

Jeanita Stott

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NORTH CAROLINA

STATE

SUMMER SESSIONS

1964

NORTH CAROLINA STATE
1964 SUMMER SESSIONS
CALENDAR

FIRST SESSION

June 8	Monday	New student orientation.
June 9	Tuesday	Registration and fee payment for regular session. Late registration fee of \$5 payable by all registering after 1 p.m. on June 9
June 10	Wednesday	First day of classes.
June 15	Monday	Last day for registration. Last day to withdraw with refund and last day to drop any course with refund.
June 19	Friday	Last day to drop courses without failure and last day to withdraw without failure.
July 15	Wednesday	Last day of classes.
July 16	Thursday	Final examinations.

SECOND SESSION

July 20	Monday	New student orientation.
July 21	Tuesday	Registration and fee payment. Late registration fee of \$5 payable by all registering after 12:00 noon on July 21.
July 22	Wednesday	First day of classes.
July 27	Monday	Last day for registration. Last day to withdraw with refund and last day to drop any course with refund.
July 31	Friday	Last day to drop courses without failure and last day to withdraw without failure.
August 26	Wednesday	Last day of classes.
August 27	Thursday	Final examinations.

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Professor of Plant Pathology
- SANFORD WINSTON, Ph.D.
Professor of Sociology and Anthro-
pology
- LOWELL S. WINTON, Ph.D.
Professor of Mathematics
- W. G. WOLTZ, Ph.D.
Professor of Soil Science
- T. W. WOOD, Ph.D.
Professor of Economics
- W. W. WOODHOUSE, JR., Ph.D.
Professor of Soil Science
- R. BAKER WYNNE, M.A.
Associate Professor of English
- TALMAGE B. YOUNG, D.Ed.
Associate Professor of Industrial Arts
- B. J. ZONEI, Ph.D.
Edwin F. Conger Distinguished Pro-
fessor of Forest Genetics

DIRECTORS OF SPECIAL PROGRAMS AND ACTIVITIES

AGRICULTURAL EXTENSION

Fred S. Sloan . . . *Program Planning* 109 Ricks Hall

ERDAHL-CLOYD UNION

Henry Bowers . . . *Director* 216 Erdahl-Cloyd Union

COUNSELING

Lyle B. Rogers . . . *Director* 205 Peele Hall

LIBRARY

Harlan C. Brown *Director* 130 D. H. Hill Library

RELIGIOUS ACTIVITIES

Oscar B. Wooldridge . . . *Coordinator* Y. M. C. A.

RESIDENCE HALLS

James S. Fulghum, Jr. . . *Housing Rental
Officer* Leazar Hall

STUDENT ACTIVITIES

Banks C. Talley, Jr. *Director* 204 Peele Hall

STUDENT HEALTH SERVICE

Dr. Joseph J. Combs Clark Hall

STUDENT HOUSING

Norbert B. Watts *Director* 203 Peele Hall

TELEVISION

George Hall *Director* WUNC-TV Building



NORTH CAROLINA STATE

North Carolina State of the University of North Carolina at Raleigh, founded by legislative act on March 7, 1887, first opened its doors to students on October 3, 1889. Since that time, the enrollment has grown from 45 to over 8,000 and the faculty has increased from 6 to approximately 1,000. In 1931, the State's Land Grant College and technological center became part of the University of North Carolina and has since operated as part of a triumvirate that now numbers some 20,000 students.

The major objective of North Carolina State is to provide an opportunity for students to obtain the highest level of scientific and technological training and, concurrently, to offer them facilities for obtaining a broad and general education. In order to achieve this end, N. C. State is organized into eight major instructional divisions or schools: Agriculture and Life Sciences, Design, Education, Engineering, Forestry, Liberal Arts, Physical Sciences and Applied Mathematics, and Textiles, offering undergraduate work in 52 departments. Through the Graduate School, N. C. State provides instruction in some 40 fields leading to the master's degree and in 25 fields leading to the degree of Doctor of Philosophy. The general objectives of the University are also carried out through several institutes and divisions, including the Institute of Statistics, the Agricultural Experiment Station with its 16 test farms, the Agricultural Extension Service, and the General Extension Division.

THE SUMMER SESSIONS

The Summer Sessions at North Carolina State offer an extensive and varied program to fit the educational needs of more than 5,000 students. Fifty departments, with a faculty of almost three hundred, offer work in some three hundred courses, one-third of which are in the area of graduate study and research. Each of State's eight schools provides facilities for summer study; six of the schools offer courses during each of the regular six-week sessions; the School of Design maintains a nine-week program; the School of Forestry conducts a summer camp for sophomores as well as two five-week practicums, and Agricultural Extension offers a three-week program for Extension workers. In addition, special programs and institutes are provided by various departments.

Summer courses and special programs are designed for the undergraduate who wishes to advance his academic standing at N. C. State, for the graduate who needs to continue his study and research during the summer months, for visiting students working toward degrees at other institutions, for teachers earning credit toward the renewal of their certificates or toward advanced degrees in teacher education, and for persons in professional fields who wish to keep abreast of new development and trends. In addition, the Summer Sessions offer the high school student planning to enroll in N. C. State an opportunity to take required sub-college level work in English and mathematics.

In keeping with the growing emphasis on science, the 1964 Summer Sessions have continued to increase the regular offerings in chemistry and have established one of the most comprehensive graduate and undergraduate programs in mathematics and physics available in the Southeast. To meet the needs of a broad, liberal education in the humanities and social sciences, new summer courses have been added in economics, English, history, music, political science, psychology, and sociology. The demand for professional and technical training has been met, not only through the regular summer offerings, but by augmented programs in engineering and textiles. Extensive undergraduate and graduate training has been provided in selected areas of Education, and a comprehensive graduate program has been maintained in the agricultural sciences.

ADMISSION AND REGISTRATION

Students are admitted to the Summer Sessions in one of four categories: (1) new freshmen; (2) new undergraduate transfer students; (3) new graduate students; and (4) summer visitors. Every applicant must complete an application form; it should be submitted at least two weeks prior to the beginning of the session for which application is being made.

NEW FRESHMEN

Application forms for new freshmen should be obtained from the Director of Admissions, Peele Hall.

A new freshmen applicant should be a graduate of a high school and should have completed 16 units, ten of which should be distributed as follows:

- 4 units of English
- 2 units of Algebra
- 1 unit of geometry
- 1 unit of United States History
- 2 units of Science

The remainder of the units will be accepted from other courses, except that not more than one unit will be accepted from activity courses.

New freshmen applicants must take the Scholastic Aptitude Test of the College Entrance Examination Board and have their scores submitted to the Office of Admissions. Information and applications may be obtained by writing to the College Entrance Examination Board, Box 592, Princeton, New Jersey. Scores on the Scholastic Aptitude Test, together with the high school record, will be considered in determining admissibility.

NEW TRANSFER STUDENTS

In addition to submitting an application form which may be obtained from the Director of Admissions, Peele Hall, all transfer students must have official transcripts sent to the Office of Admissions directly from each other college attended.

All applicants for transfer must have an overall "C" average on prior college work and must be eligible to return to the last institution attended.

Transfer students with less than 29 semester hours of transfer credit must also follow the criteria for entering freshmen as outlined above.

GRADUATE STUDENTS

All students working toward advanced degrees are enrolled in the Graduate School. An application for Graduate School admission may be obtained from the Dean of the Graduate School, Peele Hall.

SUMMER VISITORS

A summer visitor is one who is attending North Carolina State during the summer, but who has *not* applied to be a regularly enrolled student working towards a degree. Teachers who are renewing their certificates and undergraduate students from other colleges are two groups of students who often enroll in this category. An application for admission as a summer visitor should be obtained from the Director of the Summer Sessions, Peele Hall.

READMISSION

Former North Carolina State students wishing to attend the Summer Sessions should apply for readmission by writing to the Director of Admissions and Registration for the appropriate form prior to May 31.

PRE-REGISTRATION

Currently enrolled North Carolina State students should indicate their intentions to attend the Summer Sessions by making application at the Summer Sessions Office, Peele Hall between May 4 and May 15.

REGISTRATION

Registration for the First Session for all students will be held at the Reynolds Coliseum on Tuesday, June 9th, from 8:30 A.M. to 1:00 P.M. Registration materials, which include rosters, permits and directions for registration, should be picked up first at the west side of the old Frank Thompson Gymnasium starting at 8:30 A.M.

Registration for the Second Session for all students will be held at the Reynolds Coliseum on Tuesday, July 21, from 8:30 A.M. to 12:00 noon. Registration materials, which include rosters, permits and directions for registration, should be picked up first at the west side of the old Frank Thompson Gymnasium starting at 8:30 A.M.

