

specific requirements in his major field, enumerated under the appropriate titles in the section on Course Descriptions.

General requirements:

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- I. A minimum of 34 units is required for graduation. (Each unit is equal to 3.5 semester hours.)
 - II. Minimum requirements in each of the three divisions of the College are as follows. These requirements may be met any time prior to graduation.
 - A. *Humanities*: A minimum of 3 units in one or more courses, other than first-year foreign language courses, chosen from art history and theory; classics; designated courses in drama; English; French; German; music theory and history; philosophy; religion; Russian; Spanish; and designated freshman seminars and interdisciplinary courses.
 - B. *Social Sciences*: A minimum of 3 units in one or more courses, chosen from anthropology; business administration; economics; history; political science; sociology; and designated freshman seminars and interdisciplinary courses.
 - C. *Natural Sciences*: A minimum of 3 units in one or more courses chosen from biology; chemistry; geology; mathematics; physics; psychology; designated freshman seminars and interdisciplinary courses.
 - III. Each candidate must fulfill the requirements of his major field as determined by the relevant department or departments, and subject to the following general requirements:
 - A. Each student must earn a minimum of 9 units outside the division of his major. Courses in military science and courses listed as general studies may be counted as outside credit by all students. Interdisciplinary courses may be counted by students enrolled in them as outside credit provided that the faculty has approved such courses with that understanding.
 - IV. During the last year of study for a bachelor's degree, candidates may be required, at the option of their major departments, to take a departmental comprehensive examination, and/or achieve a passing grade on the Graduate Record Advanced Test.
 - V. Courses taken at other institutions or in the summer session at Colorado College shall be granted as much equivalent credit as deemed appropriate by the Dean of the College.
 - VI. Students are required to take their final 8 units at Colorado College. Exceptions to this rule will be made by the Dean's Advisory Committee.
 - VII. In each adjunct course a student may earn $\frac{1}{4}$ unit toward his degree requirement for each semester of work. Two ad-

adjunct courses per semester are the limit, unless the Dean of the College grants permission for an overload.

- VIII. These requirements shall apply to all entering and currently enrolled students, except that they shall not be interpreted in any way to increase the requirements for students enrolled prior to September, 1970.

ACADEMIC POLICIES

ADVISING PROGRAM

During New Student Week, held at the beginning of the fall session, each student is assigned a faculty adviser with whom to confer about his particular needs. The adviser's concern is not only with the academic, but with the student's general adjustment to college life. The adviser also serves as a point of contact between the student and many special offices of the College, such as Health and Counseling Services, the Business Office, the Deans of Student Affairs, the Minister of the Chapel, and the Dean of the College.

In the spring of his sophomore year the student chooses a major field. At that time he is assigned an adviser in his major department.

Each student should see his adviser at least twice each semester. He is encouraged to call on his adviser whenever he has questions about his college program. Although advisers are ready to help students in any way they can, the individual student must be responsible for seeking help when he needs it.

REGISTRATION AND PREREGISTRATION

All freshmen register for their first two courses (blocks 1 and 2) by mail during the summer. Early in New Student Week the freshman meets with his academic adviser to review this choice. During block 2 freshmen register for the remainder of their courses (blocks 3 through 9). This procedure is designed to provide freshmen with some exposure to the College and the new academic plan before requesting that they commit themselves to a schedule for the entire year.

In March approximately two weeks are set aside for preregistration. During this period the student meets with his adviser to plan his academic program for the next year. Also at this time questions about choice of major and vocational possibilities may be raised and a general review of the student's academic progress made. The student is responsible for turning in a completed preregistration form to the Registrar before the end of the preregistration period. Due to class size limits, it is possible that a student may be asked by the Registrar to revise some of his course choices.

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HUMANITIES FOR ELEMENTARY TEACHERS

ASSOCIATE PROFESSOR MAUCH, ADVISER.

The humanities major for elementary teachers is a special program designed to give prospective elementary school teachers a broad academic background through a distributed major. Students in this program must take the education courses prescribed for elementary school teachers described under the Education Department and the following courses, described in the listings of their respective departments. If the student's application in the junior year to the teacher education program is rejected, he or she will not be allowed to continue in this major.

- 2 units of art history or theory (except Art 320)
- 2 units of music history or theory (except Music 342)
- 2 units of English
- 2 units of philosophy or religion (except Phil. 108 or 314)
- 1 unit in applied music, studio art, drama or dance
- Studies in the Humanities 301

This program is being discontinued, and no student entering the college after the academic year 1974-75 will be permitted to enroll in it.

