### Computer Science

**COMPSCI 162** COMPUTER APPLICATIONS (GM) ... A thorough introduction to using computers covering word processing, spreadsheets, data storage and retrieval, computer graphics and applications, uses of computers, e-mail and the Internet, hardware, history, and problems arising from the use of computers.

**COREQ:** MATH 141 OR MATH 140 OR WAIVER

#1669 Section 01 [units: 3] Gen Ed Math/Natural Sciences (GM) 
NOTE: This is a hybrid course and will have classroom meetings plus online instruction. Further instructions will be given the first day of class.

01/21-05/20 MW 02:15 PM - 03:05 PM MG0115 Jiehui Ma
01/21-05/20 Arranged Arranged WEB BASED Jiehui Ma

#1671 Section 02 [units: 3] Gen Ed Math/Natural Sciences (GM) 
NOTE: This is a hybrid course and will have classroom meetings plus online instruction. Further instructions will be given the first day of class.

01/21-05/20 MW 03:20 PM - 04:10 PM MG0115 Jiehui Ma
01/21-05/20 Arranged Arranged WEB BASED Jiehui Ma

#1686 Section 03 [units: 3] Gen Ed Math/Natural Sciences (GM) 
01/21-05/20 T 06:15 PM - 08:45 PM MG0115 Robert L Horton

#1704 Section 04 [units: 3] Gen Ed Math/Natural Sciences (GM)
01/21-05/20 W 06:15 PM - 08:45 PM MG0115 Robert L Horton

#1718 Section 05 [units: 3] Gen Ed Math/Natural Sciences (GM) 
NOTE: This class is taught online through Desire2Learn. The course site will be available to you at the beginning of the semester. An additional $150 fee will be assessed for this course.
01/21-05/20 Arranged Arranged WEB BASED Lopamudra Mukherjee

#1719 Section 06 [units: 3] Gen Ed Math/Natural Sciences (GM) 
NOTE: This class is taught online through Desire2Learn. The course site will be available to you at the beginning of the semester. An additional $150 fee will be assessed for this course.
01/21-05/20 Arranged Arranged WEB BASED Lopamudra Mukherjee

#5085 Section 07 [units: 3] Gen Ed Math/Natural Sciences (GM) 
NOTE: Restricted to Albany high school students admitted to the PIE Program.
01/21-05/20 Arranged Arranged WEB BASED Robert L Horton PIE PROGRAM

**COMPSCI 171** INTRODUCTION TO PROGRAMMING (GM) ... An introduction to computer programming and its applications to science, business and education. Opportunity for extensive experience in designing and writing structured programs in the Visual Basic language.

**PREREQ:** MATH 141 OR WAIVER MATH 140

#1673 Section 01 [units: 3] Gen Ed Math/Natural Sciences (GM)
01/21-05/20 TR 02:15 PM - 03:30 PM MG0115 Zachary J Oster

#1676 Section 02 [units: 3] Gen Ed Math/Natural Sciences (GM)
01/21-05/20 TR 03:45 PM - 05:00 PM MG0115 Zachary J Oster

#1735 Section 03 [units: 3] Gen Ed Math/Natural Sciences (GM) 
NOTE: This course is taught online through Desire2Learn. The course site will be available to you at the beginning of the semester. An additional $150 fee will be assessed for this course.
01/21-05/20 Arranged Arranged WEB BASED Lopamudra Mukherjee

**COMPSCI 172** INTRODUCTION TO JAVA ... This course will give students the essentials of object-oriented programming in Java. Students will learn to formulate algorithms, to solve problems and to implement those solutions with a Java program that employs objects and classes. The student will be introduced to object-oriented design, applications and applets, class construction, methods and message passing arrays, string processing, file processing, and some event-handling and Graphical User Interface programming. This course is designed for students with some prior programming experience.

**PREREQ:** COMPSCI 171 AND EITHER MATH 152 OR MATH 143 OR CALCULUS PLACEMENT, OR CONSENT OF INSTRUCTOR

#1684 Section 02 [units: 3] Gen Ed Math/Natural Sciences (GM)
01/21-05/20 MW 09:55 AM - 10:45 AM MG0115 Jiehui Ma

#4343 Section 03 [units: 3] Gen Ed Math/Natural Sciences (GM)
01/21-05/20 MW 11:00 AM - 11:50 AM MG0115 Cheng Thao

#5086 Section 04 [units: 3] Gen Ed Math/Natural Sciences (GM) 
NOTE: Restricted to Homestead high school students admitted to the PIE Program.
01/21-05/20 Arranged Arranged WEB BASED Hien M Nguyen PIE PROGRAM

#5087 Section 05 [units: 3] Gen Ed Math/Natural Sciences (GM) 
NOTE: Restricted to Homestead high school students admitted to the PIE Program.
01/21-05/20 Arranged Arranged WEB BASED Hien M Nguyen PIE PROGRAM

**COMPSCI 174** INTRODUCTION TO C++ ... This course teaches basic programming skills using the structured high-level language C++. Topics include basic input and output, declaration and use of variables, use of control statements, implementation of functions using value and reference parameters, arrays, and structures. Students will write moderately complex applications using C++.

**PREREQ:** COMPSCI 171 AND EITHER MATH 152 OR MATH 143 OR CALCULUS PLACEMENT, OR CONSENT OF INSTRUCTOR

#1729 Section 01 [units: 3] Gen Ed Math/Natural Sciences (GM) 
NOTE: This is a hybrid course and will have classroom meetings plus online instruction. Further instructions will be given the first day of class.
01/21-05/20 MW 12:05 PM - 12:55 PM HY0210 Hien M Nguyen
01/21-05/20 Arranged Arranged WEB BASED Hien M Nguyen

#4353 Section 02 [units: 3] Gen Ed Math/Natural Sciences (GM) 
NOTE: This is a hybrid course and will have classroom meetings plus online instruction. Further instructions will be given the first day of class.
01/21-05/20 MW 01:10 PM - 02:00 PM HY0210 Hien M Nguyen
01/21-05/20 Arranged Arranged WEB BASED Hien M Nguyen
COMPSCI 181  INTRODUCTION TO DATABASE AND THE WEB (GM) ... This course provides the student with a comprehensive working knowledge of a modern database package including the creation of a database, construction of a wide range of queries, use of forms, and report writing features. The course also gives an introduction to the creation of World Wide Web pages using the Extended Hypertext Markup Language (XHTML).

