UNIVERSITY OF WISCONSIN

INDEPENDENT LEARNING

Online Course Catalog

July 2024

UNIVERSITY OF WISCONSIN
INDEPENDENT LEARNING

il.wisconsin.edu

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Welcome to UW Independent Learning

University of Wisconsin Independent Learning offers a more convenient way for you to meet your goals through a large catalog of online and distance learning courses.

The Courses You've Been Looking For. Where and When You Need Them.

At University of Wisconsin Independent Learning, we're focused on you. Our distance learning courses are available whenever and wherever you need them. So no matter where you are in life–high school, college, your first job, retirement–you can receive a high-quality UW education.

What began as a correspondence study program in the 1890s has evolved to meet the needs of today's learners by offering both print and online college-level courses developed and taught by UW faculty. UW Independent Learning brings the Wisconsin Idea to life by expanding education and lifelong learning opportunities beyond the boundaries of a classroom.

Whether you want to get an early start on college coursework, earn the final credits you need to graduate college, or gain professional or personal enrichment, UW Independent Learning offers courses that are:

- **Distance learning:** All of our courses can be completed from anywhere, and most are offered fully online. You can complete coursework without ever traveling to a campus.
- **Accessible:** Our program does not require an application and does not limit enrollments. If you meet the prerequisites for a course, you're guaranteed a spot.
- **Convenient:** Courses are always open, allowing students to enroll any day of the year. Your first day of class is the day you register, so there's no waiting for a new semester to start.
- **Self-paced:** You're in charge of your own progress and pace. You set your own deadlines and have six months to complete your course, with options to extend up to a full year if you need more time.
- **Transferable:** Our courses transfer to all 13 Universities of Wisconsin and many other colleges and universities around the country.

With an ever-growing catalog of over 30 courses, you'll find an option that meets your needs—whether it's a general education requirement, a professional development course, or simply a topic that interests you.

BUSINESS

Business Communication

U216-354
3 credits
Online

Study and practice of the techniques of achieving clarity, brevity and effectiveness in business communication. Planning, preparation, critiquing of business correspondence, short and long reports, resumes, and presentations. The ability to communicate effectively is the most important skill you can develop. How well you inform, influence, and persuade others determines the progress you make in your career and the quality of your personal relationships. Effective communication is essential to the success of businesses and individuals. This course will focus on the fundamentals of business communication through an examination of such topics as business letters, memorandums and e-mail, employment correspondence, listening skills, short presentations, and business reports.

Prerequisites: One college-level composition course

Business Statistics

U296-241
3 credits
Online

This course is designed to give you the ability to analyze data in a useful way. It should also provide you with the capacity to understand how you and others use (and abuse!) data and the information available from it. Topics include the description of both nominal and quantity data, probability distributions, statistical inference (estimation and hypothesis testing), and regression analysis. This course will provide you with the practical skills needed in business, science, the public sector, and other areas of society, where analysts and decision-makers need to draw conclusions from data, which will in turn better inform the decisions they must make. In essence, we will learn to analyze, collect, and organize data and how to use it for practical decision making.

Prerequisites: Completion of a college-level mathematics course (including Algebra) with a C or better, or the equivalent

Introduction to Communication

U601-110
3 credits
Online

This course offers an introduction to concepts and theories of communication, and then asks students to apply those concepts and theories to interpersonal interactions, small group processes, and public addresses. Through participating in the course, students will recognize the importance of communication's relevance to everyday life, and the importance of critically examining and celebrating diverse voices.

Prerequisites: None

Introduction to Databases

U701-328
3 credits
Online

A database is a fundamental component of an information system. Database Management Systems (DBMSs) support the development and use of databases by facilitating data insertion, update, retrieval and integrity. IT professionals must know how to design a sound database. In addition, they must know how to retrieve and update data through a DBMS. This course explores the following topics: relational model, relational algebra, SQL, four main objects and relationships, database normalization, database applications, and data-driven decision making. In this course, students will receive hands-on experience with at least one DBMS (MS Access and MySQL) and work on database projects with real-world business scenarios by applying the concepts. In addition, this course will introduce database industry careers and trends with practical information and knowledge. Students will be well-prepared to start a career in the database industry.

