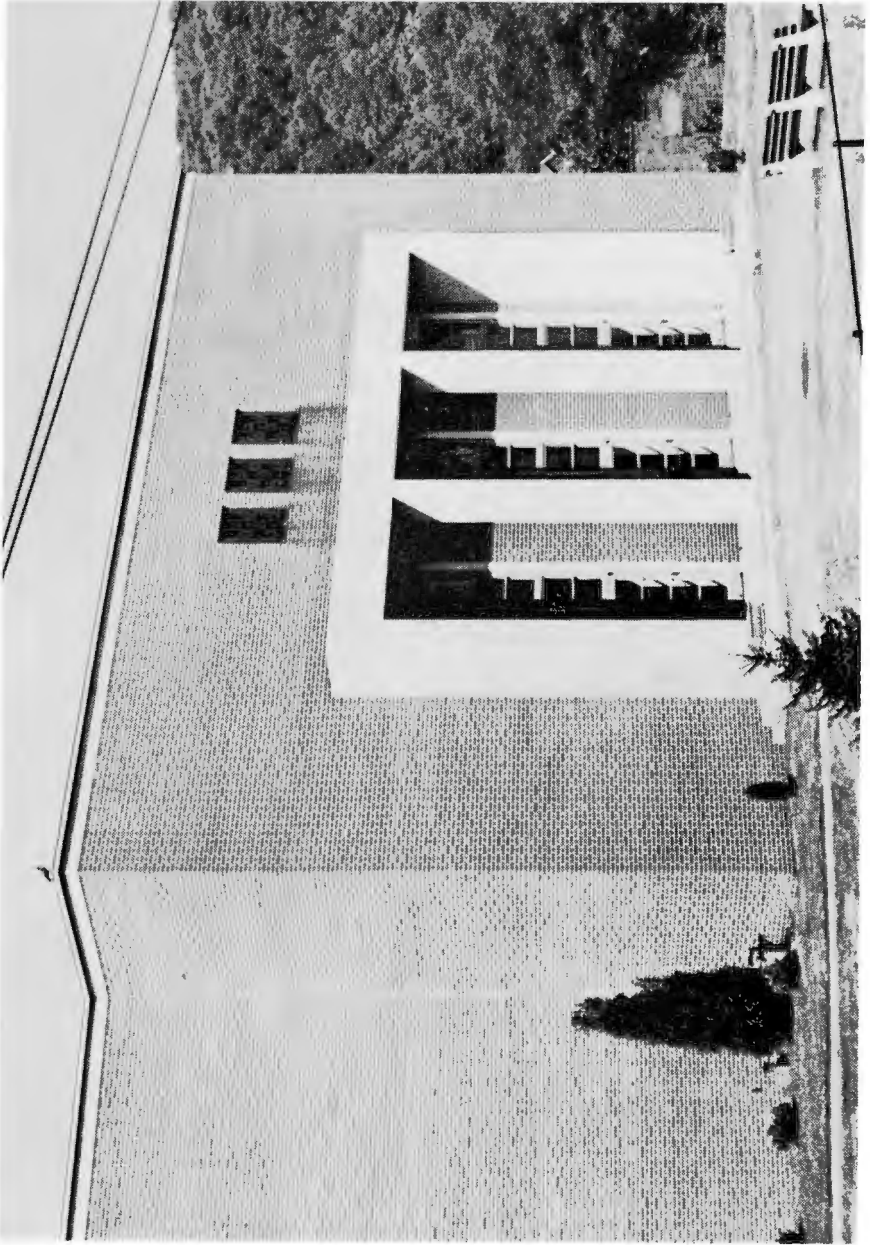




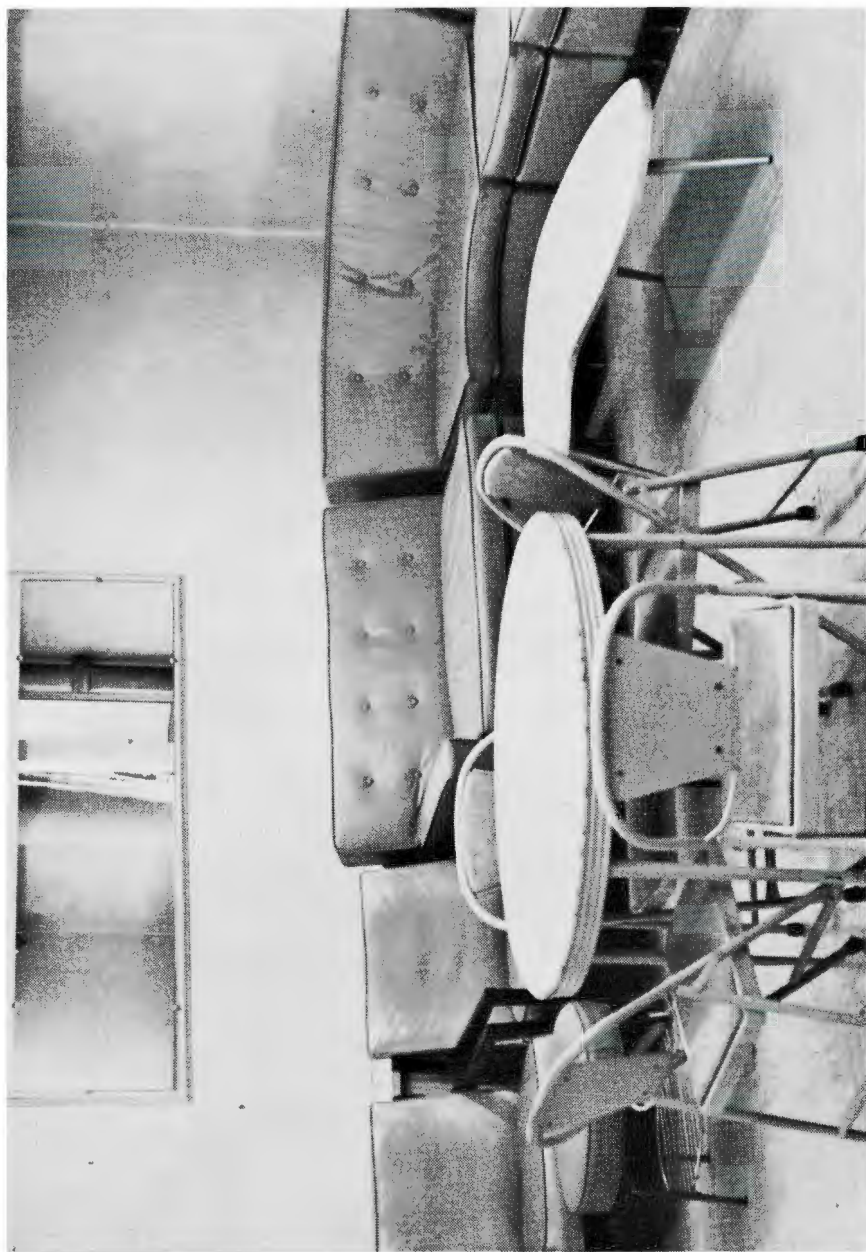














Loans and Employment

STUDENT LOANS AND FINANCIAL ASSISTANCE

The low cost to the student of an education at California State College is made possible only because the Commonwealth of Pennsylvania supports the education of its teachers. The Commonwealth in fact subsidizes every student because the actual total cost per student for a quality educational program ranks with the average for similar colleges. The student pays only about one-third the cost.

While students are encouraged to have sufficient resources upon admission to complete the first year there are limited funds available to help those able persons who find the cost too great. The college participates with National Defense Student Loan program. In addition many persons vitally interested in teacher education have contributed to the college a Loan Fund program which makes possible either short term or long term loans to needy students.

All loans are made to cover educational expenses only.

NATIONAL DEFENSE STUDENT LOAN PROGRAM

The National Defense Student Loan Program was authorized by the National Defense Education Act of 1958. This program makes loans available to students under certain conditions, with specific scholarship provisions for student borrowers who later enter public elementary and secondary teaching.

The college has the major responsibility for administering the provisions of the Act. Applications to participate in the program must be submitted to the President's Office. Eligibility to participate in the program is based on the following qualifications:

1. A student must be in full time attendance at the college (full time attendance is construed as a minimum of 12 trimester hours of credit).
2. Academic proficiency of a 3.0 or B quality point average or superior elective in one of the areas of mathematics, science or modern foreign language.
3. Needy students as evidenced by the certification by responsible persons.

4. Information on this loan may be obtained thru the Office of the College President. Inquiries should be made well in advance of the registration date.

STATE SCHOLARSHIPS

Holders of State Scholarships may attend California State College and use the Scholarship award toward meeting their expenses. The Senatorial Scholarships do not apply to state colleges.

STUDENT LOAN FUNDS

A small loan fund was established by the Class of 1927 for the purpose of giving financial assistance to worthy students. From time to time various groups of individuals have contributed money until the fund amounts at present to approximately \$20,000.

Donors of amounts of \$1,000 or more are as follows:

Lee Smith — Estate

Miss Clara Smith

P. W. Morgan — Estate

Donors of \$100 or more are as follows:

Class of 1926

Mary Graham Noss Fund

Class of 1927

J. B. Smith Alumni Chapter

Fayette Co. S. S. — 1927

California Coterie Club

Class of 1928

Class of 1941

Class of 1929

Class of 1944

Monocal — 1930

Dauna Lyn Bowlen

Class of 1932

George Kunkleman

Monocal — 1934

Alumni Association — 1960

Class of 1934

Ira Laughlin Teggart — Estate

Class of 1935

Naomi E. Birch — Estate

Class of 1936

P. J. Mollenauer

Class of 1938

H. R. Humphries

These funds are held in trust by a Board of Directors made up of two alumni and three faculty members. The following officers are: Mr. William Grimes, Chairman; Mrs. Irene Stevens Edwards, Dr. Michael Duda, Mr. Paul N. Walker, Dr. George Roadman, and Mr. Aaron J. Hoover, secretary-treasurer. All contributions should be sent to one of these persons. Arrangements for a loan should be made with the secretary-treasurer.

The committee, in granting loans, takes into consideration scholarship, personal worthiness, and professional attitude.

General Information

REQUIREMENTS FOR GRADUATION

In order to graduate, a student must pursue successfully the course requirements in his chosen curriculum. The criteria for successful work has been established by the scholarship and other faculty committees and is described in detail on the following pages. These standards include a 2.0 quality point average to be attained for advanced standing purposes, for student teaching and for graduation. When these general and specific requirements have been met and upon completion of a minimum of 128 credit hours of work a degree of Bachelor of Science in Education is awarded, assuming the satisfaction of financial and other obligations.

CLASS SCHEDULES

A program of schedule advising and program preparation is provided by the Dean of Instruction and the Curriculum Directors. By making use of this service a student may plan his program well in advance so that he may graduate in four, three and one half or three years. Acceleration beyond three years is generally not considered advisable.

SUMMER SESSION

To accelerate, a student should plan to spend several summers in full attendance. It is possible for a student to earn 12 credits in each summer session of full attendance and for this purpose a large and active summer program is provided. Generally speaking, all required courses are offered each summer as well as a representative group of elective courses in every area of specialization. Full information may be obtained from the *Summer Session Bulletin* issued in the Spring of each year. Address the Dean of Instruction, California State College, California, Pennsylvania.

SATURDAY AND EVENING PROGRAMS

Part-time student or teachers-in-service may utilize Saturday and Evening courses designed to meet the needs of a limited number of persons unable to attend regular classes.

LIBRARY

The new J. Albert Reed Library houses 45,000 volumes in conjunction with study lounge facilities for recreational reading, seminar space, exhibit areas, and a classroom for the teaching of library techniques. An adequate annual budget maintains microfilms and microcard collections; a spoken-word record collection, to which operatic and symphonic albums are being added; and an open-stack periodical room with individual study carrels to encourage concentrated and independent student effort. Five professional librarians interpret the collection to the campus and account for substantial increases in holdings each year, particularly in the field of Slavic studies. Through service and through facilities, the library seeks to anticipate and to satisfy the demands of higher enrollment and of expanded curriculum.

LABORATORIES

The new and modern Science Building has been completed and now serves the needs of the college. Well-planned chemistry, physics, biological science and elementary school science laboratories serve as the basis for an expanding science program.

CLINICS

Two types of clinical service are available within the Atypical education program. A psycho-educational clinic and a speech correction clinic are maintained to provide prospective teachers with an opportunity to observe the operation of such services within the education field. A Special Education Hall is being built as an annex to the Noss Building and both clinic and classrooms.

CREDITS

Courses are recorded in terms of "trimester hours of credit." A trimester hour of credit represents one hour a week of recitation or lecture throughout a trimester of sixteen weeks. In laboratory courses, however, a ratio of two, three, or four hours of laboratory work for one credit prevails, according to the department. Varying amount of required outside work are also assigned, so that, where the total number of credit hours is stated to be 15 or 16, the number of clock hours a week may total as high as 30, 32 or more. Descriptive titles and credit values of courses appear in the section of this bulletin devoted to description of courses.

EVALUATION OF CREDITS

An evaluation of credits is considered valid only for the year in which the distribution is made. The situation exists because of frequent changes in regulations governing the value of credits and in the requirements for certification and graduation made by the State Department of Public Instruction, the State Council of Education, and the Board of Presidents of the State Colleges. Students are urged to keep themselves informed about their credit standing by occasional inquiry, other than at registration periods, at the office of their Curriculum Director.

Students who are not graduates of first-class four-year secondary schools must have their credits evaluated by special procedure. Persons to whom this applies should consult the Dean of Instruction.

NORMAL SCHOOL CREDITS

All persons who were graduated from a State Normal School prior to September 1927, and who have a four-year secondary school education will be granted not more than 68 trimester hours of credit toward a degree.

Students who were graduated from a State Normal School before four years of secondary school preparation were required and who still have not satisfied this requirement should apply to the Secondary Credentials Division of the Department of Public Instruction, Harrisburg, Pennsylvania, for information about obtaining a secondary school equivalent certificate, which, when issued, will be accepted by the college for admission to a degree curriculum.

CREDIT BY EXAMINATION

- (a) A student may request an examination in any subject matter area in which he registers for the purpose of securing exemption from taking a course.
- (b) A student shall be given credit for a course in which he registers and in which he demonstrates competence by a qualifying examination.

Application for examination under (b) should be made to the Dean of Instruction at the time of registration. The examination will be given within two weeks of the time of application.

ADVANCED STANDING CREDIT

Credit for advanced standing is not allowed for work done by correspondence, nor will credit be given for courses which are not equivalent to those required or approved in the curriculums offered at this college or for courses completed at other colleges or universities in which grades below C were earned. All credits of students who apply for admission with advanced standing must be approved by the Dean of Instruction. Credits from colleges not approved by the Department of Public Instruction of Pennsylvania or other accrediting organizations will not be accepted toward either certification or graduation.

SCHOLARSHIP AND ACADEMIC STANDARDS

Students admitted to California State College are expected to maintain an adequate academic average each trimester in attendance in order to continue their studies.

1. First trimester freshmen who earn a quality point average of less than 1.75 will automatically be placed on academic probation for the following trimester.
2. Students other than first trimester freshmen who earn a quality point average of less than 2.00 during a trimester will automatically be placed on academic probation for the following trimester.
3. Students who earn a quality point average of less than 2.00 during the trimester of academic probation will be dismissed from the college. Students who earn a quality point average of 2.00 or better for the trimester of academic probation will be considered clear students for the following trimester.
4. Probation students must carry a minimum of 12 trimester hours with a 14 trimester hour maximum.
5. Students except first trimester freshmen who do not earn a quality point average of 1.50 during a trimester will be dismissed from the college.

6. Students who are dismissed from the college will be eligible to apply for re-admission after one trimester. Re-admitted students will be considered on probation and required to maintain a 2.00 quality point average the trimester of re-admission in order to continue.
7. Re-admission to the college is not automatic. Each case will be passed on by the Scholarship Committee.
8. Summer School grades will be counted for the purpose of determining probation or N.P.R. (not permitted to register) status when the student has carried a minimum of twelve (12) credits during a Summer Session. A student will be given clear or probation status at the end of a Summer term and may be placed on N.P.R. or avoid the same on the basis of the quality of work performed in the Summer.
9. Withdrawal from a course will be permitted during the first eight weeks of a trimester subject to the approval of the Dean of Instruction. A grade of WX will be assigned as a mark for withdrawal during the first six weeks. A W-letter grade will be assigned as a mark for a withdrawal during the seventh, eighth, and ninth weeks. An F grade will be assigned for any withdrawal without cause subject to the approval of the Dean of Instruction after the first nine weeks of the trimester.
10. Quality point average for the trimester is determined by the number of hours scheduled divided into the total number of quality points earned.

CLASSIFICATION

Students are classified as freshmen when they have earned 32 or fewer credits; as sophomores when they have earned 33 to 64 credits inclusive; as juniors when they have earned 65 to 96 credits inclusive; and as seniors when they have earned 97 or more credits.

The credits used to determine the classification of students include those earned at this college and those accepted by the college from other accredited institutions on the basis of official transcripts.

GRADING SYSTEM

- A — indicates superior attainment
- B — indicates attainment above the average
- C — indicates average attainment
- D — is the lowest passing grade
- F — indicates failure
- P — indicates passing. (Used for required preparatory courses, orientation, and student teaching courses.)
- Inc — indicates incomplete work
- W — indicates withdrawal from a course

For the purpose of interpreting percentage grades into letter grades, the following local standards have been approved by the faculty.

- 95% to 100% — A
- 88% to 94% — B
- 76% to 87% — C
- 70% to 75% — D
- Below 70% — Failing

The symbol, INC., is not used unless the student has been in attendance throughout the trimester or session and because of personal illness, covering two or more consecutive weeks, the student is not able to meet the requirements of the course at the end of the session. It indicates that as the work is incomplete the final grade is being withheld until the student fulfills all the requirements of the course. It is only used when conditions and circumstances warrant and when evidence is presented to justify its being given. An incomplete is always accompanied by a supplementary symbol indicating the character of the work already done: IncF, IncD. The following conditions govern an incomplete:

1. It must be removed by arrangement between the student and the instructor in the session, either trimester or summer, immediately following.
2. After the lapse of one term, trimester or summer, the grade may be changed only upon approval of the Dean of Instruction.

3. After the lapse of one year, the incomplete grade automatically becomes a grade of F and cannot be removed without the student's repeating the course.

GRADE REPORTS

Grade reports for students doing failing or low quality work are handed to the Dean of Instruction at the end of each eight-week period. Students reported are notified of their low grades and where deemed necessary, information is sent to the parents. The final trimester grades are mailed to the parents.

HONOR CREDITS

Students who wish to carry more than a normal schedule, (honor credits) of 15 or 16 trimester hours must have earned the right by reason of a high quality point average in session completed prior to registration. Exceptional cases must obtain permission from the Scholarship Committee or the Dean of Instruction at the time of registration. Under no circumstances will excess credits be honored, whether taken in the college or in another institution without the approval of the Committee or the Dean. In reviewing applications to carry excess credits, the Committee or the Dean will give consideration not only to the academic standing of the applicants but also to their health records and extra-curricular activities.

Students will be given approval to carry honor credits according to the following quality point average based on the grades of the previous trimester:

<i>Quality Point Average</i>	<i>Total Credits Scheduled</i>
3.00 to 3.49.....	17 credits
3.50 to 4.00.....	18 credits

College rules, in keeping with regulations of the State Department of Public Instruction, sanction only one credit a week during a summer session; that is, six credits during a six weeks' session and three credits during a three weeks' session and twelve credits during the summer trimester.

Students are advised not to take more than one credit a week during summer terms at other colleges if they expect to use credits

thus earned toward degrees from this college. Students planning a summer session at another college should consult the Dean of Instruction or their curriculum Director before registering.

EXTENSION CREDITS

The college will accept for graduation a limited number of extension credits from other accredited institutions only when those credits have been earned in courses taught by persons who were then giving their full time to extension instruction in such institutions or to a combination of extension and campus instruction. Usually not more than the equivalent of one year's work of 32 trimester hours in extension courses will be accepted toward a degree.

CORRESPONDENCE COURSES

Credits for correspondence courses are not accepted except for members of the armed forces submitting records through the United States Armed Forces Institute, Madison, Wisconsin.

WITHDRAWALS

Students who find it necessary to leave the college during a trimester should, before discontinuing attendance at classes, confer with the Dean of Instruction. If after such conference it is found that the student should not continue, official withdrawal forms must be filed in the Registrar's Office. Students who leave the college without following this routine, especially the filling in of withdrawal cards, jeopardize their status.

Withdrawal forms must be properly filled in by students who desire to discontinue part of their schedules. When students merely stop attending classes without officially withdrawing, F (failing) grades are recorded on the permanent records.

QUALITY POINT SYSTEM

As there is a quality standard for passing each course, so there is a standard for completing a curriculum. This is made possible by the establishment of a quality point system which states that students cannot be graduated by getting merely passing grades in each course.

The quality point system requires that a student, before he can be graduated, must complete all required and elective courses in the curriculum which he is pursuing, have the minimum number of credits required by his curriculum, and earn a quality point average of at least 2.0 (C) for all courses in which grades other than P are given. Only courses completed at this college are included in the quality point computation.

Each credit of work completed at California is awarded quality points which are computed according to the following scale; each credit of A grade is multiplied by 4, B grade by 3, C grade by 2, D grade by 1, and F grade by 0. Courses dropped without the consent of the Dean of Instruction shall constitute an F. Courses in which P grades are given do not count in quality point computation. Courses transferred from other approved collegiate institutions are not counted in the quality point average.

ADVANCED STANDING PROGRAM

Formal admission to Advanced Standing is a requisite for continuing the program in teacher education. This marks the time when the professional work is intensified. Fourth semester students will make application for admission to Advanced Standing, for which they are required to meet the following qualifications:

1. The scholastic record must be a "2.0" average or better for the first two years of work taken by the student. This is to be certified by the student on the application form.
2. A "2.0" average must be attained in Communication I and Communication II (Composition I, II and Speech I, II) or the student must make a score equivalent at least to the 21st percentile on the STEP test. The student is to fill in the Communication I and II grades or the equivalent on the application form.
3. Adequate background as measured by the STEP series of the Sophomore Tests in selected area must be shown. A student whose average score in all areas is below the 21st percentile or who has any single test score below the 10th percentile will be required to pass a selected course in his area of deficiency.

4. A satisfactory recommendation of the Counseling Service Committee is required of each applicant.
5. Satisfactory evidence of physical stamina, good posture, and freedom from physical defects that may interfere with the duties of a teacher must be presented.
6. The voice must be pleasing and free from objectionable qualities. A student who has failed to pass the speech test because of either voice or speech defects is required to take correction work in the College Speech Clinic until his deficiencies, if remediable, have been overcome. Evidence of his having reached a satisfactory speech standard must be included in his record at the time application is made for Advanced Standing.
7. Evidence of participation in at least two co-curricular activities must be presented; a community activity may be substituted for one of the two required. This is filled in on the application form by the student.

Credentials will be examined by the Committee on Advanced Standing, and the decisions will be reached on the basis of all evidence available.

Students who fail to meet the requirements for Advanced Standing may be given one trimester plus a summer session of twelve weeks to remove the deficiency.

RESIDENCE REQUIREMENTS

Students in all curriculums must complete a minimum of thirty-two credits, in courses given by the College, if they expect to receive degrees from this institution. These credits may be gained on the campus in regular day, evening, or Saturday classes; 25 percent of the number of credits required may be in extension courses given by the college.

CITIZENSHIP

In keeping with legislative provisions, a student, to be eligible for a teacher's certificate, is required to present evidence of citizenship of the United States. If he is not a citizen of the United States

at the time of his admission, he is required to become naturalized before he may be granted a Teacher's certificate. A non-citizen, however, can be awarded the Bachelor of Science in Education degree.

STUDENT TEACHING

Student teaching is conducted under the supervision of the Director of Student Teaching, whose office is located in the Guidance, Curriculum and Student Teaching Center. Students who are candidates for degrees are required to earn twelve trimester hours of credit in student teaching. For regular students this assignment covers the entire trimester of sixteen weeks. The work is carried on in the campus Laboratory School and in selected public schools located in the service area of the college.

Students must make application for student teaching by filling out a form obtainable through the office of the Director of Student Teaching. Registration for student teaching will be held during the March group guidance meeting.

Before a student may be assigned to this vital part of the teacher-education curriculum, he must (a) hold a certificate of advanced standing; (b) have a quality point average of at least 2.0 for all courses in which grades other than P are given; (c) demonstrate an acceptable standard of competency in his area of specialization; (d) be approved as having satisfactorily completed the required preparatory work.

Students will not be assigned to student teaching until they have completed at least one trimester's work in the college. Graduates of other colleges must meet the residence requirement before being assigned to student teaching.