PREREQ: MATH 141 OR WAIVER OF MATH 141

#1713  Section 01  [units: 3]  Gen Ed Math/Natural Sciences (GM)
01/21-05/20  MW  09:55 AM - 10:45 AM  MG0117  Robert P Siemann

#1715  Section 02  [units: 3]  Gen Ed Math/Natural Sciences (GM)
01/21-05/20  MW  11:00 AM - 11:50 AM  MG0117  Robert P Siemann

COMPSCI 220  CONCEPTS OF PROGRAMMING ... This course teaches students professional software development using object-oriented program design and the Java programming language. Coverage includes correct business programming style and documentation, program debugging and testing, database and file processing, event-handling, and graphical user interfaces.

PREREQ: COMPSCI 172 OR COMPSCI 174 AND A COMBINED CUMULATIVE GPA OF 2.50

#4354  Section 01  [units: 3]
01/21-05/20  MW  09:55 AM - 10:45 AM  HH3202  Hien M Nguyen

COMPSCI 222  INTERMEDIATE C++ ... This course will cover more advanced issues of C++, including memory management, pointers and user-defined data types. Topics will include reading and writing files, dynamic arrays, implementation of the principles of object oriented design including encapsulation, and inheritance, planning and testing. Students will write complex applications using C++.

PREREQ: COMPSCI 174 OR COMPSCI 172 AND CONSENT OF INSTRUCTOR

#1732  Section 01  [units: 3]
01/21-05/20  TR  12:30 PM - 01:45 PM  MG0115  Jiazhen Zhou

COMPSCI 223  DATA STRUCTURES ... This course covers issues of data structures, professional software development methodologies including software patterns and advanced object oriented techniques. Topics include lists, queues, stacks and trees. Complex data structure and object-oriented design technique, including inheritance and polymorphism, are applied to develop and large projects.

UNREQ: MCS 231, COMPSCI 231, COMPSCI 223

PREREQ: COMPSCI 222 OR COMPSCI 220

#1743  Section 01  [units: 3]
01/21-05/20  TR  09:30 AM - 10:45 AM  MG0115  Athula D. A. Gunawardena

#5113  Section 02  [units: 3]
01/21-05/20  TR  09:30 AM - 10:45 AM  HY0210  Cheng Thao

COMPSCI 271  ASSEMBLY PROGRAMMING ... This course covers PC hardware and the use of an assembly language including writing, linking, and executing a program. Also covered are number systems, the 8086 processor, instructions for arithmetic and logical operations, memory access, loops, declaring variables, and using interrupts, machine language, segments, stacks, procedure writing, and file handling.

PREREQ: COMPSCI 172 OR COMPSCI 174

#1678  Section 01  [units: 3]  NOTE: This is a hybrid course and will have classroom meetings plus online instruction. Further instructions will be given the first day of class.
01/21-05/20  MW  12:05 PM - 12:55 PM  MG0115  Lapamudra Mukherjee
01/21-05/20  MW  12:05 PM - 12:55 PM  MG0115  Lapamudra Mukherjee

COMPSCI 381  JAVASCRIPT AND DHTML ... JavaScipt is a computer language for adding flexibility and functionality to web pages. A powerful language in its own right, it also has the capability to interact with HTML forms, browsers, Java applets, and other objects found on a web page. Students in this course will gain a thorough understanding of JavaScript, and learn to harness it abilities to manage windows, forms, events, cookies, etc.

PREREQ: COMPSCI 181 & EITHER COMPSCI 172 OR COMPSCI 174 OR EQUIVALENT PREPARATION AND CONSENT OF INSTRUCTOR

#4355  Section 01  [units: 3]
01/25-05/20  TR  12:30 PM - 01:45 PM  HY0210  Sabitha W Samaranayake

#4357  Section 02  [units: 3]
01/21-05/20  TR  03:45 PM - 05:00 PM  HY0210  Sabitha W Samaranayake

COMPSCI 382  CGI SCRIPTING ... CGI scripting is key to processing web forms, as well as for automating a wide range of server tasks. This course will provide a thorough introduction to the CGI scripting languages including PERL, PHP, PYTHON, and RUBY. Students will learn to manipulate data, generate dynamic web pages, control email and much more.

PREREQ: COMPSCI 181 & EITHER COMPSCI 172 OR COMPSCI 174 OR EQUIVALENT PREPARATION AND CONSENT OF INSTRUCTOR

#4356  Section 01  [units: 3]
01/21-05/20  MW  03:45 PM - 05:00 PM  HY0210  Sabitha W Samaranayake

COMPSCI 433  THEORY OF ALGORITHMS ... This course is a survey of algorithms needed for searching, sorting, pattern matching, analyzing graphs, and a variety of other problems of discrete mathematics. Analysis of algorithm efficiency and space/time tradeoffs are discussed.

PREREQ: (MCS 231 OR COMPSCI 223) OR (MATH 280 AND EITHER COMPSCI 172 OR COMPSCI 174)

#5064  Section 01  [units: 3]
01/21-05/20  W  06:15 PM - 08:45 PM  HY0210  Athula D. A. Gunawardena

COMPSCI 434  THEORY OF COMPUTATION ... This course is an introduction to the theory of computation. It discusses finite automata and Turing machines as models of computation. It includes discussions of regular sets, recursive and partially recursive functions, context free grammars, the halting problem, undecidable problems, complexity, and NP-completeness.

