MAE 301 Foundations of Secondary School Mathematics
A re-examination of elements of school mathematics, including topics in algebra, geometry, and elementary functions. Competence in basic secondary-level ideas and techniques are tested. Prerequisites: MAT 200 and 211; admission to mathematics or applied mathematics secondary teacher education program.
Corequisites: MAE 311
3 credits

MAE 302 Methods and Materials for Teaching Secondary School Mathematics
The goals of mathematics education, learning theories, mathematics curricula, lesson planning, evaluation and teaching strategies. Lesson plans are drawn up and presented to the group. Prerequisites: MAE 301 and C or higher in MAE 311
Pre- or Corequisite: MAE 312
3 credits

MAE 311 Introduction to Methods of Teaching Secondary School Mathematics
Aspects of teaching mathematics on the secondary school level, including lesson designs based on the NCTM standards, cooperative learning, and technology in mathematics education. Students observe classes in middle school and high school settings. Prerequisites: MAT 211; admission to mathematics or applied mathematics secondary teacher education program; department consent.
Corequisite: MAE 301
3 credits

MAE 312 Micro-Teaching
Twice-weekly supervised classroom experience, tutoring, or working with small groups of students as a teacher's aide. Prerequisite: C or higher in MAE 311
Pre- or Corequisite: MAE 302
2 credits

MAE 330 Technology in Mathematics Education
Introduces students in the mathematics secondary teacher education program to techniques and requirements for effective use of technology in the mathematics classroom. Emphasis on projects. Use of graphing calculators and computer software such as Geometer's Sketchpad. Prerequisites: MAE 301 and 311
3 credits

MAE 447 Directed Readings in Mathematics Education
Tutorial studies in recent advances in mathematics education. Prerequisite: Corequisite: MAE 312
1 credit

MAE 451 Supervised Teaching-Middle School Level Grades 7-9
Intensive supervised teaching in secondary schools. Students work in the school under the supervision of an experienced teacher. Prerequisites: MAE 312; MAT 312, 319, and 360; AMS 310; permission of director of mathematics secondary teacher education program.
Corequisites: MAE 452 and 454
6 credits, S/U grading

MAE 452 Supervised Teaching-High School Grades 10-12
Intensive supervised teaching in secondary schools. Students work in the school under the supervision of an experienced teacher. Prerequisites: MAE 312; MAT 312, 319, and 360; AMS 310; permission of director of mathematics secondary teacher education program.
Corequisites: MAE 451 and 454
6 credits, S/U grading

MAE 454 Student Teaching Seminar
Weekly discussions of teaching techniques and experiences, learning theory, curriculum content, and classroom problems. Corequisites: MAE 451 and 452
3 credits

MAP Mathematics Proficiency

MAP 101 Fundamentals of Arithmetic and Algebra
Arithmetic: fractions, decimals, and percent. Algebra: signed numbers, monomials, linear equations in one unknown, and word problems. This course is intended for students who have never studied algebra. Does not satisfy the entry skill in mathematics requirement or the D.E.C. category C requirement. Students who have otherwise satisfied D.E.C. category C may not register for this course. Does not count toward graduation. A through C/Unsatisfactory grading only. The Pass/No Credit option may not be used.
3 credits

MAP 103 Proficiency Algebra
An intensive review of high school algebra as preparation for calculus and other mathematics. Facility with exponents, basic graphing, solving linear and quadratic equations in one variable, solving linear systems in two variables, polynomials, factorization of algebraic expressions, binomial theorem, and inequalities. Algebraic manipulations, analytic geometry of lines. Does not count toward graduation. A through C/Unsatisfactory grading only. The Pass/No Credit option may not be used.
3 credits

MAR Marine Sciences

MAR 101-E Long Island Sound: Science and Use
An introduction to one of the region's most important coastal marine environments—Long Island Sound. The course traces the origin and development of the Sound; presents an overview of the natural physical, biological, chemical, and geological processes that characterize it; explores its importance to society and assesses how society's uses of the Sound have affected it; evaluates attempts to manage it; and looks at the future of the Sound.
3 credits

MAR 104-E Oceanography
An examination of the World Ocean and the processes that control its major features and the life that inhabits it. Suitable for non-science majors.
3 credits

MAR 301 Environmental Microbiology
Microbiological mediation of natural processes in marine, freshwater, soil, and groundwater habitats, as well as microbial potential for remediation of pollutants and public health issues. The course includes a survey of taxonomic and metabolic diversity, elementary cell biology, nutrition, environmental controls on physiology and adaptations, biogeochemical cycles, and modern methods of sampling and analysis. Not for credit in addition to BIO 357.
Prerequisites: BIO 202; CHE 131 or 141
3 credits

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