Prerequisites: No specific prerequisites. However, basic calculation, logical thinking, and quantitative reasoning are necessary skills required throughout this course.

Introduction to Networking

U701-327
3 credits
Online

This course introduces the fundamentals of computer network, including communication and computation technologies. In this course, students will learn the most important concepts around IT infrastructure, such as TCP/IP, five layers of TCP/IP stack layers, data transmission, networking, security, computing infrastructure, and managerial issues. These concepts are reinforced by real-world examples in multiple hands-on exercises and example cases analysis that apply the knowledge and skills learned from this course. The critical thinking and IT infrastructure design exercises will deepen students' understanding of the IT infrastructure capabilities and supports their business problem solving ability regarding IT infrastructure components and solutions. Through interactive learning experience, students can be well-prepared for the dynamic networking industry.

Prerequisites: No specific prerequisites. However, basic calculation, logical thinking, and critical thinking are necessary skills required throughout this course. Coding skills are not required, but will be helpful in this course.

Introduction to Parliamentary Procedure: Dynamics of Leadership

C216-M28
14 CEU
Online

An introductory course based on Roberts' Rules of Order, the most widely used and authoritative reference in the field of meeting procedure and management. If you are involved in an organization and want to have quality meetings that result in decisions rather than more meetings, this course is for you. Students who finish this course and pass the examination with a grade of C or higher are eligible for membership in the National Association of Parliamentarians without further testing.

Visit the National Association of Parliamentarians for more information about parliamentary procedure, education, and resources.

Prerequisites: None

Principles of Macroeconomics

U296-103
3 credits
Online

This course will provide an introduction to Macroeconomics and will explore the following topics: The economic role of the government sector; Government expenditures and taxation; National income analysis; Economic fluctuations; Money and banking; Economic growth; and International Economics.

Prerequisites: Completion of 2 years of high school Algebra and 1 year of high school Geometry with a C or better, or the equivalent

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Principles of Marketing

U216-311
3 credits
Online

Principles of Marketing is an introductory course that presents basic marketing concepts, the marketing mix, corporate social responsibility, global marketing, consumer decision-making, market segmentation, target marketing, and marketing research.

Prerequisites: None. Appropriate for second-year or higher college students.

Principles of Microeconomics

U296-101
3 credits
Online

The goal and objective of this course is to teach students the framework principles behind microeconomics. Economics is the study of how entities make decisions to allocate resources that are scarce in nature. Microeconomics focuses on the decisions of individuals and firms in particular. Students will learn economic terminology and philosophy that will provide a strong basis for understanding and analyzing current public policies and events. Topics of this course include consumer and firm behavior as well as market and public sector economics. The tools introduced and learned in this course will be primarily diagrammatical and mathematical in nature. Oftentimes students may have some difficulty at first employing the tools learned and utilized in economics courses. However with consistent hard work, these tools become quite intuitive and even easy to use.

Prerequisites: Completion of 2 years of high school Algebra and 1 year of high school Geometry with a C or better, or the equivalent.

COMPUTER SCIENCE

Introduction to Computation

U701-105
3 credits
Online

This course introduces the student to the basics of computers and shows how problem-solving is a central theme in Computer Science. Topics include data & program representation, the system unit, the CPU & memory, storage systems, input & output devices, the operating system & utility programs, networking and computer communications, computer security and privacy, problem-solving techniques and tools, flowcharts, algorithms, and basic programming.
The heart and purpose of this course is threefold: (1) to help students become effective users of IT, (2) to help students improve their problem-solving skills, and (3) to help students understand how to apply IT knowledge and problem-solving to their everyday lives.