SPECIAL NOTES

1. Tuition and fees are payable by check or cash on the day of registration. Please have the necessary funds with you.
2. All students planning to take courses in both sessions should plan their sequences well in advance. Offerings in the Second Session are often substantially less in number than in the first, and, in many instances, departments do not offer courses in both sessions of the summer school.
3. Everything possible will be done to ensure that the courses listed in this catalog are given at the times indicated. The Director of the Summer Sessions reserves the right, however, to withdraw courses in which the enrollment is deemed insufficient.

4. **MAXIMUM CREDIT HOURS**—The normal load for either session of the Summer Sessions is six semester hours. Any student may carry less. Loads in excess of seven hours must be approved by the Dean or Director of Instruction of the school in which the student is registered. Such approvals must be in writing on the original copy of the student's Summer Session roster of courses. The maximum load is nine hours for any one session.

EXPENSES

The following expenses apply for each of the regular six-week sessions:

TUITION	— —	\$ 7.50 per semester credit for North Carolina students. \$18.50 per semester credit for out-of-state students. \$ 7.50 for each credit hour audited.
FEES	\$17.00 for registration and other fees. (A late fee of \$5.00 will be charged all students completing their registration after the designated time.)
ROOM	\$36.00 per person (two per room).
BOARD	Board is cafeteria style and the cost depends upon the individual student. A fair estimate would be about \$75.00 per session.
GRADUATION FEE	Any student who is completing requirements for graduation at the close of one of the Summer Sessions will be charged a fee of \$9.00 if he is securing a Bachelor's degree, a fee of \$12.00 if he is completing work for a Master's degree, and a fee of \$17.00 if he is a candidate for the degree of Doctor of Philosophy. The Graduate School will also charge Doctor of Philosophy candidates a fee of \$21.00 for microfilming and mailing dissertations.

Refunds

Tuition and Fees:

A student who withdraws from school on or before the last day for registration will receive a refund of the full amount paid, less \$5 registration fee. On later withdrawals no refund is made.

Room Rent:

If a student vacates his room on or before the last day for registration, the rent paid will be refunded less the \$5.00 room reservation fee or a charge of \$1.00 per day, whichever amount is greater, from the first day of the registration period to the date of cancellation. After the last day for registration, no refund will be made for any reason other than official withdrawal from school. In such cases, the rent paid will be refunded, less a charge of \$1.00 per day from the first day of the registration period to the date of cancellation. Room and mail box keys must be returned to the Housing Rental Office before refund of rent will be made. No key deposit required. Occupants not returning keys at end of rental period are assessed a charge of \$5.00.

RESIDENCE HALLS

BRAGAW Hall and possibly the new nine-story residence hall will be available for occupancy during the Summer Sessions. Accommodations will be provided for both men and women during each of the regular sessions. Bed linen, blankets and pillows are not furnished; however, linen rental service is available at a cost of \$5.00 for each regular Summer Session. Students will normally be housed two in each room. Janitorial service, supplied by the University, does not include the making of beds. Single rooms are not available.

A card for requesting a residence hall room for the regular Summer Sessions and linen rental service will be found among the cards mailed to applicants for admission instructions on both sides of the residence hall card should be noted.

Residence halls are supervised by counselors, employed to assist residents, develop and maintain satisfactory study conditions, enforce University regulations, and ensure proper use of University facilities.

University housing regulations are posted in each room. It is each occupant's responsibility to read and comply with residence hall regulations. Failure to do so may result in extra charges or disciplinary action.

Persons attending *special* summer programs, such as, Agriculture Extension and other special groups, should contact the director of their particular program for housing information.

LINEN RENTAL SERVICE

This is an additional service the University is offering this year. The service provides an initial issue of linen—two sheets, one pillow case, three bath towels, and a complete change each week during the Summer Session. Students using this service need not purchase or bring these items. The service is available to all students at a cost of \$5.00 per Summer Session. Application for this service is included on the

residence hall room reservation card and should be mailed to the Office of Business Affairs.

THE LIBRARY

The D. H. Hill Library of North Carolina State houses a collection of more than 290,000 volumes of books and bound journals. The collection has been developed to reflect the scientific and technical interests of N. C. State but materials in the arts and social sciences are also well represented. The Library subscribes to more than 4,200 current periodicals and contains over 21,000 bound volumes of documents from the Federal Government and the various Experiment Stations. The Library has been designated as one of the depositories for all unclassified publications of the Atomic Energy Commission and receives on exchange the publications of many foreign countries—especially those publications dealing with the agricultural sciences and with engineering.

A new, modern library building provides shelving for 400,000 volumes. Study carrels, conference rooms, and seminars are available for the students and faculty of N. C. State. Equipment for the production of photographic copies and for microphotography is available and there is excellent equipment on hand for reading microfilms and microcards.

Students and faculty will find the Library a useful and enjoyable adjunct to their Summer Sessions program, and will find the materials and services afforded to scholar, student, and browser a welcome discovery.

Library hours for the Summer Sessions are as follows:

Monday through Friday, 8:00 A.M. to 10:00 P.M. and Saturday, 8:00 A.M. to 1:00 P.M.

ERDAHL-CLOYD UNION

The center of summer activity is the Erdahl-Cloyd Union, one of the nation's most modern campus centers. All students on the campus are members and are invited to attend, free of charge, all programs sponsored by the Summer Sessions committee. Every member is welcome to join the committee and take part in planning the Union program.

During the summer, the Union sponsors a variety of entertainment. Activities will include parties, dances, movies, and a varied program of professional entertainment.

The completely air-conditioned Union offers many facilities and services to members and their guests. Facilities for recreation and leisure include a music-listening lounge, a television lounge, a gallery for the display of art and craft, a library lounge and a billiard room.

Services include a barber shop, cloak room, snack bar, dining room, hotel rooms and meeting rooms.

Building hours are:

Monday-Saturday	7:00 A.M. to 11:00 P.M.
Sunday	4:30 P.M. to 11:00 P.M.

NEW BUILDINGS

The varied programs offered in the Summer Sessions are being enhanced by the addition of new structures on the campus.

The huge William D. Carmichael Gymnasium houses such gymnasium facilities as a swimming pool, 25 meters by 25 yards in size; 10 four-wall handball courts; six squash courts; and games area. In addition, the building provides space and equipment for wrestling, boxing, weight-lifting, and other gymnastics, a golf room and a correctives room.

The ultra-modern Student Supply Store offers books to whet diversified appetites. The reading material ranges from 25-cent paperbacks to the latest engineering encyclopedia. The spacious store, which contains 21,000 square feet, is completely air-conditioned.

Bragaw is one of the most modern residence halls on any campus. All corridors in this well-designed building are on the outside. They open into suites, each with accommodations for eight students. The building includes a counselor's office, student lounges, recreation rooms, mail rooms, a laundry station, and a snack bar.

A nine-story residence hall is under construction and may be available for the 1964 Summer Sessions. Room and suite arrangement is similar to Bragaw Hall.

Harrelson Hall offers something new and different in classroom buildings; it is a circular structure, approximately 206 feet in diameter. Colossal Harrelson Hall accommodates 4,500 students at a time in classes ranging from 30 to 200 students. More than half of the Summer Sessions' classes will be taught in this modern, air-conditioned building.

The New Cafeteria is located near the west dormitory complex. The new cafeteria has a seating capacity of 638 and can feed 1,435 persons at one meal.

General Laboratories Building is primarily for the use of statistics and physics. This new seven-story building adjoins Harrelson Hall.

Three of the 12 fraternity houses making up the "new fraternity row" at North Carolina State were occupied in February. The remaining nine houses are scheduled to be completed and occupied during March, April and May. The entire complex will house 480 students.

Occupied during the latter part of December, 1963, Mann Hall is





the new home of civil engineering. It was designed specifically for this area of study and research.

The L-shaped addition to Polk Hall was completed and occupied in 1963. It is the new home of Animal Science of the School of Agriculture and Life Sciences.

PART-TIME EMPLOYMENT

Part-time employment is often available in Raleigh and vicinity during the summer for those willing to do whatever work is called for or for those having certain skills. While job opportunities for young men are fairly good, opportunities for women students are limited. No student should depend on earning enough money to cover tuition and living expenses, however. Because of less crowded class schedules, competition for the available jobs is much keener than during the regular term. Moreover, many campus agencies that hire a number of student workers during the year require less staff in the summertime due to the decreased enrollment.

The Student Employment Office, which operates as an integral part of the Financial Aid Office, receives job orders from various sources on the campus and in Raleigh. The jobs more commonly listed with this office in recent summers have been in the following areas: gardening, clerical, house cleaning, waiters, laboratory and tutoring. N. C. State cannot attempt to assign jobs in advance of registration. After that time students should visit the Student Employment Office, 205 Peele Hall, and consult the list of current job openings.

SPECIAL SESSIONS AND PROGRAMS

AGRICULTURAL EXTENSION SERVICE JUNE 29 - JULY 17

North Carolina State offers a special three week training program for Extension workers. The program, established at the request of the Extension workers, is designed to give them an opportunity to pursue courses of study that will improve their ability in their chosen field of endeavor.

