Lower-Division Academic Course Guide Manual

Revised Spring 2013

Texas Higher Education Coordinating Board

Academic Course Guide Manual (ACGM)
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Table of Contents

Introduction

The *Lower-Division Academic Course Guide Manual (ACGM)* is the official list of approved courses for general academic transfer to public universities that may be offered for state funding by public community and technical colleges in Texas. The ACGM lists courses alphabetically by discipline. For information regarding workforce education courses see the *Workforce Education Course Manual*. Questions concerning the content or implementation of the procedures in this manual should be directed to:

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The provisions for approval of general academic courses for state funding are outlined in the *Coordinating Board's Rules and Regulations*, Chapter 9, Subchapter D. Accordingly, the Coordinating Board established an Academic Course Guide Manual Advisory Committee with equal representation from public community colleges and public universities. The Advisory Committee meets annually to make recommendations to the Coordinating Board staff of appropriate courses to be added, revised, or deleted from the *ACGM.* The members of the committee who contributed to this edition of the *ACGM* are listed at the beginning of this manual.

Changes in the *ACGM*

The spring 2013 edition of the *ACGM* incorporates new course descriptions and learning outcomes. Revisions are found in the disciplines of Philosophy, Psychology, Sociology, Spanish, Speech, Engineering, Biology, Chemistry, Computer Science, and Physics, as well as in Developmental Education including Non-Semester Length/Non-Course Competency-Based Options and Interventions (NCBO). Faculty work groups representing the specific disciplines and expertise in the course areas, including the Tuning Oversight Council for Engineering and Science, developed the new descriptions and learning outcomes, which were then accepted as recommended or modified by the ACGM Advisory Committee for inclusion in the manual.

The *ACGM* and the Academic Unique Need Inventory

The *ACGM* serves as the generic academic course inventory for all community and technical colleges in Texas. Individual institutions are not required to maintain separate general academic course inventories. Courses listed in this manual may be offered and reported for funding without requesting approval from the Coordinating Board.

If a community or technical college wishes to offer a course not listed here, or offer an ACGM course for more credit or contact hours than listed, it must request approval for such a course on a "unique need" basis. There are no provisions in this edition for special topics courses. A resulting inventory of unique need courses is the only academic inventory required of individual institutions. Colleges must continue to report academic courses according to instructions in the most recent edition of the *Reporting and Procedures Manual for Public Community and Technical Colleges* published by the Educational Data Center of the Coordinating Board. All edits of reports must be in accordance with the *ACGM* and the individual institutions' unique need course inventories. The

state will not fund academic courses at community and technical colleges that are not listed in the *ACGM* or on the college's academic unique need inventory.

Note: Inaccurate reporting of courses that differ significantly in content from the reported course numbers may result in an audit finding. An audit finding could cause an institution to lose some or all of its state reimbursement for any or all courses reported inaccurately.

Instructions: How to Read and Use the *ACGM*

All pre-approved courses listed in the *ACGM* are numbered to correspond to course designations of the Texas Common Course Numbering System (TCCNS). Each entry begins with a common course prefix and number. In some cases, there may be a list of courses. Beneath the course or list of courses, a brief description appears along with a line listing the 10-digit approval number for the course and information about maximum semester credit hours (SCH) per student, maximum SCH per course, and maximum contact hours per course. If learning outcomes exist for a course, they appear below the course parameters.

For example:

CHEM 1311 General Chemistry I (lecture)

Fundamental principles of chemistry for majors in the sciences, health sciences, and engineering; topics include measurements, fundamental properties of matter, states of matter, chemical reactions, chemical stoichiometry, periodicity of elemental properties, atomic structure, chemical bonding, molecular structure, solutions, properties of gases, and an introduction to thermodynamics and descriptive chemistry.

Co-requisite: CHEM 1111—General Chemistry I Laboratory
Prerequisite: MATH 1314—College Algebra or equivalent academic preparation
High school chemistry is strongly recommended

Approval Number.....40.0501.52 03
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

In this example, the 10-digit approval number is 40.0501.52 03. The first six digits of the approval number indicate subject matter and are based upon current CIP codes. Coordinating Board staff assign the last four digits. The seventh and eighth digits further delineate course content, sequence, or approval category. The ninth and tenth digits indicate the funding category.

Reporting officials should review the approval numbers carefully because some have changed.

40.0501 is the CIP code for General Chemistry

52 is the code for the content listed in the course description. The range for these numbers is typically 51 to 59. However, if a course is approved as a unique need course, the seventh digit will be a 7 instead of a 5. If the course is approved for excessive credit and/or contact hours (more than allowed in the approved listing), the seventh digit will be an 8 instead of a 5.

03 is the current state funding code for biological sciences in public community and technical colleges. These codes range from 01 to 26.

A complete listing of the academic funding codes is contained in Appendix B.

IMPORTANT NOTE: The 2013 edition of the ACGM reflects current state funding codes. Some of these codes will not match funding codes found in older versions of the ACGM.

After the Approval Number the maximum hours per student, semester credit hours (SCH) per course, and contact hours per course are listed:

3 is the maximum number of semester credit hours per student for courses applicable toward an associate degree under this specific approval number. In this example, a college may allow students to take three SCHs of general chemistry courses and count them toward an associate degree.

3 is the maximum number of semester credit hours per course under this specific approval number. A college could offer a course under this approval number for three or fewer SCH, but not more. The college should award the SCH in proportion to the number of contact hours and type of instruction under the assigned common course number.

A traditional course offered for 48 contact hours of lecture over a 16-week semester will earn three semester credit hours and carry a 3 in the second digit of the common course number. Similarly, a traditional lecture/lab course offered for 48 contact hours of lecture and 32 contact hours of laboratory over a 16-week semester would earn four semester credit hours and carry a 4 in the second digit of the common course number. In general, one semester credit hour is awarded per 16 contact hours of lecture instruction and one semester credit hour is awarded per 32 to 48 contact hours of laboratory instruction.

48 is the maximum number of contact hours per course according to this specific approval number. Thus, a college can offer a course under the General Chemistry approval number for 48 or fewer contact hours, but not more. In this example, a three SCH chemistry course may be offered for up to a maximum 48 contact hours. During a regular 16-week semester, 48 contact hours in this particular course might be broken down into three hours of lecture per week or three hours of lab per week or into other combinations that total 48 contact hours.

Approval numbers and descriptions for developmental courses, listed under the heading "Developmental Education" in this manual, are not associated with specific courses numbers. The college may designate its own course prefixes and numbers.

Some courses have learning outcomes. Student learning outcomes describe what students should be able to demonstrate in terms of knowledge, skills, and attitudes upon completion of a course. When offering the courses, institutions must include all topics in the ACGM description and provide instruction to cover and assess all of the learning outcomes. Institutions may not delete any topics in the course descriptions or any of the student learning outcomes as provided in the ACGM. Based on local needs, an institution may include additional topics and learning outcomes.

The introductory phrase to the list of learning outcomes "Upon successful completion of this course, students will" is a style convention used to provide uniformity in the ACGM. The phrase does not indicate a specific timing or method of assessment. Assessment method and timing

within the duration of the course is discretionary for the institution and may be different depending upon the discipline and instructional methods used in the delivery of the course.

For example:

Learning Outcomes (for CHEM 1311 General Chemistry I)

Upon successful completion of this course, students will:

1. Define the fundamental properties of matter.
2. Classify matter, compounds, and chemical reactions.
3. Determine the basic nuclear and electronic structure of atoms.
4. Identify trends in chemical and physical properties of the elements using the Periodic Table.
5. Describe the bonding in and the shape of simple molecules and ions.
6. Solve stoichiometric problems.
7. Write chemical formulas.
8. Write and balance equations.
9. Use the rules of nomenclature to name chemical compounds.
10. Define the types and characteristics of chemical reactions.
11. Use the gas laws and basics of the Kinetic Molecular Theory to solve gas problems.
12. Determine the role of energy in physical changes and chemical reactions.
13. Convert units of measure and demonstrate dimensional analysis skills.

The Texas Common Course Numbering System (TCCNS)

The TCCNS is a cooperative effort among Texas community colleges and universities to facilitate transfer of freshman- and sophomore-level general academic courses. The TCCNS provides a shared, uniform set of course designations for students and their advisors to use in determining both course equivalency and degree applicability of transfer credit on a statewide basis. When students transfer between two participating TCCNS institutions, a course taken at the sending institution transfers as the course carrying, or cross-referenced with, the same TCCNS designation at the receiving institution.

For additional information about the TCCNS, consult the TCCNS Online (http://www.tccns.org) hosted by The University of Texas-Pan American. This website contains a list of participating TCCNS institutions, the TCCNS taxonomy, the TCCNS history, and the TCCNS board members. The site also contains the master list of the common courses offered by institutions in Texas.