Introduction to Databases

U701-328
3 credits
Online

A database is a fundamental component of an information system. Database Management Systems (DBMSs) support the development and use of databases by facilitating data insertion, update, retrieval and integrity. IT professionals must know how to design a sound database. In addition, they must know how to retrieve and update data through a DBMS. This course explores the following topics: relational model, relational algebra, SQL, four main objects and relationships, database normalization, database applications, and data-driven decision making. In this course, students will receive hands-on experience with at least one DBMS (MS Access and MySQL) and work on database projects with real-world business scenarios by applying the concepts. In addition, this course will introduce database industry careers and trends with practical information and knowledge. Students will be well-prepared to start a career in the database industry.

Prerequisites: No specific prerequisites. However, basic calculation, logical thinking, and quantitative reasoning are necessary skills required throughout this course.

Introduction to Networking

U701-327
3 credits
Online

This course introduces the fundamentals of computer network, including communication and computation technologies. In this course, students will learn the most important concepts around IT infrastructure, such as TCP/IP, five layers of TCP/IP stack layers, data transmission, networking, security, computing infrastructure, and managerial issues. These concepts are reinforced by real-world examples in multiple hands-on exercises and example cases analysis that apply the knowledge and skills learned from this course. The critical thinking and IT infrastructure design exercises will deepen students' understanding of the IT infrastructure capabilities and supports their business problem solving ability regarding IT infrastructure components and solutions. Through interactive learning experience, students can be well-prepared for the dynamic networking industry.

Prerequisites: No specific prerequisites. However, basic calculation, logical thinking, and critical thinking are necessary skills required throughout this course. Coding skills are not required, but will be helpful in this course.

Introduction to Programming

U701-221
3 credits
Online

This course provides a conceptual and practice-oriented approach to define a business problem, design and test solution logic, implement and code the logic through sound structured programming techniques. It uses the C# .NET programming language to develop programs that are robust and easy to maintain using the Windows GUI framework. This course covers programming constructs such as data types, control structures, exception handling, methods and even handlers, arrays and collections, and file I/O. This course has a significant component of object-oriented programming and covers classes, inheritance, interfaces, and polymorphism.

Prerequisites: College Algebra I (or) Equivalent

ENGINEERING

Computer-Aided Design

U901-104
3 credits
Online

This course equips students with the computer aided design software tools to generate 2D graphics and 3D models that meet industry standards. Introduces students to computer aided drafting using the AutoCAD software. Students also learn solid modeling concepts such as part modeling, assemblies and sheet metal
modeling using SolidWorks software. At the end of this course, students will be able to visualize, communicate, and document objects/parts in industry standard 2D engineering drawings and successfully create 3D assemblies.

Dynamics

U901-214
3 credits
Online

Dynamics is a branch of Engineering Mechanics which deals with the motion of accelerated bodies. It encompasses kinematics (which deals with the geometrics of motion), and kinetics (which focuses on the forces that cause motion to occur). This course will include a study of kinematics and kinetics, as well as work, energy, impulse, and momentum in two dimensions for particles, as well as rigid bodies. Dynamics is a fundamental engineering course. The mastery of the skills presented in this course is necessary for understanding many of the problems students will face for the rest of their education, and throughout their careers.

Prerequisites: Physics, Calculus (HS level)

Fluid Mechanics

U901-218
3 credits
Online

This is an introductory course in fluid mechanics. The topics include fluid properties, fluid statics, fluid dynamics; potential flow; dimensional analysis; internal flow and external flow; and boundary-layer theory.

Prerequisites: Physics II, Mechanics II, Ordinary Differential Equations

Statics

U901-213
3 credits
Online

This course will introduce students to the fundamental concepts and skills that form the foundation for structural and mechanical design. Topics covered in this course include elementary vector operations, resultant of two and three-dimensional force systems, centroid, equilibrium of trusses and frames, friction, internal forces, and moments of inertia. The problem-solving-oriented lectures help students develop the ability to understand and analyze static forces in a variety of engineering and structure applications.

