

THE MORGAN STATE COLLEGE BULLETIN ¹⁹⁴⁵₉ ⁴⁶

The Bachelor of Science degree will be rewarded to those who satisfactorily complete 120 semester hours of work in the required distribution of courses, 120 quality points, with a major in Biology, Chemistry, Economics, Home Economics, Mathematics, Education, Music Education, or Health and Physical Education and the minimum quality points required in the major.

MINIMUM REQUIREMENTS FOR GRADUATION

Courses and Semester Credits

Credits required of all students	30
English 101-102, 103, 104, 125-126	12
History 101-102	6
Health Education 101-102	2
From Division IV (Science)	6
Physical Education 101-102, 103-104	4
Major Field	30-32
Major supporting courses	6-20
Group electives	38-54
Total semester hour credits required for degree	120

Semester Credit

A class meeting one hour a week per semester yields one semester hour credit or one semester credit. A laboratory period 120 minutes long is considered equivalent to one class hour of 60 minutes.

A Major

A candidate for graduation must complete a major in a field of concentrated study which requires a minimum of 36 semester hours of work. A minimum of six of these hours is in a related field and these are known as supporting courses.

A major must be selected in the sophomore year and any change thereafter in the major field must be approved by the Consultant of the department and the Dean, and must be recorded in the office of the Registrar.

Quality of Work

A candidate for graduation must have earned a minimum of 120 quality points (an average of 1.0) and the number of quality points in the major field of study, including supporting courses, must not be less than the number of semester credits earned.

203. Acoustics—Two hours lecture; 2 credits.

A course designed primarily for students of music, covering the physical basis of the science of musical sounds, musical instruments, and the acoustics of rooms and auditoriums.

204. Household Physics—Three hours lecture, one laboratory; 4 credits.

A course covering most of the physical problems of the household. Appliances and processes for the home are worked with in the laboratory. The topics of heat, light, electricity, sound, radio and household machines are discussed. Laboratory periods, 120 minutes each.

205-206. Electricity and Magnetism—Two hours lecture, one laboratory; 6 credits.

The first part of the course is devoted to a study of vectors and vector fields. The remainder of the course covers the theory of the electrostatic field, the electromagnetic field, and Maxwell's equations. Application is made to various types of electrical instruments.

Prerequisite—Physics 101-102 and Calculus.

207-208. Modern Physics—Three hours lecture; 6 credits.

This course traces the development of modern physics out of classical physics, giving the classical development of quantum theory, the elementary principles of modern atomic theory, and a thorough discussion of nuclear physics and elementary particles (electron, proton, deuteron, positron, etc.). The course is designed to acquaint students of Physics, Chemistry, and Biology with the theory and techniques of modern physics.

Prerequisite—Physics 101-102.

5. Department of Mathematics

MR. CORNISH, *Consultant*

Requirements for a Major in Mathematics; Thirty semester hours of mathematics distributed as follows: Mathematics 103, 104, 105, 106, 201, 202, and twelve elective hours.

Supporting course: Physics 101-102.

101-102. General Mathematics—Three hours; 3 credits.

A course designed to give some of the essential topics in algebra, trigonometry, analytic geometry and the calculus in order that the student might see the relations of the several branches of mathematics as parts of a unified whole.

103. Plane Trigonometry—Three hours; 3 credits

Definitions and relations of trigonometric functions, logarithms, solutions of right and oblique triangles, trigonometric identities and equations, etc.

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104. Plane Analytic Geometry—Three hours; 3 credits.

Co-ordinate systems, loci and their equations, linear equations, conic sections.

105. Solid Geometry—Three hours; 3 credits.

Properties of straight lines and planes, the polyhedron, cylinder, cone, sphere, etc. Not open to students who present admission credit in solid geometry.

106. College Algebra—Three hours; 3 credits.

Review of algebra, quadratics, progressions, permutations, combinations, complex numbers, binomial theorem, determinants, etc.

107. Spherical Trigonometry—Three hours; 3 credits.

The geometry of the sphere, solution of right and oblique spherical triangles with applications to navigation.

108. College Geometry—Three hours; 3 credits.

An extension of the methods of a first course in plane geometry. New properties of the triangle and the circle are developed.
Prerequisite—Mathematics 103.

201. Differential Calculus—Three hours; 3 credits.

Development of the theory and formulae for differentiation with application to geometry and physics.

202. Integral Calculus—Three hours; 3 credits.

The notions and operations of the integral calculus, including their application to geometry and physics.

203. Mathematics of Finance—Three hours; 3 credits.

The application of mathematics to interest, annuities, sinking funds, depreciation, valuation of stocks and bonds, life insurance, and building and loan associations.

204. Field Work in Mathematics—Three hours; 3 credits.

Practical applications of trigonometry through simple exercises in measuring and surveying. Instruments whose practical use will be studied are transit, level, sextant, hysometer, slide rule, etc.

205. Advanced Calculus—Three hours; 3 credits.

Simple types of ordinary and partial differential equations, Fourier's series and other expansions, line, surface and space integrals.

207. Junior-Senior High School Mathematics—Three hours; 3 credits.

This course designed especially to serve the needs of those who are preparing to teach in the high school, and who require a review of the topics in algebra, intuitive geometry, numerical trigonometry, scale

drawing, and graphic work, which constitute the modern junior high school course. Additional work will be drawn from the fields of plane geometry, and physics in order to show how the high school student may be given a stronger grasp of these subjects.

209. The Elementary Theory of Numbers—Two hours; 2 credits.

A course designed to acquaint the student with a history of the development of the number system and some of the elementary properties of numbers. A study of the criteria for divisibility by a given number, theorems on divisibility, greatest common divisor, least common multiple, properties of the digits of a number, theory of prime numbers, figurate numbers, sum and number of divisors of a number, and other selected topics.

6. Department of Home Economics

MRS. CARTER, *Consultant*. MISS KENNEDY

Requirements for a Major in Home Economics: Thirty semester hours in technical courses, distributed as follows: 107, 110, 105, 108, 112, 213, 226, 228, 240, plus nine semester hours in related courses: 103, 104, 109. (See State requirements for certification.)

Supporting courses: Chemistry 101, 106; Physics, 204; Biology 201, Biology, 208. Social Science, 6 semester hours.

Note: All seniors majoring in Home Economics are required to pursue a course in Home Management which entails living in the Home Management Residence for a period of six weeks in order to get the necessary practice in this field. A laboratory fee will be charged for living expenses during the practice period. This fee will be based upon the per capita cost for managing the home. It is hoped that for the period of six weeks the fee will not exceed thirty dollars per student. Boarding students who take this course will receive credit rebate for the regular fee for board.

A. Foods and Nutrition

Laboratory hours, 120 minutes each.

105. (Formerly 203) Nutrition—Three hours lecture; 3 credits.

This course includes a study of the fundamental principles of normal nutrition for the entire family. Emphasis is placed on the processes of digestion and metabolism and their relation to the nutritive requirements of the body. The essentials of an adequate diet with the least expenditure of money and time, and the construction of practical dietary programs are considered with special problems in food substitutes.

Prerequisite—Organic Chemistry 106.