

Loyola University Dual Credit Program: Course Offerings

ACCOUNTING

ACCT 201: Introductory Accounting I (3 ch)

The student will be able to understand the underlying principles, design, concepts, limitations, and the necessity of accounting systems. The student will gain an appreciation of the uses of financial data and financial statements and their impact on business decisions.

ANTHROPOLOGY

ANTH 100: Globalization and Local Culture (3 ch)

This course is a study of cultural diversity on a global scale, and provides a comparative perspective on the investigation of humans as cultural and social beings. Outcome: Students will be able to demonstrate understanding of the historic and contemporary relationships between cultures and societies, and to understand how cultures change over time.

ANTH 102: Human Origins (3 ch)

This course explores the study of the biological history of the human species from its inception to the establishments of food producing societies. Outcome: Students will demonstrate understanding of basic biological principles (heredity, physiology, evolutionary mechanisms, ecology) in the context of their application to the human condition, as well as the role of cultural behavior in defining the distinctiveness of that condition.

ANTH 103: Biological Background Human Social Behavior (3 ch)

This course examines possible biological bases of modern human behavior, from a scientific and multi-disciplinary perspective, to explore questions regarding what comprises "human nature". Outcome: Students will demonstrate an understanding of how science is conducted, as well as interactions between science and culture, in the context of how evolutionary approaches to animal behavior may be applied to the study of human behavior.

ANTH 104: The Human Ecological Footprint (3 ch)

This course is an introduction to global human ecology and concentrates on how we as humans affect global ecosystems and how these changes can impact our behavior, health, economics, and politics. Outcome: Students will be able to draw connections between basic ecological processes and the global patterns of human population growth, health and disease, inequality and poverty, subsistence strategies, and land use and technology.

BIOLOGY

BIOL 101/111 - General Biology I: Lecture and Lab (4ch)

BIOL 101: Fundamental principles of Biology including: introduction to the scientific method, basic biological chemistry; cell structure and function; energy transformations; mechanisms of cell communication; cellular reproduction; and principles of genetics. Outcome: Students will be able to demonstrate understanding of the historical foundations, methodologies employed, general architecture and functioning of the cell - the basic unit of life.

BIOL 111: Complements General Biology I lecture material through observation, experimentation, and when appropriate, dissection of representative organisms. Physical and chemical phenomena of life as well as systematics and comparative anatomy and physiology of selected organisms will be examined. Outcome: Students will be able to demonstrate an understanding of the diversity of living organisms, including comparisons in cell structure and function, and comparative organismal evolution and ecology.

BIOL 102/112 - General Biology II: Lecture and Lab (4 ch)

BIOL 102: Prerequisites: BIOL 101, 111. A continuation of Biology 101. Fundamental principles of Biology including: evolutionary theory; general principles of ecology; study of plant structure and function; and comparative animal physiology. Outcome: Students will be able to demonstrate an understanding of the fundamental principles of ecology and evolution, as well as the anatomy and physiology of representative plant and animal phyla.

BIOL 112: Complements General Biology II lecture material through observation, experimentation, and when appropriate, dissection of representative organisms. Physical and chemical phenomena of life as well as systematics and comparative anatomy and physiology of selected organisms will be examined. Outcome: Students will be able to demonstrate an understanding of the diversity of living organisms, including comparisons in cell structure and function, and comparative organismal evolution and ecology.

BIO 152/152L: Human Anatomy and Physiology I - Lecture, laboratory and demonstrations. (4 ch)

Organization of the human body from the cellular to the system level. Anatomy of specific body systems and their related physiology. Dissection of representative organs required in some laboratory exercises. (Biology 152 is for non - majors. Designed for Allied Health Students only. Does not count toward Biology Major nor Minor credit.) Outcome: Students will be able to demonstrate understanding of the workings of the human body from an anatomical and physiological viewpoint.

BIO 153/153L: A continuation of 152. Lecture, laboratory and demonstrations. (4 ch)

Anatomy of specific organismal systems and their related physiology. Dissection of representative organs required in some laboratory exercises. (Biology 153 is for non - majors. Designed for Allied Health Students only. Does not count toward Biology Major nor Minor credit.) Outcome: Students will be able to demonstrate understanding of the workings of the human body from an anatomical and physiological viewpoint.