Addition and Deletion of Courses

At an institution's request, Coordinating Board staff and the ACGM Advisory Committee may consider a course for placement in the *ACGM*. If CB staff determine there is continuing need for that course, then the course will be presented to the ACGM Committee for review. If a majority of the committee votes that the course should be included in the *ACGM,* then the course description used by the institution initiating the request will be evaluated and revised by the committee, if necessary.

The ACGM Advisory Committee, working in cooperation with the TCCNS Board and CB staff have a joint process for accepting and adopting new courses. All institutions wishing to obtain a TCCNS number for a new course, or to place a course in the *ACGM*, should fill out the "Request to Add a New Course" form. This simplifies the application process so that institutions need to fill out only

one form in order to apply to both bodies. To find forms and other required documentation, visit the TCCNS website at www.tccns.org.

The ACGM Advisory Committee may consider information from the following categories to determine whether to include the course in the *ACGM*. The committee may request additional information from the institution submitting the request; institutions are encouraged to submit any additional information they deem relevant for consideration. However, the information that the Committee considers essential is requested on the "New Course" form, so institutions should fill out the form accurately and completely.

NOTE: THE FOLLOWING IS NOT AN EXHAUSTIVE LIST OF INFORMATIONAL CATEGORIES, NOR MUST INSTITUTIONS SUBMITTING REQUESTS SCORE HIGH MARKS IN ALL CATEGORIES.

The information for consideration may include the following:

- Unique need approval history. Course frequency and enrollments for the preceding three years have been adequate.
- The course has current applicability to baccalaureate degree plans.
- Application to the TCCNS. Final approval for inclusion in the *ACGM* may be contingent upon the assignment of a common course number.
- Frequency and level of similar course offerings statewide at both two- and four-year institutions.
- Course description and learning outcomes.
- Consultation with appropriate academic, professional, credentialing, or accrediting organizations.

If a majority of the committee votes that the course should be included in the *ACGM*, then the course description and learning outcomes used by the institution initiating the request will be evaluated and revised by the committee, if necessary. If the ACGM committee does not approve a course and CB staff determines that an institution has continued need of the course, the institution may continue to offer the course on a unique need basis.

The ACGM Advisory Committee may review and consider surveys of courses in the *ACGM*. Coordinating Board staff, using the CBM004 and other means to determine how frequently courses are taught, will conduct surveys upon request of the committee. The ACGM committee may also consider recommendations for course deletions from institutions or academic, professional, credentialing, or accrediting organizations, as well as faculty work groups appointed to develop learning outcomes. A course recommended for deletion will be placed under review for at least two years by a majority vote of the ACGM committee, and will be marked as such in the *ACGM*. Any course under review for two years will be removed from the *ACGM*.

Reasons for deletion may include the following:

- Infrequently offered courses, or low enrollments in courses statewide.
- Lack of applicability to a four-year degree, or obsolescence in a discipline.
- Courses taught most frequently at the upper division as opposed to lower division level.
- Semester Credit Hours for course are insufficient or excessive for content and learning outcomes.

Unique Need Courses

A unique need course is an academic course created by a two-year college to meet a specific lower-division requirement of a baccalaureate degree program that cannot be met by an existing course in the ACGM. Unique need courses are approved by Coordinating Board staff for use only by the institution making the application for approval. If a community or technical college wishes to offer a course not listed here, or offer an ACGM course with credit and/or contact hours in excess of the limits prescribed by the *ACGM*, a request for approval must be submitted to the Coordinating Board according to Board rules. When applying for a unique need course, institutions must submit a request for approval and ensure that all information requested is addressed or attached as needed. Unique need forms can be found at the THECB website, at http://www.thecb.state.tx.us/uniqueneed. **NOTE: Unique need rules and forms changed in 2011. Please review the changes carefully.**

For courses to be included in an institution's inventory as unique need courses, each specific course must meet the following two criteria:

1. The course must be acceptable for transfer to three or more Texas public universities. Copies of letters documenting transferability must be included in the application. The letters must state that the course will be applied to degree requirements for a specific major. Identification of a direct course substitution at the receiving institution strengthens the case for a unique need course. **Courses that transfer only as elective credit are not eligible for unique need status.** In certain cases, colleges may obtain unique need approval for courses that are documented for transfer to only one Texas university, if the course is part of a 2 + 2 agreement or other special transfer agreement. In such a case, documentation of that agreement must be submitted along with the letter of transferability.
2. The course requested must have college-level rigor and be a freshman- or sophomore-level academic course. **Courses designed to meet a community service, leisure, career/technical, or avocation need are inappropriate for unique need approval and will not receive state (academic) funding.**

Upper-division courses at community and technical colleges will not be funded by the state and may not be added to the *ACGM*. In general, community and technical colleges are not authorized to offer upper-division courses. [Note: The three community colleges authorized by the state to offer bachelor's degrees have their upper-division courses funded separately by the same formula as upper-division instruction at universities.]

The procedures for unique need approval are:

1. The application for each unique need course submitted to the Coordinating Board must be accompanied by a proposal that states the need for the course and a syllabus that includes a course description, detailed course outline, and objectives. This proposal must also document that the course is transferable to three public universities, or that it is part of a special transfer agreement.
2. Once approved, a unique need course shall be placed on the college inventory for three years. Colleges must reapply for approval of unique need courses at the end of every three-year term. Renewal requests must include the enrollments in the course and frequency with which the course was offered during the preceding three years.

If you have suggestions or comments concerning unique need request procedures, please contact the Coordinating Board's Workforce, Academic Affairs and Research Division at: uniqueneed@thecb.state.tx.us

Developmental Education in the ACGM

Developmental course work and non-semester-length/non-course competency based options and interventions (NCBO) can be reported for state reimbursement for up to 27 semester credit hours (SCH) per student, but does not result in degree credit. Common course number designations have not been developed and are not associated with the approval numbers for developmental education. Colleges may designate their own course titles but should follow the specified restrictions for number of SCH per student, maximum SCH per course, and maximum contact hours. The first-digit developmental course numbers should be 0 (zero) to indicate that the course does not carry credit.

Developmental education and assigned approval numbers appear in a separate chapter of this manual. (See Table of Contents.)

Revised Courses

Revised Developmental Education

Faculty work groups with expertise in developmental education revised the following courses.

Developmental Education Courses
Intermediate Algebra
Developmental Reading
Developmental Writing
Integrated Reading/Writing (IRW)
Writing for Non-Native Speakers
ESOL Oral Communication
ESOL Reading and Vocabulary
Grammar for Non-Native Speakers

Developmental Education Non-Semester-Length/Non-Course Competency-Based Options and Interventions (NCBO)
Intermediate Algebra
Developmental Reading
Developmental Writing
Integrated Reading/Writing (IRW)
Writing for Non-Native Speakers
ESOL Oral Communication
ESOL Reading and Vocabulary
Grammar for Non-Native Speakers

Revised courses in Philosophy, Psychology, Sociology, Spanish and Speech

Faculty work groups in the disciplines revised the descriptions and added learning outcomes for the following courses as part of the ACGM Learning Outcomes Project.

PHIL 1301	Introduction to Philosophy
PHIL 1304	Introduction to World Religions
PHIL 1316	History of Religions I
PHIL 1317	History of Religion II
PHIL 2303	Introduction to Formal Logic
PHIL 2306	Introduction to Ethics
PHIL 2307	Introduction to Social & Political Philosophy
PHIL 2316	Classical Philosophy
PHIL 2317	Seventeenth- and Eighteenth-Century Philosophy
PHIL 2318	Nineteenth- and Twentieth Century Philosophy
PHIL 2321	Philosophy of Religion

PSYC 2301	General Psychology
PSYC 2306	Human Sexuality (Also see SOCI 2306)
PSYC 2307	Adolescent Psychology
PSYC 2308	Child Psychology
PSYC 2314	Lifespan Growth & Development

SOCI 1301	Introduction to Sociology
SOCI 1306	Social Problems
SOCI 2301	Marriage and Family
SOCI 2306	Human Sexuality (Also see PSYC 2306)
SOCI 2319	Minority Studies
SOCI 2336	Criminology

SPAN 1311	Beginning Spanish I (1st semester Spanish, 3 SCH version)
SPAN 1411	Beginning Spanish I (1st semester Spanish, 4 SCH version)
SPAN 1511	Beginning Spanish I (1st semester Spanish, 5 SCH version)
SPAN 1312	Beginning Spanish II (2nd semester Spanish, 3 SCH version)
SPAN 1412	Beginning Spanish II (2nd semester Spanish, 4 SCH version)
SPAN 1512	Beginning Spanish II (2nd semester Spanish, 5 SCH version)
SPAN 2311	Intermediate Spanish I (3rd semester Spanish)
SPAN 2312	Intermediate Spanish II (4th semester Spanish)
SPAN 2313	Spanish for Native/Heritage Speakers I
SPAN 2315	Spanish for Native/Heritage Speakers II

SPCH 1311	Introduction to Speech Communication
SPCH 1315	Public Speaking
SPCH 1318	Interpersonal Communication
SPCH 1321	Business & Professional Communication

Revised Science and Engineering Courses

The Tuning Oversight Council for Engineering and Science (TOCES) reviewed the following courses as part of the Voluntary Transfer Compact for Engineering. Course descriptions were revised and learning outcomes added.