PREREQ: MATH 280

#4366  Section 01  [units: 3]
01/25-05/20  MW  11:00 AM - 11:50 AM  HE0215  Thomas L Drucker
COMPSCI 460 COMPUTER NETWORKING … This course introduces the principles, applications, protocols, and architectures of data networks. It places an equal emphasis on practical experience as well as theoretical foundations. There will be abundant network programming and lab activities around application layer, transportation layer, and routing.

PREREQ: COMPSCI 223 AND COMPSCI 271 OR CONSENT OF INSTRUCTOR

#4381  Section 01  [units: 3]
01/21-05/20  TR  11:00 AM - 12:15 PM  MG0115  Jiachen Zhou

COMPSCI 481 WEB SERVER AND UNIX ADMINISTRATION … This course is intended to introduce students to Web Server software and UNIX and UNIX-like operating systems from the perspective of the System Administrator. Linux, the fastest growing operating system, will be studied in detail, together with the Apache web server. Web server configuration will be studied, including optimization, security issues and virtual server administration. Additional topics will include shell programming, system monitoring, file systems and the X Windows GUI. This course will focus on common system administration duties on the Linux platform. Students will acquire competency in using shell programming skills to automate the maintenance of server activity. Emphasis will be placed on using Linux as an Internet server.

PREREQ: COMPSCI 172 OR COMPSCI 174 OR EQUIVALENT PREPARATION AND CONSENT OF INSTRUCTOR

#1689  Section 01  [units: 3]
01/21-05/20  MW  02:15 PM - 03:30 PM  HY0210  Zachary J Oster

COMPSCI 482 WEB DATABASE DEVELOPMENT … This course will introduce students to database applications using MySQL databases on a UNIX platform. Topics will include SQL: creating, accessing and updating server-side databases; a variety of database-to-web interface tools. Transactions with other database products via CGI scripting will also be considered.

PREREQ: COMPSCI 381 AND COMPSCI 382 OR EQUIVALENT PREPARATION OR CONSENT OF INSTRUCTOR

#1692  Section 01  [units: 3]
01/21-05/20  TR  11:00 AM - 12:15 PM  HY0210  Cheng Thao

COMPSCI 498 INDEPENDENT STUDY IN COMPUTER SCIENCE … Study of a selected topic or topics under the direction of a faculty member. Repeatable. Department Consent required.

#1695  Section 01  [units: 1-3]  Dept. Consent
01/21-05/20  Arranged  Arranged  Cheng Thao

#1698  Section 02  [units: 1-3]  Dept. Consent
01/21-05/20  Arranged  Arranged  Hien M Nguyen

#1701  Section 03  [units: 1-3]  Dept. Consent
01/21-05/20  Arranged  Arranged  To Be Arranged

#1710  Section 04  [units: 1-3]  Dept. Consent
01/21-05/20  Arranged  Arranged  To Be Arranged

#1740  Section 05  [units: 1-3]  Dept. Consent
01/21-05/20  Arranged  Arranged  To Be Arranged

*** GRADUATE LEVEL COURSES ***

COMPSCI 798 INDIVIDUAL STUDIES … Study of a selected topic or topics under the direction of a faculty member.

#1707  Section 01  [units: 1-3]
01/21-05/20  Arranged  Arranged  To Be Arranged

Mathematics

MATH 41 BEGINNING ALGEBRA … A course for those who have a sound background in basic arithmetic, but who have not been exposed to algebra, or who need to strengthen their basic algebra skills. Topics include properties of the real numbers, linear and quadratic equations, linear inequalities, exponents, polynomials, rational expressions, the straight line, and systems of linear equations. The course counts towards the semester credit load and will be computed into the grade point average. It will not, however, be included in the credits necessary for graduation. It may be taken for a conventional grade or on a satisfactory/no credit basis. Prerequisite: MATH 040 or equivalent demonstration of capability. Students cannot receive credit for MATH 041 if they have been waived from the Mathematics Proficiency Requirement. Not available to students who have satisfied the University Proficiency requirement in mathematics.

PREREQ: MATH 40 OR ITS EQUIVALENT

#1968  Section 01  [units: 4]  NOTE: This section is restricted to students with MATH 040 placement or students who would like an additional review of pre-algebra mathematics. Concurrent enrollment in DEVLPED 080, sec. 1 during Spring 2014 is required. Please contact the Mathematics Department for permission to enroll in this section.
01/21-05/20  MTWR  09:55 AM - 10:45 AM  HE0112  Huckleberry Rahr

#1950  Section 02  [units: 4]
01/21-05/20  MTWR  08:50 AM - 09:40 AM  MC0112  Brenda K Volk

#5149  Section 03  [units: 4]  Dept. Consent
01/21-05/20  MTWR  09:55 AM - 10:45 AM  MC0011A  John T Reilly  PATHWAYS

#1951  Section 03P  [units: 4]  Dept. Consent
Pathways 2013
01/21-05/20  MTWR  09:55 AM - 10:45 AM  MC0011A  John T Reilly  PATHWAYS

#1912  Section 04  [units: 4]
01/21-05/20  MTWR  11:00 AM - 11:50 AM  MC0011A  John T Reilly

#1923  Section 06  [units: 4]
01/21-05/20  MTWR  12:05 PM - 12:55 PM  MC0112  Lori L Grady
MATH 140  MATHEMATICAL IDEAS ... Designed to give students a broad understanding and appreciation of mathematics. Includes topics not usually covered in a traditional algebra course. Topics encompass some algebra, problem solving, counting principles, probability, statistics, and consumer mathematics. This course is designed to meet the University Proficiency Requirement in mathematics for those students who do not wish to take any course which has MATH 141 as a prerequisite. ACT Math subscore 19-23 (SAT 460-550)
PREREQ: MATH 41 WITH A GRADE OF C OR BETTER, OR DEMONSTRATION OF EQUIVALENT CAPABILITY