*** Students planning to enter the Pre-professional Health Program are advised to enroll in this course as a matriculated (on-campus) student.**

CHEMISTRY

CHEM 101/111: General Chemistry A Lecture/Lab (4ch)

CHEM 101: Prerequisite: MATH 117 or equivalent. A year of high school chemistry is recommended. Co-requisite: CHEM 111 and MATH 118 or equivalent. A lecture and discussion course including topics on atomic and molecular structures, states of matter, energetics, and stoichiometry of reactions. Outcome: Students will learn basic chemical principles in these areas.

CHEM 111: Pre or co-requisite: CHEM 101. Laboratory course designed to illustrate fundamental models and theories in chemistry with an emphasis on significant digits, calculations, and analysis and discussion questions. Outcome: Students will be able to use equipment properly and demonstrate correct laboratory technique.

*** Students planning to enter the Pre-professional Health Program are advised to enroll in this course as a matriculated (on-campus) student.**

CHEM 102/112: General Chemistry B Lecture/Lab (4 ch)

CHEM 102: Prerequisites: CHEM 101; MATH 118 or equivalent. This lecture and discussion course is a continuation of 101 and includes topics on equilibrium systems, chemical thermodynamics, electrochemistry, and descriptive chemistry. Outcome: Students will learn basic chemical principles in these areas.

CHEM 112: Pre or co-requisite: CHEM 102. Prerequisite: CHEM 111. The second semester of general chemistry laboratory exposes students to qualitative analysis and continues the process of experimenting and collecting data to test the validity of theories and models presented in lecture.

Outcome: Students will demonstrate success in lab by making perceptive qualitative observations and accurate quantitative measurements.

*** Students planning to enter the Pre-professional Health Program are advised to enroll in this course as a matriculated (on-campus) student.**

COMPUTER SCIENCE

COMP 125: Visual Information Processing (3ch)

This course provides an introduction to computer programming using a language well-suited to beginning programmers and practical applications, for example Visual Basic .Net. Outcome: Students will be able to represent and interpret quantitative information symbolically, graphically, numerically, verbally, and in written form.

COMP 150: Introduction to Computing

The world overflows with electronic data. This course introduces programming in a simple, powerful language like Python, with selection, repetition, functions, graphical effects, and dynamic interaction with the Internet, plus connections to lower level computer organization and computer implications in the wider world.

Outcome: Empowerment to manage and transform masses of data; understanding of technical, societal, and ethical issues involved.

COMP 163: Discrete Structures

This course covers the mathematical foundations of computer science, including such topics as complexity of algorithms, modular arithmetic, induction and proof techniques, graph theory, combinatorics, Boolean algebra, logic circuits, and automata. Outcome: The student will be prepared for the study of advanced ideas in computer science, from cryptography to databases to algorithms to computer architecture.

COMP 170: Introduction to Object-Oriented Programming (3ch)

Co-requisite or Prerequisite of either Comp 163 or 150; or prerequisite of Math 117 or Math placement in Math 118 or above. This programming intensive course with its weekly lab component introduces basic concepts of object-oriented programming in a language such as Java. Outcome: Ability to take a problem, break it into parts, specify algorithms, and express a solution in terms of variables, data types, input/output, repetition, choice, arrays, subprograms, classes, and objects; ability to judge a good program.

CRIMINAL JUSTICE and CRIMINOLOGY

CJC 201: Theories of Criminal Behavior (3ch)

This course will provide a detailed examination of past and present theories of criminal behavior, placing them in a socio-historical context and exploring their policy and practical implications. Outcome: Students will be able to demonstrate an understanding of how the specific theories of criminal behavior can be compared and evaluated, how the theories evolved over time, and how they can be applied to criminal justice policy and practice.

ENGLISH

UCLR 100: Interpreting Literature (3ch)

The foundational course of literary studies will require students to read closely and analyze carefully a representative variety of prose, poetry, and drama, master key literary and critical term, and explore a variety of core critical approaches to the analysis and interpretation of literature.