BIOL 1106	Biology for Science Major I (lab)
BIOL 1306	Biology for Science Majors I (lecture)
BIOL 1406	Biology for Science Major I (lecture + lab)
BIOL 1107	Biology for Science Major II (lab)
BIOL 1307	Biology for Science Majors II (lecture)
BIOL 1407	Biology for Science Major II (lecture + lab)
BIOL 1108	Biology for Non-Science Major I (lab)
BIOL 1308	Biology for Non-Science Majors I (lecture)
BIOL 1408	Biology for Non-Science Major I (lecture + lab)
BIOL 1109	Biology for Non-Science Major II (lab)
BIOL 1309	Biology for Non-Science Majors II (lecture)
BIOL 1409	Biology for Non-Science Major II (lecture + lab)
BIOL 1111	General Botany (lab)
BIOL 1311	General Botany (lecture)
BIOL 1411	General Botany (lecture + lab)
BIOL 1113	General Zoology (lab)
BIOL 1313	General Zoology (lecture)
BIOL 1413	General Zoology (lecture + lab)

BIOL 2106	Environmental Biology (lab)
BIOL 2306	Environmental Biology (lecture)
BIOL 2406	Environmental Biology (lecture + lab)
BIOL 2121	Microbiology for Science Major I (lab)
BIOL 2321	Microbiology for Science Majors I (lecture)
BIOL 2421	Microbiology for Science Major I (lecture + lab)

CHEM 2123	Organic Chemistry I (lab)
CHEM 2223	Organic Chemistry I (lab)
CHEM 2323	Organic Chemistry I (lecture)
CHEM 2423	Organic Chemistry I (lecture + lab)
CHEM 2125	Organic Chemistry II (lab)
CHEM 2225	Organic Chemistry II (lab)
CHEM 2325	Organic Chemistry II (lecture)
CHEM 2425	Organic Chemistry II (lecture + lab)

COSC 1336	Programming Fundamentals I (3 SCH version)
COSC 1436	Programming Fundamentals I (4 SCH version)

ENGR 2304	Programming for Engineers

PHYS 1101	College Physics I (lab)
PHYS 1301	College Physics I (lecture)
PHYS 1401	College Physics I (lecture + lab)
PHYS 1102	College Physics II (lab)
PHYS 1302	College Physics II (lecture)
PHSY 1402	College Physics II (lecture + lab)

New Courses for Engineering

TOCES added the following new courses.

ENGR 2405	Electrical Circuits I (lecture + lab)
ENGR 2333	Elementary Chemical Engineering
ENGR 2334	Chemical Engineering Thermodynamics

Courses Deleted

The following courses were under review and are now deleted. The courses are ineligible for state funding if offered after August 31, 2013.

GOVT 2301	American Government I *(Federal & Texas constitutions)*
GOVT 2302	American Government II *(Federal and Texas Topics)*

ECON 1303	Consumer Economics

Courses Scheduled for Deletion Fall 2014

The following courses are under review and will be deleted. The courses may be taught and are eligible for state funding until August 31, 2014.

COMM 2301	Introduction to Technology and Human Communication
COMM 2316	Interviewing

MATH 2513	Calculus I (5 SCH version)

PSYC 2311	Adult Development
PSYC 2302	Applied Psychology

SOCI 2320	Minority Studies II
SOCI 2339	Juvenile Delinquency

SPAN 1100	Beginning Spanish Conversation I
SPAN 1110	Beginning Spanish Conversation II
SPAN 1200	Beginning Spanish Conversation I
SPAN 1210	Beginning Spanish Conversation II
SPAN 1310	Beginning Spanish Conversation II
SPAN 2106	Intermediate Spanish Conversation
SPAN 2206	Intermediate Spanish Conversation
SPAN 2306	Intermediate Spanish Conversation
SPAN 1305	Intensive Beginning Spanish
SPAN 2316	Career Spanish I
SPAN 2317	Career Spanish II
SPAN 2321	Introduction to Spanish Literature I (Iberian)
SPAN 2322	Introduction to Spanish Literature II (Iberian)
SPAN 2323	Introduction to Latin American Literature
SPAN 2324	Spanish Culture

SPCH 2301	Introduction to Technology and Human Communication
SPCH 2316	Interviewing

List of Approved Courses

ACCT (Accounting)

ACCT 2301 Principles of Accounting I - Financial (3 SCH version)
ACCT 2401 Principles of Accounting I - Financial (4 SCH version)

ACCT 2302 Principles of Accounting II - Managerial (3 SCH version)
ACCT 2402 Principles of Accounting II - Managerial (4 SCH version)

Accounting concepts and their application in transaction analysis and financial statement preparation; analysis of financial statements; and asset and equity accounting in proprietorships, partnerships, and corporations. Introduction to cost behavior, budgeting, responsibility accounting, cost control, and product costing.

Approval Number.....52.0301.51 04
maximum SCH per student..... 8
maximum SCH per course 4
maximum contact hours per course 96

AGRI (Agriculture)

AGRI 1307 Agronomy (3 SCH version)
AGRI 1407 Agronomy (4 SCH version)

Principles and practices in the development, production, and management of field crops including plant breeding, plant diseases, soils, insect control, and weed control.

Approval Number.....01.1102.51 01
maximum SCH per student.....4
maximum SCH per course 4
maximum contact hours per course 96

AGRI 1309 Computers in Agriculture

Use of computers in agricultural applications. Introduction to programming languages, word processing, electronic spreadsheets, and agricultural software.

Approval Number.....01.0101.51 01
maximum SCH per student.....3
maximum SCH per course 3
maximum contact hours per course 64

AGRI 1311 Dairy Science

Survey of the dairy industry including dairy breeds, standards for selection and culling, herd replacements, feeding, management, physiology, and health maintenance. Food value for milk, tests for composition and quality, and use and processing of market milk and dairy products.

Approval Number.....01.0905.51 01
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....64

AGRI 1413 Plant Protection (freshman version)
AGRI 2313 Plant Protection (sophomore version)

Principles and practices of controlling and preventing economic loss caused by plant pests. Includes instruction in entomology, plant pathology, weed science, crop science, environmental toxicology, and related environmental protection measures.

Approval Number.....01.1105.51 01
maximum SCH per student.....4
maximum SCH per course.....4
maximum contact hours per course.....96

AGRI 1315 Horticulture (3 SCH version)
AGRI 1415 Horticulture (4 SCH version)

Structure, growth, and development of horticultural plants from a practical and scientific approach. Environmental effects, basic principles of propagation, greenhouse and outdoor production, nutrition, pruning, chemical control of growth, pest control, and landscaping. (Cross-listed as HORT 1301 or 1401)

Approval Number.....01.0601.51 01
maximum SCH per student.....4
maximum SCH per course.....4
maximum contact hours per course.....96

AGRI 1319 Introductory Animal Science (3 SCH version)
AGRI 1419 Introductory Animal Science (4 SCH version)

Scientific animal agriculture. Importance of livestock and meat industries. Selection, reproduction, nutrition, management, and marketing of beef cattle, swine, sheep, goats, and horses.

Approval Number.....01.0901.51 01
maximum SCH per student.....4
maximum SCH per course.....4
maximum contact hours per course.....96

AGRI 1325 Marketing of Agricultural Products

Operations in the movement of agricultural commodities from producer to consumer, including the essential marketing functions of buying, selling, transporting, storing, financing, standardizing, pricing, and risk bearing.

Approval Number.....01.0102.51 01
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

AGRI 1327 Poultry Science

Introduction to the poultry industry. Practices and principles in the production and marketing of turkeys, layers, broilers, and specialized fowl. Management, automated equipment, product technology, incubation, and production economics.

Approval Number.....01.0907.51 01
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....64

AGRI 1329 Principles of Food Science

Biological and scientific aspects of modern industrial food supply systems. Food classification, modern processing, and quality control.

