Possible First Year Math Options

Course(s) and Majors:

**Math 1014:** Course may be the first used to complete Pathways Concept Area 5 requirements. Required for students who need Math 1225, but are “Math 1225-Not Ready”, and have not passed the readiness test (80% is passing).

**Math 1025 and 1026:** Accepted for many majors; not accepted by those majors that require Math 1225-1226 or Math 1535/1536.

**Math 1535 and 1536:** Required for Architecture

**Math 1225 and 1226:** Required for Computer Science, Engineering, Math, Building Construction, Geosciences, Physics, BS Chemistry, Statistics. Recommended for Econ.

**MaSc 1024** (Credit by exam only) and **Stat 2004:** Consult with an advisor, as this math sequence is ONLY accepted by a few majors in CLAHS and CAUS. If you are not 100% sure your intended major is in one of these colleges, do not choose this math sequence.

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COURSE DESCRIPTIONS

**1014: PRECALCULUS WITH TRANSCENDENTAL FUNCTIONS**
Precalculus college algebra, basic functions (algebraic, exponential, logarithmic, and trigonometric), conic sections (parabolas, circles, ellipses, hyperbolas), graphing techniques, basic probability. Use of spreadsheet software. Two units of high school algebra and one of plane geometry are required.

**1025-1026: ELEMENTARY CALCULUS**

1025: Differential calculus, graphing, applications for the life sciences. Use of spreadsheet software. Assumes 2 units of high school algebra, 1 unit of geometry, 1/2 unit of trigonometry, and 1/2 unit of precalculus.

1026: Integral calculus, numerical techniques, elementary differential equations, applications for the life sciences. Use of spreadsheet software.

**1225-1226: CALCULUS of a SINGLE VARIABLE**
Unified calculus course covering techniques of differential and integral calculus for functions of one variable. This sequence constitutes the standard first-year mathematics courses for science and engineering.

1225: limits, continuity, differentiation, transcendental functions, applications of differentiation introduction to integration. Assumes 2 units of high school algebra, 1 unit of geometry, 1/2 unit each of trigonometry and precalculus, and placement by Math Dept.

1226: techniques and applications of integration, trapezoidal and Simpson’s rules, improper integrals, sequences and series, power series, parametric curves and polar coordinates, software-based techniques.

**1535, 1536: GEOMETRY & MATHEMATICS OF DESIGN**

1535: Review of Euclidean geometry and trigonometry. Descriptive and projective geometry applied to drawing. Similarity, proportion, and the golden mean. Applications of graph theory.

1536: Calculus with applications to max/min, areas, volumes, and centroids. Polygons, patterns, and tilings of the plane. Polyhedra and vectors applied to 3-dimensional design.

**Math Science (MaSC)**

1024: MATHEMATICS, A LIBERAL ARTS APPROACH: This is the first course in a sequence that is intended to give those students who will not make extensive use of the Mathematical Sciences in their specialties. Topics include set theory, number theory, and modular arithmetic. **Credit for MaSc 1024 can only be earned through credit-by-exam.**

**Statistics (STAT)**

2004: Fundamental concepts and methods of statistics with emphasis on interpretation of statistical arguments. An introduction to design of experiments, data analysis, correlation and regression, concepts of probability theory, sampling errors, confidence intervals, and hypothesis tests.
Additional Concept #5 courses – THESE COURSES ARE NOT ACCEPTED BY ALL MAJORS. CONSULT AN ACADEMIC ADVISOR.

ACIS-1004 Accounting Foundations: Fundamentals of accounting, the language of business, including what accounting information is, how it is developed, how it is used and what it means. Financial Accounting including the application of accounting principles for real world, complex business transactions to classify these transactions, reflect their economic value, produce basic financial statements, evaluate financial position and make fundamental interpretations. Managerial Accounting including cost behaviors, budgeting and other management reporting to assist in internal decision making and performance analysis. Attention to accountants’ codes of ethics applied throughout. Emphasis placed on non-Business majors becoming informed users of accounting information.

AAEC-2104 Personal Financial Planning: Survey of fundamental personal financial planning needs and decisions of young professionals. Introduction to the personal financial planning needs that special household circumstances or non-traditional household situations may precipitate.

CONS-2304 Family Financial Management: Overview of family financial management. Analysis of financial situations of individuals and families; assessment of needs for cash and credit management, insurance, tax savings, and investments; introduction to components of a comprehensive family financial plan.

CS-1014 Intro Computational Thinking: An exploration of basic ideas of computational thinking focusing on the perspectives, thought processes, and skills that underlie computational approaches to problem formulation and problem solving. Application of computational tools to investigate complex, large-scale problems in a variety of knowledge domains. Examination of the societal and political implications of computational systems.

CS-1044 Intro Prog in C: Fundamental concepts underlying software solutions of many problems. Structured data, statement sequencing, logic control, input/output, and functions. The course will be taught using a structured approach to programming. Partially duplicates 1344. Not for students intending to major or minor in CS.

FIN-2114 Invest & Financial Literacy: Examines the investment process; the financial markets; investing in common stock, bonds, and mutual funds; budgeting; long- and short-term borrowing; credit card debt; student loan debt; insurance; major financial decisions, and retirement planning. Coverage of time value of money and risk and return to provide fundamental tools for valuation and financial decision-making.

HIST-2604 or SOC 2604 or STS 2604 Intro to Data in Social Context: Examines the use of data to identify, reveal, explain, and interpret patterns of human behavior, identity, ethics, diversity, and interactions. Explores the historical trajectories of data to ask how societies have increasingly identified numerical measures as meaningful categories of knowledge, as well as the persistent challenges to assumptions about the university of categories reducible to numerical measures.