FINE AND PERFORMING ARTS

FNAR 120: Ceramics Handbuilding (3ch)

An exploration of various hand building techniques, surface design techniques, and firing ranges available to the contemporary ceramist. Students are encouraged to pursue individual expression in the context of a broad range of methods and creative concepts. Outcome: Students will be able to demonstrate the basics of successful construction and glaze techniques; demonstrate creative strategies and critical evaluation of the creative process; demonstrate an understanding of both historical and contemporary approaches to the medium and the role of the Ceramic artist in cultures past and present.

MUSC 101: Music: Art of Listening (3ch)

This course focuses on the acquisition and enhancement of music listening skills. Outcome: Students will be able to use musical terminology to identify the progression of musical events and will be able to recognize various musical styles and genres.

THTR 100: Introduction to the Theatrical Experience (3 ch)

This course is an introductory study of the theatrical art form and its contemporary production practice. Outcome: Students will be able to demonstrate knowledge of, and appreciation for, theatrical performance, and will participate in the production of an original one-act play.

HISTORY

HIST 101: The Evolution of Western Ideas and Institutions to the 17th Century (3ch)

This course is an introduction to history as a discipline, and an analysis of the origins, early development and structure of Western civilization from the ancient world to the 17th century. Outcome: Students will be able to demonstrate historical understanding of the period and to conduct historical investigations.

HIST 102: The Evolution of Western Ideas and Institutions from the 17th Century (3 ch)

This course is an introduction to history as a discipline, and an analysis of the development and structure of Western civilization from the 17th century to the present day. Outcome: Students will be able to demonstrate historical understanding of the period and to conduct historical investigations.

HIST 211: The United States to 1865 (3ch)

This course is an introduction to the history of the United States from the colonial era through the Civil War. Outcome: Students will demonstrate historical understanding of the growth and development of

democratic government, the formation of a diverse society; the expansion of the national territory; and the crisis over slavery and secession.

HIST 212: The United States Since 1865 (3ch)

This course is an introduction to the history of the United States from the end of the Civil War to the present. Outcome: Students will be able to demonstrate historical understanding of the growth and development of modern industrial society; the development of the general welfare state; the emergence of the United States as a world power; the debate over civil rights and civil liberties; and the evolution of the political culture of the United States.

MATHEMATICS AND STATISTICS

MATH 108: Real World Modeling with Mathematics (3ch)

This course covers material selected from the mathematics of the management sciences, statistics, the digital revolution, social choice, and consumer finance models. Outcome: Students will be able to demonstrate understanding particular topics, including: networks, planning and scheduling, linear programming, generating and analyzing statistical data, probability, statistical inference, identification numbers, data encryption, voting procedures, weighted voting systems, fair division, apportionment, models for saving and for borrowing.

MATH 161: Calculus I (3ch)

Prerequisite: MATH 118. This course provides a standard introduction to differential and integral calculus and covers topics ranging from functions and limits to derivatives and their applications to definite and indefinite integrals and the fundamental theorem of calculus and their applications. Outcome: Students will obtain the background needed to enroll in Calculus II. This course satisfies the quantitative literacy requirement of the core curriculum.

MATH 162: Calculus II (3ch)

Prerequisite: MATH 161. This course is a continuation of Calculus I and includes the calculus of various classes of functions, techniques of integration, applications of integral calculus, sequences and infinite series, and an introduction to differential equations. Outcome: Students will obtain the background needed for further study in mathematics and to apply mathematics in the physical sciences.

STAT 103: Fundamentals of Statistics (3ch)

This course is an introduction to the fundamentals of descriptive and inferential statistics. Outcome: Students will be able to demonstrate understanding of particular topics, including: design of experiments, observational studies, histograms, average and standard deviation, normal approximations, chance error and bias, basic probability, chance processes, expected value and standard error, probability histograms, surveys, accuracy of percentages and averages, tests of significance, and correlation and regression.

MODERN AND CLASSICAL LANGUAGES

CHIN 101 (3ch)

This is an introductory course in Modern Standard Chinese (Mandarin) for students with none or little prior experience in Chinese. This course introduces the four basic communicative skills in Chinese: listening, speaking, reading and writing, and emphasizes on conversation. Outcome: Students will achieve active control of Chinese sound system and writing system. They will be able to understand and respond to greetings, as well as talk about family members, time, hobbies and friends. They will learn nearly 200 characters.