Persons participating in this program will be enrolled in the School of Agriculture and Life Sciences. Eight, three credit hour courses will be offered. All except one will be taught at the graduate level. Each participant will take only one course. Persons desiring graduate credit may register as a "graduate special" or make application for admission to Graduate School.

Further information relative to courses offered, registration, and housing may be obtained from F. S. Sloan, State Program Leader, State College Station, Raleigh, N. C.

SUMMER READING WORKSHOP

The annual Summer Reading Workshop sponsored by the School of Education will provide a reading improvement section for entering college students during the *First Session*. Scores on college entrance tests indicate that a number of incoming freshmen could benefit from training in the improvement of reading rate, comprehension, and vocabulary building.

Entering college students who are interested in registering for this training, for which there is a small fee, should contact Dr. Paul Rust Tompkins 212, Director of the Reading Workshop. The Workshop will meet hourly sessions on Monday, Wednesday, and Friday mornings.

INSTITUTE IN BIOLOGY FOR HIGH SCHOOL TEACHERS JUNE 8 - JULY 17

The Department of Science and Mathematics Education and the Institute of Biological Science are offering a program of advanced instruction for high school teachers of biology. The Institute is sponsored by the National Science Foundation and is intended to prepare the participants for the teaching of modern biology in the high schools.

The major part of the program will consist of two new courses developed especially for the Institute: (1) Foundations of Modern Biology; (2) Foundations of Ecology. These two courses will give emphasis to major biological concepts, an understanding of which will be necessary for the development and teaching of a modern high

school biology course. Another important feature of the Institute will be the Evening Lecture Series. Each week an outstanding scientist will present an evening lecture on a current topic in basic and applied biology. This Institute will stress the association of the teacher with a research environment that can be illustrated by the faculty, courses, and seminars, and it is hoped that this can then be transmitted to the high school students. Those individuals selected to attend will be highly screened and emphasis in selection placed on the likelihood that they will pursue the necessary advanced study to become effective in modernizing the biology teaching in the high school curriculum. Graduate credit will be allowable in the two courses to be offered in the program.

Stipends, travel and dependency allowances will be provided from the National Science Foundation support. Application forms are obtainable from the Director, Institute of Biological Sciences and the Department of Science and Mathematics, School of Education, North Carolina State of the University of North Carolina at Raleigh. Forty participants are to be selected to receive the stipend awards.

SCHOLARSHIP PROGRAM IN LIBERAL ARTS FOR NORTH CAROLINA PUBLIC SCHOOL TEACHERS

A scholarship program in liberal arts is to be sponsored by the Special In-Service Teacher Education Program of the State Department of Public Instruction and conducted by North Carolina State. Teachers may participate in this program in either session. Its purpose is to provide opportunities for a selected group of teachers to upgrade their knowledge and broaden their cultural backgrounds.

Certain courses in English, social studies, and the humanities, which are listed below, are being offered tuition free to teachers who are under contract to a local board of education in North Carolina for 1964-65. Participants will receive a refund for tuition for each semester hour completed in approved courses. The registration fee will also be refunded to applicants who complete three or more semester hours in approved courses.

Application forms and additional information can be obtained from the Director of the Summer Sessions. Applicants should indicate Certificate Field (elementary, secondary, administrative, etc.) and Class of Certificate (C, A, or below A) on applications. Each applicant should request the employing superintendent for 1964-65 to write to Dr. Jack Suberman, Director of Summer Sessions, recommending the applicant's participation and certifying that he is under contract for 1964-65.

EC 201
EC 202

CN 301
HI 205

PS 202
PS 401

EC 205	HI 245	PS 442
ENG 205	HI 246	MU 200
ENG 261	HI 251	PHI 201
ENG 262	HI 252	PHI 205
ENG 265	HI 261	SOC 202
ENG 266	HI 306	SOC 303
ENG 353	HI 325	SS 301
ENG 371	HI 326	SS 302
ENG 468	HI 412	SS 491
ENG 485	PS 201	SS 492

COURSES OFFERED

1. Courses are listed by department, IBM symbol and numerical designator.
2. Semester hour credits for each course are given in parenthesis following the name of the course. An "X" after the semester hours indicate that the course carries no college credit.
3. Classes meet daily, Monday through Friday, except where specified to the contrary.
4. The symbols "LR" and "LB" before the clock hours refer to Lecture Recitation and Laboratory hours, respectively. If there is no symbol before the clock hours, Lecture-Recitation is implied.
5. Courses numbered from 1 through 100 are preparatory courses carrying no college credit; courses in the 100, 200, 300 and 400 series are primarily designed for undergraduates; courses in the 500 series for graduates and advanced undergraduates; and courses in the 600 series for graduates only.

AGRICULTURAL ECONOMICS

- AGC 413 Farm Appraisal and Finance (3) Prerequisite: AGC 303
First Session. LR 8:00-9:30 LB Arranged Neuman
- AGC 699 Research in Agricultural Analysis (Arranged) Prerequisite: Graduate Standing
First Session. Hours arranged. Staff

AGRICULTURAL ENGINEERING

- AGE 411 Farm Power and Machinery (3) Prerequisite: AGE 211
First Session. LR 10:20-11:50 MTW LB 1:40 5:50 MW Howell
- AGE 551 Special Problems (Arranged) Prerequisite: Senior or graduate standing in Agricultural Engineering
Both sessions. Hours arranged. Staff
- AGE 699 Research in Agricultural Engineering (Arranged) Prerequisite: Graduate standing in Agricultural Engineering
Both sessions. Hours arranged. Staff

ANIMAL SCIENCE

- ANS 507 Topical Problems in Animal Science (Arranged)
Both sessions. Hours arranged. Staff
- ANS 600 Research in Animal Science (Arranged)
Both sessions. Hours arranged. Staff

INSTITUTE OF BIOLOGICAL SCIENCES

- BS 501 Foundation of Modern Biology (3) Prerequisites: Eighteen Semester Hours in Biology Sciences and Consent of Selection Committee
First Session. LR 8:00-9:30 MTTF Manly
LB 1:00-4:00 W Staff
- BS 502 Foundations of Ecology (3) Prerequisites: Eighteen Semester Hours in Biological Sciences and Consent of Selection Committee
First Session. LR 10:20-11:50 MTTF Connell
LB 1:00-4:00 Th Staff

BOTANY AND BACTERIOLOGY

- BO 641 Research in Bacteriology (Arranged)
Both sessions. Hours arranged. Staff
- BO 651 Research in Botany (Arranged)
Both sessions. Hours arranged. Staff

CHEMICAL ENGINEERING

CHE 205	Chemical Process Principles (4) Prerequisites: MA 102, CH 103	
	<i>First Session.</i> LR 8:00-9:30 LB Arranged	Staff
CHE 307	Introductory Chemical Engineering (3) Prerequisite: CHE 205	Staff
	<i>Second Session.</i> 8:00-9:30	
CHE 412	Unit Operations II (3) Prerequisite: CHE 411	
	<i>First Session.</i> LR 8:00-9:30 MWF LB 8:00-10:10 TTh	Marsland
CHE 470	Chemical Engineering Projects (2) Elective for seniors in Chemical Engineering	
	<i>Both sessions.</i> Hours arranged.	Staff
CHE 570	Chemical Engineering Projects (1-3) Prerequisite or corequisite: CHE 412	Staff
	<i>Both sessions.</i> Hours arranged.	Staff
CHE 690	Readings in Chemical Engineering (Arranged)	Staff
	<i>Both sessions.</i> Hours arranged.	Staff
CHE 699	Research (Arranged)	Staff
	<i>Both sessions.</i> Hours arranged.	Staff

CHEMISTRY

CH 101	General Chemistry I (4)	
	<i>Both sessions.</i> LR 7:30-9:00 LB 1:40-5:50 MW	Staff
CH 103	General Chemistry II (4) Prerequisite: CH 101	Staff
	<i>First Session.</i> LR 10:20-11:50 LB 1:40-5:50 TTh	Staff
	<i>Second Session.</i> LR 7:30-9:00 LB 1:40-5:50 TTh	Staff
CH 105	General Inorganic Chemistry (4)	
	<i>First Session.</i> LR 7:30-9:00 LB 1:40-5:50 MW	Staff
CH 107	General Chemistry and Qualitative Analysis (4) Prerequisite: CH 105	Staff
	<i>Both sessions.</i> LR 10:20-11:50 LB 1:40-5:50 TTh	Staff
CH 215	Quantitative Analysis (4) Prerequisite: CH 103	
	<i>First Session.</i> LR 10:20-11:50 LB 1:40-5:50 TTh	Staff
CH 220	Introductory Organic Chemistry (4) Prerequisite: CH 103	
	<i>First Session.</i> LR 7:30-9:00 LB 1:40-5:50 TTh	Staff
CH 221	Organic Chemistry I (4) Prerequisite: CH 107 or CH 103	
	<i>First Session.</i> LR 7:30-9:00 LB 1:40-5:50 MW	Staff
CH 223	Organic Chemistry II (4) Prerequisite: CH 221	
	<i>Second Session.</i> LR 7:30-9:00 LB 1:40-5:50 MV	Staff
CH 231	Introductory Physical Chemistry (4) Prerequisites: CH 103 and MA 112	
	<i>First Session.</i> LR 10:20-11:50 LB 1:40-5:50 TTh	Staff
CH 351	Introductory Biochemistry (3) Prerequisite: CH 220	
	<i>First Session.</i> LR 10:20-11:20 LB 1:40-5:50 TTh	Staff
CH 431	Physical Chemistry I (3) Prerequisites: CH 107, MA 202 and PY 202	
	<i>First Session.</i> 7:30-9:00	Staff
CH 433	Physical Chemistry II (3) Prerequisites: CH 107, MA 202, and PY 202	
	<i>Second Session.</i> 7:30-9:00	Staff
CH 631	Chemical Research (Arranged) Prerequisites: Forty semester credits in chemistry; Open to all graduates.	
	<i>Both sessions.</i> Hours arranged.	Staff