Prerequisites: Calculus, Coordinate Geometry, Basic Physics

ENGLISH

Intermediate Composition: The Essay: Inspiration, Order, and Insight

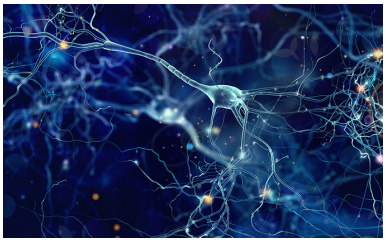
U350-201
3 credits
Online

Expository essays leading to a final project. In writing the essays, you are encouraged to begin with inspiration—with an idea you care about—and then to structure your thoughts in ways that present that idea clearly to your audience.

Prerequisites: Completion of U350-102 Freshman Composition with a C or better or the equivalent

HEALTH SCIENCES

Human Biology

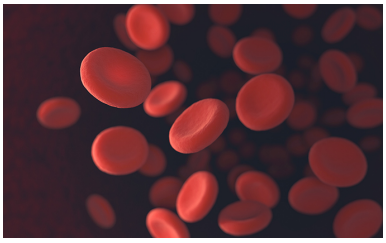


U200-115
3 credits
Online

This course will help you learn about why science, in particular biology, is important. Additional skills honed by this course, such as critical thinking and developing evaluation skills, will also benefit all aspects of your life. In this course you will investigate the chemistry of life; organization and regulation of the body systems; cardiovascular, nervous, reproductive, immune, respiratory, digestive, and lymphatic systems; infectious diseases; human evolution; ecology and human interactions with ecology; and human sustainability.

Prerequisites: None

Human Biology Lab



U200-115L
1 credits
Online

This course will help you learn about why science, in particular biology, is important. Additional skills honed by this course, such as critical thinking and developing evaluation skills, will also benefit all aspects of your life. In this course you will investigate the scientific method; chemistry of life; cell division and cancer; genetics; organization and regulation of the body systems; cardiovascular, nervous, reproductive, respiratory, digestive systems; epidemiology; evolution; population ecology; ecosystems

Prerequisites: Concurrent enrollment in or completion of U200-115 Human Biology with a C or better or the equivalent recommended.

Introduction to Human Anatomy and Physiology

U200-182
3 credits
Online

This course is a study of the structure and function of the human body at the level of organs and systems. This course gives an introductory overview of the following topics: Integumentary System, Skeletal System, Muscular System, Nervous System, The Special Senses, Endocrinology, Circulatory System, Cardiac System, Respiration, Digestion, Urinary System, and Reproductive Systems.

Prerequisites: Advanced placement biology and chemistry classes or college level biology and chemistry

Introduction to Pharmacology

U200-221
3 credits
Online

This course introduces basic concepts of pharmacology and terms used and provides a framework to understand drugs and their administration. Unit I is a basic but comprehensive review of pharmacologic principles, introducing students to the subject of drugs, their sources, and uses in treating disease. Drug calculations are simplified into two step-by-step processes, so students become. Students study medication preparation, steps in calculating dosages, supplies, and specific information on each route of administration through textual and video components.
In unit II, students examine drug classifications through descriptions and characteristics of common drugs, their purposes, side effects, precautions or contraindications, and interactions. In addition, patient education is highlighted for each classification of drugs to bring an awareness of the importance to health care professionals to assist in patient teaching and answer questions about the medications they take.

Prerequisites: Grade of C or greater in Human Biology (U200-115), or General Chemistry with Lab (U1905-101), or
equivalent

Medical Terminology

U200-105
3 credits
Online

This course is designed to acquaint students pursuing science and medical careers with the origins of technical terms they are likely to encounter. The focus of the class will be an introduction to the component parts of scientific and medical terms including prefixes, suffixes and word roots. You will become familiar with body structure and function, and as a result be able to describe the terms that define human body systems.