STUDENT TEACHING FOR EXPERIENCED TEACHERS

Teachers with three or more years' experience in teaching who become candidates for degrees and who hold certificates below the level of the Provisional College Certificate may, at the discretion of the college, complete the unfulfilled student teaching requirements for degrees in any of the following ways:

1. Earn in actual teaching the number of hours required.
2. Perform under the direction of this institution an assignment associated with their professional work which carries not less than one or more than six trimester hours of credit in a single trimester. The number of credits will be determined by the quality and amount of work done in the special assignment. In such cases the candidates must be regularly registered in the institution and may not earn more than a total of six hours of credit in a single trimester for all courses pursued.
3. In individual cases, pursue, to the limit of three trimester hours, courses approved by the college. The rest of the credit shall be earned in one of the ways designated above, or by a combination of them.

No credit toward graduation is granted for teaching experience.

Teachers-in-service who have not fulfilled the student teaching requirement of twelve credits and who are interested in completing it, must consult the Dean of Instruction.

SUMMARY OF GRADUATION REQUIREMENTS

1. A minimum of 128 trimester hours, including the satisfactory completion of all required courses, is necessary for graduation, together with a general quality point average of 2.0 for all courses in which grades other than P are given. Quality points are not computed for work done at other colleges or universities and only for courses taken at the college after 1931. Specific curriculum requirements may exceed the 128 credit minimum.
2. The student must be pronounced physically fit by a physician legally qualified to practice medicine in Pennsylvania.
3. The teaching ability of the student must be satisfactory to the Director of Student Teaching regardless of other credits.
4. No student will be graduated with less than two years of bona fide residence. The last 32 credits needed to complete a curriculum must be taken while the student is in actual attendance at the college.

5. Students who have not paid all bills previously incurred shall not be permitted to re-enroll, to be graduated, or to have credits sent to other institutions or to the Department of Public Instruction until such accounts have been paid. The records of such students are "Sealed" and no information will be given until cleared.
6. All credentials for graduation, including certificate application and transcripts of credits from other institutions, must be filed at times specified by the Registrar. If this requirement has not been met, graduation and certification will be postponed to the following graduation date.
7. Students must register with the Placement Service by filling out in every detail the registration form supplied by the Placement Service.
8. Attendance at the commencement exercises is necessary, unless unusual circumstances warrant graduation in absentia. This permission is granted only through the President of the College.

GRADUATION

Commencement exercises are held at the close of the fall and spring trimesters. At these exercises, degrees are conferred. All students who in the session preceding have completed the requirements for degrees constitute the graduating class. All members of the class are required to participate in all the Commencement activities.

CERTIFICATION OF TEACHERS

PROVISIONAL COLLEGE CERTIFICATION

Students who receive a degree after completing a four-year curriculum at this college will be granted a Provisional College Certificate, which is issued by the Department of Public Instruction. The certificate, for which application must be made, must be issued before graduates may teach in the public schools of Pennsylvania.

This certificate, not to be confused with the diploma issued at graduation, is valid for three years of teaching. It indicates the subject or subjects and the field in which the holder is permitted to teach, and may become permanent when the holder meets the requirements established by the State Council of Education.

The Dean of Instruction or the Curriculum Directors will confer with persons who wish to have a Provisional College Certificate extended to include industrial arts, speech correction, or the teaching of mentally retarded classes.

PERMANENT COLLEGE CERTIFICATE

A Provisional College Certificate may be made permanent after three years of successful teaching experience, rated at "middle" or better, in the appropriate field in the public schools of the Commonwealth and the satisfactory completion of at least twelve trimester hours of additional preparation of collegiate grade, completed subsequent to the conferring of the baccalaureate degree. Twenty-four hours will be required after October 1, 1963.

Holders of Provisional College Certificates issued after September 1, 1935, will be required to present evidence of having completed an approved course in visual and sensory techniques before the certificates may be converted into permanent form. The regulation is not retroactive. Persons who received Provisional College Certificates prior to September 1, 1935, will have them made permanent on the basis of the requirements in effect when they were issued.

TRANSCRIPTS OF CREDITS

Official transcripts, obtainable through the Registrar upon the written request of the student, will be sent to the State Department of Public Instruction for use in obtaining certification or to institutions to which credits are to be transferred.

Only the work completed at the California State College will be included in the transcript. Work taken at another institution should be certified directly from that institution.

One copy of a transcript of credits earned at California State College will be issued free of charge. A charge of one dollar is made for a second and for each subsequent transcript. This fee of one dollar will be waived for transcripts that are "to be used in connection with induction, enlistment, or advancement in the armed forces."

Transcripts cannot be prepared during the last week of the trimester or during the registration period. Persons planning admission to graduate school or to transfer to another collegiate institution should file the request for transcript with the Registrar at least a month before the end of the trimester. Women who have married since leaving college should give their maiden name as well as their married names.

PLACEMENT SERVICE

As part of its public service, the college maintains a placement office. Its purpose is to aid students and graduates in obtaining desirable positions as teachers and to assist school officials in locating well-qualified teachers who fit the requirements of vacancies in the schools of the service area of the college.

All students are required to enroll with the placement office when they complete their student teaching. Although this service does not guarantee positions, records filed by the registrants open opportunities that might not otherwise be available. Inquiry concerning charges for credentials should be made to the placement office.

CANDIDACY FOR DEGREE

At the time of registration for the trimester in which he expects to complete the requirements for graduation, the student must file with the Registrar an application for admission to candidacy for the degree.

Any student desiring to pursue any part of his program at a different institution will be required to secure, in advance, the approval of such courses from the Dean of Instruction.

HONORS

DISTINGUISHED SERVICE AWARDS

The Distinguished Service Awards are granted to the most outstanding woman and the most outstanding man of each graduating class. The awards are made on the basis of activities, character, citizenship, leadership, and personality. The election of persons to receive the awards is through a committee composed of members of the faculty.

SCHOLARSHIP AWARDS

The Scholarship Award is given to the person making the highest academic average in each of the curricula of the College.

COMMENCEMENT HONORS

Commencement Honors are awarded to a limited number of the graduating class. Not more than one-eighth of the class may have honors and a minimum of two (2) years residence is required.

Highest Honors — Quality Point Average 3.75 to 4.00 — No D or F grades.

High Honors — Quality Point Average 3.50 to 3.75 — No D or F grades.

Honors — Quality Point Average 3.25 or better — No F grades.

This recognition can be bestowed only upon evidence of unusual ability as shown by scholastic records and in keeping with standards established and approved by the faculty.

TRIMESTER HONORS

Trimester Honors (The Dean's Honors List) are awarded on the basis of quality point average at the end of the trimester as follows:

Highest Honors	4.00
High Honors	3.50 to 3.99
Honors	3.00 to 3.49

Curricula

BACHELOR OF SCIENCE IN EDUCATION

California offers men and women the following curricula leading to the degree of Bachelor of Science in Education:

ATYPICAL EDUCATION

A four-year course* which trains teachers to work with the mentally retarded or with the speech and hearing handicapped.

ELEMENTARY EDUCATION

A four-year course* which offers the opportunity for teaching in the elementary grades.

INDUSTRIAL ARTS

A four-year course* including wood, metal, graphic arts, machine, ceramics, plastics, electricity and crafts, designed to prepare teachers who are qualified to teach Industrial Arts in the Junior and Senior High School.

SECONDARY EDUCATION

A four-year course* which requires the election of a single area of specialization. California offers specialization in those academic subjects regularly taught in the Junior and Senior High School.

PUBLIC SCHOOL NURSE AND DENTAL HYGIENIST

These two-year programs designed to supplement previous training in the respective fields allow the student to earn the credits necessary to complete all the requirements for the baccalaureate degree, and make these persons eligible for full certification to work in the public schools.

MASTER OF EDUCATION DEGREE

The college has recently been approved and has initiated a program leading to the degree of Master of Education in the following fields:

Elementary Education

Industrial Arts Education

CERTIFICATION

All graduates from the various undergraduate curricula meet the requirements for the issuance of the College Provisional Certificate. This certificate enables its holder to teach the subjects listed thereon for three years in the Commonwealth of Pennsylvania. Requirements for making provisional certificates permanent have been established by the State Council of Education.

Under the Reciprocity Compact Elementary certificates valid for Pennsylvania are also valid in those states which are signatories to the Compact.

*Approximately 65% of all California students take advantage of a complete summer school program to accelerate. By careful planning and with the assistance of the curriculum directors, students may complete the four-year program in three or three and one-half years.

HIGHWAY SAFETY AND DRIVER EDUCATION

Effective September 1, 1951, a student who holds or will hold a valid certificate to teach will be issued an additional temporary standard certificate

to teach Highway Safety Education if the student has completed twelve semester hours in courses in Driver Education and Training. The temporary standard certificate so issued will become permanent after two years of successful experience in the field and the completion of three semester hours in General Safety Education.

The American Automobile Association has approved the Highway Safety Education courses offered at this college.

THE GENERAL CURRICULUM PATTERN OF THE COLLEGE

The several curriculums of the college have been developed jointly by the Curriculum Committee and the Faculty. The curricula have received approval of the Administrative Council, the Faculty, the Board of State College Presidents, and the Superintendent of Public Instruction. The approved curriculum pattern includes the following:

A. GENERAL EDUCATION

(Courses required of all students in all curriculums)

HUMANITIES	19 credits
Language and Literature	
Communication	
(Includes Composition, Speech and Literature)	
Developmental Reading	
Literature	
(Offered as part of World Culture)	
Arts	
Introduction to Art	
Introduction to Music	
Philosophy	
SOCIAL STUDIES	16 credits
World Culture	
History of Civilization	
Literature	
Survey of History of United States and Pennsylvania	
American Government	
SCIENCE	16 credits
Fundamentals of Mathematics	
Man and His Biological World	
Man and His Physical World	
World Geography	
HUMAN DEVELOPMENT AND GROWTH	11 credits
General Psychology	
Child Development (Elementary and Atypical)	
OR	
Psychology of Adolescence (Secondary and Industrial Arts)	
Health	
Physical Education	

B. PROFESSIONAL EDUCATION

These courses are specifically designed to prepare for the teaching profession. The culminating experience is the student teaching which extends for the entire trimester under the guidance of master teachers. Specific professional courses will differ with the different curricula.

C. SPECIALIZATION

The student will elect one of the curricula offered at the College in which he will specialize in his field of particular interest. General Education courses are not counted in the area of specialization.

ATYPICAL CURRICULUM

- a. Teaching the Mentally Retarded and Elementary Grades
- b. Teaching Speech and Hearing

ELEMENTARY CURRICULUM

Teaching in the Elementary school

INDUSTRIAL ARTS CURRICULUM

Teaching Industrial Arts in the Junior and/or Senior high school.

SECONDARY CURRICULUM

Teaching the following academic subjects in the Junior and/or Senior high school:

AREAS OF SPECIALIZATION

COMPREHENSIVE SPECIALIZATION	SUBJECT SPECIALIZATION
English-Speech	Biological Science
History and Government	Chemistry
Modern Language	Earth Science
Comprehensive Science	English
Field of Science	French
Physics and Math	Geography
Physical Science	German
Social Studies	History
Speech-English	Mathematics
	Physics
	Russian
	Spanish
	Speech

D. FREE ELECTIVES

The students may elect as free electives any course offered at the College for which he satisfies the prerequisites. The number of free elective hours will vary with the curriculum and area of specialization.

THE ATYPICAL CURRICULUM

A — TEACHING THE MENTALLY RETARDED AND ELEMENTARY GRADES

General Education	62	credits
Professional Education	22	Sem Hrs
Professional Orientation	3	
Audio-Visual Education	2	
Educational Psychology	3	
Student Teaching (Elementary and Atypical)	12	
Professional Practicum and Law	2	
Specialization	45	Sem Hrs
Basic Courses for Elementary Teaching	21	credits
Music for Elementary Grades	2	
Health and Physical Education for Elementary Grades	2	
Teaching of Reading	3	
Arithmetic Content and Method	3	
Teaching the Language Arts	3	
Geography of United States and Pennsylvania	3	
Teaching the Content Subject	3	
Art for Elementary Grades	2	
Teaching Retarded Children	24	credits
Curriculum Planning, Material and Equipment for Retarded Children	3	
Psychology of Exceptional Children	3	
Mental Hygiene	3	
Arts and Crafts for Atypical Children	3	
Advanced Arts and Crafts	3	
Special Class Methods	3	
Diagnostic Testing and Remedial Teaching	3	
OR		
Diagnostic and Remedial Reading	3	
Guidance with emphasis on Interviewing and Parent Education	3	
Minimum Credits Required for Graduation	129	credits

SUGGESTED PROGRAM OF STUDIES FOR TEACHING OF THE MENTALLY RETARDED AND ELEMENTARY

For administrative reasons the sequence of courses is subject to change.

FIRST TRIMESTER — 16 Crs.		SECOND TRIMESTER — 16 Crs.	
Communication I or	5	Communication II or	5
English I & Speech I		English II & Speech II	
Introduction to Art	2	Man and His Physical World	5
Man and His Biological World	5	Introduction to Music	2
Developmental Reading	2	Mathematics	3
Health	2	Physical Education I	1
Freshman Orientation	0		
THIRD TRIMESTER — 17 Crs.		FOURTH TRIMESTER — 16 Crs.	
World Culture I or	5	World Culture II or	5
Literature I History of Civilization I		Literature II History of Civilization II	
World Geography	3	Music for Elementary Grades	2
Professional Orientation	3	Geography of United States and Pennsylvania	3
Physical Education II	1	Audio-Visual Education	2
General Psychology	3	Child Development	3
Health and Physical Education for Elementary Grades	2	Physical Education III	1
FIFTH TRIMESTER — 17 Crs.		SIXTH TRIMESTER — 17 Crs.	
Arts Crafts for Atypical	3	Special Class Methods	3
Psychology of the Exceptional Child	3	History of United States and Pennsylvania I	3
Art for Elementary Gr.	2	Arithmetic Content and Method	3
Teaching of Language Arts	3	Advanced Arts and Crafts	3
Teaching of Reading	3	Remedial Teaching or Diagnostic and Remedial Reading	3
Educational Psychology	3	Introduction to Guidance	3
SEVENTH TRIMESTER — 15 Crs.		EIGHTH TRIMESTER — 14 Crs.	
American Government	3	Student Teaching	12
Curriculum	3	Professional Practicum and School Law	2
Philosophy	3		
Teaching the Content Subject	3		
Mental Hygiene	3		

THE ATYPICAL CURRICULUM

B — TEACHER OF SPEECH AND HEARING.

General Education	62	credits
Professional Education	25	credits
Professional Orientation	3	
Audio-Visual Education	2	
Educational Psychology	3	
Psychology of Exceptional Children	3	
Student Teaching	12	
Professional Practicum and School Law	2	
Specialization Courses	45	credits —
Phonetics	3	
Speech Pathology	3	
Basic Public Speaking	3	
Mental Hygiene	3	
Teaching of Reading	3	
Speech Education and Re-Education in Elementary and Secondary Schools	3	
Hearing Problems	3	
Auditory Training and Speech Reading	3	
Elementary Clinical Practice	3	
Advanced Clinical Practice	3	
Psychology of Speech and Hearing	3	
Speech Problems	3	
Physiology and Anatomy of Speech and Hearing	2	
Practice in Measurement and Adjustment for Hearing Prosthesis	3	
Clinical Practice and Speech Reading	3	
Minimum Credits Required for Graduation	130	credits

SUGGESTED PROGRAM OF STUDIES FOR TEACHING SPEECH AND HEARING

For administrative reasons the sequence of courses is subject to change.

FIRST TRIMESTER — 16 Crs.		SECOND TRIMESTER — 16 Crs.	
Phonetics	3	Speech Pathology	3
Communications I	5	Communications II	5
World Geography	3	Man and His Physical World	5
Man and His Biological World	5	Health	2
Freshman Orientation	0	Physical Education I	1
THIRD TRIMESTER — 14 Crs.		FOURTH TRIMESTER — 16 Crs.	
General Psychology	3	Hearing Problems	3
Fundamentals of Mathematics	3	Speech Ed & Re-Ed	3
Basic Public Speaking	3	Elementary Clinical Practice	3
History of United States and Pennsylvania Sur	3	Introduction to Art	2
Developmental Reading	2	World Culture I	5
FIFTH TRIMESTER — 15 Crs.		SIXTH TRIMESTER — 14 Crs.	
Auditory Training & Speech Reading	3	Teaching of Reading	3
Adv Clinical Practice	3	Psychology of Speech and Hearing	3
World Culture II	5	Physiology and Anatomy of Speech & Hearing	2
Child Development	3	Professional Orientation	3
Physical Education II	1	Physical Education III	1
		Introduction to Music	2
SEVENTH TRIMESTER — 14 Crs.		EIGHTH TRIMESTER — 15 Crs.	
Student Teaching	12	Psychology of the Exceptional Child	3
Professional Practicum and School Law	2	Speech Problems	3
		Clinical Practice in Auditory Training and Speech Reading	3
		American Government	3
		Educational Psychology	3
NINTH TRIMESTER OR SUMMER SESSION — 10 Crs.			
Mental Hygiene	3		
Practice in Measurement and Adjustment for Hearing Prosthesis	2		
Philosophy	3		
Audio-Visual Education	2		
Minimum Credits Required for Graduation	130	credits	

THE ELEMENTARY CURRICULUM

General Education	62	credits
Professional Education	22	credits
Student Teaching	12	
Professional Practicum and School Law	2	
Educational Psychology	3	
Professional Orientation	3	
Audio-Visual Education	2	
Specialization	36	credits
Children's Literature	3	
Music for Elementary Grades	2	
Art for Elementary Grades	2	
Health and Physical Education for Elementary Grades	2	
Science for Elementary Grades	3	
Teaching Language Arts	3	
Teaching the Content Subject	3	
Arithmetic — Content & Method	3	
Teaching of Reading	3	
History of United States and Pennsylvania II	3	
Geography of United States and Pennsylvania	3	
Teaching Art in Elementary Grades	3	
Teaching Music in Elementary Grades	3	
Electives	8	credits
Electives may be chosen from any courses offered at the college for which the student meets the prerequisite.		
Minimum Credits Required for Graduation	128	credits

SUGGESTED PROGRAM FOR THE ELEMENTARY CURRICULUM

For administrative reasons the sequence of courses is subject to change.

FIRST TRIMESTER — 16 Crs.

Communication I	5
Introduction to Art	2
Man and His Biological World	5
Developmental Reading	2
Health	2
Freshman Orientation	0

SECOND TRIMESTER — 16 Crs.

Communication II	5
Man and His Physical World	5
Introduction to Music	2
Fundamentals of Mathematics	3
Physical Education I	1

THIRD TRIMESTER — 16 Crs.

World Literature I	2
History of Civilization	3
World Geography	3
Professional Orientation	3
General Psychology	3
Health and Physical Education for Elementary Grades	2

FOURTH TRIMESTER — 16 Crs.

World Literature II	2
History of Civilization II	3
Music for Elementary Grades	2
Geography of United States and Pennsylvania	3
Audio-Visual Education	2
Educational Psychology	3
Physical Education II	1

FIFTH TRIMESTER — 16 Crs.

History of United States and Pennsylvania I	3
Physical Education III	1
Teaching of Language Arts	3
Children's Literature	3
Child Development	3
Teaching Music in Elementary Grades	3

SIXTH TRIMESTER — 14 Crs.

History of United States and Pennsylvania II	3
Arithmetic Content and Method	3
Science for Elementary Grades	3
Teaching of Reading	3
Art for Elementary Grades	2

SEVENTH TRIMESTER — 14 Crs.

American Government	3
Philosophy	3
Teaching the Content Subject	3
Teaching Art in Elementary Grades ..	3
Elective	2

EIGHTH TRIMESTER — 14 Crs.

Student Teaching	12
Professional Practicum and School Law	2

NINTH TRIMESTER OR SUMMER SESSION — 6 Crs.

Electives	6
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THE INDUSTRIAL ARTS CURRICULUM

General Education	60	credits
Professional Education	25	credits
Student Teaching	12	
Professional Practicum and School Law	2	
Educational Psychology	3	
Professional Orientation	3	
Audio-Visual Education	2	
Principles and Practices of Industrial Arts	3	
Specialization	46	credits
Shop		
Fundamentals of Wood Shop	4	
Fundamentals of Graphic Arts	4	
Fundamentals of Sheet Metal	4	
Fundamentals of Machine Shop	4	
Fundamentals of Electricity	4	
Advanced Wood Shop	4	
Shop Electives	8	
	32	
Drawing and Design		
Introductory Mechanical Drawing	2	
Graphic Arts Design	2	
Sheet Metal Design	2	
Machine Shop Design	2	
Electric Theory and Design	2	
Drawing Elective	2	
Elective in Industrial Arts	2	
	14	
Minimum credits required for graduation	131	credits

SUGGESTED PROGRAM FOR THE INDUSTRIAL ARTS CURRICULUM

For administrative reasons the sequence of courses is subject to change.

FIRST TRIMESTER — 17 Crs.	SECOND TRIMESTER — 17 Crs.
Fundamentals of Woodworking	Fundamentals of Graphic Arts
Introductory Mechanical Drawing	Graphic Arts Design
Communication I	Communication II
Developmental Reading	Physical Science (Physics I)
Mathematics	Health
Physical Education I	
Freshman Orientation	
THIRD TRIMESTER — 17 Crs.	FOURTH TRIMESTER — 16 Crs.
Fundamentals of Sheetmetal	Fundamentals of Machine Shop
Sheetmetal Drafting	Machine Drawing and Design
World Culture I	World Culture II
Man and His Biological World	Introduction to Music
Physical Education II	General Psychology
FIFTH TRIMESTER — 17 Crs.	SIXTH TRIMESTER — 17 Crs.
Fundamentals of Electricity	Advanced Woodworking
Electric Drafting and Theory	World Geography
Professional Orientation	History of United States
Educational Psychology	and Pennsylvania
Introduction to Philosophy	Principles and Practices
Art (Industrial Arts Design)	of Industrial Arts
	Audio-Visual Education
	Drawing and Design (elective)
SEVENTH TRIMESTER — 16 Crs.	EIGHTH TRIMESTER — 14 Crs.
Shop (elective)	Student Teaching
Shop (elective)	Professional Practice
Curriculum Making	and School Law
American Government	
Psychology of Adolescence	

THE SECONDARY CURRICULUM

General Education	62	credits
Professional Education	28	credits
- Educational Psychology	2	
Professional Orientation	3	
Audio-Visual Education	2	
Problems of Secondary Education	2	
Teaching of Field of Specialization	3	
Professional Practicum and School Law	2	
Student Teaching	12	
Approved Areas of Specialization		
Comprehensive Specialization		
- English - Speech	39	
History and Government	36	
Modern Language	36	
Comprehensive Science	44	
Field of Science	38	
Physics and Mathematics	36	
Physical Science	36	
Social Studies	36	
- Speech - English	39	
Subject Specialization		
Biology	36	
Chemistry	38	
Earth Science	26	
English	36	
French	24	
Geography	24	
German	24	
History	30	
Mathematics	30	
Physics	38	
Russian	24	
Spanish	24	
Speech	36	

SUGGESTED PROGRAM OF COURSES FOR THE SECONDARY CURRICULUM

For administrative reasons the sequence of courses is subject to change.

FIRST TRIMESTER — 17 Crs.

Communication I	5
Man and His Biological World	5
Developmental Reading	2
Health	2
Elective	3
Freshman Orientation	0

SECOND TRIMESTER — 17 Crs.

Communication II	5
Man and His Physical World	5
Physical Education I	1
Professional Orientation	3
Elective	3

THIRD TRIMESTER — 17 Crs.

World Culture I	5
Introduction to Art	2
Fundamentals of Mathematics	3
Physical Education II	1
Elective	6

FOURTH TRIMESTER — 15 Crs.

World Culture II	5
General Psychology	3
Physical Education III	1
Elective	6

FIFTH TRIMESTER — 18 Crs.

Survey of United States and Pennsylvania History	3
Educational Psychology	3
World Geography	3
Elective	9

SIXTH TRIMESTER — 16 Crs.

Introduction to Music	2
Problems of Secondary Education	3
Psychology of Adolescence	3
Audio-Visual Education	2
Elective	6

SEVENTH TRIMESTER — 18 Crs.

American Government	3
Introduction to Philosophy	3
Teaching of Major Subjects	3
Elective	9

EIGHTH TRIMESTER — 14 Crs.

Student Teaching	12
Professional Practicum and School Law	2

CURRICULUM REQUIREMENTS FOR AREAS OF COMPREHENSIVE SPECIALIZATION

English - Speech
History and Government
Modern Language
Comprehensive Science
Field of Science

Physics and Math
Physical Science
Social Studies
Speech - English

COMPREHENSIVE ENGLISH-SPEECH (Emphasis on English)

Total credits required for field	39	credits
English credits	24	credits
American Literature	3	
English Literature	3	
English Philology and Grammar	3	
Advanced Composition or Creative Writing	3	
Shakespeare	3	
Electives in English	3	
Speech credits	15	credits
Phonetics	3	
Oral Interpretation	3	
Basic Public Speaking	3	
Technical Play production	3	
Debate and Parliamentary Procedure	3	

HISTORY AND GOVERNMENT

Total credits required for field	36	credits
Required Courses	36	credits
History		
History of Europe from 1815 to Present	3	
Contemporary American History	3	
History of United States and Pennsylvania	3	
Twentieth Century World History	3	
Diplomatic History of United States	3	
Constitutional History of United States	3	
Government		
Comparative Government	3	
State and Local Government	3	
American Political Parties	3	
The United Nations: Org. and Function	3	
International Relations from 1919 to Present	3	
World Politics	3	

MODERN LANGUAGE

Students electing any one of the modern languages will be scheduled for the Intermediate courses (103, 104) only if they have completed two years of language study in high school or can otherwise demonstrate competency. Students without a secondary background in modern language will schedule beginning Language for two trimesters, (101, 102) but these will not count in the area of specialization.