CIVIL ENGINEERING

CE 201	Engineering Measurements (3)	
	<i>First Session.</i> LR 8:00-9:00 LB 1:40-5:50 TTh	Staff
CE 324	Structural Analysis I (3) Prerequisites: EM 200; Corequisite: EM 301	
	<i>First Session.</i> LR 8:00-9:00 LB 1:40-5:50 MW	Staff
CE 332	Structural Materials II (3)	
	<i>First Session.</i> LR 9:10-10:10 LB 1:40-5:50 TTh	Staff
CE 382	Hydraulics (3) Prerequisite: EM 200	
	<i>First Session.</i> 10:20-11:50	Staff

CE 698 Civil Engineering Research (1-6)
Both sessions. Hours arranged.

Staff

CROP SCIENCE

- CS 521 Special Problems (Arranged) Prerequisite: Students admitted with consent of instructor.
Both sessions. Hours arranged. Staff
- CS 542 Plant Breeding Field Procedures (2) Prerequisite: CS 541 or GN 541 or HS 541
Conducted on an arranged basis during the entire summer, terminating approximately Sept. 15. Students should register for the course First Session noting it as a 12-week course. Staff
- CS 641 Research (Arranged) Prerequisite: Graduate standing
Both sessions. Hours arranged. Staff

DESIGN

(These courses start First Session and run for nine weeks.)

- DN 102 Design II (4) Required of first year students in the School of Design
1:40-5:50 MTWTF
- DN 112 Descriptive Drawing II (2) Required of first year students in the School of Design
1:40-4:50 MWF Staff
- DN 212 Descriptive Drawing IV (2) Prerequisite: DN 112. Required of second year students in the School of Design
1:40-4:50 MWF Staff
- DN 312 Advanced Descriptive Drawing II (2) Prerequisite: DN 212. Required of third year students in the School of Design
1:40-4:50 MWF Staff

ECONOMICS

- EC 201 Economics (3)
First Session. 8:00-9:30, 10:20-11:50
1:30-3:00 Dow Olsen
Second Session. 8:00-9:30 El Kammash
1:30-3:00 Shen or Taylor
- EC 202 Economics (3)
Second Session. 8:00-9:30 Shen
- EC 205 The Economic Process (3)
First Session. 8:00-9:30, 10:20-11:50 Harrell
Second Session. 10:20-11:50 El-Kammash
- EC 312 Accounting for Engineers (3)
First Session. 8:00-9:30
10:20-11:50 Thompson
Second Session. 8:00-9:30 Thompson/Taylor
Taylor ~~Fair~~
- ~~EC 401 Principles of Accounting (3)~~
First Session. LR 10:20-11:50 LB Arranged Thompson
- E:3/3 ~~EC 402 Principles of Accounting (3)~~
Second Session. LR 10:20-11:50 LB Arranged Ufen
- EC 407 Business Law I (3) Prerequisite: EC 201 or EC 205 Hunt
- EC 409 Introduction to Production Costs (3) Prerequisite: EC 312 Taylor ~~Fair~~
- ~~EC 420 Corporation Finance (3)~~
First Session. 8:00-9:30 Ufen
- EC 425 Industrial Management (3) Prerequisite: Junior standing Wood
Second Session. 8:00-9:30
- EC 420 Corp. Finance (3)
2nd SS 8-9:30 ufen 27

- EC 426 Personnel Management (3) Prerequisite: Junior Standing
Second Session. 10:20-11:50 Wood
- EC 431 Labor Problems (3) Prerequisite: Junior standing
First Session. 10:20-11:50 Bartley
- EC 432 Industrial Relations (3) Prerequisite: Junior standing
First Session. 8:00 9:30 Bartley
- EC 490 Senior Seminar in Economics (3) Prerequisite: Consent of instructor
First Session. Hours arranged. Olsen
- EC 502 Money, Income, and Employment (3) Prerequisite: EC 302 or EC 501
 or equivalent
Second Session. Hours arranged. Shen

EDUCATION

- ED 100 Introduction to Industrial Education (2)
First Session. 8:00 9:30 MTWTh Visiting Prof.
- ED 305 Analysis of Technical Education Programs and Course Construction (3)
 Prerequisites: ED 100 and advanced undergraduate standing
First Session. 10:20-11:50 Oleson
- ED 308 Visual Aids (2)
Both sessions. LR 12:30-2:00 MW LB 2:00-4:00 MW or TTh Bryant
- ED 344 Secondary Education (2)
Both sessions. 10:20-11:20 Bryant
- ED 405 Industrial and Technical Education Shop and Laboratory Planning (3)
 Prerequisites: Senior standing and 6 hours of drawing or design.
First Session. 12:00-1:30 Oleson
- ED 410 Driver Education (3)
First Session. LR 8:00-9:00 LB Arranged Crawford
Second Session. LR 8:00-9:00 LB Arranged Staff
- ED 502 Analysis of Reading Abilities (3) Prerequisite: Six hours in Education or
 Psychology
First Session. 8:00 9:00 Rust
- ED 503 Improvement of Reading Abilities (3) Prerequisite: Six hours in Educa-
 tion or Psychology
First Session. 10:20-11:50 Rust
- ED 520 Personnel and Guidance Services (3) Prerequisites: Graduate standing and
 6 hours of Education or Psychology
Second Session. 8:00-9:00 Visiting Prof.
- ED 521 Organization of Related Study Materials (3) Prerequisite: ED 422
First Session. 8:00 9:30 Smith, Hanson
- ED 524 Occupational Information (3) Prerequisites: Six hours of Education or
 Psychology, ED 420 or equivalent
Second Session. 10:20-11:50 Visiting Prof.
- ED 527 Philosophy of Industrial and Technical Education (3) Prerequisites:
 ED 422, 440
First Session. 10:20-11:50 Nerden
- ED 528 Principles and Practices in Industrial Cooperative Training (3) Pre-
 requisites: ED 422, 440
First Session. 12:00-1:30 Smith, Hanson
- ED 529 Curriculum Materials Development (3) Prerequisite: ED 525
First Session. 12:00-1:30 Hanson
- ED 530 Group Guidance (3) Prerequisites: Six hours of Education or Psychology,
 ED 420 or equivalent
First Session. 8:00 9:30 Morehead
- ED 533 Organization and Administration of Guidance Services (3) Prerequisites:
 Graduate standing, ED 420 or equivalent
First Session. 10:30 11:50 Morehead
- ED 556 Special Problems in Teaching (3) Prerequisite: ED 411 and approval of
 instructor
Both sessions. Hours arranged. Bryant, Scarborough

→ approved for Asheville, N.C. June 22 - Aug. 14
- W. J. G. 5/1/64

- ED 563 Effective Teaching (3) Prerequisite: Twelve hours in Education
First Session. 10:20-11:50 Scarborough
- ED 591 Special Problems in Industrial Education (Max. 3) Prerequisites: Six hours of graduate credit and permission of department head.
First Session. Hours arranged. Staff
Second Session. Hours arranged. Hanson
- ED 609 Planning and Organizing Technical Education Programs (3) Prerequisites: PSY 304, ED 344, 420, 440, and 516
First Session. 8:00-9:30 Nerden
- ED 615 Introduction to Educational Research (3) Prerequisite: Twelve hours in Education
First Session. 8:00-9:30 Chansky
- ED 619 Seminar in Industrial Arts (1) Prerequisite: Graduate Standing
First Session. Hours arranged Young
- ED 621 Research in Agricultural Education (3)
Both sessions. Hours arranged Scarborough
- ED 624 Research in Industrial Arts Education (Max. 6) Prerequisites: Eighteen credits in Education, permission of instructor
Both sessions. Hours arranged. Young
- ED 626 Seminar in Industrial Education (Max. 2) Prerequisite: Graduate standing or permission of the instructor
First Session. Hours arranged. Staff
- ED 633 Techniques of Counseling (3) Prerequisites: Nine hours from following fields—Economics, Education, Psychology, or Sociology
First Session. 8:00-9:30 Anderson
- ED 635 Administration and Supervision of Industrial Arts (2) Prerequisite: Twelve hours in Education
First Session. 10:20-11:20 Young
- ED 641 Laboratory and Practicum Experiences in Counseling (3) Prerequisite: Advanced graduate standing
First Session. Hours arranged. Anderson
- ED 651 Research in Occupational Information and Guidance (3) Prerequisite: Advanced graduate standing
First Session. Hours arranged. Anderson
- ED 699 Research in Industrial Education (Max. 6) Prerequisites: Eighteen credits in Education and permission of instructor
Both sessions. Hours arranged. Hanson