Approval Number.....01.1001.51 01
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....64

AGRI 1131 The Agricultural Industry (1 SCH version)
AGRI 1231 The Agricultural Industry (2 SCH version)

Overview of world agriculture, nature of the industry, resource conservation, and the American agricultural system, including production, distribution, and marketing.

Approval Number.....01.0103.52 01
maximum SCH per student.....2
maximum SCH per course.....2
maximum contact hours per course.....32

AGRI 2301 Agricultural Power Units

Fundamentals of internal combustion engines: gasoline, diesel, and liquefied petroleum. Maintenance and adjustments of the electrical, ignition, fuel, lubricating, and cooling systems of agricultural power machinery.

Approval Number.....01.0204.51 01
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....64

AGRI 2303 Agricultural Construction I
AGRI 2304 Agricultural Construction II
AGRI 2403 Agricultural Construction (4 SCH, single-semester course)
AGRI 2603 Agricultural Construction (6 SCH, single-semester course)

Selection, use, and maintenance of hand and power tools; arc and oxy-acetylene welding; and construction materials and principles.

Approval Number.....01.0201.51 01
maximum SCH per student.....6
maximum SCH per course.....6
maximum contact hours per course.....128

AGRI 2317 Introduction to Agricultural Economics

Fundamental economic principles and their applications to the problems of the industry of agriculture.

Approval Number.....01.0103.51 01
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

AGRI 2321 Livestock Evaluation I
AGRI 2322 Livestock Evaluation II
AGRI 1121 Livestock Judging (1 SCH, single-semester course)
AGRI 2221 Livestock Evaluation (2 SCH, single-semester course)

Selection, evaluation, and classification of livestock and livestock products.

Approval Number.....01.0901.52 01
maximum SCH per student.....6
maximum SCH per course.....3
maximum contact hours per course.....96

AGRI 2330 Wildlife Conservation & Management

Principles and practices used in the production and improvement of wildlife resources. Aesthetic, ecological, and recreational uses of public and private lands.

Approval Number.....03.0601.51 01
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....64

ANTH (Anthropology)

ANTH 2401 Physical Anthropology (lecture + lab)
ANTH 2301 Physical Anthropology (lecture)
ANTH 2101 Physical Anthropology (lab)*
ANTH 2302 Introduction to Archeology (lecture)
***(Note: may be taught as an accompaniment to ANTH 2301 only.)**

Overview of human origins and bio-cultural adaptations. Also introduces methods and theory in the excavation and interpretation of material remains of past cultures.

Approval Number.....45.0301.51 25
maximum SCH per student.....7
maximum SCH per course.....4
maximum contact hours per course.....96

ANTH 2346 General Anthropology

Study of human beings, their antecedents and related primates, and their cultural behavior and institutions. Introduces the major subfields: physical and cultural anthropology, archeology, linguistics, and ethnology. (Cross-listed as HUMA 2323)

Approval Number.....45.0201.51 25
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

ANTH 2351 Cultural Anthropology

Key concepts, methods and theory in the study of cultural diversity, social institutions, linguistics, and culture change among world peoples.

Approval Number.....45.0201.53 25
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

ANTH 2289 Academic Cooperative (2 SCH version)
ANTH 2389 Academic Cooperative (3 SCH version)

An instructional program designed to integrate on-campus study with practical hands-on experience in anthropology. In conjunction with class seminars, the individual student will set specific goals and objectives in the study of human social behavior and/or social institutions.

Approval Number.....45.0101.51 25
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....144

ARAB (Arabic Language)

ARAB 1311 Beginning Arabic I (1st semester Arabic, 3 SCH version)
ARAB 1411 Beginning Arabic I (1st semester Arabic, 4 SCH version)
ARAB 1511 Beginning Arabic I (1st semester Arabic, 5 SCH version)

ARAB 1312 Beginning Arabic II (2nd semester Arabic, 3 SCH version)
ARAB 1412 Beginning Arabic II (2nd semester Arabic, 4 SCH version)
ARAB 1512 Beginning Arabic II (2nd semester Arabic, 5 SCH version)

Fundamental skills in listening comprehension, speaking, reading, and writing. Includes basic vocabulary, grammatical structures, and culture.

Approval Number.....16.0101.51 13
maximum SCH per student.....10
maximum SCH per course.....5
maximum contact hours per course.....112

ARAB 2311 Intermediate Arabic I (3rd semester Arabic)
ARAB 2312 Intermediate Arabic II (4th semester Arabic)

Review and application of skills in listening comprehension, speaking, reading, and writing. Emphasizes conversation, vocabulary acquisition, reading, composition, and culture.

Approval Number.....16.0101.52 13
maximum SCH per student.....6
maximum SCH per course.....3
maximum contact hours per course.....80

ARCH (Architecture)

ARCH 1301 Architectural History I
ARCH 1302 Architectural History II

Study of the history of architecture from the ancient civilizations to the present. Emphasis on the relationship of culture, geography, climate, natural resources, and materials to the methods of construction.

Approval Number.....04.0801.51 02
maximum SCH per student.....6
maximum SCH per course.....3
maximum contact hours per course.....48

ARCH 1303 Architectural Design I (3 SCH version)
ARCH 1403 Architectural Design I (4 SCH version)

ARCH 1304 Architectural Design II (3 SCH version)
ARCH 1404 Architectural Design II (4 SCH version)

Introduction to architectural concepts. The visual characteristics of two- and three-dimensional forms and spaces.

Approval Number.....04.0201.54 02
maximum SCH per student.....8
maximum SCH per course.....4
maximum contact hours per course.....144

ARCH 1205 Architectural Aesthetics (2 SCH version)
ARCH 1305 Architectural Aesthetics (3 SCH version)

Architecture as a contemporary philosophical concept. Visual experiences in the aesthetics of architecture.

Approval Number.....04.0201.52 02
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

ARCH 1307 Architectural Graphics I (3 SCH version)
ARCH 1407 Architectural Graphics I (4 SCH version)

ARCH 1308 Architectural Graphics II (3 SCH version)
ARCH 1408 Architectural Graphics II (4 SCH version)

Architectural drafting techniques including orthographic and axonometric studies. Principles of shades and shadows, and perspective drawing.

Approval Number.....15.1303.53 11
maximum SCH per student.....8
maximum SCH per course.....4
maximum contact hours per course.....96

ARCH 1201 Introduction to Architecture (2 SCH version)
ARCH 1311 Introduction to Architecture (3 SCH version)

An introduction to the elements of the architectural profession.

Approval Number.....04.0201.59 02
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

ARCH 1315 Architectural Computer Graphics

Introduction to computer graphics systems with emphasis on architectural applications.

Approval Number.....15.1303.52 11
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....96

ARCH 2201 Architectural Freehand Drawing I (2 SCH version)
ARCH 2301 Architectural Freehand Drawing I (3 SCH version)

ARCH 2202 Architectural Freehand Drawing II (2 SCH version)
ARCH 2302 Architectural Freehand Drawing II (3 SCH version)

ARCH 2203 Architectural Freehand Drawing III (2 SCH version)

Representational drawing using various media. Emphasis on principles of light, shade, scale, proportion, line, and tonal quality.

Approval Number.....15.1303.51 11
maximum SCH per student.....8
maximum SCH per course.....3
maximum contact hours per course.....96

ARCH 2312 Architectural Technology I
ARCH 2313 Architectural Technology II

Introduction to the properties, specifications, and application of materials related to architectural structures. Emphasis on the methods of construction and the effect of design.

Approval Number.....15.0101.51 11
maximum SCH per student.....6
maximum SCH per course.....3
maximum contact hours per course.....96

ARTS (Studio Art & Art History)

ARTS 1301 Art Appreciation

Exploration of purposes and processes in the visual arts including evaluation of selected works.

Approval Number.....50.0703.51 26
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

ARTS 1303 Art History I
ARTS 1304 Art History II

Examination of painting, sculpture, architecture, and other arts from prehistoric to present time.

Approval Number.....50.0703.52 26
maximum SCH per student.....6
maximum SCH per course.....3
maximum contact hours per course.....48

ARTS 1311 Design I (2-dimensional)
ARTS 1312 Design II (3-dimensional)
ARTS 2311 Design III (may be 2-D, 3-D, color, or combinations thereof)
ARTS 2312 Design IV (may be 2-D, 3-D, color, or combinations thereof)

Elements and principles of art using two- and three-dimensional concepts.

Approval Number.....50.0401.53 26
maximum SCH per student.....9
maximum SCH per course.....3
maximum contact hours per course.....96

ARTS 1213 Foundations of Art (2 SCH version)
ARTS 1313 Foundations of Art (3 SCH version)
ARTS 1413 Foundations of Art (4 SCH version)

Introduction to the creative media designed to enhance artistic awareness and sensitivity through the creative and imaginative use of art materials and tools. Includes art history and culture through the exploration of a variety of art works with an emphasis on aesthetic judgment and growth.