LIBERAL ARTS AND SCIENCES

ASSOCIATE DEAN TAYLOR, ADVISER.

Students who wish a major other than those provided by the departments may choose to major in liberal arts and sciences. This option permits students with the help of three faculty members to design special concentrations according to particular interests and needs.

The major in liberal arts and sciences is governed by the following provisions:

1. Students selecting this major are subject to all College requirements including the distribution requirements and the rules stipulating the minimum units for a major (7) as well as the maximum units in one department which may be counted toward graduation (14).
2. If the minimum number of units (7) is designated for this major, at least 6 of these units must be above the 100 course number level. If more than 7 units are designated, for example, up to the maximum of 14 units allowed, then no more than 2 units can be at the 100 course number level.
3. Courses which constitute the major in liberal arts and sciences are designated on the transcript by an asterisk. The Registrar designates on the transcript in an appropriate way a description of the program.
4. A student must normally declare a major in liberal arts and sciences no later than the fall semester of his junior year. A student wishing to change from another major to a major in liberal arts and sciences or first to declare this major after the fall semester of the junior year must present persuasive evidence that such a change is educationally advisable.
5. In order to be accepted as a major in liberal arts and sciences, a student must obtain the approval of three faculty advisers for a tentative program of courses for the final two years. This program of courses should be accompanied by a typewritten description of the concentration proposed in the major. In other words, the student should offer in writing a rationale demonstrating the cohesiveness of the proposed program of courses. Each course in the proposed program should be listed by course number and title. In addition, a statement as to how the specific course relates to the written description of the major is advised. Finally, the description of the major and the listed courses must be accompanied by an application form for declaring the major, available in the Registrar's Office.

6. Among the three faculty advisers, one should be designated as the principal adviser, but all three advisers will be responsible for approving any later changes in the proposed major.

7. Either a comprehensive examination or a senior thesis is required of all majors in liberal arts and sciences. Designation of this requirement and its administration rests with the three faculty sponsors after consultation with the student.

8. A student wishing to change from a major in liberal arts and sciences to another major program may do so with the consent of his chosen major department. This procedure is identical to that now used for changing majors.

MATHEMATICS

PROFESSOR G. SIMMONS; ASSOCIATE PROFESSORS HANSMAN, PAINE, STERLING; ASSISTANT PROFESSORS JANKE, KARON, ROEDER (CHAIRMAN) WOOD.

To be eligible to major in mathematics a student must complete 205, 210, and 215. Majors in mathematics are required to take 321, 316 or 413, and at least three other mathematics courses numbered 300 or above, excluding 399.

103 — INTRODUCTION TO CALCULUS. The same calculus as 126 together with materials from algebra, trigonometry, analytic geometry, and the study of functions. Intended solely for students not sufficiently prepared for 126. (Only one of the two units counts toward fulfilling the Natural Science Division requirement. *Prerequisite:* Chairman's consent. 2 units — Paine, Roeder, Wood.

110 — INTRODUCTION TO NUMBER THEORY. Topics from elementary number theory, with an emphasis on mathematical thinking. A parallel development of ideas of algebra which can be directly motivated by examples in number theory. (*May not ordinarily be taken for credit after 321.*) 1 unit — Roeder

120 — MATRICES AND PROBABILITY. Matrix algebra and computational techniques, probability of finite sample spaces, and introductory linear programming and Markov processes. Applications of these concepts and processes are made to problems arising in the areas of economics, sociology, and the life sciences. 1 unit — Department.

121 — INTRODUCTION TO DIGITAL COMPUTING. Development of computers, computer hardware, computer mathematics, and programming languages. 1 unit — Department.

126 — CALCULUS 1. Differential and integral calculus of algebraic functions with topics from analytic geometry and applications. 1 unit — Department.

128 — CALCULUS 2. A continuation of Calculus 1. The calculus of transcendental functions; methods and applications of integration; the analytic geometry and calculus associated with conic sections and polar coordinates. *Prerequisite:* 103 or 126. 1 unit — Department.

130 — CALCULUS 3. A continuation of Calculus 2. Series; vectors in two and three dimensions and introduction to functions of several variables. *Prerequisite:* 128. 1 unit — Department.

160 — ACCELERATED CALCULUS 1. The differential and integral calculus of elementary functions with applications and introduction to methods of integration. *Prerequisite:* Instructor's consent. (Not offered 1975-76.) 1 unit — Sterling.

162 — ACCELERATED CALCULUS 2. A continuation of Accelerated Calculus 1. Improper integrals and further methods of integration; polar coordinates and the analytic geometry of conics; series. *Prerequisite:* 160. (Not offered 1975-76.) 1 unit — Sterling.