Nutrition

U200-282
3 credits
Online

The course helps students plan, evaluate, and analyze dietary intake based on sound nutritional guidelines, principles, and knowledge for the purpose of health enhancement, improved mental and physical performance, and decreasing risk of disease.

Prerequisites: Intermediate language requirement

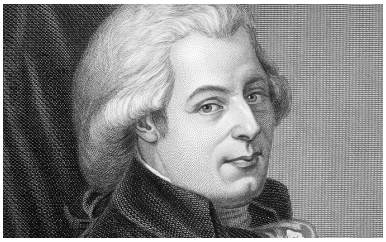
Personal Health

U200-100
3 credits
Online

This course will provide students the opportunity to develop a well- rounded understanding of health and wellness by exploring physical activity, nutrition, stress management, and other health behaviors. The course will culminate with the students creating a personal wellness plan, that includes both physical and psychological health improvement strategies.

HUMANITIES

Appreciation and History of Music



U660-101
3 credits
Online

The purpose of this course is to expand your knowledge and appreciation of music. You will learn concepts that can help you better understand the music you already enjoy while learning about the music of different time periods and different cultures. This course does not require any previous background in music.

Introduction to Communication

U601-110
3 credits
Online

This course offers an introduction to concepts and theories of communication, and then asks students to apply those concepts and theories to interpersonal interactions, small group processes, and public addresses. Through participating in the course, students will recognize the importance of communication's relevance to everyday life, and the importance of critically examining and celebrating diverse voices.

Prerequisites: None

The Civil War Era, 1848-1877

U448-393
3 credits
Online

History 393 is an upper-level undergraduate course exploring the history of the United States during the slavery debate, the Civil War, and the period often called "Reconstruction." It is designed to help you build a number of important skills, including:
• Understanding and assessing primary sources
• Understanding and assessing historical arguments and debates
• Presenting original and coherent written arguments based on primary and secondary materials
• Applying historical knowledge and skills to contemporary debates and representations

The course readings include book-length and shorter works of history, as well as a variety of primary source documents, including slave narratives, political speeches, and other personal and political writings. Visual materials are presented through the course to provide another perspective on this era. Concluding course units

LANGUAGES

French 101: First Semester French

U400-101
4 credits
Online

Develop listening, speaking, reading, and writing skills, all in a cultural context as you learn about French-speaking cultures around the world.

Prerequisites: French 101 assumes no previous knowledge of the language

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French 102: Second Semester French

U400-102
4 credits
Online

Develop listening, speaking, reading, and writing skills, all in a cultural context as youlearn about French-speaking cultures around the world.

Prerequisites: French 101

French 203: Third Semester French

U400-203
4 credits
Online

The course presents new grammar and vocabulary to advance comprehension and expression through an interactive online platform (MindTap by Cengage). Students build cultural competency, reading, writing, speaking, and listening comprehension skills to apply to new contexts in French. Students are assessed through quizzes, written assignments, presentational speaking assignments, and two (live) conversation assignments. Students will need access to the online interactive textbook and homework platform (details in Syllabus), Word (or Pages), PowerPoint (or Keynote), a webcam and microphone to record speaking presentations and to meet with their Course Facilitator.

Prerequisites: Completion of U400-102 Second Semester French with a C or better or the equivalent

French 204: Fourth Semester French

U400-204
4 credits
Online

The course presents new grammar and vocabulary to advance comprehension and expression through an interactive online platform (MindTap by Cengage). Students build cultural competency, reading, writing, speaking, and listening comprehension skills to apply to new contexts in French. Students are assessed through quizzes, written assignments, presentational speaking assignments, (live) conversation assignments, and two graded cultural activities. Students will need access to the online interactive textbook and homework platform (details in Syllabus), Word (or Pages), PowerPoint (or Keynote), a webcam and microphone to record speaking presentations and to meet with their Course Facilitator.