CHIN 102 (3ch)

Prerequisite: CHIN 101

CHIN 102 is a continuation of CHIN 101. Students will expand their knowledge of Chinese characters, vocabulary and grammar, improve their skills on listening, speaking, reading, and writing skills, and learn more cultural knowledge.

Outcome: Students will be able to make appointments, talk about Chinese learning experience, school life, shopping, weather and transportation. Aside from dialogues, they will also read a short dairy and a letter. They will learn some 200 new characters.

CHIN 103 (3ch)

Prerequisite: CHIN 102

CHIN103 builds on the knowledge and skills gained in CHIN 101-102. This course develops conversational skills by using fundamental grammatical patterns and vocabulary in functional contexts. Outcome: Students will learn dialogues used in the contexts of dinning out, studying in library, asking directions, attending birthday party, seeing a doctor, and dating.

CHIN 104 (3ch)

Prerequisite: CHIN 103

Chinese 104 is the continuation of Chinese 103. This course further extends students' knowledge of Chinese vocabulary and grammar, and improves their skills in listening, speaking, reading, and writing.

Outcome: Students will learn expressions in the contexts of renting an apartment, mailing a letter and traveling in both mainland China and Taiwan, talking about hometown and sports, and checking in at the airport.

FREN 101 - Elementary French I (3ch)

Introduction to the basic elements of French that will enable the student to develop communicative skills and a fundamental knowledge of French-speaking peoples, their language and their cultures.

Outcomes: Students will be able to demonstrate basic listening, speaking, reading and writing skills in French, and a basic understanding of Francophone cultures.

FREN 102 - French II (3ch)

Prerequisite: FREN 101

Further development of communicative skills and linguistic and cultural knowledge. Outcomes: Students will be able to demonstrate basic listening, speaking, reading, and writing skills in French, and a basic understanding of Francophone cultures.

FREN 103 - Intermediate French I (3ch)

Prerequisite: FREN 102

Intensive review of basic language skills to develop audio-lingual facility in communication. Outcomes: Students will be able to demonstrate intermediate-level listening, speaking, reading, and writing skills in French, and an intermediate-level understanding of Francophone cultures.

FREN 104 - Intermediate French II (3ch)

Prerequisite: FREN 103

Further intensive review of basic language skills. Reading, conversation, and composition based on selected literary and cultural sources. Outcomes: Students will be able to demonstrate high-intermediate-level listening, speaking, reading, and writing skills in French, and a high-intermediate-level understanding of Francophone cultures.

GERM 101 - Elementary German I (3ch)

This course is an introduction to German, designed for students with no previous experience. Students develop communicative language skills and acquire a fundamental knowledge of German-speaking cultures. Outcome: Students will be able to understand simple sentences and short narratives, respond to basic inquiries about themselves and others, formulate basic questions, comprehend basic written texts, and write simple German sentences.

GERM 102 - Elementary German II (3ch)

Prerequisite: GERM 101

Students will further develop communicative language skills and knowledge of German-speaking cultures, and will finish learning all the basic grammatical structures of the language. Outcomes: Students will have learned to express themselves through a wider range of vocabulary and grammatical structures. They will be able to express appropriate reactions to ordinary situations, read more complex texts, and write sentences in short but cohesive paragraphs.

GERM 103 - Intermediate German (3ch)

Prerequisite: GERM 102

Students will review and develop their understanding of German grammar and vocabulary. Students will read and discuss a variety of short readings, including short stories and poetry. Outcome: Students will have gained a wider range of oral expression, both lexical and grammatical. They will be able to express more complex reactions, read more complex narrative and literary texts, and write sentences in longer paragraphs.

GERM 104 - Intermediate German II (3ch)

Prerequisite: GERM 103

This course focuses on review and practice of more complex grammatical elements. Students will read texts of greater length and complexity, expand their vocabulary, and increase their ability to communicate, both orally and in writing.