Students electing Modern Language will select two languages — 24 credits required in the first language and 12 credits required in the second language.

COMPREHENSIVE SCIENCE

Total credits required for field	41 +	credits
Required Courses	41 +	credits
Botany I	1	
Botany II	4	
Zoology I	4	
Zoology II	4	
General Chemistry II	4	
General Chemistry II	4	
Physics I	4	
Physics II	4	
Astronomy (Descriptive)	3	
Geology (Physical)	3	
Mathematics	3	
and Electives in Chemistry and Physics to satisfy the Comprehensive Science Certification requirement.		

Biotic principles and physical principles will replace the comparable general education courses.

FIELD OF SCIENCE	
Total credits required for field	38 credits
Required Courses	38 credits
Botany I	4
Botany II	4
Zoology I	4
Zoology II	4
General Chemistry I	4
General Chemistry II	4
Physics I	4
Physics II	4
Astronomy (Descriptive)	3
Geology (Physical)	3
Biotic principles and physical principles will replace the comparable general education courses.	

PHYSICS AND MATHEMATICS	
Total credits required for field	36 credits
Required Courses	26 credits
Physics	
Physics I	4
Physics II	4
Mathematics	
College Algebra	3
College Trigonometry	3
Analytical Geometry	3
Calculus I	3
Calculus II	3
Geometry I	3
Elective Courses	10 credits
Astronomy	3
Modern Physics	4
Mechanics	4
Electricity and Magnetism	4
Heat and Sound	4
Optics	4
Physical Measurements I	2
Physical Measurements II	2
Special Problems in Physics I	2
Special Problems in Physics II	2
Advanced Mechanics	4
Electronics	4
Advanced Electricity and Mechanics	4
Physical principles and Math Insights replaces the comparable general education courses.	

PHYSICAL SCIENCE	
Total credits required for field	36 credits
Required Courses	22 credits
Inorganic Chemistry I	4
Inorganic Chemistry II	4
Physics I	4
Physics II	4
Astronomy (Descriptive)	3
Climatology	3
Elective Courses	14 credits
GROUP I — (not less than 6 credits from this group)	
Organic Chemistry I	4
Organic Chemistry II	4
Analytical Chemistry I	3
Analytical Chemistry II	3
GROUP II — (not less than 8 credits from this group)	
Modern Physics	4
Mechanics	4
Magnetism and Electricity	4
Heat and Sound	4
Optics	4
Physical Measurements I	2
Physical Measurements II	2
Special Problems in Physics I	2
Special Problems in Physics II	2
Physical principles will replace Man and His Physical World.	

SOCIAL STUDIES

Total required for field 36 credits

REQUIRED COURSES are marked with †

GROUP I — (12 credits to be selected from this group)

- ✕ †History of Europe to 1815 3
- ✕ †History of Europe since 1815 3
- History of the Ancient World 3
- History of Medieval Europe 3
- Renaissance and Reformation 3
- Contemporary European History 3
- History of England 3
- History of Latin America 3
- History of the Far East 3
- History of the Middle East 3
- History of Russia 3
- Twentieth Century World History 3

GROUP II — (6 credits to be selected from this group)

- ✕ †History of the United States and Pennsylvania I
— Taken in lieu of Survey of U. S. & Pa. and counted as General Education
- ✕ †History of United States and Pennsylvania II 3
- Contemporary United States History 3
- Diplomatic United States History 3
- American Constitutional History 3
- History of Pennsylvania 3
- Social and Industrial History of United States 3

GROUP III — (6 credits to be selected from this group)

- State and local government 3
- Comparative government 3
- International Relations 3
- United Nations 3
- Political Parties 3
- World Politics 3

GROUP IV — (6 credits to be selected from this group)

- ✕ †Principles of Sociology 3
- Contemporary Social Problems 3
- Home and Family Living 3
- Anthropology 3

GROUP V — (6 credits to be selected from this group)

- ✕ †Principles of Economics 3
- Contemporary Economic Problems 3
- Money and Banking 3
- Industrial Relations 3
- Public Finance 3

†Required courses in the respective groups.

COMPREHENSIVE SPEECH-ENGLISH (Emphasis on Speech)

Required Courses 39 credits

Speech Courses 24 credits

Phonetics 3

Voice and Diction 3

The completion of both these courses is considered essential *before* scheduling any elective course. (They may be taken concurrently.)

Oral Interpretation 3

Basic Public Speaking 3

Stage Direction 3

Technical play production 3

Debate and Parliamentary Procedure 3

Educational Television and Radio 3

English Courses 15 credits

American Literature 3

English Literature 3

Shakespeare 3

English Philology and Grammar 3

Advanced Composition or Creative Writing 3

CURRICULUM REQUIREMENTS FOR AREAS OF SUBJECT SPECIALIZATION

Biological Science
Chemistry
Earth Science
English
French
Geography
German

History
Mathematics
Physics
Spanish
Russian
Speech

BIOLOGICAL SCIENCE

Total credits required for field	36	credits
Required Courses	24	credits
Botany I	4	
Botany II	4	
Zoology I	4	
Zoology II	4	
General Chemistry I	4	
General Chemistry II	4	
Elective Courses	12	credits
(At least one course must be selected from each group)		
GROUP I — Laboratory Courses		
Vertebrate Anatomy	3	A
Physiology	3	
Genetics	3	
Microbiology	3	
Organic Evolution	3	
GROUP II — Field Courses		
Ecology	3	
Ornithology	3	
Entomology	3	
Field Zoology	3	
Field Botany	3	
Conservation of Biological Resources	3	
Biotic principles will replace Man and His Biological World.		

CHEMISTRY

Total credits required for field	38	credits
Required Courses	25	credits
General Chemistry I	4	
General Chemistry II	4	
Analytical Chemistry I	4	
Analytical Chemistry II	4	
Chemistry Seminar	1	
Physics I	4	
Physics II	4	
Physical Principles	4	
Elective Courses	13	credits
Organic Chemistry I	4	
Organic Chemistry II	4	
Physical Chemistry I	4	
Physical Chemistry II	4	
Laboratory Techniques in Chemistry	3	
Industrial Chemistry	3	
Colloid Chemistry	3	
Organic Preparations	3	
Agricultural Chemistry	3	
Biological Chemistry I	3	
Biological Chemistry II	3	
Radiochemistry	3	
Nuclear Chemistry	3	
Literature of Chemistry	1	
Special Topics in Chemistry	Variable	
Chemistry for High School Teachers	3	
Instrumental Analysis I	3	
Instrumental Analysis II	3	
Food Analysis	3	
Physical principles will replace Man and His Physical World		

EARTH SCIENCE

Total credits required for field	26	credits
Required Courses	23	credits
Astronomy (Descriptive)	3	
General Physics I and II	6	
Geology (Physical)	3	
Meteorology	3	
Physical Geography	3	
Conservation of Natural Resources	3	
Elective Courses	3	credits
Climatology	3	
Geology (Historical)	3	
Physiography	3	
Oceanography	3	
Seminar in Earth Sciences	3	
Field Course	3	
Special Problems in Earth Science	1, 2, or 3	

The general education courses (Man and Biological World, Man and Physical World, and World Geography) would be taken in the freshman year as part of the earth science program and as prerequisite to all other earth science courses with the exception of Astronomy which could also be taken in the freshman year.

ENGLISH

Total credits required for field	36	credits
Required	24	credits
American Literature I and II	6	
English Literature I and II	6	
Shakespeare	3	
Advanced Composition or Creative Writing	3	
English Philology and Grammar	3	
Literary Criticism	3	
Electives	12	credits
Pre-Shakespeare	3	
Romantic Movement	3	
American Poetry	3	
Seventeenth Century Literature	3	
Eighteenth Century Literature	3	
Victorian Literature	3	
Modern Drama	3	
The Novel to 1870	3	
Contemporary Novel	3	
Essay	3	
Short Story	3	
Literature of Biography	3	
Advanced Composition or Creative Writing	3	

In addition the English Department recommends courses in speech and foreign languages as desirable additions to the competency of teachers of English.

Reading will be written on the certificate valid for English, when an applicant has completed a minimum of six semester hours of developmental and remedial reading.

FRENCH

Total Credits required for field	24	credits
Elementary French I	3	
Elementary French II	3	

(Students without an adequate background of two-years of high school French will be required to complete Elementary French I & II. These courses will not be counted in the area of specialization.)

✓ Intermediate French I	3
✓ Intermediate French II	3
French Culture and Civilization I	3

(Students in French will be expected to pass a proficiency examination in the French Language since all further courses will be offered in French.)

French Culture and Civilization II	3
French Literature I	3
French Literature II	3
Readings in Contemporary French Literature	3
History of France	3
Field Work in French Studies	3

GEOGRAPHY

Total credits required for field	24	credits
Required Courses	15	credits
Economic Geography	3	
Geography of U. S. and Pennsylvania	3	
Meteorology	3	
Field Course in Geography	3	
Seminar	3	
Elective Courses	9	credits
GROUP I — Regional Courses (3 credits to be selected from this group)		
Geography of Pennsylvania	3	
Geography of United States and Canada	3	
Geography of Latin America	3	
Geography of Europe	3	
Geography of Asia	3	
Geography of the Far East	3	
Geography of Africa and Australia	3	
Geography of the Soviet Union	3	
Summer Field Trip	3	
GROUP II — Cultural Courses (3 credits to be selected from this group)		
World Problems in Geography	3	
Conservation of Natural Resources	3	
Geographic Influences in American History	3	
Trade and Transportation	3	
Commercial and Industrial Geography	3	
Commercial Air Transportation	3	
Urban Geography	3	
Special Problems	1, 2, or	
Summer Tours	3	
GROUP III — Physical Courses (3 credits to be selected from this group)		
Astronomy (Descriptive)	3	
Geology (Physical)	3	
Geology (Historical)	3	
Physiography	3	
Climatology	3	
Oceanography	3	
Cartography	3	
Physical Geography	3	
Geography majors are strongly urged to take courses in Social, Biological and Physical Sciences as the chairmen and staffs of the departments consider desirable.		
The study of a foreign language is desirable for all geography majors.		

GERMAN

Total credits required for field	24	credits
Elementary German I	3	
Elementary German II	3	
(Students without an adequate background of two-years of High school German will be required to complete Elementary German I & II. These courses will not count in the area of specialization.)		
Intermediate German I	3	
Intermediate German II	3	
(Students in German will be expected to pass a proficiency examination in the German Language since all further courses will be offered only in German.)		
German Culture and Civilization I	3	
German Culture and Civilization II	3	
German Literature I	3	
German Literature II	3	
Readings in Contemporary German	3	
History of Germany	3	
Field Work in German Studies	3	

HISTORY

Total credits required for field	30	credits
Required Courses	24	credits
GROUP I (12 credits to be selected from this group)		
Ancient World	3	
Medieval Europe	3	
History of Europe to 1815	3	
History of Europe since 1815	3	
Renaissance and Reformation	3	
Contemporary Europe	3	
History of England	3	

GROUP II (6 credits to be selected from this group)

United States and Pennsylvania II	3
Contemporary United States	3
Diplomatic History of the United States	3
American Constitutional History	3
History of Pennsylvania	3
Social and Industrial History of United States	3
History of the American Worker	3

GROUP III (6 credits to be selected from this group)

History of Latin America	3
History of the Far East	3
History of the Middle East	3
Twentieth Century World History	3
History of Russia	3

Elective Courses 6 credits

MATHEMATICS

Total credits required for field 30 credits

Required Courses 21 credits

College Algebra	3
College Trigonometry	3
Analytical Geometry	3
Calculus I	3
Calculus II	3
Geometry I	3
Geometry II	3
Math Insights	3

Elective Courses 9 credits

Calculus III	3
Differential Equations	3
Theory of Equations	3
Advanced Algebra	3
Statistics	3
Field Work in Mathematics	3
Math Insights replaces Fundamentals of Math.	

The Department of Mathematics recommends that freshman students intending to major in mathematics schedule both College Algebra and College Trigonometry in the first Trimester. This permission would be limited to those students having sufficient preparation in high school mathematics as determined by their high school record and/or the achievement on the math section of the placement examination.

PHYSICS

Total credits required for field 38 credits

Required Courses 23 credits

Physics I	4
Physics II	4
Physical principles will replace Man and His Physical World.	

MATHEMATICS

College Algebra	3
College Trigonometry	3
Analytical Geometry	3
Differential Calculus	3
Integral Calculus	3

Elective Courses 15 credits

These courses may follow Physics I

Mechanics	4
Electricity and Magnetism	4
Physical Measurements	2
Special Problems in Physical I	2

These courses may follow Physics II

Heat and Sound	4
Optics	4
Modern Physics	4
Physical Measurements II	2
Special Problems in Physics II	2
Electronics	4

RUSSIAN

Credits required for field	24	credits
Elementary Russian I	3	
Elementary Russian II	3	

(Students without an adequate background of two-years of high school Russian will be required to complete Elementary Russian I and II. These courses will not be counted toward the area of specialization.)

Intermediate Russian I	3
Intermediate Russian II	3
Russian Culture and Civilization	3

(Students in Russian will be expected to pass a proficiency examination in Russian language before continuing since all further courses are offered only in Russian.)

Russian Culture and Civilization I	3
Russian Literature I	3
Russian Literature II	3
Readings in Contemporary French Literature	3
Russian History	3

SPANISH

Total Credits required for field	24	credits
Elementary Spanish I	3	
Elementary Spanish II	3	

(Students without an adequate background of two years of high school Spanish will be required to complete Elementary Spanish I and II. These Courses will not be counted toward the area of specialization.)

Intermediate Spanish	3
Advanced Spanish I	3
Advanced Spanish II	3

(Students in Spanish will be expected to pass a proficiency test in Spanish language before continuing since all further courses are offered only in Spanish.)

History of Spain and Hispanic America	3
Culture and Civilization of Spain and Hispanic America	3
Literature of Spain	3
Literature of Hispanic America	3
Readings in Hispanic American Literature	3

GENERAL SPEECH

Total credits required for field	36	credits
Required Credits	24	credits
*Phonetics	3	
*Voice and Diction	3	

(The completion of both these courses is considered essential before scheduling any elective course. They may be taken concurrently.)

*Oral Interpretation	3
*Basic Public Speaking	3
*Stage Direction	3
*Technical play production	3
*Debate and Parliamentary Procedure	3
*Educational Television and Radio	3

Elective Courses	12	credits
Advanced Phonetics	3	
Advanced Debate	3	
Advanced Public Speaking	3	
*History of the Theatre	3	
*Acting	3	
*Choral Speaking	3	
Speech Correction Elective	2 or 3	
Anatomy of the Speech and Hearing	2	
Mechanisms OR Elementary Clinic Practice	3	
*Teaching of Speech in Elementary School	3	

* - Open to students in all curricula without prerequisites.

SPECIAL DEGREE PROGRAMS

THE TWO-YEAR DEGREE PROGRAMS

The State Colleges have been approved to offer a two-year program to Dental Hygienists and School Nurses who are able to meet the conditions set forth in the following paragraphs:

DEGREE CURRICULUM FOR DENTAL HYGIENISTS

The degree of Bachelor of Science in Education will be conferred upon dental hygienists meeting the following requirements:

1. The possession of a valid license to practice dental hygiene in the Commonwealth of Pennsylvania issued by the State Dental Council and Examining Board and the Department of Public Instruction.

“The Professional education requirements for dental hygiene is the satisfactory completion of an approved dental hygienist course of instruction of two years of not less than thirty-two weeks and not less than thirty hours each week or its equivalent in and graduation from a dental hygiene school approved by the State Dental Council and Examining Board.”

2. The satisfactory completion in addition thereto of 64 semester hours of professional and general education courses distributed as follows:

A. Education	Semester Hours
(1) Professional Orientation	3
(2) General Psychology	3
(3) Educational Psychology	3
(4) Audio-Visual Education	2
Total	11
B. General Education	
(1) Communication I	5
or English Comp I	(3)
and Speech I	(2)
Communication II	5
or English Comp II	(3)
and Speech II	(2)
(2) Fine Arts	4
a. Intro to Art	(2)
b. Intro to Music	(2)
(3) Geography	6
a. World Geography	(3)
b. Geography of U. S. and Pa.	(3)
(4) World Culture I	5
or Hist of Civ I	(3)
and Lit I	(2)
World Culture II	5
or Hist of Civ II	(3)
and Lit II	(2)
(5) Social Studies	11
a. American Government	3
b. Economics	3
c. History of U.S. and Pa.	3
d. Sociology	2
Total	41
C. Electives	12
Grand Total	64

In each category above, credit will be given for equivalent courses pursued in the two-year dental hygiene curriculum. In such cases students must increase their electives by the number of semester hours so credited.

In the case of dental hygienists who had less than two years of specialized training on the basis of which they were licensed to practice dental hygiene, proportional credit will be given. Such persons must pursue additional general education courses in college to make up the deficiency.

Electives may be chosen with the approval of the Dean of Instruction from any field or curriculum offered at the college in which the student is enrolled.

The curriculum will be effective as of January 23, 1951.

DEGREE PROGRAM FOR PUBLIC SCHOOL NURSING

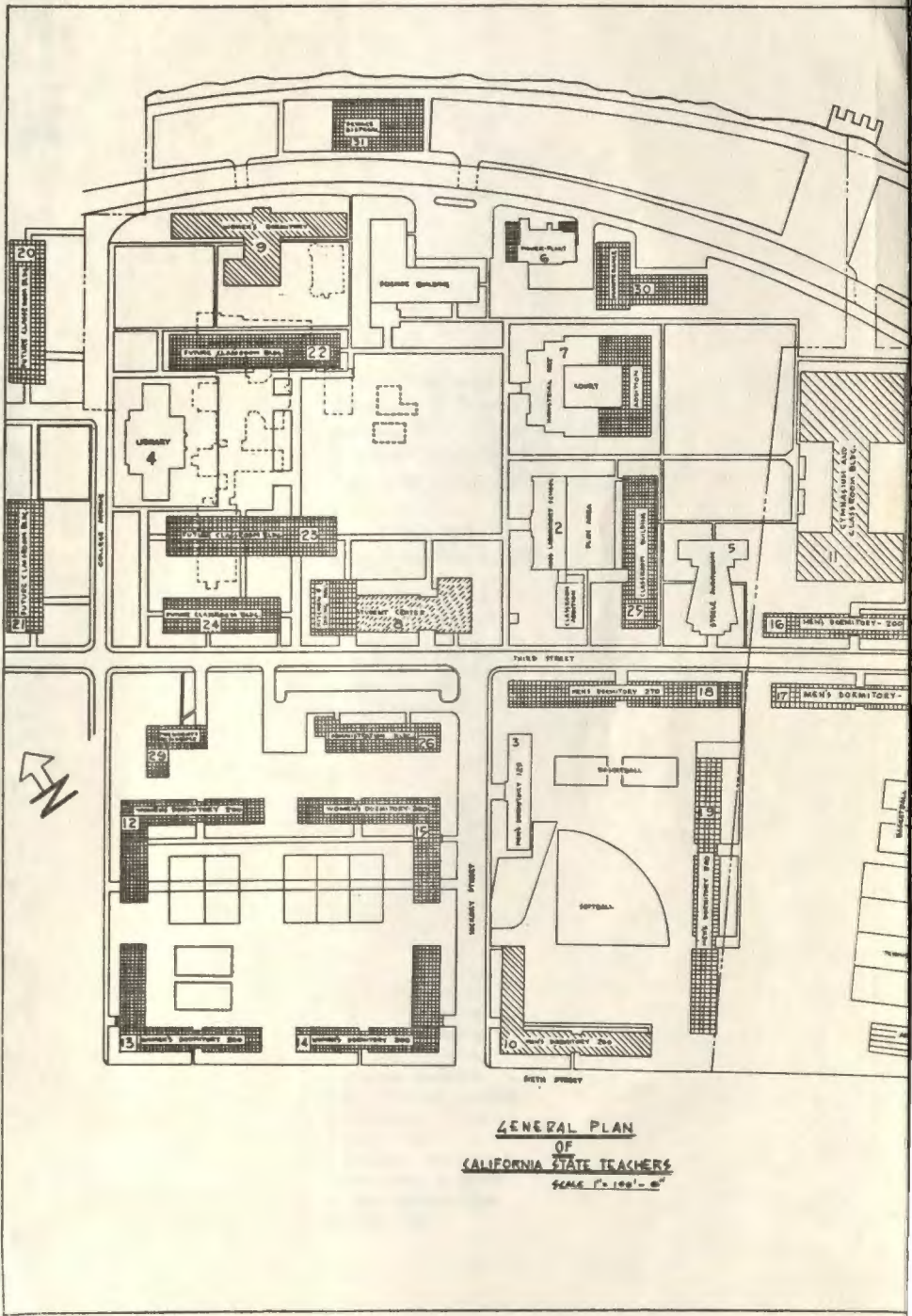
The program for Public School Nursing was revised by the Board of Directors on August 2, 1960. The following requirements are effective for those nurses who began the degree program after September 1, 1961.