MATH 141  INTERMEDIATE ALGEBRA ... Introduction to college algebra. Topics and concepts extend beyond those taught in a beginning algebra course. A proficiency course for those who have not had sufficient preparation in high school to allow them to take MATH 143 or MATH 152. ACT Math subscore 19-23 (SAT 460-550)
PREREQ: MATH 41 WITH A GRADE OF C OR BETTER OR ITS EQUIVALENT
#4268  Section 20  [units: 4]  NOTE: This class is taught online through Desire2Learn. The course site will be available to you at the beginning of the semester. An additional $200 fee will be assessed for this course.
01/21/05/20  Arranged  WEB BASED  Joan Stamm

MATH 143 FINITE MATHEMATICS FOR BUSINESS AND SOCIAL SCIENCES (GM) ... Mathematical preparation for the understanding of various quantitative methods in modern management and social sciences. Topics included are sets, relations, linear functions, interest, annuities, matrix theory, the solution of linear systems by the graphical, algebraic, Gauss-Jordan, and inverse methods, linear programming by graphical and simplex methods, counting and probability, and decision theory. College of Business and Economics majors must take this course on a conventional grade basis.
PREREQ: MATH 141 WITH A GRADE OF C OR BETTER OR WAIVER.

#1928  Section 01  [units: 3]  Gen Ed Math/Natural Sciences (GM)
01/21/05/20  MWF  08:50 AM - 09:40 AM  MG0125  William T Mickelson

#1886  Section 03  [units: 3]  Gen Ed Math/Natural Sciences (GM)
01/21/05/20  MWF  08:50 AM - 09:40 AM  HE0219  Khyam N Paneru

#1887  Section 04  [units: 3]  Gen Ed Math/Natural Sciences (GM)
01/21/05/20  MWF  09:55 AM - 10:45 AM  MG0125  William T Mickelson

#1888  Section 05  [units: 3]  Gen Ed Math/Natural Sciences (GM)
01/21/05/20  MWF  09:55 AM - 10:45 AM  HE0219  Khyam N Paneru

#1889  Section 06  [units: 3]  Gen Ed Math/Natural Sciences (GM)  NOTE: This is a hybrid course and will have classroom meetings plus online instruction. Further instructions will be given the first day of class.
01/21/05/20  MW  11:00 AM - 11:50 AM  HE0219  Jiazhen Zhou
01/21/05/20  Arranged  Arranged  WEB BASED  Jiazhen Zhou

#1890  Section 07  [units: 3]  Gen Ed Math/Natural Sciences (GM)  NOTE: This is a hybrid course and will have classroom meetings plus online instruction. Further instructions will be given the first day of class.
01/21/05/20  MW  12:05 PM - 12:55 PM  MG0125  Jiazhen Zhou
01/21/05/20  Arranged  Arranged  WEB BASED  Jiazhen Zhou

#1891  Section 08  [units: 3]  Gen Ed Math/Natural Sciences (GM)
01/21/05/20  MWF  12:05 PM - 12:55 PM  HE0219  Jiehui Ma

#1892  Section 09  [units: 3]  Gen Ed Math/Natural Sciences (GM)
01/21/05/20  MWF  03:45 PM - 05:00 PM  HE0101  Thomas L McFarland
03/05  W  04:45 PM - 07:00 PM  HE0117  Thomas L McFarland  EXAM

#1893  Section 10  [units: 3]  Gen Ed Math/Natural Sciences (GM)  NOTE: This class is taught online through Desire2Learn. The course site will be available to you at the beginning of the semester. An additional $150 fee will be assessed for this course.
01/21/05/20  Arranged  Arranged  WEB BASED  Mohammad H Ahmadi

#1894  Section 11  [units: 3]  Gen Ed Math/Natural Sciences (GM)
01/21/05/20  TR  09:30 AM - 10:45 AM  HE0219  Mohammad H Ahmadi

#1895  Section 12  [units: 3]  Gen Ed Math/Natural Sciences (GM)
01/21/05/20  TR  09:30 AM - 10:45 AM  MG0125  Xueqing Chen

#1936  Section 13  [units: 3]  Gen Ed Math/Natural Sciences (GM)
01/21/05/20  TR  11:00 AM - 12:15 PM  HE0215  Peter H Lampe

#1940  Section 14  [units: 3]  Gen Ed Math/Natural Sciences (GM)
01/21/05/20  TR  12:30 PM - 01:45 PM  HE0215  Peter H Lampe

#1945  Section 15  [units: 3]  Gen Ed Math/Natural Sciences (GM)
01/21/05/20  TR  02:15 PM - 03:30 PM  HE0215  Peter H Lampe

#1952  Section 16  [units: 3]  Gen Ed Math/Natural Sciences (GM)  NOTE: This class is taught online through Desire2Learn. The course site will be available to you at the beginning of the semester. An additional $150 fee will be assessed for this course.
01/21/05/20  Arranged  Arranged  WEB BASED  Angela Kopf Harlan

MATH 145 MATHEMATICS FOR THE ELEMENTARY TEACHER I (GM) ... A study of sets, whole numbers, fractions, integers, decimals and real numbers, basic arithmetic operations and their properties, standard and alternative algorithms and estimations strategies; problem-solving, proportional reasoning and algebraic thinking. Manipulatives and cooperative learning activities are used throughout the course. For elementary education majors.
PREREQ: A GRADE OF C OR BETTER OR WAIVER FROM THE UNIVERSITY MATHEMATICS PROFICIENCY REQUIREMENT.