Outcome: Students will have gained a wider range of oral expression, both lexical and grammatical. They will be able to express more complex reactions, read more complex narrative and literary texts, and write sentences in cohesive paragraphs and short essays.

ITAL 101: Italian I (3ch)

First-year Italian language courses are designed to help beginning students obtain functional and basic competency in speaking, reading, writing and listening in Italian. This course promotes the acquisition of language skills in everyday communication as well as the understanding of target language and behavior in relation to distinctive social and cultural norms. Outcome: The student will be able to: carry out simple conversations on a variety of practical topics such as greeting, inviting, ...(*speaking skills*), understand native speech and its social meaning - everyday topics in predictable contexts (*listening skills*), understand the content and the cultural significance of predictable discourse types - literary and non-literary texts on familiar topics (*reading skills*) and express themselves in simple narratives (*writing skills*).

ITAL 102: Italian II (3ch)

Prerequisite: ITAL 101

This course emphasizes the development of listening and speaking skills and grammar in relation to communication. Class sessions are conducted primarily in Italian in order to immerse students as much as possible in the living language. The textbook and other materials will introduce students to Italian in a variety of contexts. Outcome: Students will be able to further develop listening comprehension skills and to produce orally and in writing short sentences providing basic personal information about themselves,

their activities and plans in Italian. By the end of Italian 102, students will be able to: 1. Develop speaking skills in Italian on topics such as everyday life activities and habits, getting together and organizing some activity/program; inviting; accepting/declining an invitation; talking about usual actions in the past and memories; talking about one's family and home; shopping in Italy; talking about health issues; talking about future plans; 2. Acquire further knowledge of and talk about social and cultural issues in contemporary Italy, particularly in reference to vacations, museums, theatre, opera, music, food and eating habits, festivals and traditions, sports, work; 3. Expand vocabulary related to family members, clothing, stores, animals, entertainment and travel.

ITAL 103: Italian III (3ch)

Prerequisite: ITAL 102

Second-year Italian language courses at Loyola emphasize the development of intermediate listening, speaking, reading and writing skills and teach grammar in relation to communication. Class sessions are conducted primarily in Italian in order to immerse the students as much as possible in the living language and in a simulated Italian linguistic and cultural context. In introducing a variety of authentic cultural materials (songs, videos and films), the course will introduce students to the study of the Italian languages in a cross-cultural, international studies perspective.

LATN 101 - Latin I (3ch)

This course introduces students to elementary grammatical forms, basic syntax, and vocabulary of Latin, and simple readings in the language. Outcome: students should be able to demonstrate basic knowledge of Latin vocabulary, syntax and grammar and deploy it to be able to translate accurately simple Latin sentences and passages into English.

LATN 102 - Latin II (3ch)

Prerequisite: LATN 101

This course continues the study of the fundamentals of the Latin language, including more vocabulary, grammar, syntax and more advanced readings. Outcome: students should be able to demonstrate advanced knowledge of basic Latin vocabulary, syntax and grammar and deploy it to be able to translate accurately more advanced Latin sentences and passages into English.

SPAN 101: Spanish 1 (3ch)

This course is an introduction to the basic elements of Spanish language and culture. It is designed for students with no previous experience in Spanish. Outcome: Students will be able to understand simple messages and short narratives, respond to basic inquiries about themselves and others, formulate basic questions, as well as understand basic written texts.

SPAN 102: Spanish 2 (3ch)

Prerequisite: SPAN 101

This course builds on 101, and introduces students to new topics and grammatical structures. Outcome: Students will be able to produce sounds in Spanish more accurately, express appropriate reactions to ordinary situations, understand basic oral commands, read more complex texts, and write sentences in cohesive paragraphs.

SPAN 103: Spanish 3 (3ch)

Prerequisite: SPAN 102

This course is the first semester of second-year Spanish. Outcome: Students will increase their knowledge of Spanish grammar and vocabulary, and their Spanish communication skills.

SPAN 104: Spanish 4 (3ch)

Prerequisite: SPAN 103

This course is the second semester of second-year Spanish. Outcome: Students will continue to perfect their knowledge of Spanish grammar and vocabulary, with greater stress on reading and speaking.