1. All registered nurses in Pennsylvania who were graduated and registered since September 1952, be required to complete 60 credits of approved education at the state college distributed as follows:

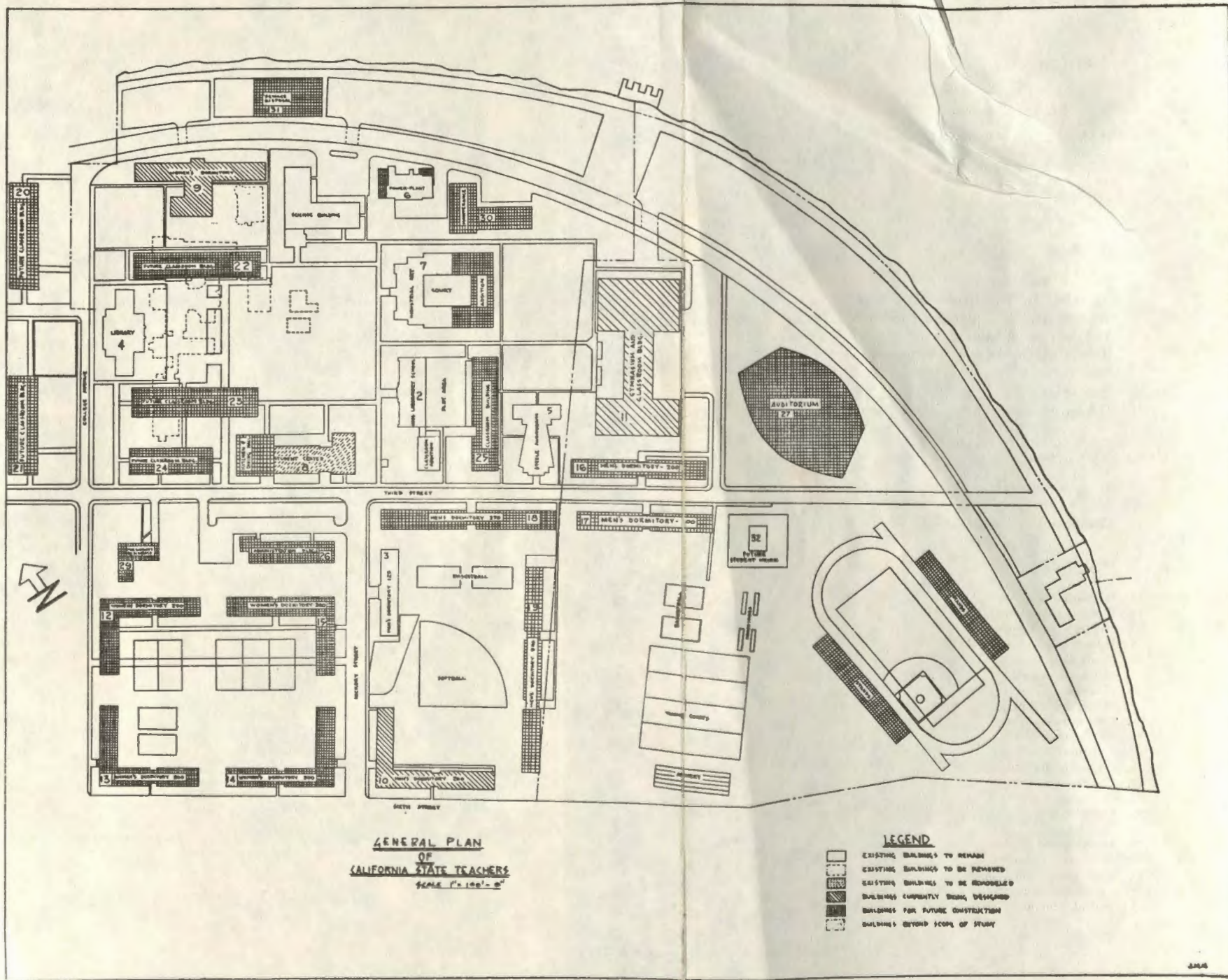
Courses related to Public School Nursing	15	credits
Courses in Social Studies	9	credits
Courses in English and Literature	7	credits
Courses in Education	12	credits
Electives in General Education	17	credits
	<hr/>	
Total	60	credits

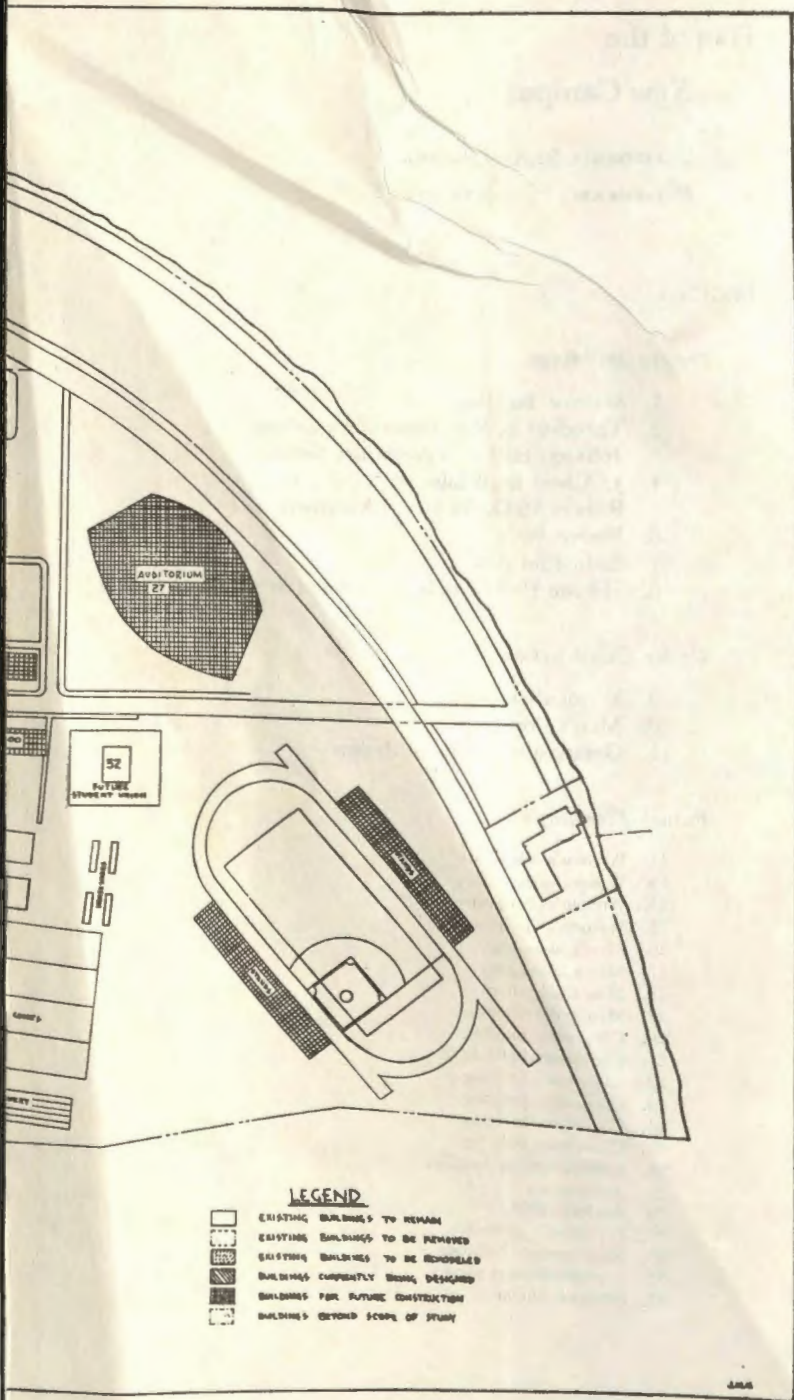
2. Any nurse graduated and registered previous to 1952 should have her credits evaluated in order to determine if any additional work is necessary for a degree.

All persons desiring to enroll in the Public School Nursing Program should be interviewed by the Dean of Instruction. The Director of Secondary Curriculum will assist with the scheduling of classes.



GENERAL PLAN
OF
CALIFORNIA STATE TEACHERS
 SCALE 1" = 100' - 0"





Course Descriptions

The required and elective courses available at California are listed under the several departmental headings. Each course, when offered during the regular trimester, is taught for 16 weeks. The number of clock hours of instruction each week for the trimester hours of credit is indicated. The clock hours listed are minimal; individual courses, because of special needs or exceptional facilities, occasionally exceed these established standards in the interest of better teacher education.

Not all of the courses listed in this section are given in any one trimester or even in any one year. Courses may be withdrawn without notice. A schedule of classes listing the days, hours and instructor for each course is available in the office of the Curriculum Directors, prior to registration. Students are encouraged to carefully plan their programs several years ahead so that they may graduate as planned.

The course numbering system used at California is as follows:

Courses numbered

- 1 to 99 Remedial Non-credit Courses
- 100 to 199 First year undergraduate courses
- 200 to 299 Second year undergraduate courses
- 300 to 399 Third year undergraduate courses
- 400 to 499 Fourth year undergraduate courses
- 500 to 599 Graduate division courses in General Education
- 600 to 699 Graduate division courses in Professional Education
- 700 to 799 Graduate division courses in Areas of Specialization
- 800 to 899 Graduate division courses in Research

Descriptions of the graduate courses will be found in the Graduate Bulletin.

FINE ARTS DEPARTMENT

MR. ANGUS DOUPLE, *Chairman*

ART

MR. DOUPLE
MR. KOTOUGH
MRS. WOOD

MUSIC

MR. COLLELLI
MR. DOVENSPIKE
DR. STONEY

ART

Art 201 INTRODUCTION TO ART *two credits*

A course dealing with art as a vital part of contemporary living. Art of other ages will be given some consideration as a basis for interpreting the present. Students will be encouraged to experiment with materials in order to understand the creative process. Through a variety of experiences an attempt will be made to help students develop an awareness of and a sensitivity to all forms of art.

Three class hours each week.

Art 104 CONTEMPORARY ART IN AMERICA *two credits*

A study of the development of Contemporary painting, architecture and sculpture in the United States, with emphasis on 20th century developments.

Three class hours each week.

MUSIC

Mus 201 INTRODUCTION TO MUSIC *two credits*

This course provides an orientation in music experience which aims to equip the prospective teacher with a knowledge and understanding of music as it relates to general education and the art of daily living. Through the use of recordings, radio, concerts, and other media, every possible contact is made with music. The possibility of correlation with other subjects is explored. This course is required of all in general education. No prerequisite courses or special abilities are required. (One class hour may be integrated with World Culture II.)

Three class hours each week.

Mus 180 CO-CURRICULAR ACTIVITIES — BAND *one credit*

Mus 280 CO-CURRICULAR ACTIVITIES — BAND *one credit*

Mus 380 CO-CURRICULAR ACTIVITIES — BAND *one credit*

Mus 181 CO-CURRICULAR ACTIVITIES — CHORUS *one credit*

Mus 281 CO-CURRICULAR ACTIVITIES — CHORUS *one credit*

Mus 381 CO-CURRICULAR ACTIVITIES — CHORUS *one credit*

Mus 182 CO-CURRICULAR ACTIVITIES — GLEE CLUB *one credit*

Mus 282 CO-CURRICULAR ACTIVITIES — GLEE CLUB *one credit*

Mus 382 CO-CURRICULAR ACTIVITIES — GLEE CLUB *one credit*

Mus 430 OPERA SURVEY *three credits*

This course offering will provide its students with (1) the origin and history of opera, (2) National contributions to the art, (3) the listening and analysis of numerous representative operas, (4) the relationship of plots to history and events.

Three class hours each week.

DIVISION OF EDUCATION

DEAN OF INSTRUCTION, *Chairman*

ATYPICAL EDUCATION

DR. ARTHUR HENRY, *Chairman*

MR. BOWLEN

MRS. HUGHES

MR. FABIAN

DR. MOREE

ATYPICAL — MENTALLY RETARDED

Aty-MR 301 CURRICULUM PLANNING, MATERIAL
AND EQUIPMENT *three credits*

Problems in the selection and placement of children in Atypical class programs. Type and costs of equipment needed. Meeting parents and community problems. Education of teachers, parents, school board and community of values in Atypical programs. Selecting Atypical class teachers and planning for improvement in service.

Three class hours each week.

Aty-MR 302 ARTS AND CRAFTS *three credits*

Devices, techniques, and methods for making interesting, useful, and attractive articles are considered for use with children in Atypical classes. Projects in simple handloom weaving, rake knitting, textile types, basketry, and wood are emphasized.

Three class hours each week.

Aty-MR 303 ADVANCED ARTS AND CRAFTS *three credits*

Progressive steps in weaving techniques on two and four harness looms are taught. Opportunities for the beginning weaver to express himself creatively in color, design, and texture are offered. Consideration of sources and selection of equipment, accessories, and materials is given.

Three class hours each week.

Aty-MR 401 SPECIAL CLASS METHODS *three credits*

Major emphasis is given to basic procedures for planning and implementing an adequate educational program for mentally retarded children of different age and ability levels. The course provides a developmental approach with emphasis on specific techniques and methods for meeting the needs of these children.

Three class hours each week.

Aty-MR 402 GUIDANCE WITH EMPHASIS ON INTERVIEWING
AND PARENT EDUCATION *three credits*

It is important to help parents accept the handicap of their child whether it be mental retardation, physical impairment, a speech defect or any other condition. This course attempts to help parents recognize and adjust to the realities of their child's condition.

Three class hours each week.

Aty-MR 410 DIAGNOSTIC TESTING AND REMEDIAL
TEACHING *three credits*

Study of achievement tests useful for diagnostic purposes. Teaching procedures adjusted to particular needs or weaknesses. To include all school curriculum, elementary and secondary.

Three class hours each week.

Aty-MR 451 PROFESSIONAL PRACTICUM AND SCHOOL LAW *two credits*

Methods and practices of teaching. General techniques of teaching and techniques for the students' special fields. Pennsylvania school laws relevant to the work of the classroom teacher. Problems encountered by the students in their student teaching.

Two class hours each week.

Aty-MR 449 STUDENT TEACHING — ATYPICAL *six credits*

Observation and participation in all teaching and activities related to the performance of a teacher's work in the class for mentally retarded children. The student spends full time in actual classroom teaching for one-half trimester of sixteen weeks.

Aty-MR 490 HONORS COURSE IN MENTALLY RETARDED *three credits*

Aty-MR 491 HONORS COURSE IN MENTALLY RETARDED *three credits*

Aty-MR 492 HONORS COURSE IN MENTALLY RETARDED *three credits*

Aty-MR 495 SEMINAR IN MENTALLY RETARDED *one credit*

ATYPICAL — SPEECH AND HEARING

Aty-SH 101 HEARING PROBLEMS *three credits*

The appreciation of the many problems of children and adults with hearing losses requires the study of types of losses, personality adjustments, counseling, parent guidance, and vocations. Thus interested persons are acquainted as to how to improve and to better adjust the child or adult to his hearing problem.

Three class hours each week.

Aty-SH 102 SPEECH PATHOLOGY *three credits*

This foundation course includes the study of the anatomy and physiology of the speech mechanism, the brain, the muscles, and consideration of the causes, symptoms, nature, and management of speech disorders.

Three class hours each week.

Aty-SH 103 SPEECH EDUCATION AND RE-EDUCATION *three credits*

A study designed to correlate the speech activities with the school work and teacher-planned speech activities. Each college student will teach a speech improvement lesson in a Kindergarten or a First Grade classroom.

Three class hours each week.

Aty-SH 204 AUDITORY TRAINING AND SPEECH READING *three credits*

Students study and compose the different systems of teaching Speech Reading. Lessons in Auditory Training are planned for the different age and hearing difficulty groups. Prerequisite: Hearing Problems.

Three class hours each week.

Aty-SH 205 PSYCHOLOGY OF SPEECH AND HEARING *three credits*

This course offers an explanation of the psychological factors involved in the study of speech and hearing with special emphasis given to listening. Prerequisite: Hearing Problems.

Three class hours each week.

Aty-SH 206 PHYSIOLOGY AND ANATOMY OF SPEECH
AND HEARING *two credits*

A study of the anatomy and physiology of the ear and the speech mechanism dealing with their functions and performance necessary for speech and hearing. Prerequisite: Hearing Problems.

Three class hours each week.

Aty-SH 207 PRACTICE IN MEASUREMENT AND ADJUSTMENT
FOR HEARING PROSTHESIS *two credits*

A study is made of the many types of tests involved in measurement. Practice is required in the use of the audiometer. Research problems and the use of the soundproof room will be required when the equipment is available. Also a study of the Hearing Aid is required. Prerequisite: Hearing Problems.

Two class hours each week; one laboratory.

Aty-SH 308 CLINICAL PRACTICE IN AUDITORY TRAINING
AND SPEECH READING *three credits*

This course offers a student an opportunity to teach children with hearing problems. Area hearing therapists recommend the children who can benefit by additional therapy. Prerequisite: Auditory Training and Speech Reading.

Three laboratory hours each week.

Aty-SH 309 SPEECH PROBLEMS *three credits*

A survey of the techniques and procedures of Speech Correctionists and their programs within the school districts requires that students place this course before or after Student Teaching. Juniors and Seniors.

Three class hours each week.

Aty-SH 313 ELEMENTARY SPEECH CLINIC *three credits*

This elementary clinical procedure practice offers a review of speech disorders and methods of diagnosis and remedial treatment. Students learn to use the various corrective machines and materials. Each student is required to observe at least twenty-five hours of the work of the speech clinicians. Juniors.

Six laboratory hours each week.

Aty-SH 314 ADVANCED SPEECH CLINIC *three credits*

Students practice in the College Speech Clinic, Noss Laboratory School, and an out-patient clinic for children of school age. Each student is responsible for his own cases, including diagnosis, analysis, therapy, reports, follow-up and other problems with planned supervision. Juniors and Seniors.

Minimum: Six laboratory hours each week.

Aty-SH 450 STUDENT TEACHING *twelve credits*

Observation and participation in all teaching activities related to the performance of a teacher's work, in the area of the student's specialization. Prerequisite: A general quality point average of C or 2.0. The student spends full time in actual classroom teaching for a trimester of sixteen weeks.

Aty-SH 451 PROFESSIONAL PRACTICUM *two credits*

Methods and practices of teaching. General techniques of teaching and techniques for the student's special field. Pennsylvania school laws relevant to the work of the classroom teacher. Problems encountered by the students in their student teaching.

Two class hours each week.

Aty-SH 490 HONORS COURSE IN SPEECH AND HEARING *three credits*

Aty-SH 491 HONORS COURSE IN SPEECH AND HEARING *three credits*

Aty-SH 492 HONORS COURSE IN SPEECH AND HEARING *three credits*

Aty-SH 495 SEMINAR IN SPEECH AND HEARING *one credit*

EDUCATION DEPARTMENT

DR. JACK HOYES, *Chairman*

DR. CROWLEY	MR. LEVENDOS
MRS. DE CARLO	MR. NATALI
MR. DOCHINEZ	MISS O'BRIEN
DR. FISHER	MR. PORTER
MRS. HAMILTON	DR. PROUD
DR. JONES	MR. RICHARDS

MR. WELSH

STUDENT TEACHING

DR. IRVIN J. SHUTSY, *Director*

MRS. BARRY	MRS. HOLMAN
MR. BOWLEN	MRS. HUGHES
MR. BUTLER	MR. KULIKOWSKI
DR. COOVER	DR. NAYLOR
MR. COVELL	DR. STERRETT

MR. WALKER

Ed 1 REMEDIAL READING *no credit*
A remedial course to make up deficiencies.

✓ Ed 100 FRESHMAN ORIENTATION *no credit*
Opportunity to help in problems of personal adjustment and for discussion of the nature, objectives, traditions and regulations of the college. Basic materials for student's personnel files are prepared in orientation classes. Required for all entering freshmen.

Two hours each week for first six weeks.

✓ Ed 101 PROFESSIONAL ORIENTATION *three credits*
An orientation and guidance course acquainting prospective teachers with the opportunities and requirements of the profession; the relationship of the school to society; the organization and administration of the American School system. Extensive directed observation of various schools and learning situations will be required. Acceptable as credit for Introduction to Teaching.

Three class hours each week.

Ed 102 DEVELOPMENTAL READING *two credits*
This course is designed to improve the reading skills of the college student. Emphasis is placed upon comprehension and speed.

Two class hours each week.

Ed 301 AUDIO VISUAL EDUCATION *two credits*
The need for sensory techniques and materials in the learning process with attention to the psychological principles involved are given major consideration in this basic course. Activities include the production of inexpensive audio-visual aids, the limited use of selected aids, and an understanding of the best sources of teaching materials.

Three class hours each week.

Ed 302 AUDIO VISUAL WORKSHOP

two credits

An opportunity for more intensive study in the Audio, Visual and Audio-Visual field with greater possibilities for the application of techniques involving sensory aids. Direct laboratory experiences involving machine competency and problem-solving situations are a major consideration. Motion picture film library experience is required. Special skills and abilities correlating this field provide areas for individual study. Prerequisite: Audio-Visual Education or consent of the instructor.

Four laboratory hours each week.

Ed 305 INTRODUCTION TO GENERAL SEMANTICS

three credits

A new science closely related to anthropology, biology, mathematics, and psychology. It is based on the concept that man, contrary to old theories of evolution, is not an animal. Man excels animals since he inherits not only biologically, but passes on knowledge. His knowledge inheritance becomes progressively greater and can be changed, thereby greatly affecting human development. The course is concerned with two questions basic to all teaching: (1) How to facilitate the accumulation of knowledge and (2) How to avoid interfering with the accumulation of knowledge. This course is a free elective in any curriculum.

Three class hours each week.

Ed 401 MENTAL TESTS

three credits

A study of intelligence, its nature and measurement, and the history and analysis of intelligence testing; practice in giving individual and group mental tests; the application of test results.

Three class hours each week.

Ed 410 PHILOSOPHY OF EDUCATION

three credits

Ed 455 STUDENT TEACHING WORKSHOP

six credits

For teachers with three or more years' experience who are candidates for degrees and who have not completed the required number of trimester hours in student teaching. After consultation with the Dean of Instruction and the Director of Student Teaching, the student will be assigned to a course suitable to his needs without duplicating courses already accredited. A student who has changed curriculums may not use the course to satisfy the student teaching requirements; he must earn at least six semester hours in accredited student teaching at the appropriate level.

ELEMENTARY EDUCATION

MR. MERLE O. COVELL, *Director*

MISS ANDERSON

MRS. HOLMAN

MR. SAPKO

MRS. BARRY

DR. GAMBLE

MR. SNYDER

MR. HERRON

MR. KULIKOWSKI

MRS. WEAVER

NOSS LABORATORY SCHOOL

MRS. MERRILL HOLMAN, *Director*

MISS DALAIDI

MISS GLOD

MRS. MARSH

MISS FELDMILLER

MR. HUGHES

MRS. WILLET

MR. KENNEDY

Elem Ed 303 TEACHING OF READING *three credits*

The several aspects of problems in the teaching of reading in all elementary grades. Presentation in theory and practice, from careful examination of research and from observation, opportunity for the student to acquaint himself with a variety of modern reading materials and with approved techniques in their use. Problems of disability and their treatment.

Three class hours each week.

Elem Ed 304 CHILD DEVELOPMENT *three credits*

Acquisition of understanding and appreciation of the patterns of physical, mental, social, and emotional growth in the period of early childhood. Consideration of local, state, and national agencies concerned with the welfare and education of early childhood. Observation of learning situations in the family, school, and community environments.

Three class hours each week.

Elem Ed 305 ARITHMETIC — CONTENT AND METHOD *three credits*

The various processes and operations in the arithmetic of the elementary school are carefully analyzed to determine which should be taught at each grade or developmental level and how they may be taught most effectively. Opportunities for observation and participation in actual teaching situations are provided. Stress is placed on understanding of concepts of modern trends in mathematics such as sets, inequalities, number line, numeral systems, modular arithmetic, field postulates, and results of research in arithmetic. Prerequisite: Fundamentals of Mathematics.

Three class hours each week.

**Elem Ed 310 HEALTH AND PHYSICAL EDUCATION
FOR ELEMENTARY GRADES** *three credits*

Elementary school teachers are constantly called upon to supervise and plan programs for recreation or curriculum purposes. This course is planned to give the necessary background and experience in health and physical education on the elementary school level.

Three class hours each week.

**Elem Ed 316 EDUCATIONAL TESTS AND MEASUREMENTS
FOR ELEMENTARY SCHOOLS** *two credits*

A consideration of the simpler statistical measures, with particular stress on their application to classroom work, and of the principles underlying the construction of valid, reliable objective tests, with practice in the making of classroom tests in the various fields of subject matter.

Two class hours each week.

Elem Ed 321 MUSIC FOR ELEMENTARY GRADES *two credits*

Designed to prepare the teacher in grades one to three to teach her own music under supervision. It includes the study of suitable rote songs, acquaintance with reading materials, and oral and written ear training. The best practical methods are discussed and used in presenting the materials.

Two class hours each week.

Elem Ed 325 ART FOR ELEMENTARY GRADES *two credits*

Practice in freehand drawing and composition in various mediums; a study of the principles of design and color, with application to creative problems.

Two class hours each week.

Elem Ed 351 CHILDREN'S LITERATURE *three credits*

A survey of those poems and stories known as children's literature, with the selection of appropriate material for use in the elementary grades. To assist teachers in evaluating the reading which the child enjoys, criteria for every type of reading are presented.

Three class hours each week.

Elem Ed 353 DIAGNOSTIC AND REMEDIAL READING *three credits*

An examination of the techniques of diagnosing reading difficulties and of determining appropriate remedial treatment. Opportunity is given for observing and participating in procedures in the reading clinic. Prerequisite: The Teaching of Reading.

Three class hours each week.

Elem Ed 355 TEACHING OF LANGUAGE ARTS *three credits*

Survey of the content of the curriculum in English in the elementary grades. Methods of teaching oral and written composition, principles of grammar, poetry and literature. The teaching of handwriting is part of this course.

Three class hours each week.

Elem Ed 357 SCIENCE FOR ELEMENTARY GRADES *three credits*

Provides the elementary teacher with a more adequate background for teaching science in the elementary school. The emphasis is placed upon those science units or science problems that are commonly studied in the elementary classroom. Included are units on the earth and its surface, the earth and its neighbors in space, the air and the weather, machines and how they work, magnetism and electricity, fire and heat, sound, light, and living things.

Three class hours each week.

Elem Ed 358 EARLY CHILDHOOD EDUCATION *three credits*

A study of pre-school, kindergarten, and primary grade activities in the traditional and activity school programs, with a sound evaluation of the practical aspects of the latter. Opportunity is provided for the administering of readiness tests. Required for specialization in Early Childhood Education.

Three class hours each week.

Elem Ed 370 TEACHING OF MUSIC IN ELEMENTARY GRADES *three credits*

An advanced course stressing more than ordinarily difficult and interesting work especially the singing of two and three-part music, designed to prepare and assist the teacher in grades four to six in teaching her own music under supervision. Teaching techniques and procedures are developed by the students through teaching the college class in typical school room situations. Prerequisite: Elem Ed 321.

Four class hours each week.

Elem Ed 375 TEACHING OF ART IN ELEMENTARY GRADES *three credits*

Development of problems suitable for the elementary grades; illustrations, creative design, bookbinding, clay modeling and soap carving, posters, lettering, potato and linoleum block printing, and construction in paper, cardboard, cloth, scrap and other materials. Emphasis is placed upon the integration of art education with other school subjects.

Four class hours each week.

Elem Ed 406 TEACHING THE CONTENT SUBJECT *three credits*

Provides the elementary teacher with a comprehensive course in methods common to such areas of instruction as geography, social studies, and science. The student will be afforded an opportunity to investigate a variety of topics related to good teaching procedures, hear them discussed, and observe them in practice.

Three class hours each week.

Elem Ed 409 DIAGNOSTIC AND REMEDIAL TEACHING *three credits*

Study of achievement tests useful for diagnostic purposes. Teaching procedures adjusted to particular needs or weaknesses. To include all school curriculum, elementary and secondary.

Three class hours each week.

Elem Ed 413 WORKSHOP IN ELEMENTARY SCIENCE *three credits*

Elem Ed 414 FIELD WORK IN ELEMENTARY SCIENCE *three credits*

Elem Ed 417 NEW METHODS IN ELEMENTARY GRADES *three credits*

For supervisors and teachers interested in child growth through activities. Opportunities are provided for observation and participation, with emphasis on critical evaluation. The course is of special significance to teachers who, holding the normal school or the standard certificate, are working toward certification in elementary education.