ELECTRICAL ENGINEERING

- EE 202 Elementary Circuits and Fields (2) Prerequisites: EE 201, MA 201. Required of Sophomores in Electrical Engineering
(Offered only in a 12-week sequence. The course counts for 2 semester hours in calculating loads for each session. Students should register for 2 semester hours at registration for each Session, noting the 12-week sequence on their rosters.)
Both sessions. LR 9:10-10:10 or 10:20-11:20 Seagraves
LB 1:40-3:50 MW, TTh, or MTh Seagraves
- EE 213 Elementary Circuits and Fields Lab (1)
First Session. LB 1:40-3:50 MTh Seagraves
- EE 332 Principles of Electrical Engineering (4)
First Session. LR 8:00-9:30 LB 1:40-4:20 MW or TTh Connelly
- EE 430 Essentials of Electrical Engineering (4)
Second Session. LR 8:00-9:30 LB 1:40-4:20 TTh Connelly
- EE 440 Fundamentals of Digital Systems (3)
First Session. 10:20-11:50 Hoyle
- EE 650 Electrical Engineering Research (Arranged) Prerequisites: Graduate standing in Electrical Engineering and approval of adviser.
Second Session. Hours arranged. Staff

EE 699 Electrical Engineering Research (Arranged)	Staff
<i>First Session.</i> Hours arranged.	
Thesis Preparation (Arranged)	Staff
<i>Both sessions.</i> Hours arranged.	

ENGINEERING MECHANICS

EM 200 Introduction to Mechanics (3) Corequisite: MA 301	Staff
<i>Both sessions.</i> 8:00-9:30, 10:20-11:50	
EM 211 Introduction to Applied Mechanics (3)	Staff
<i>First Session.</i> 10:20-11:50	
EM 212 Mechanical Engineering Materials (3)	Staff
<i>Second Session.</i> 10:20-11:50	
EM 301 Solid Mechanics I (3) Prerequisite: EM 200	Staff
<i>Both sessions.</i> 8:00-9:30, 10:20-11:50	
EM 303 Fluid Mechanics I (3) Prerequisite: EM 200	Staff
<i>Both sessions.</i> 8:00-9:30, 10:20-11:50	
EM 698 Special Topics in Mechanics (3)	Staff
<i>Both sessions.</i> Hours arranged.	
EM 699 Research in Mechanics (Arranged)	Staff
<i>Both sessions.</i> Hours arranged.	

ENGLISH

ENG 100 Refresher English (3x)	Staff
<i>Both sessions.</i> 8:00-9:30	Staff
<i>First Session.</i> 10:20-11:50	
ENG 111 Composition and Rhetoric (3) Required of all freshmen	Staff
<i>Both sessions.</i> 8:00-9:30, 10:20-11:50	
ENG 112 Composition and Reading (3) Required of all freshmen	Staff
<i>Both sessions.</i> 8:00-9:30, 10:20-11:50	
ENG 205 Reading for Discovery (3)	Staff
<i>Both sessions.</i> 8:00-9:30, 10:20-11:50	
ENG 211 Business Communications (3) Prerequisite: ENG 112	Davis
<i>First Session.</i> 8:00-9:30	
ENG 231 Basic Speaking Skills (3) Prerequisite: ENG 112	Paget
<i>First Session.</i> 8:00-9:30	Porter
10:20-11:50	Wynne
<i>Second Session.</i> 8:00-9:30	Fountain
10:20-11:50	
ENG 261 English Literature (I) (3)	Toole
<i>First Session.</i> 8:00-9:30	
ENG 262 English Literature (II) (3)	Koonce
<i>Second Session.</i> 8:00-9:30	
ENG 265 American Literature I (3)	Eldridge
<i>First Session.</i> 10:20-11:50	
ENG 266 American Literature II (3)	Kincheloe
<i>Second Session.</i> 10:20-11:50	
ENG 321 Scientific Writing (3) Prerequisite: Junior or Senior standing	Dandridge
<i>First Session.</i> 10:20-11:50	
ENG 353 The Romantic Period (3)	Williams
<i>First Session.</i> 8:00-9:30	
ENG 371 The Novel (3)	Staff
<i>Second Session.</i> 8:00-9:30	
ENG 468 Major American Writers (3)	Halperen
<i>First Session.</i> 8:00-9:30	
ENG 485 Shakespeare (3)	Champion
<i>Second Session.</i> 10:20-11:50	

ENTOMOLOGY

- ENT 590 Special Problems (Arranged) Prerequisites: Graduate standing and consent of the instructor. Staff
Both sessions. Hours arranged.
- ENT 699 Research in Entomology (Arranged) Prerequisite: Graduate standing in Entomology or closely allied fields. Staff
Both sessions. Hours arranged.

EXPERIMENTAL STATISTICS

- ST 361 Introduction to Statistics for Engineers I (3) Prerequisite: College Algebra Staff
First Session. 7:30-9:00
- ST 511-S Experimental Statistics I (3) Prerequisite: ST 311 or equivalent or graduate standing Staff
First Session. 8:00-9:30
- ST 512-S Experimental Statistics II (3) Prerequisite: ST 511-S or equivalent Staff
Second Session. 8:00-9:30
- ST 661 Advanced Special Problems (1-3) Prerequisites: ST 502 or equivalent; ST 522 and/or Staff
ST 691 Research (Arranged)
Both sessions. Hours arranged.

FOOD SCIENCE

- FS 691 Special Research Problems in Food Science (Arranged) Staff
Both sessions. Hours arranged.
- FS 690 Research in Food Science (Arranged) Staff
Both sessions. Hours arranged.

99 OK

FORESTRY

- FOR 204 Silviculture (3) Duffield, Maki
First Session. 8:00-5:00 Perry, Grad. As.
Second Session. 8:00-5:00
- FOR 205 Wood Machining Practicum (1) Gilmore
First Session. 8:00-5:00
- FOR 206 Wood Drying Practicum (1) Carter
First Session. 8:00-5:00
- FOR 207 Gluing Practicum (1) Rice
First Session. 8:00-5:00
- FOR 208 Wood Finishing Practicum (1) Carter
First Session. 8:00-5:00
- FOR 209 Plant Inspections (1) Carter
First Session. 8:00-5:00
- FOR 210 Mensuration Practicum (2) Carter
Second Session. 8:00-5:00
- FOR 211 Logging and Milling Practicum (2) Carter
Second Session. 8:00-5:00
- FOR 212 Graphic Methods (1) Carter
Second Session. 8:00-5:00
- FOR 264 Protection (3) Farrier, Kelman, Bryant
First Session. 8:00-5:00 Bryant and Grad. Asst.
Second Session. 8:00-5:00
- FOR 274 Mapping and Mensuration (3) Bryant, Lammi, Grad. Asst.
First Session. 8:00-5:00
- FOR 284 Utilization (1) Staff
Second Session. 8:00-5:00
- FOR 591 Forestry Problems (1-5) Prerequisite: Senior or graduate standing Staff
First Session. Hours arranged.