#1869  Section 03  [units: 3]  Gen Ed Math/Natural Sciences (GM)
01/21/05/20  MWF  10:50 AM - 12:00 PM  HY0216  Angela Kopf Harlan
01/31  F  11:00 AM - 12:00 PM  HH3106  Angela Kopf Harlan

#1870  Section 02  [units: 3]  Gen Ed Math/Natural Sciences (GM)  NOTE: Required course fee $45.
01/21/05/20  MWF  12:05 PM - 12:55 PM  HY0216  Angela Kopf Harlan

#1871  Section 01  [units: 3]  Gen Ed Math/Natural Sciences (GM)  NOTE: Required course fee $45.
01/21/05/20  T  06:15 PM - 08:45 PM  HY0216  Teri J Alder
MATH 149 MATHEMATICS FOR THE ELEMENTARY TEACHER II ... Topics in probability and statistics, with emphasis on descriptive techniques. Investigations in geometric figures, measurement, construction, transformations, congruent and similar geometric figures. Problem solving strategies, manipulatives, and cooperative learning activities are emphasized throughout the course. All students will prepare a mathematics based activity and present it at an area elementary school.

PREREQ: MATH 148 WITH A GRADE OF C OR BETTER

#1872 Section 01 [units: 3] NOTE: A required course fee of $45 will be charged to students who did not receive a math manipulative kit in MATH 148.
01/21-05/20 MW 02:15 PM - 03:30 PM HY0216 Teri J Alder

#1873 Section 02 [units: 3] NOTE: A required course fee of $45 will be charged to students who did not receive a math manipulative kit in MATH 148.
01/21-05/20 MW 03:45 PM - 05:00 PM HY0216 Teri J Alder

#1874 Section 03 [units: 3] NOTE: A required course fee of $45 will be charged to students who did not receive a math manipulative kit in MATH 148.
01/21-05/20 M 06:15 PM - 08:45 PM HY0216 Teri J Alder

MATH 152 ELEMENTARY FUNCTIONS (GM) ... Review of algebraic functions, inequalities, mathematical induction, theory of equations, exponential and logarithmic functions, circular functions, trigonometric identities and equations, inverse trigonometric functions, solution of triangles.

PREREQ: MATH 141 WITH A GRADE OF C OR BETTER OR WAIVER.

#1896 Section 01 [units: 5] Gen Ed Math/Natural Sciences (GM)
01/21-05/20 MTWRF 08:00 AM - 09:40 AM HE0112 Pawel Felcyn

#1897 Section 02 [units: 5] Gen Ed Math/Natural Sciences (GM)
01/21-05/20 MTWRF 09:55 AM - 10:45 AM HH2311 Pawel Felcyn

#1898 Section 03 [units: 5] Gen Ed Math/Natural Sciences (GM)
01/21-05/20 MTWRF 11:00 AM - 11:50 AM HH1310 Inessa Maryline Sedegho

#1927 Section 04 [units: 5] Gen Ed Math/Natural Sciences (GM) NOTE: This is a hybrid course and will have classroom meetings plus online instruction. Further instructions will be given the first day of class.
01/21-05/20 MTWRF 12:05 PM - 12:55 PM HH2311 Corey T Bruns
01/21-05/20 Arranged Arranged WEB BASED Corey T Bruns

#1942 Section 05 [units: 5] Gen Ed Math/Natural Sciences (GM) NOTE: This is a hybrid course and will have classroom meetings plus online instruction. Further instructions will be given the first day of class.
01/21-05/20 MTWRF 01:10 PM - 02:00 PM HH2311 Corey T Bruns
01/21-05/20 Arranged Arranged WEB BASED Corey T Bruns

#1962 Section 06 [units: 5] Gen Ed Math/Natural Sciences (GM)
01/21-05/20 MW 02:15 PM - 03:05 PM HE0219 Ki-Bong Nam
01/21-05/20 TR 02:15 PM - 03:30 PM HE0219 Ki-Bong Nam

MATH 177 THE LOGIC OF CHESS ... A study of logic particularly as it is used in the game of chess and, most particularly, in chess strategy and the end game of chess. The rules are taught to those who are not already acquainted with the game.

PREREQ: MATH 141 OR MATH 140

#1899 Section 01 [units: 1]
01/21-05/20 M 06:15 PM - 07:30 PM HE0100 Thomas L McFarland

MATH 230 INTRODUCTORY STATISTICS ... A pre-calculus course in statistics. Descriptive statistics, probability distributions, prediction, hypothesis testing, correlation, and regression. This course does not count towards a mathematics major or minor in either liberal arts or secondary education or towards a mathematics minor in elementary education. This course may not be taken for credit if credit has been or is being earned in any other statistics course.

PREREQ: MATH 141 WITH A GRADE OF C OR BETTER OR WAIVER.

#1900 Section 01 [units: 3] Gen Ed Math/Natural Sciences (GM)
01/21-05/20 MWF 01:10 PM - 02:00 PM MG0125 William T Mickelson

MATH 231 UNDERSTANDING PROBABILITY AND STATISTICS ... A pre-calculus course in probability and statistics. Descriptive statistics, classical probability, probability distributions, prediction, parametric and nonparametric hypothesis testing, correlation, regression, and use of some statistical software. This course does not count towards a mathematics major or minor in liberal arts or towards a mathematics major in secondary education. This course may not be taken for credit if credit has been or is being earned in any other statistics course.

PREREQ: MATH 143 OR MATH 152 WITH A GRADE OF C OR BETTER

#1946 Section 01 [units: 3] Gen Ed Math/Natural Sciences (GM)
01/21-05/20 MW 03:45 PM - 05:00 PM MG0125 Khyam N Paneru

MATH 243 SHORT CALCULUS FOR BUSINESS AND SOCIAL SCIENCES (GM) ... A general survey of the calculus. Topics covered include limits, differentiation, max-min theory, exponential and logarithmic functions, and integration. Business and social science applications are stressed.

