readings on branding practice. Coursework involves discussion, case analysis and projects with a high level of student interaction.

680 Strategic Marketing Decisions (1.5)
For graduate students only. Prerequisites: MKT 601, 606 and 607, plus 9 completed hours of marketing electives. This course serves as a vehicle for the application and integration of the concepts, analytical tools and problem-solving approaches to marketing strategy. It develops the student’s ability to use facts in the analysis and execution of marketing strategy by using a simulation. (*as needed)

695 Special Topics in Marketing (3)
Prerequisites: to be specified at time of offering. A course offered at the discretion of the marketing department. Subject may focus on a topic of current interest in the field, training in a specific area of the field, or a topic that is of interest to a particular group of students. (*as needed)

699 Independent Study in Marketing (1-3)
For graduate students only. Prerequisites: minimum 3.5 GPA, MKT 607 and written permission of the department chair. Contemporary topics in marketing.

704 Marketing New Technology and Innovations (1.5)
For graduate students only. Prerequisite: MKT 601. This course focuses on the rapidly evolving concepts and analytical techniques that facilitate strategic plan development for new ventures, products, technologies or services. The impact of technology modifies traditional marketing strategies, and these differences are explored. The course involves developing a comprehensive strategic marketing plan for a new-venture firm or a real-world client with a technology product introduction so that students may learn to apply updated strategic planning methods to business and marketing strategies. This course is available to all MS-IM students and MBA students with a declared entrepreneurship or marketing concentration. Other MBA students may be enrolled by permission of the instructor. (*as needed)

Mathematics (MAT)
Credit cannot be earned in mathematics courses that are prerequisites for courses already completed.

150 Introductory Algebra (4)
A study of the basic concepts of algebra such as first-degree equations, factoring, rational expressions, graphing, quadratic equations, exponents and radicals. May not be used to satisfy general curriculum distribution requirements of the Baccalaureate Experience. (*fall and spring semesters)

153 College Geometry (2)
A study of geometric problem-solving and formal synthetic Euclidean geometry. Students study properties of basic geometric figures, learn to verify them using formal proofs, and use results to solve applied problems. Students also are exposed to the axiomatic method of synthetic Euclidean geometry, learning how to verify results and then apply them to other proofs and applied problems. Required for education majors; may be taken as an elective by other majors. May not be used to satisfy general curriculum requirements.

155 Finite Mathematics for Liberal Arts (4)
Prerequisite: MAT 150 or equivalent. Appropriate as a general curriculum distribution requirement for liberal arts students. Topics include graph theory, planning and scheduling, data collection, descriptive statistics, social choices and voting, the problem of fair division, and the study of size and shape. (*fall and spring semesters)
160 College Algebra (4)
Prerequisites: MAT 150 or equivalent. Topics include rational exponents, equations and inequalities, functions and their operations, polynomials, rational functions, and systems of equations, inequalities and matrices. (*fall and spring semesters)

170 Precalculus (4)
Prerequisite: MAT 160 or equivalent. Covers exponential and logarithmic functions, applications to growth and decay problems, trigonometry and analytic geometry with emphasis on the use of graphing calculators. (*fall and spring semesters)

201 Introduction to Statistics (4)
Prerequisite: MAT 155 or equivalent (or higher). An introduction to descriptive and inferential statistics, with applications in various disciplines using statistical computer software. (*fall and spring semesters)

225 Calculus for Business (4)
Prerequisite: MAT 160 or equivalent. This course is designed to provide students with the fundamental components of differential and integral calculus, with a particular emphasis on those aspects of calculus that have applications to business. The course covers exponential and logarithmic functions, limits, differentiation and differentiation techniques, applications of the derivative (e.g. marginal cost, marginal revenue, rate of growth), anti-derivatives, the integral as an area, functions of several variables, and partial derivatives.