- FOR 601 Advanced Forestry Management Problems (1-5) Prerequisite: Graduate Standing
Both sessions. Hours arranged. Staff
- FOR 601 Problems in Research (1-5)
Both sessions. Hours arranged. Staff

GENETICS

- GN 301 Genetics of Human Affairs (3)
First Session. 8:00-9:30 Bostian
- GN 661 Research in Genetics (Arranged) Prerequisite: Graduate standing
First Session. Hours arranged. Graduate Staff
- GN 671 Special Problems in Genetics (1-3) Prerequisites: Advanced graduate standing and consent of instructor
First Session. Hours arranged. Graduate Staff

HISTORY AND POLITICAL SCIENCE

- HI 205 Modern Western World (3)
First Session. 8:00-9:30 Staff
- HI 245 History of European Civilization (3)
First Session. 8:00-9:30 Barnhardt
- HI 246 History of European Civilization (3)
Second Session. 8:00-9:30 Brown
- HI 251 The United States Through Reconstruction (3)
First Session. 10:20-11:50 Kolb
- HI 252 The United States Since Reconstruction (3)
Second Session. 10:20-11:50 Seegers
- HI 261 The United States in Western Civilization (3)
Second Session. 8:00-9:30 Seegers
- HI 306 North Carolina History (2)
First Session. 10:20-11:50 Barnhardt
- HI 325 Modern Europe (3)
First Session. 10:20-11:50 Staff
- HI 326 Modern Europe (3)
Second Session. 10:20-11:50 Brown
- HI 412 Recent United States History (3)
First Session. 8:00-9:30 Kolb
- PS 201 The American Governmental System (3)
First Session. 8:00-9:30 Staff
- PS 202 County and Municipal Government (3)
Second Session. 10:20-11:50 Leach
- PS 401 American Parties and Pressure Groups (3)
First Session. 10:20-11:50 Staff
- PS 442 Government and Planning (3)
Second Session. 8:00-9:30 Leach

HORTICULTURAL SCIENCE

- HS 301 Plant Propagation (3) Prerequisite: BO 103
First Session. L.R. 8:00-9:00 L.B. 1:40-4:20 MW Staff
- HS 501 Research Principles (3) Prerequisite: Permission of instructor
First Session. Hours arranged. Staff
- HS 641 Research (Arranged) Prerequisite: Graduate standing in Horticulture, consent of chairman
First Session. Hours arranged. Staff

INDUSTRIAL ARTS

- IA 102 Fundamentals of Materials and Processes (4)
First Session. 7:00-10:10 Meosky, Moeller

IA 210 Metal Technology (4)
 1st Session 10:20-11:50

IA 105 Drafting (4) Second Session. 7:00-10:10	Troxler
IA 109 Wood Processing (4) First Session. 10:20-1:30	Meosky
IA 205 Industrial Arts Design (2) Prerequisites: IA 104, IA 107, IA 206 Second Session. 10:20-11:50	Troxler
IA 207 Metal Processing II (3) Prerequisite: IA 206 First Session. 10:20-1:00	Moeller
IA 312 Electricity-Electronics (4) First Session. 7:00-10:10	Young
IA 510 Design for Industrial Arts Teachers (3) Prerequisites: Six hours of drawing and IA 205 or equivalent First Session. 1:40-4:20	Papanek
IA 570 Laboratory Problems in Industrial Arts (Max. 6) Prerequisites: Senior standing, permission of instructor. Both sessions. Hours arranged.	Staff
IA 575 Special Problems in Industrial Arts (Max. 6) Prerequisite: One term of student teaching or equivalent Both sessions. Hours arranged.	Staff
ED 624 Research in Industrial Arts Education (Max. 6) Both sessions. Hours arranged.	Staff
ED 635 Administration and Supervision of Industrial Arts (2) First Session. 10:20-11:20	Young

INDUSTRIAL ENGINEERING

IE 591 Project Work (Arranged) First Session. Hours arranged.	Anderson
IE 699 Industrial Engineering Research (Arranged) First Session. Hours arranged.	Anderson

MATHEMATICS

MA 2 Review Algebra (4x) Both sessions. 8:00-10:10	Staff
MA 4 Solid Geometry (2x) First Session. 10:20-11:20	Staff
MA 102 Analytic Geometry and Calculus I (4) Prerequisite: MA 101 Both sessions. 8:00-10:10, 10:20-12:30	Staff
MA 111 Algebra and Trigonometry (4) Both sessions. 8:00-10:10, 10:20-12:30	Staff
MA 112 Analytic Geometry and Calculus A (4) Prerequisite: MA 111 or MA 101 Both sessions. 10:20-12:30	Staff
MA 122 Mathematics of Finance (4) Prerequisite: MA 101 or MA 111 First Session. 8:00-10:10	Staff
MA 201 Analytic Geometry and Calculus II (4) Prerequisite: MA 102 (with a minimum grade of C.) Both sessions. 8:00-10:10, 10:20-12:30	Staff
MA 202 Analytic Geometry and Calculus III (4) Prerequisite: MA 201 Both sessions. 8:00-10:10, 10:20-12:30	Staff
MA 301 Differential Equations I (3) Prerequisite: MA 202 Both sessions. 8:00-9:30, 10:20-11:50	Staff
MA 302 Theory of Equations (3) Prerequisite: MA 202 Second Session. 10:20-11:50	Staff
MA 401 Intermediate Differential Equations (3) Prerequisite: MA 301 First Session. 8:00-9:30 Second Session. 10:20-11:50	Staff Staff
MA 403 Fundamental Concepts of Algebra (3) Prerequisite: MA 202 or MA 212 First Session. 10:20-11:50	Staff
MA 405 Introduction to Determinants and Matrices (3) Prerequisite: MA 202 or MA 212 Both Sessions. 10:20-11:50	Staff

MA 211 Anal Geom & Calc B (3)
 1st SS 10:20-11:50

MA 421	Theory of Probability I (3) Prerequisite: MA 301 or consent of department	
	<i>First Session.</i> 12:00-1:30	Staff
MA 433	History of Mathematics (3) Prerequisite: MA 202 or MA 212	
	<i>Second Session.</i> 8:00-9:30	Staff
MA 441	Advanced Calculus I (3) Prerequisites: MA 301 and, preferably, a B average in all mathematics courses	
	<i>First Session.</i> 8:00-9:30	Staff
MA 512	Advanced Calculus II (3) Prerequisite: MA 511	
	<i>First Session.</i> 10:20-11:50	Staff
	<i>Second Session.</i> 8:00-9:30	Staff
MA 513	Introduction to Complex Variable (3) Prerequisite: MA 512	
	<i>First Session.</i> 10:20-11:50	Staff
MA 514	Methods of Applied Mathematics (3) Prerequisite: MA 512	
	<i>First Session.</i> 8:00-9:30	Staff
MA 527	Numerical Analysis I (3) Prerequisite: MA 511	
	<i>Second Session.</i> 10:20-11:50	Staff
*MA 608	Integral Equations (1½) Prerequisites: MA 512, MA 532	
	<i>Both sessions.</i> MTWTh 1:40-2:40	Staff
*MA 622	Vector Spaces and Matrices (1½) Prerequisite: MA 511	
	<i>Both sessions.</i> MTWTh 8:00-9:00	Staff
*MA 625	Differential Geometry (1½) Prerequisite: MA 512	
	<i>Both sessions.</i> MTWTh 10:20-11:20	Staff
*MA 632	Operational Mathematics I (1½) Corequisite: MA 413 or MA 611	
	<i>Both sessions.</i> MTWTh 9:10-10:10	Staff
MA 699	Thesis Research (Arranged)	
	<i>Both sessions.</i> Arranged	Staff
* Courses starting in the First Session offered 4 days a week for 10 weeks for 3 hours total credit.		

MECHANICAL ENGINEERING

ME 101	Engineering Graphics I (2) Corequisite: MA 101 or MA 111	
	<i>First Session.</i> 8:00-10:10	Staff
	<i>Second Session.</i> 10:20-12:30	Staff
ME 102	Engineering Graphics II (1) Corequisite: MA 101 or MA 111	
	<i>Both sessions.</i> 8:00-9:30	Staff
	<i>First Session.</i> 10:20-11:50	Staff
ME 211	Introduction to Mechanical Engineering (3)	
	<i>First Session.</i> 8:00-9:30	Staff
ME 301	Engineering Thermodynamics (3) Prerequisites: MA 202 and PY 201	
	<i>First Session.</i> 8:00-9:30, 10:20-11:50	Staff
ME 302	Engineering Thermodynamics II (3) Prerequisite: ME 301	
	<i>Second Session.</i> 8:00-9:30, 10:20-11:50	Staff
ME 303	Engineering Thermodynamics III (3) Prerequisite: ME 301	
	<i>Second Session.</i> 10:20-11:50	Staff
ME 305	Mechanical Engineering Lab I (1) Prerequisite: ME 301	
	<i>First Session.</i> 1:40-5:50 MW	Staff
ME 306	Mechanical Engineering Lab II (1) Prerequisite: ME 305; Corequisites: EM 301 and ME 312	
	<i>Second Session.</i> 1:40-5:50 MW	Staff
ME 315	Dynamics of Machines (3)	
	<i>Second Session.</i> 10:20-11:50	Staff
ME 352	Aerodynamics (3) Prerequisites: EM 200 and MA 301	
	<i>First Session.</i> 8:00-9:30	Pinkerton
ME 412	Mechanical Design II (3) Prerequisite: ME 411. Required of seniors in Mechanical Engineering.	
	<i>First Session.</i> 8:00-9:30	Staff
ME 447	Performance, Stability, and Control of Flight Vehicles (3)	
	<i>Second Session.</i> 8:00-9:30	Smetana

ME 461	Aerospace Technology (3)	
	<i>First Session.</i> 8:00-9:30	Williams
ME 521	Aerothermodynamics (3) Prerequisites: ME 301, MA 301 and EM 303 or ME 352	
	<i>First Session.</i> 8:00-9:30	Smetana
ME 625	Direct Energy Conversion I (3) Prerequisite: ME 601	
	<i>First Session.</i> Hours arranged.	El-Saden
ME 626	Direct Energy Conversion II (3) Prerequisite: ME 601	
	<i>Second Session.</i> Hours arranged.	El-Saden
ME 658	Molecular Gasdynamics (3) Prerequisites: ME 521, ME 602	
	<i>First Session.</i> 10:20-11:50	Williams
ME 699	Mechanical Engineering Research (1-6)	
	<i>Both sessions.</i> Hours arranged.	Staff