PREREQ: MATH 143 OR MATH 152 WITH A GRADE OF C OR BETTER

#1901 Section 01 [units: 3] Gen Ed Math/Natural Sciences (GM)
01/21-05/20 MWF 01:10 PM - 02:00 PM MG0117 Robert P Siemann

#1902 Section 02 [units: 3] Gen Ed Math/Natural Sciences (GM)
01/21-05/20 MWF 02:15 PM - 03:05 PM MG0117 Robert P Siemann

#1903 Section 03 [units: 3] Gen Ed Math/Natural Sciences (GM)
01/21-05/20 TR 11:00 AM - 12:15 PM HE0219 Fe S Evangelista
04/15 T 04:30 PM - 06:00 PM HE0217 Fe S Evangelista REVIEW SESSION
<table>
<thead>
<tr>
<th>Course section</th>
<th>Start/End Dates</th>
<th>Meeting Days</th>
<th>Meeting Times</th>
<th>Location</th>
<th>Instructor</th>
<th>Course Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1915 Section 04</td>
<td>01/21-05/20</td>
<td>TR</td>
<td>12:30 PM - 01:45 PM</td>
<td>HE0100</td>
<td>Leon M Arriola</td>
<td>Gen Ed Math/Natural Sciences (GM)</td>
</tr>
<tr>
<td>#1916 Section 05</td>
<td>01/21-05/20</td>
<td>TR</td>
<td>12:30 PM - 01:45 PM</td>
<td>HY0216</td>
<td>Mohammad H Ahmadi</td>
<td>Gen Ed Math/Natural Sciences (GM)</td>
</tr>
<tr>
<td>#1922 Section 06</td>
<td>01/21-05/20</td>
<td>W</td>
<td>06:15 PM - 08:45 PM</td>
<td>HH1300</td>
<td>Mohammad H Ahmadi</td>
<td>Gen Ed Math/Natural Sciences (GM)</td>
</tr>
<tr>
<td>#1932 Section 01</td>
<td>01/21-05/20</td>
<td>MTWRF</td>
<td>08:50 AM - 09:40 AM</td>
<td>HE0215</td>
<td>Thomas L Drucker</td>
<td>Gen Ed Math/Natural Sciences (GM)</td>
</tr>
<tr>
<td>#1963 Section 02</td>
<td>01/21-05/20</td>
<td>MW</td>
<td>02:15 PM - 03:05 PM</td>
<td>HE0100</td>
<td>Thomas L McFarland</td>
<td>Gen Ed Math/Natural Sciences (GM)</td>
</tr>
<tr>
<td>#1904 Section 01</td>
<td>01/21-05/20</td>
<td>MTWRF</td>
<td>08:50 AM - 09:40 AM</td>
<td>HH2311</td>
<td>Balamurugan Pandiyan</td>
<td>Gen Ed Math/Natural Sciences (GM)</td>
</tr>
<tr>
<td>#1905 Section 02</td>
<td>01/21-05/20</td>
<td>Arranged</td>
<td>Arranged</td>
<td>WEB BASED</td>
<td>Balamurugan Pandiyan</td>
<td>Gen Ed Math/Natural Sciences (GM)</td>
</tr>
<tr>
<td>#1931 Section 03</td>
<td>01/21-05/20</td>
<td>MW</td>
<td>02:15 PM - 03:05 PM</td>
<td>HE0112</td>
<td>Xueqing Chen</td>
<td>Gen Ed Math/Natural Sciences (GM)</td>
</tr>
<tr>
<td>#1906 Section 01</td>
<td>01/21-05/20</td>
<td>MTWRF</td>
<td>08:50 AM - 09:40 AM</td>
<td>MG0117</td>
<td>Peter H Lampe</td>
<td>Gen Ed Math/Natural Sciences (GM)</td>
</tr>
<tr>
<td>#1907 Section 02</td>
<td>01/21-05/20</td>
<td>MW</td>
<td>02:15 PM - 03:05 PM</td>
<td>HH2311</td>
<td>Julie A Letellier</td>
<td>Gen Ed Math/Natural Sciences (GM)</td>
</tr>
<tr>
<td>#1908 Section 01</td>
<td>01/21-05/20</td>
<td>MW</td>
<td>02:15 PM - 03:30 PM</td>
<td>HH2308</td>
<td>Geethamali G Samaranayake</td>
<td>Gen Ed Math/Natural Sciences (GM)</td>
</tr>
<tr>
<td>#5114 Section 02</td>
<td>01/21-05/20</td>
<td>TR</td>
<td>11:00 AM - 12:15 PM</td>
<td>WH2016</td>
<td>Sabitha W Samaranayake</td>
<td>Gen Ed Math/Natural Sciences (GM)</td>
</tr>
</tbody>
</table>

**MATH 250 APPLIED CALCULUS SURVEY FOR BUSINESS AND SOCIAL SCIENCES (GM)** - An applied calculus course covering elementary analytic geometry, limits, differentiation, max-min theory, exponential and logarithmic functions, integration, functions of several variables, and elementary differential equations. Some computer topics may be included.

**PREREQ:** MATH 143 WITH A C OR BETTER OR EQUIVALENT PREPARATION AS DETERMINED BY THE MATH DEPARTMENT.

**MATH 252 CALCULUS AND ANALYTIC GEOMETRY I (GM)** - Review of algebraic and trigonometric functions, transcendental functions, limits, study of the derivative, techniques of differentiation, continuity, applications of the derivative, L' Hopital's Rule and indeterminate forms, the Riemann integral, Fundamental Theorem of Calculus, and substitution rule.

**PREREQ:** MATH 152 WITH A GRADE OF C OR BETTER OR EQUIVALENT HIGH SCHOOL PREPARATION AS DETERMINED BY THE MATHEMATICS DEPARTMENT.