Three class hours each week.

Elem Ed 421 INTERGATED MUSIC PROGRAMS
IN ELEMENTARY GRADES *three credits*

Covers all aspects of a progressive public school music program. Includes the study of techniques and procedures as well as projects and units. The area of child creativity is explored. Demonstrations are usually presented to college elementary students and Noss school children (when in session).

Four class hours each week.

Elem Ed 425 CREATIVE ART ACTIVITIES *three credits*

This is a drawing and painting course (no previous art training is necessary). Instruction in pictorial representation in various art media, particularly crayon, watercolor and oil painting. Opportunity for specialization.

Three class hours each week.

Elem Ed 430 TEACHING SPEECH IN ELEMENTARY SCHOOLS *three credits*

The application of principles of educational psychology, philosophy, and sociology to the teaching of Speech in the elementary school. The course includes both practical techniques of classroom practice and an investigation of the larger problems of the profession. Adequate prior content courses in Speech are necessary to the student undertaking this course.

Three class hours each week.

Elem Ed 449 STUDENT TEACHING *six credits*

For students in Atypical Education — program A — only.

Elem Ed 450 STUDENT TEACHING *twelve credits*

Observation and participation in all teaching and activities related to the performance of a teacher's work in the elementary grades. Prerequisite: A general quality point average of C or 2.0. The student spends full time in actual classroom teaching for a trimester of 16 weeks.

Elem Ed 451 PROFESSIONAL PRACTICUM AND SCHOOL LAW *two credits*

Methods and practices of teaching. General techniques of teaching in the elementary curriculum. Pennsylvania school laws relevant to the work of the classroom teacher. Problems encountered by the students in their student teaching.

Two class hours each week.

INDUSTRIAL ARTS EDUCATION

DR. SHRIVER L. COOVER, *Director*

DR. SHUTSY

MR. SWEARINGEN

IA ED 355 CURRICULUM MAKING IN INDUSTRIAL ARTS *two credits*

Analysis of Industrial Arts objectives for curriculum content; emphasis by grade levels; criterion basis of content selection and appraisal; curriculum construction in selected areas.

Two class hours each week.

IA ED 440 PRINCIPLES AND PRACTICES OF INDUSTRIAL ARTS *three credits*

A requirement for the prospective industrial arts teacher in order that they may master a few of the fundamental principles, procedures and techniques of industrial arts teaching.

Three class hours each week.

IA ED 450 STUDENT TEACHING

Observation and participation in all teaching and activities related to the performance of a teacher's work, in the area of the student's specialization. Prerequisite: A general quality point average of C or 2.0. The student spends full time in actual classroom teaching for a trimester of 16 weeks.

IA ED 451 PROFESSIONAL PRACTICE AND SCHOOL LAW *two credits*

Methods and practices of teaching. General techniques of teaching and techniques for the students' special fields. Pennsylvania school laws relevant to the work of the classroom teacher. Problems encountered by the students in their student teaching.

Two class hours each week.

SECONDARY EDUCATION

MR. PAUL WALKER, *Director*

DR. PROUD

MR. LIMBACHER

MISS LANGHAM

MR. BUTLER

DR. NAYLOR

MR. SAPKO

DR. CULLER

MR. NORMAN

DR. STERRETT

MISS KING

MISS ANDERSON

Sec Ed 301 PROBLEMS OF SECONDARY EDUCATION *three credits*

Consideration of the practical problems of secondary teaching and organization. Survey of the basic structure and nature of American Secondary Education emphasizing guidance principles. Prerequisite: Professional Orientation.

Three class hours each week.

Sec Ed 420 PRINCIPLES OF GUIDANCE *three credits*

Educational, social, and vocational guidance emphasized, with some attention to the meaning, scope, and methods involved in the guidance movement.

Three class hours each week.

Sec Ed 425 CO-CURRICULAR ACTIVITIES *three credits*

Sec Ed 430 EDUCATIONAL TESTS AND MEASUREMENTS

IN SECONDARY SCHOOLS

three credits

A consideration of the simpler statistical measures, with particular stress on their application to classroom work, and of the principles underlying the construction of valid, reliable objective tests, with practice in the making of classroom tests in the various fields of subject matter.

Three class hours each week.

Sec Ed 435 SCHOOL AND COMMUNITY *three credits*

Sec Ed 440 TEACHING OF ENGLISH IN SECONDARY SCHOOLS *three credits*

The content of language-arts requirements of the secondary schools is reviewed, with special reference to grade-placement and adaptation of materials, appraisal of results, and the development of programs of study. Directed observation in the laboratory school is frequently employed.

Three class hours each week.

Sec Ed 441 TEACHING OF GEOGRAPHY AND EARTH SCIENCE
IN SECONDARY SCHOOLS *three credits*

A review of concepts and basic philosophy in geography and earth science. The course includes a survey of available materials and current curriculums in the fields of geography and earth science which form the bases for analysis of modern techniques in the teaching of these subjects. Prerequisite: 18 credits in geography and/or earth science.

Three class hours each week. Observations.

Sec Ed 442 TEACHING MATHEMATICS
IN SECONDARY SCHOOLS *three credits*

The mathematical abilities of the secondary student are diagnosed. Methods of mathematical teaching are discussed and presented. Results of mathematical education according to recent research are studied and trends are indicated. The control and use of the visual aids pertaining to mathematics as well as sources of information. How to maintain a mathematics classroom, and a study of student, teacher, administration and community problems with proper methods of instruction. Content material will be included at the discretion of the mathematics department. Evaluation is maintained by tests, reports, textbook evaluations, course outlines, unit plans, projects and teaching lesson. Prerequisite: Mathematical Insights.

Three class hours each week.

Sec Ed 443 TEACHING OF MODERN LANGUAGE
IN SECONDARY SCHOOLS *three credits*

Sec Ed 444 TEACHING OF SCIENCE IN SECONDARY SCHOOLS *three credits*

This course is planned to give the prospective science major a thorough grounding in the problems of teaching science. The objectives of the science program in the secondary school, selection of textbooks, sources of suitable literature, how to secure materials for instruction, the preparation of units, and special techniques are studied.

Three class hours each week.

Sec Ed 445 TEACHING OF SOCIAL STUDIES
IN SECONDARY SCHOOLS *three credits*

This course is intended to familiarize prospective teachers with desirable methods which may be used in teaching the social studies. Emphasis is placed on the philosophy, objectives, courses of study, and organization of subject matter for teaching purposes, curriculum materials, procedures and development.

Three class hours each week.

Sec Ed 446 TEACHING OF SPEECH IN SECONDARY SCHOOLS *two credits*

Problems in the selection of materials for courses of study, forensics, group discussions, assemblies, dramatics and correction and improvement programs on the secondary level. This study is planned to benefit students specializing in the teaching of oral English, speech, and dramatics and those supervising extra-curricular activities in the speech field.

Two class hours each week.

Sec Ed 449 STUDENT TEACHING *six credits*

Sec Ed 450 STUDENT TEACHING *twelve credits*

Observation and participation in all teaching and activities related to the performance of a teacher's work, in the area of the student's specialization. Prerequisite: A general quality point average of C or 2.0. The student spends full time in actual classroom teaching for a trimester of 16 weeks.

Sec Ed 451 PROFESSIONAL PRACTICUM AND SCHOOL LAW *two credits*

Methods and practices of teaching. General techniques of teaching and techniques for the student's special fields. Pennsylvania school laws relevant to the work of the classroom teacher. Problems encountered by the students in their student teaching.

Two class hours each week.

Sec Ed 455 MODERN METHODS IN SECONDARY SCHOOLS *three credits*

An analysis of the functions of secondary education and of classroom problems, followed up by the presentation of techniques for the solution of such problems advocated by the more recent literature in the field.

Three class hours each week.

Sec Ed 460 TEACHING READING IN SECONDARY SCHOOLS *three credits*

Survey course of the modern practices of teaching reading at the higher levels. Emphasis upon materials, methods and basic skills.

Three class hours each week.

Sec Ed 461 DIAGNOSTIC AND REMEDIAL READING *three credits*
IN SECONDARY SCHOOLS

Acquaintance with recent research in the field of reading to acquaint students with problems and needs common to incompetent readers and with the most successful materials and techniques for dealing with such problems. Demonstration and practice in testing, planning, and directing remedial programs with groups and individuals. Prerequisite: Teaching of Reading.

Three class hours each week.

Sec Ed 462 READING CLINIC *two credits*
FOR SECONDARY SCHOOLS

Opportunity to observe approved processes, and to practice under guidance the art of supervision. Special emphasis will be placed upon individualized instruction.

ENGLISH AND SPEECH DEPARTMENT

DR. ARTHUR M. COON, *Chairman*

MR. BLOEMKER	MR. HUGHEY	MR. NEWELL
MR. BORAM	MR. LIMBACHER	MISS RAKESTRAW
MR. CASSIDY	MR. MADDOCK	DR. REESE
DR. CATLIN	DR. MAJOR	MR. WATKINS
MR. GRIMES	MR. MARTIN	DR. WILDER

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MRS. COOVER	MISS LANGHAM	MR. EMELSON
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Eng 1 REMEDIAL ENGLISH *no credit*
A make-up course for those with inadequate knowledge of English.

✓ Eng 101 COMMUNICATION I *five credits*
A basic course, required of all students, in language, literature, and composition.

Five class hours each week.

- ✓ Eng 102 COMMUNICATION II *five credits*
Continuation of Communication I, which is a prerequisite.
Five class hours each week.
- Eng 105 ENGLISH COMPOSITION I *three credits*
That part of Communication I dealing with composition (for students who have completed the other parts of that course elsewhere).
Three class hours each week.
- Eng 106 ENGLISH COMPOSITION II *three credits*
That part of Communication II dealing with composition (for students who have completed the other parts of that course elsewhere).
Three class hours each week.
- Eng 110 CO-CURRICULAR ACTIVITIES — PUBLICATIONS *one credit*
- Eng 111 CO-CURRICULAR ACTIVITIES — PUBLICATIONS *one credit*
- Eng 112 CO-CURRICULAR ACTIVITIES — PUBLICATIONS *one credit*
- Eng 151 AMERICAN LITERATURE I *three credits*
An introductory survey, through 1865. No prerequisite.
Three class hours each week.
- Eng 152 AMERICAN LITERATURE II *three credits*
An introductory survey, from 1865 to the present. No prerequisite.
Three class hours each week.
- Eng 201 WORLD LITERATURE I *two credits*
A survey of the literature of Western civilization, both in English and in translation, through the Renaissance. Required of all students. No prerequisite, but best taken concurrently with Social Studies 201: WORLD CULTURE I, a complementary course also required of all students.
Two class hours each week.
- Eng 202 WORLD LITERATURE II *two credits*
A survey of the literature of Western civilization, both in English and in translation, from the Renaissance to the present. Required of all students. No prerequisite, but best taken concurrently with Social Studies 202: WORLD CULTURE II, a complementary course also required of all students.
Two class hours each week.
- Eng 211 ENGLISH LITERATURE I *three credits*
An introductory survey, to 1798. No prerequisite.
Three class hours each week.
- Eng 212 ENGLISH LITERATURE II *three credits*
An introductory survey, from 1798 to the present. No prerequisite.
Three class hours each week.
- Eng 251 PHILOLOGY AND GRAMMAR *three credits*
The course attempts to give some knowledge of the history of English as a language and to acquaint the student with the use of the larger dictionaries. The main body of the course is concerned with a systematic study of grammar, with emphasis on its historical development and on its more functional aspects.
Three class hours each week.
- Eng 252 ADVANCED COMPOSITION *three credits*
Advanced experience in writing is afforded through the preparation of reviews, digests, and critical reports, employing expository, descriptive and argumentative techniques.
Three class hours each week.

Eng 312 PRE-SHAKESPEAREAN LITERATURE *three credits*

The course has two central divisions. 1. Chaucer: an intensive study of the Canterbury Tales. 2. The beginnings of the theatre in England, the Miracle Plays; the morality plays; the mystery plays; England's first professional playhouse; Kyd, Lyly, others of Shakespeare's immediate predecessors.

Three class hours each week.

Eng 323 SEVENTEENTH CENTURY LITERATURE *three credits*

Metaphysical and other poets such as Donne, Marvell, Herbert; prose writers such as Browne, Walton, Pepys, Milton.

Three class hours each week.

Eng 329 EIGHTEENTH CENTURY LITERATURE *three credits*

A critical consideration of significant eighteenth-century writers with emphasis upon the struggle between tradition and revolt as reflected in the works of Pope, Johnson, Addison, Swift, Goldsmith, Burns, and other representative writers of the period.

Three class hours each week.

Eng 335 ROMANTIC MOVEMENT *three credits*

A study of Wordsworth, Coleridge, Byron, Shelley, Keats, and their contemporaries, in the light of social background and biographical and critical doctrine.

Three class hours each week.

Eng 336 VICTORIAN LITERATURE *three credits*

Victorian culture is studied through its interpretations by poets and essayists of the period, with particular reference to the writings of Carlyle, Ruskin, Newman, Browning, Tennyson.

Three class hours each week.

Eng 341 THE NOVEL TO 1870 *three credits*

The rise and development of the novel in English from its predecessors of the eighteenth century to Hardy and Mark Twain. A selected list of novels is assigned for analysis with a view to cultivating an appreciation of this dominant literary form.

Three class hours each week.

Eng 342 CONTEMPORARY NOVEL *three credits*

A study of modern and contemporary movements in fiction based on the critical reading and analysis of English and American novels published since 1870.

Three class hours each week.

Eng 351 SHORT STORY *three credits*

The development of the short story as a distinct and popular current literary form is traced through its history and technique. Recent tendencies are investigated and wide reading in current periodicals is encouraged.

Three class hours each week.

Eng 352 CREATIVE WRITING *three credits*

For students of marked ability in the creative processes of writing. The course aims to develop creative ability, to improve the student's own style, and to furnish methods and materials for the teaching of composition in the secondary schools.

Three class hours each week.

Eng 362 CONTEMPORARY POETRY *three credits*

First of all a course in reading poetry, reading for pleasure and for understanding; finally a study of the origins of twentieth century poetry and its present day trends.

Three class hours each week.

- Eng 372 MODERN DRAMA *three credits*
 Study of the new dramatic literature of Europe and America and of its techniques, aims, and problems. Representative plays for reading and study from Ibsen and Shaw to T. S. Eliot and Arthur Miller. 12 to 15 plays.
 Three class hours each week.
- Eng 382 THE ESSAY *three credits*
 Readings in American, British and Continental essayists along with the writing of an original essay.
 Three class hours each week.
- Eng 392 LITERATURE OF BIOGRAPHY *three credits*
 Since biographical writings occupy a solid place among the monuments of literature and scholarship, the course will focus on biography as a literary form and as a discipline of literary and historical scholarship. Readings will be from the works of major biographers: Plutarch, Boswell, Carlyle, Macaulay, Josephson, Edel, and others.
 Three class hours each week.
- Eng 401 LITERARY CRITICISM *three credits*
 Critical Theory, both ancient and modern, will be put to the test of practice in our society: (1) novels that have been tested in court actions; (2) novels that offend — and should please — no one. The severer critical test in the sense of good art will be applied to poetry. Both will be given expression in critical papers.
 Three class hours each week.
- Eng 405 SHAKESPEARE *three credits*
 Selected comedies, tragedies, and historical plays by Shakespeare, together with the social, historical, and literary background necessary for their full appreciation. Particular reference is made to those plays most frequently included in the secondary school curriculum.
 Three class hours each week.
- Eng 490 HONORS COURSE IN ENGLISH *three credits*
 Eng 491 HONORS COURSE IN ENGLISH *three credits*
 Eng 492 HONORS COURSE IN ENGLISH *three credits*
 Eng 495 SEMINAR IN ENGLISH *one credit*

GEOGRAPHY AND EARTH SCIENCE

DR. GABRIEL BETZ, *Chairman*

MR. BROWN

MR. LIND

MR. ROINE

MR. RAMPON

- Geo 100 WORLD GEOGRAPHY *three credits*
 A basic course organized to develop a knowledge and appreciation of the physical factors of the environment and man's adjustment to them. World patterns of land forms, climate, soils, vegetation, etc., are emphasized in relation to their influence on the economic and cultural activities of man.
 Three class hours each week.
- Geo 102 ECONOMIC GEOGRAPHY *three credits*
 The geographical bases for the production, manufacture and distribution of the earth's resources and the relationships arising as man engages in making a living. Prerequisite: World Geography.
 Three class hours each week.

Geo 151 PHYSICAL GEOLOGY *four credits*

The material, structures, surface features of the earth and processes which have produced them. Course work includes: study of rocks and minerals, topographic maps and models. Field trips are an integral part of the course. Open to all students.

Three hours lecture and a two hour laboratory each week.

Geo 152 HISTORICAL GEOLOGY *four credits*

The geologic history of the earth and the succession of the major groups of plants and animals as based on the geologic interpretation of rock formations and fossils. Prerequisite: Physical Geology or permission of the instructor.

Three hours lecture and a two hour laboratory each week.

Geo 157 DESCRIPTIVE ASTRONOMY *three credits*

Recognition of the various elements of the solar system, their physical characteristics and motions, the phenomena of the galactic system and the extra-galactic space and the constellations, with a consideration of the mathematical phases generally omitted from studies of this kind.

Three class hours each week.

Geo 202 COMMERCIAL AND INDUSTRIAL GEOGRAPHY *three credits*

A geographic analysis of the factors involved in the production and distribution of economic goods. Local and world patterns of commerce and industry and their effect on national and international affairs are studied. Prerequisite: World Geography.

Three class hours each week.

Geo 203 TRADE AND TRANSPORTATION *three credits*

National and international trade, transportation routes, and transportation centers. Prerequisite: World Geography and Economic Geography.

Three class hours each week.

Geo 220 GEOGRAPHY OF UNITED STATES
AND PENNSYLVANIA *three credits*

The physiography, climate, vegetation, population, land utilization, production and trade of the various regions of the United States and the Commonwealth of Pennsylvania. The first part of the course deals with Pennsylvania, and through its economic position within the United States, proceeds logically to an analysis of the nation as a whole. Prerequisite: World Geography.

Three class hours each week.

Geo 243 CONSERVATION OF NATURAL RESOURCES *three credits*

Emphasizes the development of a working philosophy of conservation and use of the various types of natural resources. The relationship between loss and waste in the varied uses of the natural resources, as in processing, production, transportation, and/or maintenance, will be considered. Prerequisite: World Geography or permission of the instructor.

Three class hours each week.

Geo 254 METEOROLOGY *three credits*

An introduction to the physics of the atmosphere approached from the standpoint of earth — atmosphere interaction. The effects of the physical controls such as land and water distribution upon weather and climate is emphasized. Weather map analysis and weather observations are an integral part of the course. Prerequisite: World Geography or permission of instructor.

Two hours lecture and a two hour laboratory each week.

- Geo 255 CLIMATOLOGY *three credits*
 A systematic study of the climatic regions of the world and the advantages and limitations of each for man's occupancy. The physical aspects of the atmosphere and the regional characteristics of climate are examined. Prerequisite: Meteorology or permission of instructor.
 Three class hours each week.
- Geo 261 PHYSIOGRAPHY *three credits*
 The history, origin, and characteristics of land forms produced by weathering fluvial, glacial, wind, and wave erosion, or by a combination of these acting upon the major kinds of geologic materials and structures. Prerequisite: Physical Geology or permission of instructor.
 Two hours lecture and a two hour laboratory each week.
- Geo 303 COMMERCIAL AIR TRANSPORTATION *three credits*
 The geographic factors which have determined commercial air centers and routes. The effects of national and international controls are considered. Prerequisite: World Geography and Economic Geography.
 Three class hours each week.
- Geo 310 URBAN GEOGRAPHY *three credits*
 An analysis of cities in selected regions: classification, location, distribution, function and growth; types and patterns of land use. Geography in city planning will culminate the study. Prerequisite: World Geography, Economic Geography, and Cartography or a regional course.
 Three class hours each week.
- Geo 320 GEOGRAPHY OF UNITED STATES AND CANADA *three credits*
 A regional study of the United States and Canada, considering man's adjustment to the physical factors of relief, climate, soil, vegetation and mineral resources. Political structure, and the relations between the two countries and the rest of the world are analyzed from a geographic point of view. Prerequisite: World Geography.
 Three class hours each week.
- Geo 322 GEOGRAPHY OF PENNSYLVANIA *three credits*
 A regional analysis of Pennsylvania, emphasizing man's cultural and economic response to environment factors. Field trips are an integral part of the course. Prerequisite: World Geography.
 Three class hours each week.
- Geo 323 GEOGRAPHY OF LATIN AMERICA *three credits*
 The effects of the physical environment of Latin America upon the activities of man. Effects of the historical background, types of governments, and ethnic backgrounds of the peoples upon the development of the natural resources of Latin America. The study is regional by nations. Prerequisite: World Geography.
 Three class hours each week.
- Geo 325 GEOGRAPHY OF EUROPE *three credits*
 Europe's natural and political regions, emphasizing the complexity of the continent's natural and cultural landscapes and the effect they have had on the occupants past and present. Prerequisite: World Geography.
 Three class hours each week.
- Geo 329 GEOGRAPHY OF ASIA *three credits*
 A regional study of the continent of Asia. An analysis of the political subdivisions will be made from the standpoint of cultural and political changes, as influenced by the physical nature of each province. The significance of these changes in world relations is stressed. Prerequisite: World Geography.
 Three class hours each week.

Geo 330 GEOGRAPHY OF SOVIET UNION *three credits*

A regional study of the physical and cultural features of the Soviet Union. The emphasis is placed upon those factors responsible for the current position of the Soviet Union as a major world power, and upon potential future development. Prerequisite: World Geography.

Three class hours each week.

Geo 331 GEOGRAPHY OF THE FAR EAST *three credits*

The natural environment of China, Japan, Southeastern Asia, Korea, the Philippines and the South Indies, and man's adjustments economically, politically, and socially. Prerequisite: World Geography.

Three class hours each week.

Geo 333 GEOGRAPHY OF AFRICA AND AUSTRALIA *three credits*

A regional study of Africa, Australia and the neighboring islands of the Pacific, showing the social and economic development of these lands in relation to their physical environment. The importance of Australia and Africa to the world, and the effect thereon of emergent nationalism in an Africa torn by strife are studied. Prerequisite: World Geography.

Three class hours each week.

Geo 341 GEOGRAPHIC INFLUENCES IN AMERICAN HISTORY *three credits*

The interrelationships between the natural environment and the historical development of the United States. The attraction of North America for colonization, the expansion from sea to sea, the absorption of millions of immigrants, the schism and refusion of the nation, the development of resources to a position of world power are considered. Prerequisite: World Geography, Geography of the United States and History of the United States.

Three class hours each week.

Geo 342 WORLD PROBLEMS IN GEOGRAPHY *three credits*

A political geography giving attention to the problems of State, internal and external, as influenced by the human and natural resources. Prerequisite: World Geography, Economic Geography, and at least one regional course.

Three class hours each week.

Geo 358 OCEANOGRAPHY *three credits*

An introduction to the physical nature of the ocean, its topography and circulation. Chemical and physical nature of ocean water. Marine sedimentation. Biotic environments. Relation to biological, geographical, geologic and economic problems including fisheries. Prerequisite: Permission of instructor.

Two hours lecture and a two hour laboratory each week.

Geo 360 PHYSICAL GEOGRAPHY *three credits*

The physical elements in the geographic pattern of man's environment. Advanced phases of systematic geography. Prerequisite: World Geography.

Three hours lecture each week plus field work.

Geo 370 CARTOGRAPHY *three credits*

A non-technical laboratory course designed to develop competence in map use and evaluation. Compilation of maps from statistical, descriptive, and cartographic sources. Use and interpretation of globes, cartograms, and geographic/geologic diagrams, topographic maps and aerial photographs. History of maps. Prerequisite: Permission of Instructor.

Two hours lecture and a two hour laboratory each week.