Prerequisites: Completion of U400-203 Third Semester French with a C or better or the equivalent

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Spanish 101: First Semester Spanish

U912-101
4 credits
Online

Spanish 101 is the first course in the Spanish language sequence. In this elementary level course, students will develop an understanding of grammar concepts. Through textbook-based activities, written assignments, reading activities, and speech acts, students will practice grammatical forms and new vocabulary in guided, meaningful settings. Course materials are selected and designed to aid students in developing an understanding of diverse Spanish-speaking cultures.

Prerequisites: None; Appropriate for advanced high school and first-year or higher college students.

Spanish 102: Second Semester Spanish

U912-102
4 credits
Online

Spanish 102 is the second course in the Spanish language sequence. In this elementary level course, students will develop an understanding of grammar concepts. Through textbook-based activities, written assignments, reading activities, and speech acts, students will practice grammatical forms and new vocabulary in guided, meaningful settings. Course materials are selected and designed to aid students in developing an understanding of diverse Spanish-speaking cultures.

Prerequisites: Completion of U912-101 First Semester Spanish with a C or better or the equivalent; Appropriate

Spanish 203: Third Semester Spanish

U912-203
4 credits
Online

Spanish 203 is the third course in the Spanish language sequence. In this intermediate level course, students will develop a greater understanding of grammar concepts introduced earlier in the sequence. Through textbook-based activities, written assignments, reading activities, and speech acts, students will practice grammatical forms and new vocabulary in guided, meaningful settings. Course materials are selected and designed to aid students in developing a greater understanding of the diverse Spanish-speaking cultures.

Prerequisites: Completion of U912-102 Second Semester Spanish with a C or better or the equivalent

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Spanish 204: Fourth Semester Spanish

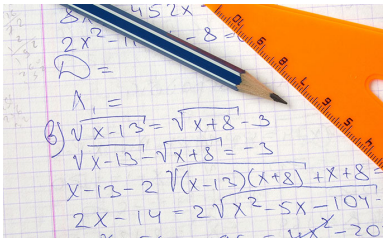
U912-204
4 credits
Online

Spanish 204 is the fourth course in the Spanish language sequence. In this advanced intermediate level course, students will develop a greater understanding of grammar concepts introduced earlier in the sequence. Through textbook-based activities, written assignments, reading activities, and speech acts, students will practice grammatical forms and new vocabulary in guided, meaningful settings. Course materials are selected and designed to aid students in developing a greater understanding of the diverse Spanish-speaking cultures.

Prerequisites: Completion of U912-203 Third Semester Spanish with a C or better or the equivalent; Appropriate for second-year or higher college students

MATHEMATICS

Algebra for Calculus



U3600-109
4 credits
Online

The study of the properties of elementary functions, such as polynomial, absolute, radical, rational, exponential, and logarithmic functions. Topics include equations, inequalities, functions, and their graphs. Students will formulate, analyze, solve and interpret mathematical and real-world problems. Student work will be completed in an open-source homework platform through the online learning management system (LMS) as well as some paper assignments to be scanned and submitted electronically to the LMS. A mix of figures, video lectures, examples, and help is available to assist students in the course. Throughout the course, students will have opportunities to have video conversations with the course facilitator. Students will work with the course facilitator to create a customized learning plan to create a path toward course completion. In this problem-based quantitative course, students will have the opportunity to communicate and collaborate with other students in the course. Students are given opportunities for extra credit. The course is intended to provide the algebra skills for calculus.

Prerequisites: Completion of 2 years of high school Algebra and 1 year of high school Geometry with a C or better or the equivalent. Appropriate for advanced high school students; First-year or higher college students.