260 Calculus I (4)
Prerequisite: MAT 170 with a grade of “C” or higher, or equivalent. Covers limits, continuity, differentiation and its applications, integration, and the calculus of logarithmic, exponential, and trigonometric functions with emphasis on the use of graphing calculators. (*fall and spring semesters)

261 Calculus II (4)
Prerequisite: MAT 260 with a grade of “C” or higher. Covers integration techniques and applications, polar coordinates, parametric equations and infinite series. (*fall and spring semesters)

262 Calculus III (4)
Prerequisite: MAT 261 with a grade of “C” or higher. Covers partial differentiation, multiple integration and vector analysis in three dimensions. (*fall and spring semesters)

299 Introduction to Higher Mathematics (4)
Prerequisite: MAT 261 with a grade of “C” or higher. Covers proof techniques and their applications to various branches of mathematics, basic set theory, properties of number systems, and basic history of mathematics. (*spring semester)

300 Differential Equations (4)
Prerequisite: MAT 262 with a grade of “C” or higher. An introductory course in ordinary differential equations with applications. (*once every two years)

301 Discrete Mathematics (4)
Prerequisite: MAT 261 with a grade of “C” or higher. Covers sets, induction, algorithms, recursion, matrices, relations, functions, digraphs, partially ordered sets, lattices, Boolean algebra, switching circuits, trees and combinatorial analysis. (*once every two years)

308 Linear Algebra (4)
Prerequisite: MAT 299 with a grade of “C” or higher. Covers vectors and vector spaces, matrices, and linear transformations on a vector space. (*once every two years)

310 Probability and Mathematical Statistics (4)
Prerequisite: MAT 261 with a grade of “C” or higher. Covers probability, descriptive statistics and inferential statistics. (*once every two years)
Course Descriptions

401 Real Analysis (4)
Prerequisites: MAT 262 and 299 both with a grade of “C” or higher. Covers theories of limits, continuity, differentiation and integration. (*once every two years)

410 Complex Analysis (4)
Prerequisite: MAT 262 and 299 both with a grade of “C” or higher. Coverage includes complex numbers, analytic functions, elementary functions, integrals, series, residues and poles. (*once every two years)

420 Modern Abstract Algebra (4)
Prerequisite: MAT 299 with a grade of “C” or higher. An introduction to the theory of groups, rings and fields. (*once every two years)

490 Senior Seminar (1)
Prerequisite: senior standing in mathematics or mathematical programming. An in-depth study of a topic in mathematics or mathematical programming. Requires consultation with a faculty member, personal research, library research and an oral presentation. (*fall and spring semesters)

499 Selected Topics (1-4)
Subject may be chosen from point-set topology, partial differential equations, combinatorics, graph theory or other topics. (*fall and spring semesters)

Military Science and Leadership (MSL)

Note: Leadership Laboratory courses are offered only to Army ROTC cadets who qualify to become commissioned officers in the U.S. Army. Enrollment is subject to the approval of the professor of military science. Grades earned in leadership laboratories and all MSL courses provide the basis for selection for leadership positions in the Cadet Corps (Spartan Battalion), selection for Cadet Professional Development Training slots (Airborne School, Air Assault School, internships, etc.) during summer months, and for the national order of merit list ranking for the U.S. Army commissioning process during senior year.

101 Leadership and Personal Development (2)
Introduces students to the personal challenges and competencies that are critical for effective leadership. Students learn how the personal development of life skills such as critical thinking, goal setting, time management, physical fitness and stress management relate to leadership, officer-ship, and the Army profession. The focus is on developing basic knowledge and comprehension of Army leadership dimensions while gaining a big-picture understanding of the ROTC program, its purpose in the Army and its advantages for the student. All cadets must take a Leadership Laboratory course to fulfill Army commissioning requirements. Participation in MSL 101 does not include military obligation. (*fall semester)

102 Introduction to Tactical Leadership (2)
Discusses leadership fundamentals such as setting direction, problem-solving, listening, presenting briefs, providing feedback and using effective writing skills. Students explore dimensions of leadership, values, attributes, skills and actions in the context of practical, hands-on and interactive exercises. All cadets must take a Leadership Laboratory course to fulfill Army commissioning requirements. Participation in MSL 102 does not include military obligation. (*spring semester)

110 Basic Leadership Laboratory (0)
Required of MSL I cadets (freshmen). Involves practical exercises in the principles of military courtesy, discipline, self-confidence, drill and ceremonies, as well as introduction to basic soldier skills. (*fall semester)