- Geo 401 SPECIAL PROBLEMS IN GEOGRAPHY
AND EARTH SCIENCE I *one credit*
Individual research problems. Do not replace any courses regularly given. May be repeated. Prerequisite: Permission of instructor.
- Geo 402 SPECIAL PROBLEMS IN GEOGRAPHY
AND EARTH SCIENCE II *two credits*
Individual research problems. Do not replace any courses regularly given. May be repeated. Prerequisite: Permission of instructor.
- Geo 403 SPECIAL PROBLEMS IN GEOGRAPHY
AND EARTH SCIENCE III *three credits*
Individual research problems. Do not replace any courses regularly given. May be repeated. Prerequisite: Permission of instructor.
- Geo 420 SUMMER FIELD TRIP *three credits*
Planned trips in summer, during which lectures and discussions are conducted. Open to all students.
- Geo 430 FIELD METHODS IN GEOGRAPHY
AND EARTH SCIENCE *three credits*
An intensive micro-geographic-geologic study through actual field work. An advanced course; permission of instructor required for registration. One hour lecture and four to eight hours field work each week.
- Geo 490 HONORS COURSE IN GEOGRAPHY I *three credits*
Directed reading and research in field of interest chosen by student in consultation with the instructor. Prerequisites: Provisions of the Honors Program of the college. Approval of staff of the department.
Weekly meeting with instructor to be arranged.
- Geo 491 HONORS COURSE IN GEOGRAPHY II *three credits*
Continued, but individual, research on particular topic chosen from field of interest studied in Geography 490. Comprehensive oral and written examination by staff near close of this trimester. Prerequisite: Geography 490.
Weekly meeting with instructor to be arranged.
- Geo 492 HONORS COURSE IN GEOGRAPHY III *three credits*
The writing of an undergraduate thesis based upon the work of Geography 490 and 491. Comprehensive oral examination by faculty near close of this trimester. Prerequisite: Geography 491.
Weekly meeting with instructor to be arranged.
- Geo 495 SEMINAR IN GEOGRAPHY AND EARTH SCIENCE *one credit*
An introduction to the literature, philosophy, techniques, and research methods of geography and/or earth science. Prerequisite: At least 18 hours in geography and/or earth science.
Hours to be arranged.

HEALTH AND PHYSICAL EDUCATION DEPARTMENT

MR. EUGENE J. HESTER, *Chairman*

MISS NEVIN

MR. ROSS

MR. NEMETH

MR. WITCHEY

- H & PE 101 PHYSICAL EDUCATION I — MEN *one credit*
The purpose is to help students attain a high degree of physical fitness and to grow in mental and emotional fitness through a program which includes seasonal sports. The development of those skills which may be carried on in college and after college life.
Two class hours each week.

H & PE 102 PHYSICAL EDUCATION I — WOMEN *one credit*

The purpose is to help students attain a high degree of physical fitness and to grow in mental and emotional fitness through a program which includes seasonal sports. The development of those skills which may be carried on in college and after college life.

Two class hours each week.

H & PE 105 HEALTH — MEN *two credits*

Consideration is given to physical and mental equipment of the individual with the hope that practical application will be made in personal and community living.

Two class hours each week.

✓ H & PE 106 HEALTH — WOMEN *two credits*

Consideration is given to physical and mental equipment of the individual with the hope that practical application will be made in personal and community living.

Two class hours each week.

H & PE 201 PHYSICAL EDUCATION II — MEN *one credit*

To further develop skills and physical aptitudes and to grow in mental and emotional fitness. Emphasis being placed on individual sports. Prerequisite: Physical Education I.

Two class hours each week.

H & PE 202 PHYSICAL EDUCATION II — WOMEN *one credit*

To further develop skills and physical aptitudes and to grow in mental and emotional fitness. Emphasis being placed on individual sports. Prerequisite: Physical Education I.

Two class hours each week.

H & PE 301 PHYSICAL EDUCATION III — MEN *one credit*

Specialization in selected activities aimed to bring personal performance ability to advanced levels. Prerequisite: Physical Education I and II.

Two class hours each week.

H & PE 302 PHYSICAL EDUCATION III — WOMEN *one credit*

Specialization in selected activities aimed to bring personal performance ability to advanced levels. Prerequisite: Physical Education I and II.

Two class hours each week.

H Saf 301 DRIVER EDUCATION AND TRAFFIC SAFETY *three credits*

Classroom instruction combined with road training and the teaching of driving to beginners using dual control cars. Emphasis is placed upon the essential facts, principles, skills and attitudes necessary for good driving and the teaching of same to beginning drivers. Ability to use and interpret the results of psycho-physical testing is required.

Three class and three practicum hours each week.

H Saf 302 INTRODUCTION TO SAFETY EDUCATION *three credits*

The development of habits and attitudes that will make for safe living by both teachers and students. Acquaintance with 1. Rules, regulations and laws concerning the operation of motor vehicles; 2. Rules, and regulations of pedestrian travel; 3. Other hazards to which we are commonly subjected such as fire, electricity, etc., especially in the home and school.

Three class hours each week.

H Saf 303 MATERIALS AND METHODS IN SAFETY EDUCATION *three credits*

The development of habits and attitudes that will better enable the elementary and secondary school teacher in the teaching of safety at home and in the school. Evaluation of curricular materials, teacher as safety counselor, basic facts relating to accidents and hazards.

Three class hours each week.

H Saf 401 ORGANIZATION AND ADMINISTRATION
OF SAFETY EDUCATION *three credits*

Curriculum content and experiences for all school grades in safety education, its organization and graduation for teaching purposes. Ways and means of administering a safety education program.

Three class hours each week.

H Saf 402 VISUAL AND OTHER AIDS IN SAFETY EDUCATION *three credits*

Discussion of practical values in visual and other sensory aids; guiding principles and techniques in the teaching of safety education.

Two class and two practicum hours each week.

H Saf 403 PSYCHOLOGY OF ACCIDENT PREVENTION *three credits*

The development of habits and attitudes that will better enable the elementary and secondary school teacher in the teaching of safety at home and in the school. Evaluation of curricular materials, teacher as safety counselor, basic facts relating to accidents and hazards.

Three class hours each week.

INDUSTRIAL ARTS DEPARTMENT

DR. SHRIVER L. COOVER, *Director*

MR. ANDERSON	MR. HELSEL	DR. SHUTSY
MR. BIRCH	MR. HOOVER	MR. SIKORA
DR. CAMPBELL	MR. MCCRORY	MR. SMOYER
MR. CHARNEY	MR. LEBOIS	MR. STAVASKI
MR. DENNIS		MR. SWEARINGEN

IA 100 FUNDAMENTALS OF WOODWORKING *four credits*

Woodworking with the major emphasis upon hand tool operations, wood turning, jig-saw work and wood finishing. A variety of projects are constructed which may be used in a later teaching situation in the public schools. The planning process is demonstrated and use by the students in addition to a pupil personnel system both of which have a place in the Industrial Arts work.

Two demonstration and six laboratory hours each week.

IA 101 FUNDAMENTALS OF GRAPHIC ARTS *four credits*

The fundamental principles of letterpress printing; hand composition; proofreading; imposition; press make-ready operation and care; paper estimation and cutting; elementary binding.

Two demonstration and six laboratory hours each week.

IA 150 INTRODUCTORY MECHANICAL DRAWING *two credits*

Mechanical drawing with the major emphasis upon the theory of projection; blueprint reading, sketching, graphs, and charts, and basic forms of representation such as multi-view projection, auxiliary projection, sectioning, revolutions, dimensioning, isometric drawings and oblique drawings.

Four laboratory hours each week.

IA 151 GRAPHIC ARTS DESIGN *two credits*

Consideration of the principles of design and color as applied to printing.

Four laboratory hours each week.

IA 200 FUNDAMENTALS OF SHEETMETAL *four credits*

An introductory course giving instruction in seaming, riveting, forming, and soldering. Projects suitable for junior and senior high school boys are designed and constructed.

Two demonstration and six laboratory hours each week.

- IA 201 FUNDAMENTALS OF MACHINE SHOP** *four credits*
 Instruction in the operation of hand and machine tools, including the engine lathe, and in foundry and forge practice, including the heat treatment of steel.
 Two demonstration and six laboratory hours each week.
- IA 202 POWER MECHANICS** *four credits*
 The internal combustion engine, uses, types, construction, function, and theory. Disassembly, minor repair, and adjustment of component parts and assemblies of two and four cycle engines.
 Eight laboratory hours each week.
- IA 250 SHEETMETAL DRAFTING** *two credits*
 A course in practical workshop problems which arise in everyday practice.
 Four laboratory hours each week.
- IA 251 MACHINE DRAWING AND DESIGN** *two credits*
 Special emphasis upon American Standard drawing room practice in the development of mechanical engineering drawings, conventional representation, standardization of machine parts and fasteners, preparation of tracings, and the reproduction of industrial working drawings.
 Four laboratory hours each week.
- IA 300 ELECTRICITY — ELECTRONICS** *four credits*
 A course in the fundamentals of electronic theory in its application to radio and television, with practice in radio repair and maintenance and in the construction of radio receivers.
 Two demonstration and six laboratory hours each week.
- IA 301 CERAMICS** *four credits*
 An introduction to Ceramics as an art, a craft, an industrial pursuit, and an educational vehicle. Students are taught the major forming, decorating, and firing processes in clay. Originality in ceramic design, sensitivity to tools and materials and technical proficiency are stressed.
 Two demonstration and six laboratory hours each week.
- IA 302 ADVANCED WOODWORKING** *four credits*
 Principally a course in machine woodworking. Safe operation of all basic woodworking machines is demonstrated. Students make projects involving operations in all basic machines. Spray finish method and techniques are demonstrated. Maintenance of equipment is discussed. Prerequisite: Fundamentals of Woodworking and Introductory Mechanical Drawing.
 Two demonstration and six laboratory hours each week.
- IA 303 CRAFTS** *four credits*
 An introduction to the Crafts is provided in this course. Creative craftwork is done in a variety of media such as clay, metal, wood, leather, and mosaic. Creative and aesthetic design is stressed as well as attainment of technical proficiency. The student is made aware of the vital and significant role of crafts in life and education.
 Two demonstration and six laboratory hours each week.
- IA 304 FUNDAMENTALS OF COLDMETAL** *four credits*
 Development and construction of ornamental iron projects, including lamps, candle holders, wood baskets, and other projects suitable for high school shops. The work includes both cold and hot forming.
 Two demonstration and six laboratory hours each week.

IA 305 JEWELRY MAKING *four credits*

The creative and aesthetic application of the fundamental processes of jewelry making are presented. Handwrought brooches, necklaces, bracelets, rings, and other types of jewelry are designed by the student. In addition, the student is introduced to the supplementary crafts of lapidary and enameling usually associated with jewelry making. Originality in design, aesthetic sensitivity, and craftsmanship are stressed.

Two demonstration and six laboratory hours each week.

IA 306 PLASTICS *four credits*

A general introduction to the history and development of plastics, with laboratory work in the designing and construction of plastic products.

Two demonstration and six laboratory hours each week.

IA 307 LEATHERWORK *four credits*

Such fundamental leathercraft techniques as currying, skiving, tooling, finishing, sewing, and lacing of leather are taught. A problematic approach to designing in leather is stressed, thus assuring originality of design and self-expression. Through creative and aesthetic experiences, leathercraft becomes an art expression.

Two demonstration and six laboratory hours each week.

IA 308 FOUNDRY *four credits*

For students who wish to major in the field of metal working. The course is concerned with techniques in metal casting. Foundry procedures and processes that permit an increase in scope of the school metal working program are covered.

Two demonstration and six laboratory hours each week.

IA 309 FUNDAMENTALS OF ART METAL *four credits*

The application of the principles of design to copper, brass, and pewter. Representative projects include letter openers, book ends, and lanterns.

Two demonstration and six laboratory hours each week.

IA 310 ADVANCED ART METAL *four credits*

To provide experience in planning and development of jigs and fixtures; forging of stamping and chasing tools; making tools for die cutting and cutting dies. Practice with new techniques in metalworking. Organization of teaching materials and curriculum development. Prerequisite: Shop 50.

Two demonstration and six laboratory hours each week.

IA 311 FUNDAMENTALS OF PHOTOGRAPHY *four credits*

This course deals with the fundamental and advance problems of Photography. It includes the study and care of cameras, picture composition, developing, contact printing, enlarging, dodging, toning and photo finishing. Special problems are assigned to individual students.

Four laboratory hours each week.

IA 312 ADVANCED PLASTICS *four credits*

A study of new plastics and their uses. The designing of molds and forms for use in plastics. A study of molding problems and processes.

Four laboratory hours each week.

IA 350 ELECTRIC DRAFTING AND THEORY *two credits*

Fundamental theory of electricity with emphasis on practical application. Includes basic practice in dealing with electrical measuring units and their circuit application. Making and reading electrical drawings and diagrams is a part of the work. Prerequisite: D & D 1, knowledge of Algebraic equations, the enrollment in Shop 31.

Four laboratory hours each week.

IA 351 INDUSTRIAL ARTS DESIGN *two credits*

Design is studied as a process made up of three major components: the creative, the aesthetic, and the technical. Students experience design creatively and aesthetically by actively participating in a series of design problems which stress the sensitive use of the elements, principles and concepts of design. Creative thinking and aesthetic sensitivity are encouraged and developed.

Four laboratory hours each week.

IA 352 ARCHITECTURAL DRAFTING *two credits*

Design experience is provided in a basic residence planning. The fundamental sequences in designing and drawing a residence are stressed and the student completes all architectural drawings necessary for construction. Elements of the course include: architectural styles, area planning, structural detailing, pictorial rendering, building specifications and cost analysis.

Four laboratory hours each week.

IA 353 SHOP PLANNING *two credits*

Experience is provided in all phases of modern industrial arts laboratory planning. The student proceeds through the entire sequence of shop planning — from the original design to the completion of all drawings necessary for the construction of industrial arts facilities. The major units of the course include: types of industrial arts programs, principles of laboratory planning, equipment selection, architectural and engineering practices, and evaluation of industrial arts facilities.

Four laboratory hours each week.

IA 354 ADVANCED INDUSTRIAL ARTS DESIGN *two credits*

The creative and aesthetic design theory expounded in Industrial Arts Design is put into actual use in this course. Students carry through a number of design problems which include the complete planning and developing of functional products. The problematic approach to design is stressed. The history of design is surveyed, and experiences in free hand sketching is provided.

Four laboratory hours each week.

IA 355 ADVANCED ARCHITECTURAL DRAFTING *two credits*

Provides broad experiences in general architectural design and drafting techniques. The functional approach to the design of residences and commercial buildings is stressed. New trends in architectural design and new drafting techniques are introduced. Prerequisite: Architectural Drafting.

Four laboratory hours each week.

IA 400 ELECTRONICS *four credits*

The fundamentals of electronic theory in its application to radio and television, with practice in radio repair and maintenance and in the construction of radio receivers.

Two demonstration and six laboratory hours each week.

IA 401 PATTERNMAKING *four credits*

For students who wish to major in woodworking in preparation for teaching a unit shop. Basic principles involved in the making of wood patterns and core boxes are stressed. Techniques are demonstrated. Patterns and core boxes made by students are used in the school foundry.

Two demonstration and six laboratory hours each week.

IA 402 ADVANCED MACHINE SHOP *four credits*

Experience in the operation of the milling machine, shaper, the drill press, and the engine lathe; in indexing, and in the heat treatments of metals. Special emphasis is placed upon assembly and mass production. Prerequisite: Shop 22.

Two demonstration and six laboratory hours each week.

- IA 404 ADVANCED GRAPHIC ARTS *four credits*
 A continuation of Shop 23, covering the organization of suitable shop equipment and teaching material, and providing experience in the study, selection and development of binding projects suitable for secondary schools. Two demonstration and six laboratory hours each week.
- IA 405 SPECIAL MACHINE SHOP *four credits*
 Project work in machine shop practice. Admission only by consent of the instructor. Two demonstration and six laboratory hours each week.
- IA 406 ADVANCED ELECTRICITY *four credits*
 Advanced practice with electrical circuits and appliances. Special attention is given to preparation of teaching materials for electricity including project design and visual aids. Two demonstration and six laboratory hours each week.
- IA 408 ADVANCED SHEETMETAL SHOP *four credits*
 To provide practice in development and construction of advanced projects. e.g., equipment and projects for school shop use. Study of sheet-metal trade and industrial practices. Organization of teaching materials and curriculum development. Prerequisite: Shop 21. Two demonstration and six laboratory hours each week.
- IA 410 FUNDAMENTALS OF AUTO MECHANICS *four credits*
 Credit is given for work taken at General Motors Institute.
- IA 411 ADVANCED AUTO MECHANICS *four credits*
 Credit is given for work taken at General Motors Institute.
- IA 412 SPECIAL AUTO MECHANICS *four credits*
 Credit is given for work taken at General Motors Institute.
- IA 460 ADVANCED GRAPHIC ARTS DESIGN
 Designing and preparing teaching materials as used in Advanced Graphic Arts through the study and use of various media in preparing of illustrative material for publication. Two laboratory hours each week.
- IA 461 ADVANCED MECHANICAL DRAWING *two credits*
 Special emphasis is placed upon the basic principles involved in machine design. The possibilities and limitations of the common metals, mechanical movements, and the use of fasteners, and the application of machine fits are stressed. Four laboratory hours each week.

MATHEMATICS DEPARTMENT

MR. HARRY L. MONROE, *Chairman*

MR. ATKINS	MR. DUNBAR	MR. SAPKO
MR. BETHEM	MR. FERNANDES	DR. THOMAS
	MR. NOVAK	

- Math 101 FUNDAMENTALS OF MATHEMATICS *three credits*
 Development of the number system; nature and application of fundamental processes; extension of the number system to include common and decimal fractions and negative numbers; approximate nature of measurements; percents; language of algebra including formulas, graphs, tables, and equations; meaning of proof; elementary concepts of statistics; art of indirect measurement; history of number systems, number line, inequalities, basic set notation, general principles of geometry. Three class hours each week.

Math 102 COLLEGE ALGEBRA *three credits*

Fundamental operations; factoring; fractions; functions and their graphs, linear, quadratic, and systems of equations; proportions and variations; progressions; mathematical induction; determinants; equivalence relations; postulates of addition and multiplication (closure, associative, commutative, distributive, identity, and inverse). Prerequisite: Three years of high school mathematics or honor grade in Fundamentals of Mathematics.

Three class hours each week.

Math 103 COLLEGE TRIGONOMETRY *three credits*

Functions of an angle; logarithms; use of tables; radians; identities; trigonometric and exponential equations; solution of triangles by natural functions and logarithms; inverse functions; complex numbers; application in practical problems. Prerequisite: College Algebra.

Three class hours each week.

Math 104 ANALYTIC GEOMETRY *three credits*

Correlation of algebra and geometry in finding equations of loci and loci corresponding to certain equations; properties of the straight line, the circle and conic sections; rectangular and polar coordinates; transformation of coordinates; parametric equations; a brief introduction to three dimensions. Prerequisite: College Algebra and Trigonometry; students presenting evidence of proficiency may take electives for six credits in place of algebra and trigonometry.

Three class hours each week.

Math 105 CALCULUS I — DIFFERENTIAL *three credits*

Elementary concepts of limits; the derivation; applications of the derivative to maxima and minima, rates, velocity, acceleration. Prerequisite: Analytic Geometry.

Three class hours each week.

Math 106 GEOMETRY I *three credits*

Professionalized subject matter background for teachers of secondary school plane geometry; completes a restudy of euclidean Geometry filling in gaps that exist. The emphasis here is placed in greater rigor in proofs. The approach used is that presented by Hilbert. Topics included are: the nature of defined and undefined terms, the use of postulates, the nature of a proof, logical proofs, constructions, and sets. The course includes work in both two and three dimensional geometry. Prerequisite: College Algebra and Trigonometry.

Three class hours each week.

Math 201 CALCULUS II — INTEGRAL *three credits*

Integration as the inverse of differentiation; formulas of integration; the definite integral; methods of integration; integration as the limit of a sum applied to areas, volumes, lengths of curves and other practical problems. Differential and Integral Calculus may be taught as a unified course. Prerequisite: Calculus I.

Three class hours each week.

Math 202 CALCULUS III *three credits*

Continuation of studies begun in Calculus I and Calculus II, extension of concepts of differentials, and integration, problems taken from the physical sciences; Rolle's Theorem, Theorem of Mean Value, Indeterminate forms, emphasis on proofs and applications; curvature; series and expansion of functions; hyperbolic functions; partial derivatives and applications; multiple integrations and problems involving them. Prerequisite: Calculus II.

Three class hours each week.

Math 203 GEOMETRY III *three credits*

Topics of axiomatic geometry; selected topics of Euclidean Geometry such as theorems of Memelaus and Ceva; Harmonic elements and cross-ratio; an introduction to synthetic and analytic projective geometry; concepts of Non-Euclidean geometries. Prerequisite: Geometry I.

Three class hours each week.

X Math 204 ABSTRACT ALGEBRA *three credits*

The number system; number theory; elementary theory of groups; rings; integral domain; field; matrices and determinants. Prerequisite: Calculus I.

Three class hours each week.

Math 205 FIELD WORK IN MATHEMATICS *three credits*

Use of various instruments including the transit, slide rule, plane table, level sextant, E6B computer, hypsometer, angle mirror, planimeter, computing machines and other measuring instruments. Student projects making use of the various instruments. Prerequisite: College Trigonometry.

Three class hours each week.

Math 302 THEORY OF EQUATIONS *three credits*

Complex numbers; theorems involving polynomials in one variable; cubic and biquadratic equations; separations of roots; Sturm's theorem and approximate evaluation of roots. Prerequisite: Calculus II.

Three class hours each week.

Math 303 DIFFERENTIAL EQUATIONS *three credits*

Elementary ordinary differential equations and their use in a wide variety of applications in geometry, engineering and physical sciences; methods employing symbolic operators; approximations, techniques and series solution. Prerequisite: Calculus II.

Three class hours each week.

Math 304 STATISTICS *three credits*

Basic principles and methods of statistics common to scientific research; probability theory, measures of central tendency; binomial distribution, normal curve; reliability of statistical measures; statistical inference, confidence limits, Bayes Theorem. Prerequisite: 12 credit hours of college mathematics.

Three class hours each week.

Math 390 MATHEMATIC INSIGHTS *three credits*

Language; symbols; compound statements; arguments and proofs; an introduction to the theory of sets; connection between the structure of sets and the structure of compound statements and arguments. Prerequisite: Calculus II.

Three class hours each week.

Math 401 ADVANCED CALCULUS I *three credits*

Elementary differential and integral calculus of functions and transformations from a more rigorous point-set topology point of view. This course is primarily for those who will continue with graduate work in mathematics. Prerequisite: Calculus III and Differential Equations.

Three class hours each week.

Math 402 ADVANCED CALCULUS II *three credits*

Continuation of Advanced Calculus I. Prerequisite: Advanced Calculus I.

Three class hours each week.

Math 490 HONORS COURSE IN MATHEMATICS *three credits*

Individual study and research on topics and materials not covered by regular course work in mathematics. Prerequisite: 64 credits completed or scheduled with a QPA of 3.25 in all work, recommendation of the mathematics faculty, approval of the Department Head and the Dean of Instruction.

Math 491 HONORS COURSE IN MATHEMATICS *three credits*

Individual study and research on topics and materials not covered by regular course work in mathematics. Prerequisite: 64 credits completed or scheduled with a QPA of 3.25 in all work, recommendation of the mathematics faculty, approval of the Department Head and the Dean of Instruction.

Math 492 HONORS COURSE IN MATHEMATICS *three credits*

Individual study and research on topics and materials not covered by regular course work in mathematics. Prerequisite: 64 credits completed or scheduled with a QPA of 3.25 in all work, recommendation of the mathematics faculty, approval of the Department Head and the Dean of Instruction.

Math 495 SEMINAR IN MATHEMATICS *one credit*

MODERN LANGUAGE

DR. FERRAGUT

DR. HALLEY

DR. MARISA

Mod Lang 490 HONORS COURSE IN MODERN LANGUAGE *three credits*

Mod Lang 491 HONORS COURSE IN MODERN LANGUAGE *three credits*

Mod Lang 492 HONORS COURSE IN MODERN LANGUAGE *three credits*

Mod Lang 495 SEMINAR IN MODERN LANGUAGE *one credit*

Fr 101 ELEMENTARY FRENCH I *three credits*

For the student without previous knowledge of French who wishes to achieve a sound basis for an active command of the language. This course is devoted to aural — oral adaptation in the language laboratory and the study of fundamental speech patterns. Progressively greater emphasis is placed on correct grammar, writing and reading. Not open to students who have had secondary school French. Prerequisite: none.

Three class hours each week.

Fr 102 ELEMENTARY FRENCH II *three credits*

A continuation of Elementary French A for students who wish to increase their oral comprehension and their reading skill. There will be a review of the fundamentals of French grammar, combined with extensive readings in literary and cultural texts. Prerequisite: Open to all students who have passed French I or have had one year of secondary school preparation.

Fr 103 INTERMEDIATE FRENCH I *three credits*

(French Grammar and Literature). For students who have completed courses A and B or two years of secondary school French. This course develops aural — oral skills and increases the command of written French. Also for students who wish to acquire reading speed and comprehension. Review and practice will be functional, combined with outside readings. Conducted largely in French. Prerequisite: French A and B.

Three class hours each week.