Approval Number.....50.0701.51 26
maximum SCH per student.....4
maximum SCH per course.....4
maximum contact hours per course.....96

ARTS 1316 Drawing I
ARTS 1317 Drawing II

Investigation of drawing media and techniques including descriptive and expressive possibilities.

Approval Number.....50.0705.52 26
maximum SCH per student.....6
maximum SCH per course.....3
maximum contact hours per course.....96

ARTS 2323 Life Drawing I (3rd semester drawing)
ARTS 2324 Life Drawing II (4th semester drawing)

Basic study of the human form.

Approval Number.....50.0705.53 26
maximum SCH per student.....6
maximum SCH per course.....3
maximum contact hours per course.....144

ARTS 1320 Interior Design I
ARTS 1321 Interior Design II

Studio course in interior design. Includes instruction in professional techniques of designing the interiors of homes, offices, and industrial buildings.

Approval Number.....50.0408.51 26
maximum SCH per student.....6
maximum SCH per course.....3
maximum contact hours per course.....96

ARTS 1325 Drawing & Painting

Drawing and painting for non-art majors.

Approval Number.....50.0708.51 26
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....96

ARTS 2313 Design Communications I
ARTS 2314 Design Communications II

Communication of ideas through processes and techniques of graphic design and illustration.

Approval Number.....50.0401.51 26
maximum SCH per student.....6
maximum SCH per course.....3
maximum contact hours per course.....96

ARTS 2316 Painting I
ARTS 2317 Painting II

Exploration of ideas using painting media and techniques.

Approval Number.....50.0708.52 26
maximum SCH per student.....6
maximum SCH per course.....3
maximum contact hours per course.....96

ARTS 2326 Sculpture I
ARTS 2327 Sculpture II

Exploration of ideas using sculpture media and techniques.

Approval Number.....50.0709.51 26
maximum SCH per student.....6
maximum SCH per course.....3
maximum contact hours per course.....96

ARTS 2333 Printmaking I
ARTS 2334 Printmaking II

Exploration of ideas using various printmaking processes.

Approval Number.....50.0710.51 26
maximum SCH per student.....6
maximum SCH per course.....3
maximum contact hours per course.....96

ARTS 2336 Fiber Arts I
ARTS 2337 Fiber Arts II

Structure and design of woven and non-woven fiber forms.

Approval Number.....50.0712.51 26
maximum SCH per student.....6
maximum SCH per course.....3
maximum contact hours per course.....96

ARTS 2341 Art Metals I
ARTS 2342 Art Metals II

Exploration of ideas using basic techniques in jewelry and metal construction.

Approval Number.....50.0713.51 26
maximum SCH per student.....6
maximum SCH per course.....3
maximum contact hours per course.....96

ARTS 2346 Ceramics I
ARTS 2347 Ceramics II

Exploration of ideas using basic ceramic processes.

Approval Number.....50.0711.51 26
maximum SCH per student.....6
maximum SCH per course.....3
maximum contact hours per course.....96

ARTS 2348 Digital Art I
ARTS 2349 Digital Art II

Studio art courses that explore the potential of the computer hardware and software medium for their visual, conceptual, and practical uses in the visual arts.

Approval Number.....50.0402.52 26
maximum SCH per student.....6
maximum SCH per course.....3
maximum contact hours per course.....96

ARTS 2356 Photography I (fine arts emphasis)

Introduction to the basics of photography. Includes camera operation, techniques, knowledge of chemistry, and presentation skills. Emphasis on design, history, and contemporary trends as a means of developing an understanding of photographic aesthetics.
(Cross-listed, with journalism emphasis, as COMM 1318)

Approval Number.....50.0605.51 26
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....96

ARTS 2357 Photography II (fine arts emphasis)

Extends the students' knowledge of technique and guides them in developing personal outlooks toward specific applications of the photographic process. (Cross-listed, with journalism emphasis, as COMM 1319)

Prerequisite: Photography I or its equivalent.

Approval Number.....50.0605.52 26
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....96

ARTS 2366 Watercolor I
ARTS 2367 Watercolor II

Exploration of ideas using water-based painting media and techniques.

Approval Number.....50.0708.53 26
maximum SCH per student.....6
maximum SCH per course.....3
maximum contact hours per course.....96

ARTS 2289 Academic Cooperative (2SCH version)
ARTS 2389 Academic Cooperative (3 SCH version)

An instructional program designed to integrate on-campus study with practical hands-on work experience. In conjunction with class seminars, the individual student will set specific goals and objectives in the study of studio art and/or art history.

Approval Number.....24.0103.52 12
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....144

ASTR (Astronomy)

ASTR 1403 Stars and Galaxies (lecture + lab)
ASTR 1303 Stars and Galaxies (lecture)
ASTR 1103 Stars and Galaxies Laboratory (lab)

Study of stars, galaxies, and the universe outside our solar system. May or may not include a laboratory. (Cross-listed as PHYS 1403, 1303, & 1103)

Approval Number.....40.0201.51 03
maximum SCH per student.....4
maximum SCH per course.....4
maximum contact hours per course.....96

ASTR 1404 Solar System (lecture + lab)
ASTR 1304 Solar System (lecture)
ASTR 1104 Solar System Laboratory (lab)

Study of the sun and its solar system, including its origin. May or may not include a laboratory. (Cross-listed as PHYS 1404, 1304, & 1104)

Approval Number.....40.0201.52 03
maximum SCH per student.....4
maximum SCH per course.....4
maximum contact hours per course.....96

BCIS (Business Computer Information Systems)

(Refer to COSC for computer science programming courses.)

BCIS 1301 Microcomputer Applications (3 SCH version)
BCIS 1401 Microcomputer Applications (4 SCH version)

Overview of computer information systems. Introduces computer hardware, software, procedures, systems, and human resources and explores their integration and application in business and other segments in society. The fundamentals of computer problem solving and programming in a higher level programming language may be discussed and applied. (These courses are no longer cross-listed as COSC 1301 and 1401)

Approval Number.....11.0202.52 04
maximum SCH per student.....4
maximum SCH per course.....4
maximum contact hours per course.....96

BCIS 1305 Business Computer Applications (3 SCH version)
BCIS 1405 Business Computer Applications (4 SCH version)

Computer terminology, hardware, software, operating systems, and information systems relating to the business environment. The main focus of this course is on business applications of software, including word processing, spreadsheets, databases, presentation graphics, and business-oriented utilization of the Internet. (This course is part of the Business Field of Study Curriculum)

Approval Number.....11.0202.54 04
maximum SCH per student.....4
maximum SCH per course.....4
maximum contact hours per course.....96

BCIS 1310 BASIC Programming
BCIS 1311 FORTRAN Programming
BCIS 1312 PASCAL Programming

Course designed to teach software theory and structured programming methods used to solve business data problems. Includes discussion of business applications, testing, documentation, input specification, and report generation.

Approval Number.....11.0202.51 04
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....80

BCIS 1316 Computer Programming-BASIC (3 SCH version)
BCIS 1416 Computer Programming-BASIC (4 SCH version)

Introduction to business programming techniques. Includes structured programming methods, designing customized software applications, testing documentation, input specification, and report generation.

Approval Number.....11.0202.52 04
maximum SCH per student.....4
maximum SCH per course.....4
maximum contact hours per course.....96

BCIS 1320 C Programming (3 SCH version)
BCIS 1420 C Programming (4 SCH version)

Introduces the fundamental concepts of structured programming in the C language. Topics include data types; control structures; functions, structures, arrays, pointers, pointer arithmetic, unions, and files; the mechanics of running, testing, and debugging programs; introduction to programming; and introduction to the historical and social context of computing.

Prerequisite: None

Approval Number.....11.0202.52 04
Maximum SCH per student.....4
maximum SCH per course.....4
maximum contact hours per course.....96

Learning Outcomes

Upon successful completion of this course, students will:

1. Analyze and explain the behavior of simple programs involving the fundamental programming constructs.
2. Modify and expand short programs that use standard conditional and iterative control structures and functions; choose appropriate conditional and iteration constructs for a given programming task.
3. Design, implement, test, and debug a program that uses each of the following fundamental programming constructs: basic computation, simple I/O, standard conditional and iterative structures, and the definition of functions.
4. Apply the techniques of structured (functional) decomposition to break a program into smaller pieces.
5. Describe the mechanics of parameter passing and demonstrate the difference between call-by-value and call-by-reference parameter passing.
6. Discuss the importance of algorithms in the problem-solving process, identify the necessary properties of good algorithms, and create algorithms for solving simple problems.
7. Use pseudocode or a programming language to implement, test, and debug algorithms for solving simple problems.
8. Discuss the representation and use of primitive data types and built-in data structures.
9. Explain the reasons for using different formats to represent numerical data.
10. Explain basic concepts of secure programming functions.
11. Discuss the properties of good software design.