SPAN 270: Introduction to Critical Analysis In Spanish (3ch)

This course reviews and sharpens the essential skills and techniques necessary to critically read, interpret, and write and speak about all genres of Hispanic literature (narrative, poetry, drama, and essay) in Spanish. In so doing, students refine their linguistic skills, and gain awareness of the complexities of the Spanish-speaking world. Outcome: Students will gain the necessary skills for critically reading, writing and discussing all genres of Hispanic literature.

SPAN 271: Introduction to Iberian Culture (3ch)

An introduction to Iberian literature, film, and cultural production, designed to provide students with an understanding of Iberian culture, history, and society, while also honing their linguistic and analytical skills. Outcome: Students will gain a grounding in Iberian literary and cultural production, an understanding of various literary and cultural forms, and an awareness of their context of production.

PHYSICS

PHYS 102: Planetary and Stellar Astronomy (3ch)

This course covers the astronomy of the solar system and planetary science as well as the astronomy of stars and galaxies. This includes study of earth and comparative study of all the planets, as well as the birth, evolution, and death of stars, the clustering of stars and galaxies, the expanding universe and cosmology. Outcome: Students will have an understanding of the fundamental principles, concepts and knowledge of science as well as methodology of scientific inquiry. It will prepare them to make reasoned judgments about the impact of science on the individual, community, and society.

PHYS 111: College Physics I Lecture and Discussion (3ch)

Prerequisites: MATH 118 or equivalent; Non-calculus introduction to vectors, kinematics, Newtonian mechanics of translational, rotational, and oscillatory motion, energy and momentum conservation, and thermodynamics. Outcome: Understanding of analytical description of motion and application of conservation laws; develop scientific insight and proficiency in solving representative problems.

PHYS 112: College Physics II Lecture and Discussion (3ch)

Prerequisite: Physics 111 or equivalent. Physics 111 and 112 provide a non-calculus introduction to physics. Topics include electricity and magnetism, sound, optics, and selected topics from modern physics. Outcome: Understand and apply electromagnetism to 2- and 3-dimensional problems in physical and biological sciences.

PHYS 111K - College Physics I Lec/Dis

Prerequisite: MATH 131 or 161. Calculus based introduction to vectors, kinematics, Newtonian mechanics of translational, rotational, and oscillatory motion, energy and momentum conservation, and thermodynamics. Outcome: Understanding of analytical description of motion and application of conservation laws; develop scientific insight and proficiency in solving representative problems.

PHYS 112K - College Phys II Lec/Dis

Prerequisite: MATH 132 or 162. Physics 111K and 112K provide a calculus based introduction to physics. Topics include electricity and magnetism, sound, optics, and selected topics from modern physics. Outcome: Understand and apply electromagnetism to 2- and 3-dimensional problems in physical and

biological sciences. Outcome: Understand and apply electromagnetism to 2- and 3-dimensional problems in physical and biological sciences.

POLITICAL SCIENCE

PLSC 100: Political Theory (3ch)

This course introduces students to the study of the perennial questions, traditions and concepts in the history of political thought. Outcome: Students will demonstrate understanding of the major concepts that organize and inform theoretical reflection on politics e.g. human nature and the human good, theory and practice, natural law and natural rights, power and authority, consent and obligation.

PLSC 101: American Politics (3ch)

American national government and politics, including institutions, group and electoral processes, and public policy. Outcome: Students will be able to demonstrate an understanding of the American political system, the patterns of political participation and behavior of diverse individuals and groups in American society, and evaluate the roles and processes of U.S. political institutions.

PSYCHOLOGY

PSYC 101: General Psychology (3ch)

Introduction to concepts, theories, and methods in psychology. Emphasis is given to the scientific study of consciousness and human behavior. Topics include: human development, learning, thinking, perception, personality, testing, mental illness and mental health, biological and social aspects of behavior. Outcomes: Students will master basic concepts and key theories and learn to apply them to real-world situations.

SOCIOLOGY

SOCL 101: Society in a Global Age (3ch)

This is a foundational course in the social sciences which explores the effect of globalization on everyday life in the United States and elsewhere, using the basic perspectives and methodologies of sociology.