- Fr 104 INTERMEDIATE FRENCH II *three credits*
 (Conversation, Composition, and Reading). For students who are interested primarily in achieving greater fluency in speech and writing. The course is conducted, to a great extent, in French. After a short review of formal grammar selected literary texts will be read and discussed. Prerequisites: Course 103 or equivalent.
 Three class hours each week.
- Fr 201 FRENCH CULTURE AND CIVILIZATION I *three credits*
 The purpose of this course is to study French culture and literature from the Middle Ages to the Twentieth Century. Selected literary works (with) will be analyzed and discussed in French and in English. Prerequisite: An ability to understand spoken French and to read with ease.
 Three class hours each week.
- Fr 202 FRENCH CULTURE AND CIVILIZATION II *three credits*
 This is a continuation of French V. More and more French will be introduced into discussions of French Culture and works of literature. Occasionally, conversation will be held on current events in France. Prerequisite: French V.
 Three class hours each week.
- Fr 301 FRENCH LITERATURE I *three credits*
 Conducted largely in French. A history of the origins of modern ideas in scepticism and free thought. Subject matter will include works of Descartes, Corneille, Pascal, Moliere, La Fontaine, Racine and other classical writers. Prerequisites: Pass oral proficiency examination.
 Three class hours each week.
- Fr 302 FRENCH LITERATURE II *three credits*
 A study of eighteenth century thought from its origins through the French Revolution. Life and works of Rousseau, Voltaire, Diderot, the women of the literary salons, and their influence in French History.
 Three class hours each week.
- Fr 401 READINGS IN CONTEMPORARY FRENCH LITERATURE *three credits*
 Themes and techniques in fiction from the romantic period through Malraux and Bernanos. A close study of Flaubert's "Madame Bovary" will be made for social background. Conducted in French.
 Three class hours each week.
- Fr 402 HISTORY OF FRENCH LITERATURE *three credits*
 This course will consist of class reading and analysis of works of leading French authors and literary critics, especially Saint-Beuve.
 Three class hours each week.
- Fr 461 FIELD WORK IN FRENCH STUDIES *three credits*
- Fr 462 FIELD WORK IN FRENCH STUDIES *three credits*

GERMAN

- Ger 101 ELEMENTARY GERMAN I *three credits*
 Elements of pronunciation, essentials of grammar. This course should be taken by those who have had no previous instruction or contact with the language.
 Three class and one laboratory hours each week.
- Ger 102 ELEMENTARY GERMAN II *three credits*
 Continuation of Elementary German I.
 Three class and one laboratory hours each week.

- Ger 103 INTERMEDIATE GERMAN I *three credits*
 Grammar review, reading, composition and conversation. This course is open to all who have had two years of high school German.
 Three class and one laboratory hours each week.
- Ger 104 INTERMEDIATE GERMAN II *three credits*
 Continuation of Intermediate German I.
 Three class and one laboratory hours each week.
- Ger 201 GERMAN CULTURE AND CIVILIZATION I *three credits*
 A study of the German people, its geographical, historical, economic, and political background; German art and Folklore.
 Three class hours each week.
- Ger 202 GERMAN CULTURE AND CIVILIZATION II *three credits*
 A continuation of German Culture and Civilization I.
 Three class hours each week.
- Ger 301 GERMAN LITERATURE I *three credits*
 General discussion of the major literary movements. Detailed readings of selected pieces of prose, poetry and drama.
 Three class hours each week.
- Ger 302 GERMAN LITERATURE II *three credits*
 A survey of the main currents of German literature during the nineteenth century starting with the Romantic Movement.
 Three class hours each week.
- Ger 401 READINGS IN CONTEMPORARY GERMAN LITERATURE *three credits*
 General discussion of the major literary movements since the turn of the century; more detailed reading of selected pieces of prose, poetry, and drama.
- Ger 402 HISTORY OF GERMANY *three credits*
 A study of the History of Germany for the purpose of integrating the students' field of concentration.
 Three class hours each week.

RUSSIAN

- Rus 101 ELEMENTARY RUSSIAN I *three credits*
- Rus 102 ELEMENTARY RUSSIAN II *three credits*
- Rus 103 INTERMEDIATE RUSSIAN I *three credits*
- Rus 104 INTERMEDIATE RUSSIAN II *three credits*
- Rus 201 RUSSIAN CULTURE AND CIVILIZATION I *three credits*
- Rus 202 RUSSIAN CULTURE AND CIVILIZATION II *three credits*
- Rus 301 RUSSIAN LITERATURE I *three credits*
- Rus 302 RUSSIAN LITERATURE II *three credits*
- Rus 401 READINGS IN CONTEMPORARY RUSSIAN LITERATURE *three credits*
- Rus 402 RUSSIAN HISTORY *three credits*

SPANISH

- Span 101 ELEMENTARY SPANISH I *three credits*
Oral Spanish. Laboratory practice is compulsory.
Three class and one laboratory hour each week.
- Span 102 ELEMENTARY SPANISH II *three credits*
Practical and theoretical Spanish. Laboratory practice is compulsory.
Three class and one laboratory hour each week.
(Students without an adequate background of two years of high school Spanish will be required to complete Elementary Spanish I and II. These credits will not be counted toward the area of specialization.) Both courses can be taken together for those who are going to be specialized in Spanish.
- Span 103 INTERMEDIATE SPANISH I *three credits*
Spanish Grammar and Conversational Spanish. Laboratory practice is compulsory.
Three class hours and one laboratory hour each week.
- Span 104 INTERMEDIATE SPANISH II *three credits*
Continuation of Spanish Grammar and Conversational Spanish. Laboratory practice is compulsory. Successful completion of previous course is prerequisite.
Three class hours and one laboratory hour each week.
- Span 201 INTERMEDIATE SPANISH III *three credits*
Continuation of Spanish Grammar and Conversational Spanish. Laboratory practice is compulsory.
Three class hours and one laboratory hour each week.
- Span 202 HISTORY OF SPAIN AND HISPANIC AMERICA *three credits*
Elements of History of Spain and Hispanic America. Understanding and speaking Spanish and a knowledge of Spanish Grammar are prerequisites.
Three class hours each week.
- Span 301 CULTURE AND CIVILIZATION OF SPAIN
AND HISPANIC AMERICA *three credits*
Elements of Spanish and Hispanic American Culture and Civilization. Understanding and speaking Spanish and a knowledge of Spanish Grammar are prerequisites.
Three class hours each week.
- Span 302 LITERATURE OF SPAIN *three credits*
Masterpieces of Spanish Literature of different eras. A knowledge of Spanish Culture and Civilization is prerequisite.
Three class hours each week.
- Span 401 LITERATURE OF HISPANIC AMERICA *three credits*
Panoramic view of Hispanic American Literature. A knowledge of Hispanic American Culture and Civilization is prerequisite.
Three class hours each week.
- Span 402 READING IN HISPANIC AMERICAN LITERATURE *three credits*
Continuation of Reading in Hispanic American Literature.
Three class hours each week.

PHILOSOPHY

DR. LACHNER

MR. WALSH

Phil 401 INTRODUCTION TO PHILOSOPHY *three credits*

A course designed to lead the student in a critical examination of his ideas concerning the tests of truth, the validity of knowledge, the nature of reality and the character of values. This is done by an examination of the thought of some leading philosophers from Thales to Bertrand Russell.

Three class hours each week.

Phil 402 MODERN PHILOSOPHY — DESCANTES TO KANT *three credits*

The course will: 1. familiarize the student with some of the basic writings of men such as Descartes, Locke, Berkeley, Hume, Hobbes and Kant; 2. help the student develop an over-all view of this philosophic end; 3. terminate in a critical evaluation of the period in terms of more recent developments in philosophy.

Three class hours each week.

Phil 405 LOGIC *three credits*

The course will be a study of "the methods and principles used in distinguishing correct from incorrect arguments." (copi) The first part will consist of a discussion of logical symbols and de-emotionalized language. The second part will be devoted to deduction. The third part will be devoted to induction and the scientific method. The course will also include a discussion of informal fallacies and the value and limitations of logic.

PSYCHOLOGY

Psy 101 GENERAL PSYCHOLOGY *three credits*

A study of the psychological factors which determine human behavior.
Three class hours each week.

Psy 201 EDUCATIONAL PSYCHOLOGY *three credits*

The nature of the learning process with emphasis on the application of the principles of psychology to the problems of learning and teaching. An important aspect of the course is the study of actual classroom problems and procedures by observation of regular work and by special illustrative demonstrations in the laboratory school. Prerequisite: General Psychology.

Three class hours each week.

Psy 301 PSYCHOLOGY OF ADOLESCENCE *three credits*

A study of (1) developmental needs and adjustment problems experienced by pre-adolescents, adolescents, and young adults, (2) problems that confront parents, teachers, counselors, and other adults in their relations with individuals in these age-groups, and (3) case reports of secondary school pupils in need of various kinds of assistance. Prerequisite: General Psychology.

Three class hours each week.

Psy 302 PSYCHOLOGY OF EXCEPTIONAL CHILDREN *three credits*

The problems of exceptional or atypical children. The major purpose is to gain a functional understanding of the various types of psychological and physical deviates, both as to the genesis of their behavior processes, their treatment, and the guiding principles involved in their training. Prerequisite: General Psychology.

Three class hours each week.

Psy 310 MENTAL HYGIENE *three credits*

Problems of personality and mechanisms of adjustment, including a study of the origin and resolution of conflicts, and the role of emotion in the pattern of behavior are studied. Prerequisite: General Psychology.

Three class hours each week.

Psy 401 ABNORMAL PSYCHOLOGY *three credits*

Psy 410 CLINICAL PSYCHOLOGY *three credits*

Use of the case method of studying children; observation of and experience with the individual testing of mentality, vision, hearing, motor speed, coordination, and other capacities. Enrollment is limited to small groups.

Three class hours each week.

Psy 411 PRACTICUM IN PSYCHOLOGY *varying credits*

Case studies, practice in the giving, scoring, and interpretation of mental tests, the making of personal inventories, and the use of clinical instruments. One semester of credit is allowed for each fifty hours of work satisfactorily completed. Maximum credit: six semester hours. Open only to students who have the proper prerequisites and to graduate students specializing in psychological work. Admission by consent of the Director of the Clinic and the Dean of Instruction.

SCIENCE DEPARTMENT

MR. JOHN F. LEWIS, *Chairman**

DR. ASA ANDERSON, *Acting Chairman*

MR. BAILEY

MR. HARTMAN

MR. SERINKO

DR. BAUSOR

MR. MATZEN

MR. SNYDER

MR. BUELL

MR. McCLOSKEY

MR. WALKER

MR. CRAIG

MR. SEPSI

MR. ZADOROZNY

MR. FLEMING

DR. SERENE

MR. ZOPPETTI

*Sabbatical Leave — Fall Trimester 1962

✓ Sci 101 MAN AND HIS BIOLOGICAL WORLD *five credits*

This course deals with the functional principles of Biology. Concepts treated include dependence upon physical surroundings; food getting; assimilation; growth; maintenance of kind; classification; reaction, adaptation, and constant adjustment to environment, and the use, improvement, and conservation of living things.

Five class hours each week.

✓ Sci 111 MAN AND HIS PHYSICAL WORLD *five credits*

A broad, survey-type, non-laboratory course devoted to the fields of physics, chemistry and astronomy and their related branches. Besides lecture-recitation methods, — motion pictures, demonstration experiments, oral reports and other activities of a research or audio-visual project type are used.

Five class hours each week.

Sci 401 BIOTIC PRINCIPLES *five credits*

A comprehensive terminal course open only to biology majors. Taken preferably the trimester immediately preceding student teaching. The aim is to summarize and correlate the various phases of undergraduate biology, and to help the student gain a well-formed concept of the life sciences.

Five class hours each week.

Sci 402 PHYSICAL PRINCIPLES *five credits*

A comprehensive study of the field of physical science including: modern views on space, time, and motion; with emphasis on special relativity, microcosm; microcosm including general relativity and cosmology. Prerequisite: Major field of study one of the physical sciences.

Five lecture hours each week.

Sci 490 HONORS COURSE IN SCIENCE *three credits*

Sci 491 HONORS COURSE IN SCIENCE *three credits*

Sci 492 HONORS COURSE IN SCIENCE *three credits*

BIOLOGICAL SCIENCE

Biol 111 BOTANY I — FLOWERING PLANTS *four credits*

Botany I is a study chiefly of the flowering plants. Topics include classification, anatomy, and life processes of cells, roots, stems, leaves, flowers, fruits, seeds, and seedlings of selected plants.

Three class and three laboratory hours each week.

Biol 112 BOTANY II — NON-FLOWERING PLANTS *four credits*

A survey of the algae, fungi, bryophytes, pteridophytes and gymnosperms with special emphasis on possible evolutionary relationship. Regressive details of structure and function are considered.

Three lecture and one three hour laboratory each week.

Biol 121 ZOOLOGY I — INVERTEBRATES *four credits*

An elementary course in animal biology emphasizing the invertebrates. Included is morphology, physiology, life history, and inter-relationships of the various phyla. Emphasis is given to those forms of special economic importance and with health implications to man. The course is designed for freshmen and sophomores. May either precede or follow Zoology II.

Three class and three laboratory hours each week.

Biol 122 ZOOLOGY II — VERTEBRATE *four credits*

An elementary course in animal biology with emphasis on the vertebrates. Topics include anatomy, physiology, origin, development, and life history of representative animals. Special attention is given to the systems of organs of selected animals, and their functioning. The course is designed for freshmen and sophomores. May either precede or follow Zoology I.

Three class and three laboratory periods each week.

Biol 201 VERTEBRATE ANATOMY *three credits*

This course deals with the fundamental organ systems of vertebrates as they apply to the cat. Comparisons are made with the organ systems of other chordates. Prerequisite: Zoology II or consent of the instructor.

Two class and three laboratory hours each week.

Biol 221 PHYSIOLOGY *three credits*

The functions of the animal body. Basic physiological phenomena are studied with considerable emphasis upon practical applications to the student's own life and well being. Prerequisite: Zoology II. It is strongly recommended that Comparative Anatomy and Chemistry precede enrollment in Physiology.

Two class and three laboratory hours each week.

Biol 240 FIELD BOTANY (LOCAL FLORA) *three credits*

A study of the identification and classification of the ferns and flowering plants of Southwestern Pennsylvania. Prerequisite: Botany I or the consent of the instructor.

Two class and three laboratory or field hours each week.

Biol 260 FIELD ZOOLOGY

three credits

Designed to acquaint students with the varied equipment and materials utilized in collecting, mounting, and preserving zoological specimens to give them varied field experiences in the utilization of such equipment; to give them the opportunity to make a personal collection to the familiar forms of animal life of this region; and to give them practice in the identification and study of these familiar forms.

Two class and three laboratory hours each week.

Biol 301 MICROBIOLOGY

three credits

An introduction to the study of microorganisms. Culture, morphology, identification and control of bacteria are emphasized. Some attention is given to the yeasts and the fungi. The role of microorganisms in nature and in industry is considered. Special attention is given to microorganisms of importance to health and sanitation. Prerequisite: Botany I and II, Zoology I and II, Chemistry I and II. Open to qualified juniors and seniors. Consent of instructor is required for any one lacking prerequisites:

Two class and three laboratory hours each week.

Biol 321 GENETICS

three credits

The purpose of this course is to give the student an understanding of the laws of inheritance as they operate in plant, animals, and humans. Cell structure, Mendelian inheritance, Eugenics, linkage, probability, crossing over, and random assortment are all considered. Prerequisite: Six hours Biology.

Two class and three laboratory hours each week.

Biol 331 ORGANIC EVOLUTION

three credits

An intensive study of the history of the evolutionary theory and its impact upon the various disciplines of biology. The ideologies of the opposing schools of thought of modern evolutionists are considered. The significance of the evolutionary doctrine to the present concept of species and races is emphasized. This course is designed for mature students, preferably upperclassmen, and is especially recommended for biology majors, and social science majors with an interest in anthropology.

Three class periods each week.

Biol 360 FIELD ZOOLOGY

three credits

Designed to acquaint students with the varied equipment and materials utilized in collecting, mounting, and preserving zoological specimens to give them varied field experiences in the utilization of such equipment; to give them the opportunity to make a personal collection of the familiar forms of animal life of this region; and to give them practice in the identification and study of these familiar forms.

Two class and three laboratory hours each week.

Biol 361 ORNITHOLOGY

three credits

An introduction to the birds of Pennsylvania with special emphasis upon their identification in the field. Abundant field work gives practice in recognition by plumage, song, form, and behavior. Lectures deal with classification, migration, distribution, habitat preferences, song, courtship, nesting and rearing young, plumage changes, and economic importance. Open to any student.

Two class and three laboratory or field hours each week.

Biol 362 ENTOMOLOGY

three credits

An introductory course to the study of insects. Insect structure, life history, physiology, and economic importance are considered. An intensive study is made of the major orders and the most important minor orders found in our locality. Field work is required. Prerequisite: Zoology I.

Two class and three laboratory hours each week.

Biol 420 ECOLOGY *three credits*

This is a study of plants and animals in relation to their physical and biological environments. Concepts include migration, invasion, competition, climax, and post-succession. Considerable attention is given to plant and animal communities of Pennsylvania. Individual problems may be assigned. Since this is a terminal course in Biology, consent of the instructor is required before electing it.

Two class and three laboratory or field hours each week.

Biol 421 CONSERVATION OF BIOLOGICAL RESOURCES *three credits*

This is a study of the basic principles of conservation as they affect Man. The concepts taught include the historical background of the conservation movement, and the problems of water, soils, food producing lands, forests, wildlife, minerals, areas of special use, and land-use planning. Special emphasis is placed upon conservation as it affects the individual in society.

Two class and three laboratory or field hours each week.

Biol 495 SEMINAR IN BIOLOGY *one credit*

CHEMISTRY

Chem 101 GENERAL CHEMISTRY I *four credits*

The course includes a chemical study of the structure and behavior of matter. Topics stressed the first semester includes atomic structure and valence, equation and formula writing, the periodic table, the gas laws, oxidation and reduction, solutions, ionization stoichiometry.

Three lecture hours and three laboratory hours each week.

Chem 102 GENERAL CHEMISTRY II *four credits*

Includes the fundamental ideas concerning the common metals and non-metals, and introduction to radioactivity and nuclear reactions and semi-micro qualitative analysis.

Three lecture hours and three laboratory hours each week.

Chem 201 ANALYTICAL CHEMISTRY I *four credits*

A study of the theoretical principles and practices underlying analytical chemistry. It includes study and practice in separating and identifying the cations and anions, mathematical computations of chemical equilibria in solutions of electrolytes, and an introduction to the statistical methods applicable to qualitative and quantitative procedures. Prerequisite: Chemistry 101 and 102.

Three lecture hours and three laboratory hours each week.

Chem 202 ANALYTICAL CHEMISTRY II *four credits*

A continuation of Chemistry III, including a study of the relationship of qualitative and quantitative analytical procedures; theory and practice of volumetric, gravimetric, and colorimetric determinations; electro-deposition and oxidation — reduction methods; and unknowns involving the practices of both qualitative and quantitative procedures, stressing precision, accuracy, significant figures, and errors. Prerequisite: Chemistry 201.

Three lecture hours and three laboratory hours each week.

Chem 211 LABORATORY TECHNIQUES IN CHEMISTRY *three credits*

Includes laboratory planning; selecting, care and storage of equipment, making of solutions and various reagents from stock supplies. Setting up classroom demonstrations for use in secondary schools is stressed. Prerequisite: Chemistry 201 and 202.

Two class and three laboratory hours each week.

Chem 221 INDUSTRIAL CHEMISTRY *three credits*

The application of theories, laws and calculations of chemistry to industrial processes. An intensive study of at least one major industrial process is made by each student. The class work is supplemented by selected laboratory experiences and numerous trips to neighboring industries. Prerequisite: Chemistry 101 and 102.

Two class and three laboratory hours each week.

Chem 301 ORGANIC CHEMISTRY I *four credits*

An elective for those who plan to major or minor in Chemistry, it includes a study of the hydrogen compounds of carbon of the aliphatic series with emphasis on structural relationships and nomenclature as well as on uses and characteristic properties. Prerequisite: Chemistry 101 and 102.

Three class and three laboratory hours each week.

Chem 302 ORGANIC CHEMISTRY II *four credits*

A continuation of Organic Chemistry I, dealing primarily with the amines and proteins and those compounds belonging to the aromatic series. Both micro and semi-micro techniques are employed to stress the properties and type reactions of the usual classes of organic compounds. Prerequisite: Chemistry 301.

Three class and three laboratory hours each week.

Chem 311 ORGANIC PREPARATIONS *three credits*

An advanced course in synthetic organic chemistry. Important reactions and special experimental techniques are applied to the preparation of more complex organic compounds. Prerequisite: Chemistry 201 and 202.

Two class and three laboratory hours each week.

Chem 321 BIOLOGICAL CHEMISTRY I *three credits*

Includes the chemistry of the carbohydrates, fats and proteins; a survey of the chemistry and function of enzymes, vitamins and hormones. Prerequisite: Chemistry 301 and 302.

Two class and three laboratory hours each week.

Chem 322 BIOLOGICAL CHEMISTRY II *three credits*

Includes the chemistry of the carbohydrates, fats and proteins; a survey of the chemistry and function of enzymes, vitamins and hormones. Prerequisite: Chemistry 301 and 302.

Two class and three laboratory hours each week.

Chem 331 COLLOID CHEMISTRY *three credits*

Discussion and laboratory work dealing with the theory of colloidal behavior. Stress is placed upon proteins and other materials encountered in the colloidal state which are important in nature and industry. Prerequisite: Chemistry 201 and 202, and Chemistry 301 and 302.

Two class and three laboratory hours each week.

Chem 341 FOOD ANALYSIS *three credits*

Includes studies of dietary problems, food requirements of persons of different ages, food metabolism, mineral requirements and utilization, basic chemical test for food substance, food laws, and the effect of food on growth and well-being. Prerequisite: Chemistry 301 and 302.

Two class and three laboratory hours each week.

Chem 351 AGRICULTURAL CHEMISTRY *three credits*

Includes discussion of plant fertilizers and their soil reactions, plant composition and chemistry, chemical control of weeds, etc., as well as laboratory work in the field. Prerequisite: Chemistry 201 and 202, Chemistry 301 and 302.

Two class and three laboratory hours each week.

- Chem 401 PHYSICAL CHEMISTRY I *four credits*
 Properties of gases; elementary thermodynamics; thermochemistry; Kinetic molecular theory; atomic and molecular structure; introduction to the theory of chemical bonding. Prerequisite: Chemistry 201 and 202, Mathematics through integral calculus.
 Three lecture hours and three laboratory hours each week.
- Chem 402 PHYSICAL CHEMISTRY II *four credits*
 Kinetics; properties of solids and liquids; phase equilibria; colligative properties of solutions; electrolytic conductance and electrochemistry. Prerequisite: Chemistry 401.
 Three lecture hours and three laboratory hours each week.
- Chem 411 RADIO CHEMISTRY *three credits*
 Includes properties of radioactive nuclei, nature of radioactivity, nuclear reactions, detection equipment, and traces techniques. Prerequisite: Chemistry 201 and 202.
 Two class and three laboratory hours each week.
- Chem 421 NUCLEAR CHEMISTRY *three credits*
 A lecture and problem course presenting our modern knowledge of the nature and properties of electrons, light quanta, atoms and molecules. Prerequisite: Chemistry 401 and 402.
 Three class hours each week.
- Chem 431 LITERATURE OF CHEMISTRY *one credit*
 Designed for chemistry majors and includes a survey of the literature in the field. Prerequisite: Completion of 18 hours in chemistry and German I (two semesters). Every chemistry major should endeavor to take this course.
 One class hour each week.
- Chem 435 SPECIAL PROBLEMS IN CHEMISTRY I *two credits*
 Topics will be selected to suit the individual needs of the students.
- Chem 436 SPECIAL PROBLEMS IN CHEMISTRY II
- Chem 441 INSTRUMENTAL CHEMICAL ANALYSIS I *three credits*
 Modern quantitative analysis employing instrumental methods. Lecture and laboratory work in photoelectric colorimetry, fluorimetry, spectrophotometry, potentiometric and conductimetric titrimetry, elementary electronics, refractometry, polarography, electroanalysis and polarized light microscopy. Prerequisite: Chemistry 201 and 202.
 Two class and three laboratory hours each week.
- Chem 442 INSTRUMENTAL CHEMICAL ANALYSIS II *three credits*
 Modern quantitative analysis employing instrumental methods. Lecture and laboratory work in photoelectric colorimetry, fluorimetry, spectrophotometry, potentiometric and conductimetric titrimetry, elementary electronics, refractometry, Polarography, electroanalysis and polarized light microscopy. Prerequisite: Chemistry 201 and 202.
 Two class and three laboratory hours each week.
- Chem 455 CHEMISTRY FOR HIGH SCHOOL TEACHERS *three credits*
 Designed to strengthen the preparation of the teacher in service and will include recent ideas in chemical bonding, crystal structure, radio and nuclear chemistry. Prerequisite: Certification in Physical Science or Chemistry.
 Three class hours each week.
- Chem 495 SEMINAR IN CHEMISTRY *one credit*

PHYSICS

- Phys 101 PHYSICS I** *four credits*
An introductory course in mechanics and electricity. Some of the topics studied are the mechanics of solids, liquids, and gases. The portion devoted to electricity and magnetism deals with the general concepts of magnetism, electrostatics, electrical circuits, generators, motors, and alternating currents. Prerequisite: Algebra and Trigonometry.
Three class hours and three laboratory hours each week.
- Phys 102 PHYSICS II** *four credits*
A continuation of Physics I. Some of the topics discussed are: production and nature of sound waves, including music sounds; thermometry, calorimetry and heat transference; reflection and refraction, optical instruments, spectra and interference; and selected topics of the newer developments in physics such as radioactivity and atomic energy.
Three class hours and three laboratory hours each week.
- Phys 103 PHYSICS (INDUSTRIAL ARTS)** *four credits*
An introductory course in the principles of physics with emphasis on problems. The topics include mechanics of solids, liquids, and gases. The portion devoted to electricity includes the general concept of magnetism, electrostatics, and electrical theory. Prerequisite: Fundamentals of Mathematics.
Three class hours and three laboratory hours each week.
- Phys 110 ASTRONOMY** *three credits*
Non-mathematical presentation of methods and results of astronomical discovery. The planet Earth — its shape, motions, and atmosphere. The seasons, calendar, time of day. Telescopes and their uses. The Moon — effects on the earth, surface features, phases and eclipses. The planetary system — Law of Gravitation — satellites, comets, and meteors. The sun — its atmosphere, sunspots, and eclipses. The stars in their seasons, constellations, stars. Cosmic dust and gas, the galactic system, the exterior galaxies.
Three hours lecture each week.
- Phys 201 MECHANICS** *four credits*
An intermediate course in mechanics of solids, liquids, and gases. An opportunity is provided for a deeper insight into the principles in operation and their practical application. Studies are made of rectilinear and circular motion, work and energy, impulse and momentum, simple harmonic motion, and hydrostatics. Emphasis is placed on qualitative considerations. Prerequisite: Physics I and II.
Three class and three laboratory hours each week.
- Phys 206 MAGNETISM AND ELECTRICITY** *four credits*
An intermediate course in general electricity and magnetism. Direct and alternating current circuits; instruments; thermal, chemical and electromagnetic effects; with an introduction to electronics. Calculus recommended. Prerequisite: Physics I.
Three class and three laboratory hours each week.
- Phys 211 HEAT, WAVE MOTION, SOUND** *four credits*
Temperature measurements, thermal expansion, calorimetry, heat transfer, properties of gases, thermodynamics, and wave motion as applied to sound with special attention to the new developments in ultrasonics. Intermediate level. Prerequisite: Physics I and II.
Three class and three laboratory hours each week.