MINERAL INDUSTRIES

MIC 621	The Vitreous State (3) Prerequisite: MIC 540	
	<i>First Session.</i> 7:30-9:00	Hackler
MIC 635	Electronic Dynamics (3) Prerequisites: MA 441, and PY 414 or PY 407	
	<i>Second Session.</i> Hours arranged.	Stadelmaier
MIC 699	Ceramic Research (Arranged)	
	<i>First Session.</i> Hours arranged.	Hackler
	<i>Second Session.</i> Hours arranged.	Staff
MIM 201	Structure and Properties of Engineering Materials (3) Prerequisite: CH 103	
	<i>Both sessions.</i> LR 12:00-1:00 LB 10:00-4:00 MWF	Waller, Staff

MODERN LANGUAGES

MLF 101	Elementary French (3)	
	<i>First Session.</i> 8:00-9:30	Stack
MLF 102	French Grammar and Prose Reading (3) Prerequisite: MLF 101 or equivalent	
	<i>Second Session.</i> 8:00-9:30	Allred
MLF 201	French Prose (3) Prerequisites: MLF 101, MLF 102 or equivalent	
	<i>First Session.</i> 10:20-11:50	Stack
MLF 401	French Grammar for Graduates (3)	
	<i>First Session.</i> 8:00-9:30	Ballenger
MLF 402	Introduction to Scientific French (3) Prerequisite: MLF 401 or equivalent	
	<i>First Session.</i> To be announced	Allred
	<i>Second Session.</i> To be announced	Poland
MLG 101	Elementary German	
	<i>First Session.</i> 8:00-9:30	Howard
	10:20-11:50	Simonsen
MLG 102	German Grammar and Prose Reading (3) Prerequisite: MLG 101 or equivalent	
	<i>Second Session.</i> 8:00-9:30, 10:20-11:50	Morris
MLG 203	Review Grammar and Composition (3) Prerequisite: MLG 101, MLG 102 or equivalent	
	<i>First Session.</i> 8:00-9:30	Simonsen
MLG 401	German Grammar for Graduates (3)	
	<i>First Session.</i> 8:00-9:30	Hall
	<i>Second Session.</i> 8:00-9:30	Allred
MLG 402	Scientific German (3) Prerequisite: MLG 401 or equivalent	
	<i>First Session.</i> 10:20-11:50	Howard
	10:20-11:50	Hall
	<i>Second Session.</i> To be announced	Staff
MLS 101	Elementary Spanish (3)	
	<i>First Session.</i> 8:00-9:30	Staff
MLS 102	Spanish Grammar and Prose Reading (3) Prerequisite: MLS 101 or equivalent	
	<i>Second Session.</i> 8:00-9:30	Staff

- MLS 203 Review Grammar and Composition (3) Prerequisite: MLS 101, MLS 102, or equivalent
 First Session. 10:20-11:50 Staff
- MLS 401 Spanish for Graduates (3)
 First Session. 10:20-11:50 Ballenger
- MLS 402 Technical Spanish (3) Prerequisite: MLS 401 or equivalent
 First Session. To be announced Allred
 Second Session. To be announced Poland

MLC 210 A Survey of Music in America (3)

- MU 200 Music in Our Contemporary Life (3)
 First Session. 10:20-11:50
 Second Session. 10:20-11:50
 7:00 P.M.-8:30 P.M.

*Bliss
 Adcock
 Adcock
 (3)*

MU 220 Musical Lit. of Romantic Period (3)

NUCLEAR ENGINEERING

- NE 591 Special Topics in Nuclear Engineering (1-3)
 First Session. Hours arranged.
- NE 691 Advanced Topics in Nuclear Engineering (1-3)
 First Session. Hours arranged.
- NE 695 Seminar (1)
 First Session. Hours arranged.
- NE 699 Research (Arranged)
 First Session. Hours arranged.

*m. c. Bliss
 H.C. K.../10/64*

PHILOSOPHY AND RELIGION

- PHI 201 Logic (3)
 First Session. 10:20-11:50, 12:00-1:30 Bradner
 Second Session. 10:20-11:50, 12:00-1:30 Herring
- PHI 205 Problems and Types of Philosophy (3)
 First Session. 8:00-9:30, 10:20-11:50 Bredenberg
- PHI 309 Marriage and Family Living (3)
 First Session. 8:00-9:30, 10:20-11:50 Hicks
 8:00-9:30, 10:20-11:50 Middleton
- REL 403 Religions of the World (3)
 Second Session. 8:00-9:30, 10:20-11:50 Highfill
- PHI 405 Foundations of Science (3)
 Second Session. 8:00-9:30, 10:20-11:50 Hoffman

PHYSICAL EDUCATION

Any one of the following activities may be taken as PE 101, PE 102, PE 202, PE 301, PE 302, PE 303, or PE 304. No activity may be repeated for credit.

- Angling (1)
 First Session. 12:00-1:00 Staff
 Second Session. 10:20-11:20 Staff
- Badminton (1)
 First Session. 10:20-11:20, 1:10-2:10 Staff
 Second Session. 12:00-1:00 Staff
- Golf (1)
 First Session. 8:00-9:00, 10:20-11:20, 1:10-2:10 Staff
 Second Session. 9:10-10:10, 12:00-1:00, 1:40-2:40 Staff
- Softball (1)
 First Session. 12:00-1:00
 Second Session. 10:20-11:20 Staff
- Swimming (1)
 Both sessions. 12:00-1:00 Staff

Tennis (1)		
<i>First Session.</i> 9:10-10:10, 1:40-2:40		Staff
<i>Second Session.</i> 8:00-9:00, 1:10-2:10		Staff
Volleyball (1)		
<i>First Session.</i> 10:20-11:20		Staff
<i>Second Session.</i> 1:10-2:10		Staff

PHYSICS

PY 205 General Physics (4) Corequisite: MA 201		
<i>Both sessions.</i> LR 8:00-9:30 LB 1:40-3:50 MW or TTh		Staff
<i>First Session.</i> LR 10:20-11:50 LB 1:40-3:50 MW or TTh		Staff
PY 207 General Physics (4) Corequisite: MA 201		
<i>Both sessions.</i> LR 8:00-9:30, 10:20-11:50		Staff
LB 1:40-3:50 MW or TTh		Staff
PY 208 General Physics (5)		
<i>Both sessions.</i> LR 8:00-10:10, 10:20-12:30		Staff
LB 1:40-3:50 MW or TTh		Staff
PY 211 General Physics (4) Prerequisite: MA 111		
<i>Both sessions.</i> LR 8:00-9:30, 10:20-11:50		Staff
LB 1:40-3:50 MW or TTh		Staff
PY 212 General Physics (4) Prerequisite: MA 111		
<i>Both sessions.</i> LR 8:00-9:30 LB 1:40-3:50 MW or TTh		Staff
PY 221 College Physics (5) Prerequisite: MA 111		
<i>Both sessions.</i> 7:30-10:10		Staff
PY 407 Introduction to Modern Physics (3) Prerequisite: PY 202, MA 202		
<i>Both sessions.</i> 8:00-9:30		Staff
PY 410 Nuclear Physics I (4) Prerequisite: PY 407		
<i>First Session.</i> LR 10:20-11:50 LB 1:40-3:50 TTh		Staff
PY 510 Nuclear Physics II (4) Prerequisite: PY 410		
<i>First Session.</i> LR 7:30-9:00 LB Arranged		Staff
PY 695 Seminar (1)		
<i>Both sessions.</i> 1:00-2:30 MW		Staff
PY 699 Research (1-6)		
<i>Both sessions.</i> Hours arranged.		Staff

PLANT PATHOLOGY

PP 503 Diagnosis of Plant Diseases (3) Prerequisites: One advanced course in Plant Pathology, permission of instructor		
<i>First Session.</i> Hours arranged.		Hebert
PP 615 Research in Plant Pathology (Arranged) Prerequisites: Graduate standing and consent of instructor		
<i>Both sessions.</i> Hours arranged.		Staff
Thesis Preparation (Arranged)		
<i>Both sessions.</i> Hours arranged.		Staff

POULTRY SCIENCE

PO 201 Poultry Production (4)		
<i>First Session.</i> LR 10:20-11:50 LB 1:40-4:20 TTh		Brown
PO 613 Special Problems (1-6) Prerequisite: Graduate standing		
<i>First Session.</i> Hours arranged.		Staff

PSYCHOLOGY

PSY 200 Introduction to Psychology (3)		
<i>Both sessions.</i> 8:00-9:30		Staff
10:20-11:50		Baldwin