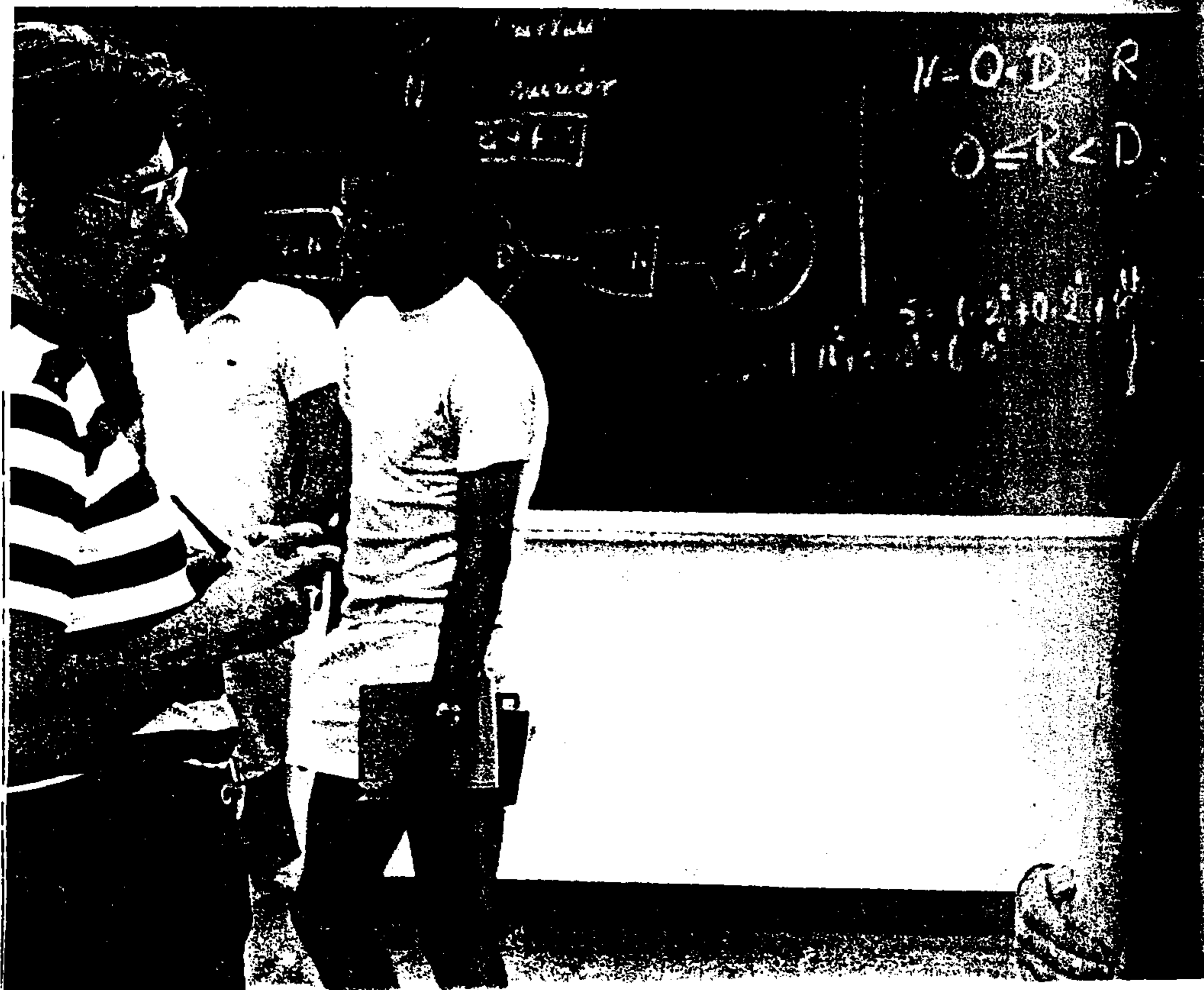
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MATHEMATICS