12. Describe the phases of program translation from source code to executable code and the files produced by these phases; explain the software life cycle and its phases, including the deliverables that are produced.
13. Identify and describe the properties of a variable such as its associated address, value, scope, persistence, and size.
14. Explain how abstraction mechanisms support the creation of reusable software components.

BCIS 1331 Programming in BASIC I (3 SCH version)
BCIS 1431 Programming in BASIC I (4 SCH version)

Introduction to business programming techniques. Includes structured programming methods, designing customized software applications, testing documentation, input specification, and report generation.

Approval Number.....11.0202.52 04
maximum SCH per student.....4
maximum SCH per course.....4
maximum contact hours per course.....96

BCIS 1332 COBOL Programming I (3 SCH version)
BCIS 1432 COBOL Programming I (4 SCH version)

Introduction to business programming techniques. Includes structured programming methods, designing customized software applications, testing documentation, input specification, and report generation.

Approval Number.....11.0202.52 04
maximum SCH per student.....4
maximum SCH per course.....4
maximum contact hours per course.....96

BCIS 2316 Advanced Structured Programming Techniques BASIC (3 SCH version)
BCIS 2416 Advanced Structured Programming Techniques BASIC (4 SCH version)

Further applications of business programming techniques. Advanced topics may include varied file access techniques, system profiles and security, control language programming, data validation program design and testing, and other topics not normally covered in an introductory information systems programming course.

Approval Number.....11.0202.53 04
maximum SCH per student.....4
maximum SCH per course.....4
maximum contact hours per course.....96

BCIS 2320 Advanced C Programming (3 SCH version)
BCIS 2420 Advanced C Programming (4 SCH version)

Further applications of business programming techniques. Advanced topics may include varied file access techniques, system profiles and security, control language programming, data validation program design and testing, and other topics not normally covered in an introductory information systems programming course.
(Cross-listed as COSC 2320 & 2420)

Approval Number.....11.0202.53 04
maximum SCH per student.....4
maximum SCH per course.....4
maximum contact hours per course.....96

BCIS 2331 Advanced Programming BASIC (3 SCH version)
BCIS 2431 Advanced Programming BASIC (4 SCH version)

Further applications of business programming techniques. Advanced topics may include varied file access techniques, system profiles and security, control language programming, data validation program design and testing, and other topics not normally covered in an introductory information systems programming course.

Approval Number.....11.0202.53 04
maximum SCH per student.....4
maximum SCH per course.....4
maximum contact hours per course.....96

BCIS 2332 Advanced Programming COBOL (3 SCH version)
BCIS 2432 Advanced Programming COBOL (4 SCH version)

Further applications of business programming techniques. Advanced topics may include varied file access techniques, system profiles and security, control language programming, data validation program design and testing, and other topics not normally covered in an introductory information systems programming course.

Approval Number.....11.0202.53 04
maximum SCH per student.....4
maximum SCH per course.....4
maximum contact hours per course.....96

BCIS 2390 Systems Analysis & Design

Analysis of business information needs and preparation of specifications and requirements for appropriate data system solutions. Includes instruction in information requirements analysis, specification development and writing, prototype evaluation, and network application interfaces.

Approval Number.....11.0501.51 04
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....80

BIOL (Biology)

BIOL 1306 Biology for Science Majors I (lecture)

Fundamental principles of living organisms will be studied, including physical and chemical properties of life, organization, function, evolutionary adaptation, and classification. Concepts of cytology, reproduction, genetics, and scientific reasoning are included.

Recommended co-requisite: BIOL 1106 Biology for Science Majors I Laboratory

Recommended prerequisite: MATH 1314 Successful completion of College Algebra or concurrent enrollment in higher-level mathematics is recommended.

Approval Number.....26.0101.51 03
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

Learning Outcomes

Upon successful completion of this course, students will:

1. Describe the characteristics of life.
2. Explain the methods of inquiry used by scientists.
3. Identify the basic requirements of life and the properties of the major molecules needed for life.
4. Compare and contrast the structures, reproduction, and characteristics of viruses, prokaryotic cells, and eukaryotic cells.
5. Describe the structure of cell membranes and the movement of molecules across a membrane.
6. Identify the substrates, products, and important chemical pathways in metabolism.
7. Identify the principles of inheritance and solve classical genetic problems.
8. Identify the chemical structures, synthesis, and regulation of nucleic acids and proteins.
9. Describe the unity and diversity of life and the evidence for evolution through natural selection.

BIOL 1106 Biology for Science Majors I (lab)

This laboratory-based course accompanies Biology 1306, Biology for Science Majors I. Laboratory activities will reinforce the fundamental principles of living organisms, including physical and chemical properties of life, organization, function, evolutionary adaptation, and classification. Study and examination of the concepts of cytology, reproduction, genetics, and scientific reasoning are included.

Pre-/Co-requisite: BIOL 1306 Biology for Science Majors I

Approval Number.....26.0101.51 03
maximum SCH per student.....1
maximum SCH per course.....1
maximum contact hours per course.....48

Learning Outcomes

Upon successful completion of this course, students will:

1. Apply scientific reasoning to investigate questions and utilize scientific tools such as microscopes and laboratory equipment to collect and analyze data.
2. Use critical thinking and scientific problem-solving to make informed decisions in the laboratory.
3. Communicate effectively the results of scientific investigations.
4. Describe the characteristics of life.
5. Explain the methods of inquiry used by scientist.
6. Identify the basic properties of substances needed for life.
7. Compare and contrast the structures, reproduction, and characteristics of viruses, prokaryotic cells, and eukaryotic cells.
8. Describe the structure of cell membranes and the movement of molecules across a membrane.
9. Identify the substrates, products, and important chemical pathways in metabolism.
10. Identify the principles of inheritance and solve classical genetic problems.
11. Identify the chemical structures, synthesis, and regulation of nucleic acids and proteins.
12. Describe the unity and diversity of life and the evidence for evolution through natural selection.

BIOL 1406 Biology for Science Majors I (lecture + lab)

This lecture and lab course should combine all of the elements of BIOL 1306 Biology for Science Majors I (lecture) and BIOL 1106 Biology for Science Majors I (lab), including the learning outcomes listed for both courses.

Approval Number.....26.0101.51 03
maximum SCH per student.....4
maximum SCH per course.....4
maximum contact hours per course.....96

BIOL 1307 Biology for Science Majors II (lecture)

The diversity and classification of life will be studied, including animals, plants, protists, fungi, and prokaryotes. Special emphasis will be given to anatomy, physiology, ecology, and evolution of plants and animals.

Recommended co-requisite: BIOL 1107 Biology for Science Majors II Laboratory

Recommended prerequisite: MATH 1314 Successful completion of College Algebra or concurrent enrollment in higher-level mathematics is recommended.

Note: It is recommended that BIOL 1306 and 1106, or BIOL 1406 Biology for Science Majors I (Lecture and Laboratory) be taken before BIOL 1307/1107 or BIOL 1407.

Approval Number.....26.0101.51 03
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

Learning Outcomes

Upon successful completion of this course, students will:

1. Describe modern evolutionary synthesis, natural selection, population genetics, micro and macroevolution, and speciation.
2. Describe phylogenetic relationships and classification schemes.
3. Identify the major phyla of life with an emphasis on plants and animals, including the basis for classification, structural and physiological adaptations, evolutionary history, and ecological significance.
4. Describe basic animal physiology and homeostasis as maintained by organ systems.
5. Compare different sexual and asexual life cycles noting their adaptive advantages.
6. Illustrate the relationship between major geologic change, extinctions, and evolutionary trends.

BIOL 1107 Biology for Science Majors II (lab)

This laboratory-based course accompanies Biology 1307, Biology for Science Majors II. Laboratory activities will reinforce study of the diversity and classification of life, including animals, plants, protists, fungi, and prokaryotes. Special emphasis will be given to anatomy, physiology, ecology, and evolution of plants and animals.