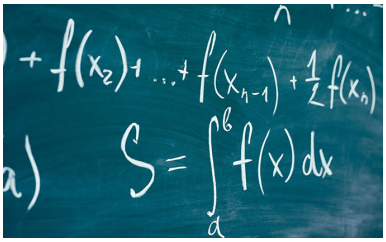
Business Statistics

U296-241
3 credits
Online

This course is designed to give you the ability to analyze data in a useful way. It should also provide you with the capacity to understand how you and others use (and abuse!) data and the information available from it. Topics include the description of both nominal and quantity data, probability distributions, statistical inference (estimation and hypothesis testing), and regression analysis. This course will provide you with the practical skills needed in business, science, the public sector, and other areas of society, where analysts and decision-makers need to draw conclusions from data, which will in turn better inform the decisions they must make. In essence, we will learn to analyze, collect, and organize data and how to use it for practical decision making.

Prerequisites: Completion of a college-level mathematics course (including Algebra) with a C or better, or the equivalent

Calculus I

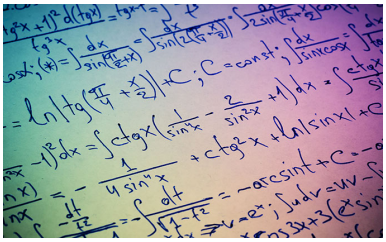


U3600-114
4 credits
Online

This course will cover limits, theory, and application of the derivative; introduction to integration. After completing this course, the student will be able to: Evaluate limits and explain the relationship between continuity, limits, and derivatives; Use the definition of a derivative and the product, quotient, and chain rules to find derivatives; Use the Fundamental Theorem of Calculus and the substitution rule to compute integrals; Solve applied problems by setting up and evaluating derivatives and integrals.

Prerequisites: Completion of a college-level precalculus mathematics course with a C or better or the equivalent, or completion of U3600-109 Algebra for Calculus or similar college algebra course and a trigonometry course with a C or better or the equivalent, or four-years of above-average work in college-prep mathematics, including one semester of trigonometry.

Calculus II

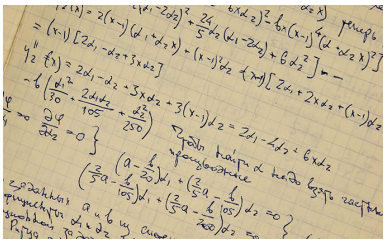


U3600-215
4 credits
Online

This course will cover techniques of integration, applications of integration and an introduction to differential equations, and sequences and series.

Prerequisites: Completion of U3600-114 Calculus I with a C or better or the equivalent.

Calculus III



U3600-216
4 credits
Online

Introduction to functions of several variables, including partial derivatives, multiple integrals, the calculus of vector-valued functions, and Green's Theorem, Stokes' Theorem, and the Divergence Theorem.

Prerequisites: Completion of U3600-215 Calculus II with a C or better or the equivalent

Elementary Statistics

U3600-246
4 credits
Online

The primary aim of the course is to help students develop a basic understanding and use of statistical concepts and methods to facilitate study and research in other disciplines.
Major topics that we will cover include:
1. Producing (collecting) data
2. Exploring data analysis (EDA) which includes organizing, summarizing, and visualizing data and studying relationships among variables.
3. Studying various probability models
4. Understanding sampling distributions and
5. Making statistically correct interpretations using estimation and inferences
Specific topics we will cover include data collection, descriptive statistics, both graphical and numerical; measures of central tendency; measures of variability; grouped data; discrete and continuous distributions such as binomial distribution, the normal distribution; sampling distributions and central limit theorem; the t-distribution; the fundamentals of statistical interference ----confidence intervals and hypothesis testing; the chi-square tests and simple regression and correlation. Students who have successfully learned these materials will be prepared to interpret data from their field of study.

Prerequisites: Completion of an introductory-level Algebra course or U3600-110 College Algebra with a C or better or the equivalent.

Principles of Macroeconomics

U296-103
3 credits
Online

This course will provide an introduction to Macroeconomics and will explore the following topics: The economic role of the government sector; Government expenditures and taxation; National income analysis; Economic fluctuations; Money and banking; Economic growth; and International Economics.