- 164 — **ACCELERATED CALCULUS 3.** A continuation of Accelerated Calculus 2. Vectors in two and three dimensions, the calculus of functions of several variables, and introduction to classical vector analysis. *Prerequisite:* 162. (Not offered 1975-76.) 1 unit — Sterling.
- 205 — **CALCULUS 4.** A continuation of Calculus 3. Calculus of functions of several variables and introduction to classical vector analysis. *Prerequisite:* 130. 1 unit — Department.
- 207 — **INTRODUCTION TO NUMERICAL COMPUTATION.** An introduction to some of the basic ideas of numerical computation and the difficulties encountered, using a digital computer. Selected methods used to solve some standard problems: solution of one nonlinear equation, and of systems of linear equations; interpolation; numerical integration and differentiation; ordinary differential equations. *Prerequisite:* 128 or 160, and 121; or instructor's consent. (Offered 1974-75 and alternate years.) 1 unit — Department.
- 210 — **LINEAR ALGEBRA.** Topics from the theory of vector spaces and linear transformations. Matrix manipulations with applications to linear programming and an introduction to orthogonal geometry and eigenvalue problems. *Prerequisite:* 110 or 205. 1 unit — Department.
- 215 — **DIFFERENTIAL EQUATIONS.** Elementary methods of solution; linear differential equations with constant coefficients; power series solutions; and an introduction to Fourier series. *Prerequisite:* 210, or either 130 or 162 and instructor's consent. 1 unit — Department.

Dr. Daniel Sterling, associate professor of mathematics, with students



MATHEMATICS

- 241 — **MATHEMATICAL MODELING.** Modeling in the social and biological sciences, with emphasis on the analysis of models. Topics include least squares, simulation of stochastic and deterministic models, non-numerical problems, and models in the student's field of interest. Computations are carried out on the digital computer. *Prerequisite:* 121 and one other math course, or instructor's consent. 1 unit — Department.
- 300 — **GEOMETRY.** Some current topics in advanced and modern geometry. Topics drawn from linear geometry, affine, inversive and projective geometries, foundations and axiomatics, transformation groups, geometry of complex numbers. *Prerequisite:* 210. (Offered 1974-75 and alternate years.) 1 unit — Department.
- 307 — **NUMERICAL ANALYSIS.** The central ideas of numerical analysis — practical methods, their theoretical basis, and error analysis — through the study of one of the following topics: solution of non-linear equations; systems of linear equations; interpolation and approximation; quadrature; ordinary differential equations. *Prerequisite:* 207, 210, and 215; or instructor's consent. (Offered 1975-76 and alternate years.) 1 unit — Karon.
- 308 — **COMPUTER SCIENCE II.** Topics drawn from programming languages, machine assembly language and machine structure, operating systems, advanced programming techniques, and computer literature. *Prerequisite:* 121. 1 unit — Paine.
- 313 — **PROBABILITY.** Probability spaces, discrete and continuous random variables, independence, expectation, distribution functions. *Prerequisite:* 205. (Offered 1975-76 and alternate years.) 1 unit — Department.
- 316 — **ADVANCED CALCULUS.** Topics in classical advanced calculus. *Prerequisite:* 210 and 215, or 215 and instructor's consent. (Not offered 1975-76.) 1 unit — Department.
- 317 — **MATHEMATICAL STATISTICS.** Brief review of probability, descriptive statistics, classical and Bayesian statistical inference including point and interval estimation, hypothesis tests, and decision. *Prerequisite:* 313. (Offered 1974-75 and alternate years.) 1 unit — Gateley.
- 321 — **ALGEBRA I.** Elementary number theory and group theory. A brief introduction to rings and fields. *Prerequisite:* 210 and 215, or 210 and instructor's consent. 1 unit — Sterling.
- 371, 372 — **TOPICS IN APPLIED MATHEMATICS, I AND II.** The classical partial differential equations of physics, boundary value problems leading to the special functions, Fourier series. *Prerequisite:* 371: 205 and instructor's consent; 372: 371. 1 unit each — Bordner, Hilt.
- 399 — **SECONDARY SCHOOL TEACHING: MATHEMATICS.** (See Educ. 399.) 1 unit — Kuerbis.
- 411 — **REAL ANALYSIS.** Functions of a real variable approached from a rigorous and modern viewpoint. *Prerequisite:* 316. (Not offered 1975-76.) 1 unit — Department.
- 413 — **COMPLEX ANALYSIS.** The calculus of functions of a complex variable. *Prerequisite:* 210 and 215. 1 unit — Roeder.
- 414 — **ALGEBRA II.** Polynomial rings, fields, and an introduction to Galois theory. *Prerequisite:* 321. (Not offered in 1975-76.) 1 unit — Department.
- 420 — **SPECIAL TOPICS.** Given on demand for a group of students interested in a topic not included in the regular curriculum. *Prerequisite:* Instructor's consent. 1 unit — Department.
- 430, 431 — **INDEPENDENT STUDY.** *Prerequisite:* Instructor's consent. 1 unit each — Department.