Pre-/Co-requisite: BIOL 1307 Biology for Science Majors II

Approval Number.....26.0101.51 03
maximum SCH per student..... 1
maximum SCH per course 1
maximum contact hours per course 48

Learning Outcomes

Upon successful completion of this course, students will:

1. Apply scientific reasoning to investigate questions, and utilize scientific tools such as microscopes and laboratory equipment to collect and analyze data.
2. Use critical thinking and scientific problem-solving to make informed decisions in the laboratory.
3. Communicate effectively the results of scientific investigations.
4. Demonstrate knowledge of modern evolutionary synthesis, natural selection, population genetics, micro and macroevolution, and speciation.
5. Distinguish between phylogenetic relationships and classification schemes.
6. Identify the major phyla of life with an emphasis on plants and animals, including the basis for classification, structural and physiological adaptations, evolutionary history, and ecological significance.
7. Describe basic animal physiology and homeostasis as maintained by organ systems.
8. Compare different sexual and asexual life cycles noting their adaptive advantages.
9. Illustrate the relationship between major geologic change, extinctions, and evolutionary trends.

BIOL 1407 Biology for Science Majors II (lecture + lab)

This lecture and lab course should combine all of the elements of BIOL 1307 Biology for Science Majors II (lecture) and BIOL 1107 Biology for Science Majors II (lab), including the learning outcomes listed for both courses.

Approval Number.....26.0101.51 03
maximum SCH per student.....4
maximum SCH per course.....4
maximum contact hours per course.....96

BIOL 1308 Biology for Non-Science Majors I (lecture)

Provides a survey of biological principles with an emphasis on humans, including chemistry of life, cells, structure, function, and reproduction.

Recommended co-requisite: BIOL 1108 Biology for Non-Science Majors I Laboratory

Approval Number.....26.0101.51 03
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

Learning Outcomes

Upon successful completion of this course, students will:

1. Distinguish between prokaryotic, eukaryotic, plant and animal cells, and identify major cell structures.
2. Identify stages of the cell cycle, mitosis (plant and animal), and meiosis.
3. Interpret results from cell physiology experiments involving movement across membranes, enzymes, photosynthesis, and cellular respiration.
4. Apply genetic principles to predict the outcome of genetic crosses and statistically analyze results.
5. Describe karyotyping, pedigrees, and biotechnology and provide an example of the uses of each.
6. Identify parts of a DNA molecule, and describe replication, transcription, and translation.
7. Analyze evidence for evolution and natural selection.

BIOL 1108 Biology for Non-Science Majors Laboratory I (lab)

This laboratory-based course accompanies BIOL 1308, Biology for Non-Science Majors I. Laboratory activities will reinforce a survey of biological principles with an emphasis on humans, including chemistry of life, cells, structure, function, and reproduction.

Pre-/Co-requisite: BIOL 1308 – Biology for Non-Science Majors I

Approval Number.....26.0101.51 03
maximum SCH per student.....1
maximum SCH per course.....1
maximum contact hours per course.....48

Learning Outcomes

Upon successful completion of this course, students will:

1. Apply scientific reasoning to investigate questions, and utilize scientific tools such as microscopes and laboratory equipment to collect and analyze data.
2. Use critical thinking and scientific problem-solving to make informed decisions in the laboratory.
3. Communicate effectively the results of scientific investigations.
4. Distinguish between prokaryotic, eukaryotic, plant and animal cells, and identify major cell structures.
5. Identify stages of the cell cycle, mitosis (plant and animal), and meiosis.
6. Interpret results from cell physiology experiments involving movement across membranes, enzymes, photosynthesis, and cellular respiration.
7. Apply genetic principles to predict the outcome of genetic crosses and statistically analyze results.
8. Identify the importance of karyotypes, pedigrees, and biotechnology.
9. Identify parts of a DNA molecule, and describe replication, transcription, and translation.
10. Analyze evidence for evolution and natural selection.

BIOL 1408 Biology for Non-Science Majors I (lecture + lab)

This lecture and lab course should combine all of the elements of BIOL 1308 Biology for Non-Science Majors I (lecture) and BIOL 1108 Biology for Non- Science Majors I (lab), including the learning outcomes listed for both courses.

Approval Number.....26.0101.51 03
maximum SCH per student.....4
maximum SCH per course.....4
maximum contact hours per course.....96

BIOL 1309 Biology for Non-Science Majors II (lecture)

This course will provide a survey of biological principles with an emphasis on humans, including evolution, ecology, plant and animal diversity, and physiology.

Recommended co-requisite: BIOL 1109 Biology for Non-Science Majors II Laboratory

Approval Number.....26.0101.51 03
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

Learning Outcomes

Upon successful completion of this course, students will:

1. Describe modern evolutionary synthesis, natural selection, population genetics, micro and macroevolution, and speciation.
2. Describe phylogenetic relationships and classification schemes.
3. Identify the major phyla of life with an emphasis on plants and animals, including the basis for classification, structural and physiological adaptations, evolutionary history, and ecological significance.
4. Describe basic animal physiology and homeostasis as maintained by organ systems.

5. Compare different sexual and asexual life cycles noting their adaptive advantages.
6. Illustrate the relationship between major geologic change, extinctions, and evolutionary trends.

BIOL 1109 Biology for Non-Science Majors II (lab)

This laboratory-based course accompanies BIOL 1309, Biology for Non-Science Majors II. Laboratory activities will reinforce a survey of biological principles with an emphasis on humans, including evolution, ecology, plant and animal diversity, and physiology.

Pre-/Co-requisite: BIOL 1309 – Biology for Non-Science Majors II

Approval Number.....26.0101.51 03
maximum SCH per student..... 1
maximum SCH per course 1
maximum contact hours per course 48

Learning Outcomes

Upon successful completion of this course, students will:

1. Apply scientific reasoning to investigate questions and utilize scientific tools such as microscopes and laboratory equipment to collect and analyze data.
2. Use critical thinking and scientific problem-solving to make informed decisions in the laboratory.
3. Communicate effectively the results of scientific investigations.
4. Define modern evolutionary synthesis, natural selection, population genetics, micro and macroevolution, and speciation.
5. Describe phylogenetic relationships and classification schemes.
6. Identify the major phyla of life with an emphasis on plants and animals, including the basis for classification, structural and physiological adaptations, evolutionary history, and ecological significance.
7. Describe basic animal physiology and homeostasis as maintained by organ systems.
8. Compare different sexual and asexual life cycles noting their adaptive advantages.
9. Illustrate the relationship between major geologic change, extinctions, and evolutionary trends.

BIOL 1409 Biology for Non-Science Majors II (lecture + lab)

This lecture and lab course should combine all of the elements of BIOL 1309 Biology for Non-Science Majors II (lecture) and BIOL 1109 Biology for Non-Science Majors II (lab), including the learning outcomes listed for both courses.

Approval Number.....26.0101.51 03
maximum SCH per student..... 4
maximum SCH per course 4
maximum contact hours per course 96

BIOL 1311 General Botany (lecture)

Fundamental biological concepts relevant to plant physiology, life cycle, growth and development, structure and function, and cellular and molecular metabolism. The role of plants in the environment, evolution, and phylogeny of major plant groups, algae, and fungi. (This course is intended for science majors.)

Recommended co-requisite: BIOL 1111 General Botany Laboratory

Recommended prerequisite: MATH 1314 - Successful completion of College Algebra or concurrent enrollment in higher level mathematics is recommended.

Approval Number.....26.0301.51.03
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

Learning Outcomes

Upon successful completion of this course, students will:

1. Compare and contrast the structures, reproduction, and characteristics of plants, algae, and fungi.
2. Describe the characteristics of life and the basic properties of substances needed for life.
3. Identify the principles of inheritance and solve classical genetic problems.
4. Describe phylogenetic relationships and classification schemes.
5. Identify the major phyla of life with an emphasis on plants, including the basis for classification, structural and physiological adaptations, evolutionary history, and ecological significance.
6. Identify the chemical structures, synthesis, and regulation of nucleic acids and proteins.
7. Identify the substrates, products, and important chemical pathways in photosynthesis and respiration.
8. Describe the unity and diversity of plants and the evidence for evolution through natural selection.
9. Compare different sexual and asexual life cycles noting their adaptive advantages.
10. Describe the reasoning processes applied to scientific investigations and thinking.

BIOL 1111 General Botany (lab)

This laboratory-based course accompanies Biology 1311, General Botany. Laboratory activities will reinforce fundamental biological concepts relevant to plant physiology, life cycle, growth and development, structure and function, and cellular and molecular metabolism. The role of plants in the environment, evolution, and phylogeny of major plant groups, algae, and fungi. (This course is intended for science majors.)