PSY 302	Psychology of Personality and Adjustment (3)	Prerequisite: PSY 200	
	<i>First Session.</i> 8:00-9:30		Cortner
PSY 304	Educational Psychology (3)	Prerequisite: PSY 200	
	<i>First Session.</i> 10:20-11:50		Johnson
PSY 337	Industrial Psychology I (3)		Baldwin
	<i>First Session.</i> 8:00-9:30		
PSY 476	Adolescent Psychology (2)	Prerequisite: PSY 200	
	<i>First Session.</i> 12:00-1:00		Barkley
PSY 535	Tests and Measurements (3)	Prerequisite: Six hours in Psychology	
	<i>First Session.</i> 8:00-9:30		Johnson
PSY 550	Mental Hygiene in Teaching (3)	Prerequisite: Six hours in Psychology	
	<i>First Session.</i> 10:20-11:50		Barkley
PSY 570	Theories of Personality (3)	Prerequisite: Nine hours in Psychology	
	<i>First Session.</i> 10:20-11:50		Cortner
PSY 576	Developmental Psychology (3)	Prerequisite: Nine hours in Psychology, including PSY 475 or 476	
	<i>Second Session.</i> Hours arranged.		Cortner
PSY 591	Individual Intelligence Measurement (3)	Prerequisite: PSY 570	
	<i>Second Session.</i> Hours arranged.		Cortner
PSY 690	Seminar in Industrial Psychology (3)		
	<i>Both sessions.</i> Hours arranged.		Miller, Baldwin
PSY 692	Personality Measurement (3)	Prerequisites: PSY 570, 571	
	<i>Second Session.</i> Hours arranged.		Cortner
PSY 693	Psychological Clinic Practicum (Max. 9)	Prerequisite: Eight hours in Psychology	
	<i>Both sessions.</i> Hours arranged.		Cortner
PSY 699	Research in Psychology (3)		
	<i>Both sessions.</i> Hours arranged.		Staff

RECREATION AND PARK ADMINISTRATION

RPA 152	Introduction to Recreation (3)		
	<i>First Session.</i> 8:00-9:30		Brantley or Hines
	<i>Second Session.</i> 8:00-9:30		Brantley
RPA 153	The Aquatic Program (2)	Prerequisite: PE (Swimming)	
	<i>First Session.</i> 8:00-9:00		Stott
RPA 253	Principles of Physical Education (3)		
	<i>First Session.</i> 10:20-11:50		Brantley or Hines
	<i>Second Session.</i> 10:20-11:50		Hines
RPA 333	First Aid and Safety (2)		
	<i>First Session.</i> LR 10:20-11:50	MWF LB Arranged	Stott or Crawford
	<i>Second Session.</i> LR 10:20-11:50	MWF LB Arranged	Crawford
RPA 353	Camp Organization and Leadership (3)	Prerequisites: RPA 153 and RPA 201	
	<i>First Session.</i> LR 9:10-10:10	LB Arranged	Stott
RPA 365	Methods and Materials in Health and Physical Education (3)	Prerequisites: RPA 301	
	<i>Second Session.</i> 10:20-11:50		Brantley
*RPA 470	Supervised Practice (6)	Prerequisites: RPA 353, 355	
	<i>First Session.</i> MTWTF	Hours arranged.	Hines and Miller
*RPA 472	Observation and Field Experience (2)	Prerequisite: RPA 470	
	<i>First Session.</i> Hours arranged.		Hines and Miller
	* 9-weeks program		

RURAL SOCIOLOGY

RS 642	Research (Arranged)	Prerequisite: Permission of chairman of graduate study committee.	
	<i>Both sessions.</i> Hours arranged.		Staff

SOCIAL STUDIES

- SS 301 Science and Civilization (3) Prerequisites: For engineering students, Eng. 205, HI 205, EC 205; for others, permission of the department.
Both sessions. 8:00-9:30, 10:20-11:50 Staff
- SS 302 Science and Civilization (3) Prerequisites: Same as for SS 301
Both sessions. 8:00-9:30, 10:20-11:50 Staff
- SS 491 Contemporary Issues (3) Prerequisites: For engineering students, SS 301, 302, for others, permission of the department.
Both sessions. 8:00-9:30, 10:20-11:50 Staff
- SS 492 Contemporary Issues (3) Prerequisites: For engineering students, SS 301, 302, for others, permission of the department.
Both sessions. 8:00-9:30, 10:20-11:50 Staff

SOCIOLOGY AND ANTHROPOLOGY

- SOC 202 Principles of Sociology (3)
First Session. 8:00-9:30, 10:20-11:50 Middleton
Second Session. 8:00-9:30, 10:20-11:50 Staff
- SOC 301 Human Behavior (3)
First Session. 8:00-9:30, 10:20-11:50 Rawls
- SOC 303 Current Social Problems (3)
Second Session. 10:20-11:50 Johnson
- SOC 304 Contemporary Family Life (3)
First Session. 8:00-9:30 Winston
- SOC 305 Race Relations (3)
Second Session. 10:20-11:50 Collins
- SOC 306 Criminology (3)
Second Session. 8:00-9:30 Johnson
- SOC 401 Human Relations in Industrial Society (3) Prerequisite: Senior standing or permission of the instructor.
First Session. 10:20-11:50 Winston
Second Session. 8:00-9:30 Collins

SOIL SCIENCE

- SSC 590 Special Problems (Arranged) Prerequisites: SSC 200 and SSC 302
Both sessions. Hours arranged. Graduate Staff
- SSC 699 Research (Arranged)
Both sessions. Hours arranged. Graduate Staff

STATISTICS

(See Experimental Statistics)

TEXTILES

- TX 221 Fundamentals of Textiles (3) Prerequisite: MA 101 or MA 111, or equivalent
First Session. LR 7:30-8:30 LB 1:40-4:20 TTh Moser
- TX 261 Fabric Structure (3) Prerequisite: TX 221
First Session. LR 10:20-11:20 LB 1:40-4:20 TTh Berry
- TX 281 Fiber Quality (3) Prerequisite: TX 221
First Session. LR 9:10-10:10 LB 1:40-4:20 MW Moser
- TX 303 Fiber and Yarn Technology (4) Prerequisite: TX 281
First Session. LR 7:30-9:00 LB 1:40-4:20 TTh Pardue
- TX 304 Fiber and Yarn Technology (4) Prerequisite: TX 303
Second Session. LR 10:20-11:50 LB 1:40-4:20 TTh Lassiter
- TC 307 Textile Chemistry II (4) Prerequisite: TC 201
First Session. LR 12:00-1:30 LB 1:40-4:20 MW Hayes

*will be
4 in fall*

non

TX 327	Textile Testing (4) Prerequisites: TX 303, TX 365, ST 361 <i>First Session.</i> LR 10:20-11:50 LB 1:40-4:20 TTh	Lassiter
TX 342	Knitting Principles (2) Prerequisites: TX 281 and TX 221 <i>Second Session.</i> 9:10-10:10	Middleton
TX 365	Fabric Technology (4) Prerequisites: TX 261, TX 281 <i>First Session.</i> LR 10:20-11:50 LB 1:40-4:20 MW	Porter
TX 366	Fabric Technology (4) Prerequisite: TX 365 <i>Second Session.</i> LR 7:30-9:00 LB 1:40-4:20 MW	Berry
TC 421	Fabric Finishing (2) Prerequisite: TC 201 <i>First Session.</i> 8:00-9:00	Hayes
TX 436	Staple Fiber Processing (3) Prerequisite: TX 303 <i>First Session.</i> LR 9:10-10:10 LB 1:40-4:20 TTh	Pardue
TX 442	Knitted Fabrics (3) Prerequisite: TX 342 <i>Second Session.</i> LR 7:30-8:30 LB 1:40-4:20 TTh	Middleton
TX 483	Textile Cost Methods (3) Prerequisites: TX 303, TX 365 <i>Second Session.</i> 12:00-1:30	Lynch
TX 601	Yarn Manufacture (3 arranged) Prerequisite: Graduate Standing <i>First Session.</i> Hours arranged.	Grover
TX 602	Yarn Manufacture (3 arranged) Prerequisite: Graduate standing <i>Second Session.</i> Hours arranged.	Grover
TX 621	Textile Testing III (2 arranged) Prerequisite: TX 522 or equivalent <i>First Session.</i> Hours arranged.	Hamby
TX 681	Textile Research for Textile Technology (Arranged) <i>Both sessions.</i> Hours arranged.	Graduate Staff
TX 681	Textile Research for Textile Chemistry (Arranged) <i>Both sessions.</i> Hours arranged.	Rutherford

ZOOLOGY

ZO 571	Special Studies (Arranged) Prerequisites: ZO 103 and approval of the instructor. <i>Both sessions.</i> Hours arranged.	Staff
ZO 641	Research in Zoology (Arranged) Prerequisites: Twelve semester credits in Zoology and approval of the instructor. <i>Both sessions.</i> Hours arranged.	Staff