- Phys 216 OPTICS** *four credits*
 Geometrical and physical optics including reflection and refraction at surfaces, lenses, interference and diffraction, elementary spectroscopy and polarization of light are discussed. Applications are made in the study of optical instruments. Prerequisite: Physics I and II.
 Three class and three laboratory hours each week.
- Phys 221 MODERN PHYSICS** *four credits*
 This is a study of the twentieth century physics. The course includes the development in thermoionics, X-rays, and radioactivity. Considerable attention is given to the modern concepts of atomic structure together with the mechanisms of release of atomic energy and its subsequent utilization.
 Three class and three laboratory hours each week.
- Phys 226 PHYSICAL MEASUREMENTS I** *two credits*
 Experiments and problems in Mechanics and Electricity. Prerequisite: Physics I.
 One class hour and three laboratory hours per week.
- Phys 227 PHYSICAL MEASUREMENTS II** *two credits*
 Experiments and problems in Sound, Heat and Light. Prerequisite: Physics II.
 One class hour and three laboratory hours each week.
- Phys 231 SPECIAL PROBLEMS IN PHYSICS I** *two credits*
 Problems in Mechanics and Electricity. Examples drawn from its field of engineering. Prerequisite: Physics I.
 Two class hours per week.
- Phys 232 SPECIAL PROBLEMS IN PHYSICS II** *two credits*
 Problems in Heat, Sound and Light. Examples drawn from the field of engineering. Prerequisite: Physics II.
 Two class hours each week.
- Phys 301 ADVANCED MECHANICS** *four credits*
 This is an advanced course in mechanics. An opportunity is provided for the student to use calculus in the solution of problems. Specific topics to be developed are centroids and centers of gravity, moments of inertia, hydrostatics, kinetics of a particle, and dynamics of a rigid body. Prerequisite: Intermediate Mechanics and Integral Calculus.
 Three hours lecture each week.
- Phys 306 ADVANCED ELECTRICITY AND MAGNETISM** *four credits*
 This is an advanced course in electricity and magnetism. Topics to be developed are properties of electrostatic and magnetostatic fields, electric circuit theory, Kirchoff's Law and circuit problems. Faraday's Law, electromagnetic induction, the properties of alternating-current circuits, capacitance, and electrical instruments. Prerequisite: Intermediate Electricity and Magnetism and Integral Calculus.
 Three hours lecture and three hours laboratory each week.
- Phys 311 ELECTRONICS** *four credits*
 This is an advanced course in electronics. Special topics to be developed are electronic emission, operation of vacuum tubes and gas filled tubes, operation of amplifiers, rectifiers, basic control circuits, and transistor theory. Prerequisite: Intermediate Electricity and Magnetism and Integral Calculus.
 Three hours lecture and three hours laboratory each week.
- Phys 495 SEMINAR IN PHYSICS** *two credits*
 An introduction to the literature, history, teaching and research methods of physics. Strongly recommended for Physics majors. Prerequisite: 12 hours of credit in Physics.

SOCIAL STUDIES DEPARTMENT

DR. GEORGE S. HART, *Chairman*

MR. HEPNER	MR. LECHNAR	DR. SIEGAL
DR. JACK	MR. LENOX	DR. SOFCHALK
MR. KANIA	MR. MARSHALL	DR. WOLFE
DR. KELLER	MR. NORMAN	MR. ZEMO
	DR. ROADMAN	

S Std 201 WORLD CULTURE I *three credits*

A survey of the evolution of man's culture — his governmental, economic, social, religious, intellectual, and aesthetic activities from ancient times to the beginning of the modern world.

Three class hours each week.

S Std 202 WORLD CULTURE II *three credits*

A survey of the evolution of man's culture — his governmental, economic, social, religious, intellectual and aesthetic activities from the end of the ancient world to modern times.

Three class hours each week.

S Std 490 HONORS COURSE IN SOCIAL STUDIES *three credits*

S Std 491 HONORS COURSE IN SOCIAL STUDIES *three credits*

S Std 492 HONORS COURSE IN SOCIAL STUDIES *three credits*

S Std 495 SEMINAR IN SOCIAL STUDIES *one credit*

Econ 201 PRINCIPLES OF ECONOMICS *three credits*

This course emphasizes economic principles which are fundamental for an appreciation of our modern economy. While stressing the forces and factors that explain production, distribution, and consumption in our capitalistic order, much attention is also given to practical economic matters, including labor problems, co-operative movements and business management.

Three class hours each week.

Econ 202 CONTEMPORARY ECONOMIC PROBLEMS *three credits*

This course consists of a study of certain of our more crucial present day problems such as: labor relations, money and banking, social waste, the family, crime and delinquency, race relations, international trade, government regulation and the individual's responsibility as a citizen of the world.

Three class hours each week.

Econ 203 INDUSTRIAL RELATIONS *three credits*

The methods by which workers, employers and the public have been and are now attempting to solve their problems are examined in the light of underlying economic principles. Labor and management representatives from the area are invited to discussion sections when possible.

Three class hours each week.

Econ 301 MONEY AND BANKING *three credits*

A survey of monetary practices and principles, the influence on the level of national income of monetary activities of the nation's financial institutions, particularly commercial banks. The Federal Reserve System, and the Treasury Department. Emphasis is given to the nature of money and the significance of monetary standards. Prerequisite: Principles of Economics.

Three class hours each week.

Econ 302 PUBLIC FINANCE *three credits*

A study of governmental activities in the collection and spending of public income. Subjects covered will include government expenditures, taxes and revenues, public debt management, fiscal policy and fiscal administration. Prerequisite: Principles of Economics.

Three class hours each week.

Hist 101 HISTORY OF UNITED STATES AND PENNSYLVANIA I *three credits*

A broad study of the political, economic, social, and intellectual forces which shaped the American past to 1865. Pennsylvania History assumes a prominent place in this course.

Three class hours each week.

Hist 102 HISTORY OF UNITED STATES AND PENNSYLVANIA II *three credits*

A broad study of the political, economic, social, and intellectual forces which shaped the American past since 1865. Pennsylvania History assumes a prominent place in this course.

Three class hours each week.

Hist 103 SURVEY OF UNITED STATES AND PENNSYLVANIA *three credits*

A course for secondary curriculum students who are not majoring in history or social studies; Industrial Arts students and Speech Correction students. This course will survey the major issues of United States growth and development from 1607 to the present. Problems in American, political, social and economic history will be discussed.

Three class hours each week.

Hist 111 HISTORY OF CIVILIZATION I *three credits*

A study of the origin and development of the political, social, economic and religious institutions which constitute modern civilization from ancient times to the beginning of the modern world. Emphasis is placed upon broad movements to make realistic the information necessary for a proper understanding of the heritage that is ours in the present day.

Three class hours each week.

Hist 112 HISTORY OF CIVILIZATION II *three credits*

A study of the origin and development of the political, social, economic and religious institutions which constitute modern civilization from the end of the ancient world to modern times. Emphasis is placed upon broad movements to make realistic the information necessary for a proper understanding of the heritage that is ours in the present day.

Three class hours each week.

Hist 121 HISTORY OF EUROPE TO 1815 *three credits*

The development of the social, economic, political, religious and cultural experiences of the European people. The decline of monarchial Europe and the major democratic movements in Europe.

Three class hours each week.

Hist 122 HISTORY OF EUROPE SINCE 1815 *three credits*

The growth of European national states as reflected in their political, social and economic activities. An understanding of the casual and inter-group relationships are essential to the analysis and interpretation of the difficulties facing the European world today.

Three class hours each week.

Hist 201 HISTORY OF PENNSYLVANIA *three credits*

The founding and development of Pennsylvania from its colonial beginnings to the present time. Emphasis is placed on the social, economic and political developments in the different periods of its history. Special attention is given to the diversity of the people and their institutions and to the growth of Pennsylvania as a leader in our modern industrial world.

Three class hours each week.

Hist 202 CONTEMPORARY HISTORY OF UNITED STATES *three credits*

The policies and problems of United States in the twentieth century, with emphasis upon the Second World War and the post-war period. Prerequisite: United States and Pennsylvania I and II.

Three class hours each week.

Hist 221 HISTORY OF CONTEMPORARY EUROPE *three credits*

The development of political, social, and economic forces since World War I and a history of the several attempts to resolve these problems.

Three class hours each week.

Hist 222 HISTORY OF ANCIENT WORLD *three credits*

The origins of Western Civilization from Pre-historic man to the disintegration of the Roman Empire, embracing a thorough study of the cultural aspects of the Fertile Crescent and Greco-Roman Civilizations.

Three class hours each week.

Hist 223 HISTORY OF MEDIEVAL EUROPE *three credits*

The political, social, economic, and cultural history of the Middle Ages with emphasis on institutional and cultural life from the fall of Rome to the Renaissance.

Three class hours each week.

Hist 224 RENAISSANCE AND REFORMATION *three credits*

Renaissance Culture in Europe from the 14th to the 16th century, with emphasis on Italy. It will include a treatment of late Medieval Civilization, the growth of Humanism, and the rise of the Middle Class. Also surveyed is disruption of the Universal Church, the rise of the principle branches of Protestantism, and the reform movement within the Roman Catholic Church.

Three class hours each week.

Hist 301 DIPLOMATIC HISTORY OF UNITED STATES *three credits*

Special emphasis is placed on a study of our foreign relations from the beginning of our national history to the present. Included are separate topics such as the growth and influence of a policy of "isolation," the creation and development of the Monroe Doctrine, the changing position of the United States as a world power, and the problems incident to the assumption of the resulting responsibilities.

Three class hours each week.

Hist 302 AMERICAN CONSTITUTIONAL HISTORY *three credits*

The growth of the American Constitutional system, with special emphasis on constitutionalism, federalism, national-state relations, judicial review, economic regulations and civil liberties.

Three class hours each week.

**Hist 303 SOCIAL AND INDUSTRIAL HISTORY
OF UNITED STATES** *three credits*

Survey of the economic and social elements in the development of the United States from Colonial times to the present, emphasis is given to the interaction of these phases of American life.

Three class hours each week.

Hist 331 HISTORY OF ENGLAND *three credits*

The growth of the people and institutions of England from the conquest by the Anglo-Saxons to the present. The emphasis is placed on the development of those factors that gave rise to the struggle for the establishment of democratic principles in our modern world.

Three class hours each week.

Hist 332 HISTORY OF LATIN AMERICA *three credits*

The development of the Latin American countries from the period of discovery to the present. The colonial period, the revolutionary period, and the national period are surveyed. European and American relations with Latin America are emphasized.

Three class hours each week.

Hist 333 HISTORY OF THE FAR EAST *three credits*

The interaction of East and West with emphasis on developments since 1800. The impact of modern technology, imperialism, nationalism and communism on Oriental cultures is given special attention.

Three class hours each week.

Hist 334 HISTORY OF THE MIDDLE EAST *three credits*

The rise of the modern national state in the Middle East is the focal point of international concern since World War I. A review of the history of the peoples of the region in addition to a consideration of major political, economic and cultural factors which color international affairs in the Middle East is the basis for this work.

Three class hours each week.

Hist 335 HISTORY OF RUSSIA *three credits*

Hist 401 CONTEMPORARY WORLD HISTORY *three credits*

Hist 405 HISTORY OF AMERICAN LABOR *three credits*

Pol Sci 201 AMERICAN GOVERNMENT *three credits*

The general principles of the American system of constitutional government; special emphasis is placed upon the organization and functions of the national government — legislative, executive and judicial; careful treatment is given to the rights and duties of citizenship, the electorate, political parties, civil rights and the growing regulatory function of government.

Three class hours each week.

Pol Sci 301 STATE AND LOCAL GOVERNMENT *three credits*

A treatment of the organization, powers, functions, and problems of state and local governmental units. Emphasis is placed on the growing complexity of relationship among the various levels of government as a result of technological developments and the growth of metropolitan areas.

Three class hours each week.

Pol Sci 302 INTERNATIONAL RELATIONS *three credits*

Background of international politics since the First World War, emphasizing successes and failures of the League of Nations, the rise of totalitarianism and World War II; the patterns of international affairs, the balance of power systems and various efforts at collective security.

Three class hours each week.

Pol Sci 303 UNITED NATIONS *three credits*

The background, structural organization, functions and activities of the United Nations; emphasizing continued efforts towards collective security, together with the problem of strengthening the United Nations.

Three class hours each week.

Pol Sci 401 POLITICAL PARTIES *three credits*

This course deals with the organization and operations of political parties in the United States. Careful attention is given to the methods used by parties in nominating candidates and conducting campaigns, and to the significance of pressure groups, public opinion, and the electorate in our political life.

Three class hours each week.

Pol Sci 402 WORLD POLITICS *three credits*

An inter-disciplinary approach to the study of international politics, stressing the basic factors of national strength — economic and military, political and strategic — and theories of power patterns as applied to regional areas of the world in the struggle of the great powers to win the neutral nations.

Three class hours each week.

Pol Sci 405 COMPARATIVE GOVERNMENT *three credits*

Major attention is given to Great Britain and Soviet Russia as best representing, among foreign governments, the democratic and authoritarian systems. Brief consideration is given to the governments of France and Germany. Frequent comparisons and contrasts are drawn between these governments and governments in the United States.

Three class hours each week.

✓ Soc 201 PRINCIPLES OF SOCIOLOGY *three credits*

This is a basic course in sociology dealing with the interaction arising from the association of human beings. Emphasis is placed upon natural and social heritage, the meaning and functions of culture, the origin, functions, and characteristics of social institutions; with inquiry into the nature and genesis of social pathology.

Three class hours each week.

Soc 202 CONTEMPORARY SOCIAL PROBLEMS *three credits*

Selected contemporary social problems, including crime, divorce, delinquency, etc., in their relation to our traditional social institutions. Current data and remedial proposals will be carefully examined and evaluated in the light of basic sociological principles.

Three class hours each week.

Soc 301 THE FAMILY *three credits*

This course deals with the development of the family and the home in its historical, economic and legal aspects. The various factors influencing the organization, disorganization, and reorganization of the family are considered, as well as the modern trends in this basic institution.

Three class hours each week.

Soc 302 PRINCIPLES OF ANTHROPOLOGY

SPEECH

MRS. COOVER

MISS LANGHAM

MR. EMELSON

- Sp 101 PHONETICS *three credits*
A basic course designed to the application of articulatory speech disorders by a study of each sound. Palatography, through lectures and the use of the Language Master for vocabulary study, is used to give a composite picture of each sound.
Three class hours each week. Laboratory hours by assignment.
- Sp 102 ADVANCED PHONETICS *three credits*
The advanced study of the International Phonetic Alphabet with an analysis of the phonetic sounds according to their kinesthetic, acoustical, and physiological principles; variations of phonemes and the manner of producing them.
- Sp 105 SPEECH I *two credits*
That part of Communication I dealing with speech (for students who have completed the other parts of that course elsewhere).
Three class hours each week.
- Sp 106 SPEECH II *two credits*
That part of Communication II dealing with speech (for students who have completed the other parts of that course elsewhere).
Two class hours each week.
- Sp 201 BASIC PUBLIC SPEAKING *three credits*
The practice in organization and delivery of original speeches. The speech processes with emphasis on speech as a thinking process and as a motivating process.
Three class hours each week.
- Sp 202 ADVANCED PUBLIC SPEAKING *three credits*
An advanced review course in speech with exploration of Altitudes and intensive drill in oral composition and delivery.
- Sp 203 ORAL INTERPRETATION *three credits*
The oral re-creation of literature, based on the processes of finding the meaning in idea and in feeling and communicating that meaning to others, both orally and visually.
Three class hours each week.
- Sp 204 VOICE AND DICTION *three credits*
A course planned to aid teachers in gaining vocal control. Part of the time is devoted to correction, pronunciation, articulation, and enunciation.
Three class hours each week.
- Sp 221 CHORAL SPEAKING *three credits*
Practice of correct and expressive speech through the group achievement of the verse speaking choir. The course is designed to aid both elementary and secondary teachers in the organization, selection of materials, methods, and direction of choral speaking.
Three class hours each week.
- Sp 301 DEBATE AND PARLIAMENTARY PROCEDURE *three credits*
- Sp 302 ADVANCED DEBATE *three credits*

- Sp 311 STAGE DIRECTION *three credits*
 A fundamental approach to the staging of a play, including script selection and analysis, casting, set design, rehearsal techniques and performance. Students will direct short scenes and one-act plays as class projects.
 Three class hours each week.
- Sp 321 TECHNICAL PLAY PRODUCTION *three credits*
 A practical course in the design, planning and execution involved in play production for the following kinds of work: scenery, lighting, costume, make-up, properties, supervision and running of rehearsals and performances.
 Three class hours each week.
- Sp 331 ACTING *three credits*
 A practical course in the teaching and training of acting, considering voice, movement, characterization, internal and external techniques, plus study and application in historical periods and styles, high school and college play production. Students will get practical experience in class and campus productions.
 Three class hours each week.
- Sp 411 HISTORY OF THE THEATRE *three credits*
 A study of the history and development of dramatic literature from the Greeks to Off-Broadway, considering historical changes in the physical theatre, styles, customs, acting, audiences and productions.
 Three class hours each week.
- Sp 421 EDUCATIONAL TELEVISION AND RADIO *three credits*
- Sp 490 HONORS COURSE IN SPEECH *three credits*
- Sp 491 HONORS COURSE IN SPEECH *three credits*
- Sp 492 HONORS COURSE IN SPEECH *three credits*
- Sp 495 SEMINAR IN SPEECH *one credit*

The Faculty

MICHAEL DUDA (1956)

President
A.B., St. Vincent College; M.Ed., University of Pittsburgh; Ed.D., University of Pittsburgh; LL.D., St. Vincent College

GEORGE ROADMAN (1946)

Dean of Instruction
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HEADS OF DEPARTMENTS

<i>Atypical Curriculum</i>	ARTHUR HENRY
<i>Education</i>	JACK F. HOYES
<i>English</i>	ARTHUR COON
<i>Fine Arts</i>	ANGUS DOUPLE
<i>Geography</i>	GABRIEL BETZ
<i>Health and Physical Education</i>	EUGENE J. HESTER
<i>Industrial Arts Curriculum</i>	SHRIVER L. COOVER
<i>Library</i>	VIRGINIA LUCKHARDT
<i>Mathematics</i>	HARRY L. MONROE
<i>Science</i>	JOHN F. LEWIS*
(Acting)	ASA ANDERSON
<i>Social Studies</i>	GEORGE S. HART

*Sabbatical Leave Fall Trimester 1962

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Director of Placement and Director of Graduate Studies
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- JESSE B. REESE (1962)**
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- MICHAEL SERENE (1960)**
Professor of Science
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Professor of Mathematics
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Professor of English and Speech Arts
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Instructor of English and Speech Arts
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- JAY D. HELSEL (1961)
Instructor of Industrial Arts
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- MARIAN WEAVER (1953)
Instructor of Elementary Education and Speech Arts
 B.S., California State Teachers College
- LOLA M. WILLETT (1961)
Instructor of Elementary Education
 B.S., California State College
- HENRIETTA M. WOOD (1959)
Instructor of Fine Arts
 B.S., Edinboro State College

EMERITI

- ELLA E. BERNSTORF, A.B., A.M.1930-1945
Dean of Women
- O. RAY BONTRAGER, A.B., M.A., Ph.D.1936-1962
Professor of Education
- HENRIETTA CARROLL, A.B., A.M.1926-1957
Associate Professor of English
- THOMAS M. GILLAND, A.B., M.A., Ph.D.1931-1956
Director of Noss Laboratory School, Director of Student Teaching
- NANCY WATERS GRIMES, A.B., M.A.1928-1935; 1946-1956
Associate Professor of Geography
- EDWIN E. HALSTEAD, B.S., M.A.1924-1958
Assistant Professor of Music
- GEORGE E. HARDING, A.B., M.A.1927-1958
Associate Professor of Geography
- BETSEY M. HAZEN, A.B., M.A.1926-1954
Assistant Professor of Art
- LOUISE HILDRETH, B.S., M.A.1926-1962
Associate Professor of Health and Physical Education
- ISAAC C. KELLER, A.B., M.A., Ph.D.1924-1952
Professor of English
- MARY C. KING, B.S., M.Ed.1932-1955
Assistant Professor of Elementary Education
- NEVA W. MONTGOMERY, B.S., A.M.1929-1947
Assistant Professor of Elementary Education
- EMMA SACCO, B.S., A.M.1928-1957
Associate Professor of Social Studies
- DOROTHY K. SALISBURY, A.B., B.L.S., M.A.1929-1941
Assistant Professor of Library
- ELON G. SALISBURY, B.S., A.M., Ph.D.1930-1943
Professor of Mathematics
- ROBERT M. STEELE, Ph.B., A.M., Ph.D., LL.D.1928-1952
President of the College
- HAROLD W. TRAISTER, B.S., A.M., Ed.D.1947-1957
Professor of Education
- CLAIR B. WILSON, B.S., A.M.1926-1956
Associate Professor of Psychology

SECRETARIAL AND CLERICAL STAFF

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Dorothy Reichard	Library Assistant
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Joanne Demczyk	Secretary
Katherine Burger	Manager of College Book Store
T. Leland Moore	Accountant for Student Activities Association
Mary Elaine Cushma	Clerk
Thelma Nelson	Clerk
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Dennis R. Moser	A. L. Mathias Company of Pennsylvania
HEALTH SERVICES	
Joseph E. Downey	College Physician
Dorothy Hanjorgiris	College Nurse
NOSS LABORATORY SCHOOL	
Jeanne Vella	Secretary

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For Information . . .

Address inquiries to:

Official Information

The President

Academic Information

The Dean of Instruction

Admission

Director of Admissions

Financial Information

The Bursar

Graduate

Director of Graduate Studies

Housing

The Dean of Men or Women

Transcripts — Grades

The Registrar

Important Business by Appointment

Calendar 1963-1964

SUMMER TRIMESTER

Registration Monday, June 3, 1963
Registration and Classes Tuesday, June 4, 1963
Trimester Ends Saturday, September 21, 1963
(Summer School — Monday, June 3 - Saturday, August 24, 1963)

FALL TRIMESTER

Registration Monday, September 30, 1963
Registration and Classes Tuesday, October 1, 1963
Thanksgiving Recess Begins Thursday, November 28, 1963
Thanksgiving Recess Ends 8:00 A. M.
..... Monday, December 2, 1963
Christmas Recess Begins Saturday, December 21, 1963
Christmas Recess Ends 8:00 A. M. Thursday, January 2, 1964
Winter Commencement Saturday, January 25, 1964
Trimester Ends Wednesday, January 29, 1964

SPRING TRIMESTER

Registration Thursday, February 6, 1964
Registration and Classes Friday, February 7, 1964
Spring-Easter Recess Begins Thursday, March 26, 1964
Spring-Easter Recess Ends 8:00 A. M. ... Monday, March 30, 1964
Spring Commencement Saturday, May 23, 1964
Trimester Ends Friday, May 29, 1964

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