Prerequisites: Completion of 2 years of high school Algebra and 1 year of high school Geometry with a C or better, or the equivalent

Principles of Microeconomics

U296-101
3 credits
Online

The goal and objective of this course is to teach students the framework principles behind microeconomics. Economics is the study of how entities make decisions to allocate resources that are scarce in nature. Microeconomics focuses on the decisions of individuals and firms in particular. Students will learn economic terminology and philosophy that will provide a strong basis for understanding and analyzing current public policies and events. Topics of this course include consumer and firm behavior as well as market and public sector economics. The tools introduced and learned in this course will be primarily diagrammatical and mathematical in nature. Oftentimes students may have some difficulty at first employing the tools learned and utilized in economics courses. However with consistent hard work, these tools become quite intuitive and even easy to use.

Prerequisites: Completion of 2 years of high school Algebra and 1 year of high school Geometry with a C or better, or the equivalent.

Trigonometry

U3600-113
2 credits
Online

The trigonometric functions are developed in the context of right triangles and the unit circle. Properties of the trigonometric functions, including graphs and transformations, are explored. Other topics include solving trigonometric equations, establishing identities, using inverse trigonometric functions, and applications.

Prerequisites: Completion of College Algebra with a C or better (the equivalent of IL Math 109)

NATURAL SCIENCES

General Biology

U401-101
3 credits
Online

This course focuses on biochemistry, cell biology, genetics, and molecular biology. Explores the nature of living things and current developments in biology. Designed specifically for non-science majors.

Prerequisites: College Algebra or concurrent enrollment; placement into Freshman English or higher

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General Chemistry with Lab

U1905-101
4 credits
Online

Introduces fundamental principles of chemistry including atomic theory, periodic properties, energy, stoichiometry, nomenclature, bonding, Lewis structures, and aqueous solution chemistry. Includes first semester general chemistry laboratory where students explore atomic and molecular properties, classification schemes for chemical reactions and aqueous solution chemistry.

Prerequisites: College Algebra or concurrent enrollment, or Introductory Chemistry

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General Physics

U540-101
3 credits
Online

Physics is a way of viewing the world through quantitative relationships among qualities of physical objects in ever broadening abstractions of the relationships among these objects, established through the scientific method. In this course, you will learn two of the classical theories of physics that first established the field: Newton's law of motion and the kinetic theory of gases. Along the way, you will learn the ideas that undergird these broad-ranging principles and practice quantifying their interrelationships.

Prerequisites: C or better in College Algebra

Microbiology

U520-101
3 credits
Online

U520-101 introduces concepts, skills and reasoning fundamental to the study of Microbiology. A key theme is cellular nature of life. The main principles that guide our study include evolution, cellular structure and function, metabolic pathway, information flow and genetics, microbial systems, and the impact of microbes. Some of our topics will address infectious disease and how our understanding of microbes allows us to battle this persistent threat.

Prerequisites: The completion of college level General Biology and General Chemistry or the equivalents of those courses.

Research Methods in Psychology

U550-225
3 credits
Online

This course covers the major research methodologies used in Psychological research. It covers background information important to research methodology including literature searches, forming research questions, ethics, and methodology selection, as well as the actual techniques of conducting research including collecting, handling and analyzing data, interpretation, and reporting results. It covers these techniques for the major types of research methodology including literature, observational, correlational, and experimental.

Prerequisites: A passing grade in Elementary Statistics U3600-246 or the equivalent college level statistics course

SOCIAL SCIENCES

Principles of Macroeconomics

U296-103
3 credits
Online

This course will provide an introduction to Macroeconomics and will explore the following topics: The economic role of the government sector; Government expenditures and taxation; National income analysis; Economic fluctuations; Money and banking; Economic growth; and International Economics.

Prerequisites: Completion of 2 years of high school Algebra and 1 year of high school Geometry with a C or better, or the equivalent

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