**MATH 254 CALCULUS AND ANALYTIC GEOMETRY II** - Techniques of integration, applications of the integral, introduction to differential equations, polar coordinates and conic sections, infinite sequences and series. This course includes a writing component.

**PREREQ:** MATH 250 WITH A GRADE OF B OR BETTER OR MATH 253 WITH A GRADE OF C OR BETTER

**MATH 255 CALCULUS AND ANALYTIC GEOMETRY III** - Solid analytic geometry, vectors and vector functions, functions of several variables, multiple integrals and their applications.

**PREREQ:** MATH 254 WITH A GRADE OF C OR BETTER

**MATH 280 DISCRETE MATHEMATICS** - This course will supply a thorough grounding in the mathematical topics which are central to the study of computer science, and which form the basis for many modern applications of mathematics to the social sciences. Topics covered will include sets, logic, Boolean algebra and switching circuits, combinatorics, probability, graphs, trees, recursion, and algorithm analysis. Expressing mathematical ideas and writing proofs will be emphasized.

**PREREQ:** MATH 250 WITH A GRADE OF B OR BETTER OR MATH 253 WITH A GRADE OF C OR BETTER
MATH 301  INTRODUCTION TO ANALYSIS ... The main emphasis of this course is to introduce students to mathematical proofs. Students will learn to read and write proofs in mathematics by writing proofs of theorems about limits, sets of real numbers, and continuous functions. If time permits, other topics may include derivates and integration theorems, theory of open and closed sets, and cardinality of sets.
PREREQ: MATH 255 AND MATH 280
#1926  Section 01  [units: 3]
    01/21-05/20  MWF  12:05 PM - 12:55 PM  HE0215  Thomas L. Drucker

MATH 352  INFINITE PROCESSES FOR THE ELEMENTARY TEACHER ... This course is primarily for pre-service elementary and middle school teachers. Students will be introduced to the concepts of calculus, which include infinite processes, limits, and continuity. In addition, derivatives and integrals, and their relationship to area and change will be covered.
PREREQ: MATH 152
#1948  Section 01  [units: 3]
    01/21-05/20  TR  11:00 AM - 12:15 PM  HY0216  Angela Kopf Harlan

MATH 353  COLLEGE GEOMETRY ... The topics included in this course are foundations of Euclidean geometry, Euclidean transformational geometry, modern synthetic geometry that builds on Euclidean geometry, selected finite geometries, and an introduction to non-Euclidean and projective geometry, including their relationship to Euclidean geometry. Although the course is adapted to the prospective teacher of geometry, it will also meet the needs of those in other majors needing a background in geometry. Standards and guidelines of appropriate national and local bodies will be implemented.
PREREQ: MATH 253 AND MATH 280
#1917  Section 01  [units: 5]
    01/21-05/20  MWF  03:45 PM - 04:35 PM  HH2311  Tamas Szabo
    01/21-05/20  TR  03:45 PM - 05:00 PM  HH2311  Tamas Szabo

MATH 355  MATRICES AND LINEAR ALGEBRA ... Systems of linear equations, matrices and determinants, finite dimensional vector spaces, linear dependence, bases, dimension, linear mappings, orthogonal bases, and eigenvector theory. Applications stressed throughout.
PREREQ: MATH 250 WITH A GRADE OF B OR BETTER OR MATH 253 WITH A GRADE OF C OR BETTER
#1930  Section 01  [units: 3]
    01/21-05/20  MWF  09:55 AM - 10:45 AM  HH2310  Xueqing Chen

MATH 359  MATHEMATICAL MODELING & STATISTICS ... An introduction to mathematical modeling and descriptive statistics. Students will develop the basic skills of formulating, simplification, and analysis of mathematical models for describing and predicting physical phenomena. The basic tools of descriptive statistics will also be introduced; the use of descriptive statistics in formulating and interpreting mathematical models will be emphasized. This course contains a writing component.
PREREQ: MATH 255 OR CONSENT OF INSTRUCTOR
#1918  Section 01  [units: 3]
    01/21-05/20  MWF  11:00 AM - 11:50 AM  HY0210  William T Mickelson

MATH 415  MODERN ALGEBRA AND NUMBER THEORY FOR THE ELEMENTARY TEACHER ... An introduction to modern algebra with special emphasis on the number systems and algorithms which underlie the mathematics curriculum of the elementary school. Topics from logic, sets, algebraic structures, and number theory.
PREREQ: MATH 149 AND MATH 152
#1919  Section 01  [units: 3]
    01/21-05/20  MWF  09:55 AM - 10:45 AM  HY0216  Angela Kopf Harlan

MATH 421  MATHEMATICS FOR HIGH SCHOOL TEACHERS I ... The course revisits the high school curriculum from an advanced perspective. The focus is on deepening understanding of concepts, highlighting connections and solving challenging problems. The mathematical content includes number systems, functions, equations, integers, and polynomials. Connections to geometry are emphasized throughout the course.
PREREQ: MATH 280, MATH 301 AND AT LEAST AN ADDITIONAL 3 CREDITS IN UPPER LEVEL MATH
#5002  Section 01  [units: 3]
    01/21-05/20  TR  09:30 AM - 10:45 AM  HY0216  Tamas Szabo

MATH 422  MATHEMATICAL STATISTICS ... This course will cover moment generating functions, moments of linear combinations of random variables, conditional expectation, functions of random variables, sampling distributions, the theory of estimation, Bayesian estimation, hypothesis testing, nonparametric tests, and linear models.
PREREQ: MATH 441 AND MATH 355 OR CONSENT OF INSTRUCTOR
#1976  Section 01  [units: 4]
    01/21-05/20  MTWR  11:00 AM - 11:50 AM  HH2311  Julie A Letellier

MATH 446  ACTUARIAL MATHEMATICS ... This course will discuss the actuarial profession and the insurance industry, provide direction to students wishing to take the first few actuarial examinations, thoroughly cover the theory of interest, and introduce the basic concepts of actuarial mathematics.
COREQ: MATH 441
#5098  Section 01  [units: 3]
    01/21-05/20  TR  04:35 PM - 05:50 PM  HH1303  Thomas M Karthausser

MATH 449  ACTUARIAL EXAMINATION PREPARATION ... Designed for students preparing to take either the first (probability) or second (interest theory) actuarial examination, the course will review the mathematics required for the examination and bring the student through a series of exercises designed to give them the required training to pass their examination.
PREREQ: MATH 441
#1966  Section 01  [units: 1]
    01/21-05/20  MWF  01:10 PM - 02:00 PM  HY0216  Julie A Letellier
<table>
<thead>
<tr>
<th>Class#</th>
<th>Section</th>
<th>General Education Designation (if any)</th>
<th>Start/End Dates</th>
<th>Meeting Days</th>
<th>Meeting Times</th>
<th>Location</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MATH 452</td>
<td>INTRODUCTION TO ABSTRACT ALGEBRA ... An introductory survey of abstract algebra and number theory with emphasis on the development and study of the number systems of integers, integers mod n, rationals, reals, and complex numbers. These offer examples of and motivation for the study of the classical algebraic structures of groups, rings integral domains and fields. Applications to algebraic coding theory and crystallography will be developed if time allows.</td>
<td>01/21-05/20</td>
<td>TR</td>
<td>03:45 PM - 05:00 PM</td>
<td>HE0219</td>
<td>Ki-Bong Nam</td>
</tr>
<tr>
<td>#1933</td>
<td>Section 01</td>
<td>[units: 3]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>MATH 459</td>
<td>PARTIAL DIFFERENTIAL EQUATIONS ... Fourier analysis, partial differential equations and boundary value problems, complex variables, and potential theory.</td>
<td>01/21-05/20</td>
<td>TR</td>
<td>02:15 PM - 03:30 PM</td>
<td>HY0210</td>
<td>Leon M Arriola</td>
</tr>
<tr>
<td>#4367</td>
<td>Section 01</td>
<td>[units: 3]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>MATH 464</td>
<td>ADVANCED CALCULUS ... This course presents a rigorous treatment of the differential and integral calculus of single variable functions, convergence theory of numerical sequences and series, uniform convergence theory of sequences and series of functions, metric spaces, functions of several real variables, and the inverse function theorem. This course contains a writing component.</td>
<td>01/21-05/20</td>
<td>MWF</td>
<td>01:10 PM - 02:00 PM</td>
<td>HE0219</td>
<td>Pawel Felcyn</td>
</tr>
<tr>
<td>#5003</td>
<td>Section 01</td>
<td>[units: 3]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>MATH 498</td>
<td>INDEPENDENT STUDY ... Study of a selected topic or topics under the direction of a faculty member. Repeatable. Department Consent required.</td>
<td>01/21-05/20</td>
<td>Arranged</td>
<td>Arranged</td>
<td>Arranged</td>
<td>Ki-Bong Nam</td>
</tr>
<tr>
<td>#1910</td>
<td>Section 01</td>
<td>[units: 3]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>#1911</td>
<td>Section 02</td>
<td>[units: 3]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>#1920</td>
<td>Section 03</td>
<td>[units: 1-5]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>#1921</td>
<td>Section 04</td>
<td>[units: 1-5]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>#1924</td>
<td>Section 05</td>
<td>[units: 3]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>MATH 453 ABSTRACT ALGEBRA</td>
<td>Dept. Consent</td>
<td>01/21-05/20</td>
<td>Arranged</td>
<td>Arranged</td>
<td>Pawel Felcyn</td>
<td></td>
</tr>
<tr>
<td>#1910</td>
<td>Section 01</td>
<td>[units: 3]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>#1911</td>
<td>Section 02</td>
<td>[units: 3]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>#1920</td>
<td>Section 03</td>
<td>[units: 1-5]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>#1921</td>
<td>Section 04</td>
<td>[units: 1-5]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>#1924</td>
<td>Section 05</td>
<td>[units: 3]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>MATH 431 TOPOLOGY</td>
<td>Dept. Consent</td>
<td>01/21-05/20</td>
<td>Arranged</td>
<td>Arranged</td>
<td>Tamas Szabo</td>
<td></td>
</tr>
<tr>
<td>#1910</td>
<td>Section 01</td>
<td>[units: 3]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>#1911</td>
<td>Section 02</td>
<td>[units: 3]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>#1920</td>
<td>Section 03</td>
<td>[units: 1-5]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>#1921</td>
<td>Section 04</td>
<td>[units: 1-5]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>#1924</td>
<td>Section 05</td>
<td>[units: 3]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>DIFFERENTIAL GEOMETRY II</td>
<td>Dept. Consent</td>
<td>01/21-05/20</td>
<td>Arranged</td>
<td>Arranged</td>
<td>Tamas Szabo</td>
<td></td>
</tr>
<tr>
<td>#1910</td>
<td>Section 01</td>
<td>[units: 3]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>#1911</td>
<td>Section 02</td>
<td>[units: 3]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>#1920</td>
<td>Section 03</td>
<td>[units: 1-5]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>#1921</td>
<td>Section 04</td>
<td>[units: 1-5]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>#1924</td>
<td>Section 05</td>
<td>[units: 3]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>MATH 416</td>
<td>Dept. Consent</td>
<td>01/21-05/20</td>
<td>Arranged</td>
<td>Arranged</td>
<td>Tamas Szabo</td>
<td></td>
</tr>
<tr>
<td>#1920</td>
<td>Section 03</td>
<td>[units: 1-5]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>#1921</td>
<td>Section 04</td>
<td>[units: 1-5]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>#1924</td>
<td>Section 05</td>
<td>[units: 3]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>