Pre-/Co-requisite: BIOL 1311 General Botany

Approval Number.....26.0301.51.03
maximum SCH per student.....1
maximum SCH per course.....1
maximum contact hours per course.....64

Learning Outcomes

Upon successful completion of this course, students will:

1. Apply scientific reasoning to investigate questions and utilize scientific tools such as microscopes and laboratory equipment to collect and analyze data.
2. Use critical thinking and scientific problem-solving to make informed decisions in the laboratory.
3. Communicate effectively the results of scientific investigations.
4. Compare and contrast the structures, reproduction, and characteristics of plants, algae, and fungi.
5. Describe the characteristics of life and the basic properties of substances needed for life.
6. Identify the principles of inheritance and solve classical genetic problems.
7. Describe phylogenetic relationships and classification schemes.
8. Identify the major phyla of life with an emphasis on plants, including the basis for classification, structural and physiological adaptations, evolutionary history, and ecological significance.
9. Identify the chemical structures, synthesis, and regulation of nucleic acids and proteins.
10. Identify the substrates, products, and important chemical pathways in photosynthesis and respiration.
11. Describe the unity and diversity of plants and the evidence for evolution through natural selection.
12. Compare different sexual and asexual life cycles noting their adaptive advantages.
13. Describe the reasoning processes applied to scientific investigations and thinking.

BIOL 1411 General Botany (lecture + lab)

This lecture and lab course should combine all of the elements of BIOL 1311 (lecture) and BIOL 1111 (lab), including the learning outcomes listed for both courses.

Approval Number.....26.0301.51.03
maximum SCH per student.....4
maximum SCH per course.....4
maximum contact hours per course.....112

BIOL 1313 General Zoology (lecture)

Fundamental biological concepts relevant to animals, including systematics, evolution, structure and function, cellular and molecular metabolism, reproduction, development, diversity, phylogeny, and ecology. (This course is intended for science majors.)

Recommended co-requisite: BIOL 1113 General Zoology Laboratory

Recommended prerequisite: MATH 1314 - Successful completion of College Algebra or concurrent enrollment in higher level mathematics is recommended.

Approval Number.....26.0701.51.03
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

Learning Outcomes

Upon successful completion of this course, students will:

1. Compare and contrast the structures, reproduction, and characteristics of animals.
2. Describe the characteristics of life and the basic properties of substances needed for life.
3. Identify the principles of inheritance and solve classical genetic problems.
4. Describe phylogenetic relationships and classification schemes.
5. Identify the major phyla of life with an emphasis on animals, including the basis for classification, structural and physiological adaptations, evolutionary history, and ecological significance.
6. Identify the chemical structures, synthesis, and regulation of nucleic acids and proteins.
7. Identify the substrates, products, and important chemical pathways in respiration.
8. Describe the unity and diversity of animals and the evidence for evolution through natural selection.
9. Describe the reasoning processes applied to scientific investigations and thinking.
10. Describe basic animal physiology and homeostasis as maintained by organ systems.
11. Describe modern evolutionary synthesis, natural selection, population genetics, micro and macroevolution, and speciation.
12. Describe the structure of cell membranes and the movement of molecules across a membrane.

BIOL 1113 General Zoology (lab)

This laboratory-based course accompanies Biology 1313, General Zoology. Laboratory activities will reinforce fundamental biological concepts relevant to animals, including systematics, evolution, structure and function, cellular and molecular metabolism, reproduction, development, diversity, phylogeny, and ecology. (This course is intended for science majors.)

Pre-/Co-requisite: BIOL 1313 General Zoology

Approval Number.....26.0701.51.03
maximum SCH per student..... 1
maximum SCH per course 1
maximum contact hours per course 64

Learning Outcomes

Upon successful completion of this course, students will:

1. Apply scientific reasoning to investigate questions and utilize scientific tools such as microscopes and laboratory equipment to collect and analyze data.
2. Use critical thinking and scientific problem-solving to make informed decisions in the laboratory.
3. Communicate effectively the results of scientific investigations.
4. Compare and contrast the structures, reproduction, and characteristics of animals.
5. Describe the characteristics of life and the basic properties of substances needed for life.
6. Identify the principles of inheritance and solve classical genetic problems.
7. Describe phylogenetic relationships and classification schemes.
8. Identify the major phyla of life with an emphasis on animals, including the basis for classification, structural and physiological adaptations, evolutionary history, and ecological significance.
9. Identify the chemical structures, synthesis, and regulation of nucleic acids and proteins.
10. Identify the substrates, products, and important chemical pathways in respiration.

11. Describe the unity and diversity of animals and the evidence for evolution through natural selection.
12. Describe the reasoning processes applied to scientific investigations and thinking.
13. Describe basic animal physiology and homeostasis as maintained by organ systems.
14. Describe modern evolutionary synthesis, natural selection, population genetics, micro and macroevolution, and speciation.
15. Describe the structure of cell membranes and the movement of molecules across a membrane.

BIOL 1413 General Zoology (lecture + lab)

This lecture and lab course should combine all of the elements of BIOL 1313 (lecture) and BIOL 1113 (lab), including the learning outcomes listed for both courses.

Approval Number.....26.0701.51.03
maximum SCH per student.....4
maximum SCH per course.....4
maximum contact hours per course.....112

BIOL 1322 Nutrition & Diet Therapy I (may also be single-semester course)
BIOL 1323 Nutrition & Diet Therapy II (2nd of 2 semesters)

Study of the chemical, physical, and sensory properties of food; nutritional quality; and food use and diet applications. (Cross-listed as HECO 1322)

Approval Number.....19.0501.51 09
maximum SCH per student.....6
maximum SCH per course.....3
maximum contact hours per course.....48

BIOL 1414 Introduction to Biotechnology I

Overview of classical genetics, DNA structure, the flow of genetic information, DNA replication, gene transcription, protein translation. Principles of major molecular biology and genetic engineering techniques, including restriction enzymes and their uses, major types of cloning vectors, construction of libraries, Southern and Northern blotting, hybridization, PCR, DNA typing. Applications of these techniques in human health and welfare, medicine, agriculture and the environment. Introduction to the human genome project, gene therapy, molecular diagnostics, forensics, creation and uses of transgenic plants and animal and animal cloning and of the ethical, legal, and social issues and scientific problems associated with these technologies. Relevant practical exercises in the above areas.

Approval Number.....26.1201.51 03
Maximum SCH per student.....4
Maximum SCH per course.....4
Maximum contact hours per course.....112

BIOL 1415 Introduction to Biotechnology II

Biology course that focuses on an integrative approach to studying biomolecules with an emphasis on protein structures, functions and uses in the modern bioscience laboratory. Students will investigate the mechanisms involved in the transfer of information from DNA sequences to proteins to biochemical functions. The course will integrate biological and chemical concepts with techniques that are used in research and industry. Critical thinking will be applied in laboratory exercises using inquiry-based approaches, troubleshooting, and analyzing experimental data.

Approval Number.....26.1201.52 03
Maximum SCH per student.....4
Maximum SCH per course.....4
Maximum contact hours per course.....112

BIOL 1424 Systematic Botany (lecture + lab)
BIOL 1324 Systematic Botany (lecture)
BIOL 1124 Systematic Botany (lab)

Introduction to the identification, classification, and evolutionary relationships of vascular plants with emphasis on flowering plants. Includes the importance of herbaria, collection techniques, and the construction and use of taxonomic keys.

Approval Number.....26.0301.52 03
maximum SCH per student.....4
maximum SCH per course.....4
maximum contact hours per course.....112

BIOL 2401 Anatomy & Physiology I (lecture + lab)
BIOL 2301 Anatomy & Physiology I (lecture)
BIOL 2101 Anatomy & Physiology Laboratory I (lab)

BIOL 2402 Anatomy & Physiology II (lecture + lab)
BIOL 2302 Anatomy & Physiology II (lecture)
BIOL 2102 Anatomy & Physiology II (lab)

BIOL 2304 Anatomy & Physiology I (specialized, lecture only)
BIOL 2305 Anatomy & Physiology II (specialized, lecture only)
BIOL 2404 Anatomy & Physiology (specialized, single-semester course, lecture + lab)

Study of the structure and function of human anatomy, including the neuroendocrine, integumentary, musculoskeletal, digestive, urinary, reproductive, respiratory, and circulatory systems. Content may be either integrated or specialized.

Approval Number.....26.0707.51 03
maximum SCH per student.....8
maximum SCH per course.....4
maximum contact hours per course.....112

BIOL 2306 Environmental Biology (lecture)

Principles of environmental systems and ecology, including biogeochemical cycles, energy transformations, abiotic interactions, symbiotic relationships, natural resources and their management, lifestyle analysis, evolutionary trends, hazards and risks, and approaches to ecological research.

Recommended co-requisite: BIOL 2106 Environmental Biology Laboratory
Recommended prerequisite: MATH 1314 - Successful completion of College Algebra or concurrent enrollment in higher-level mathematics is recommended.

Approval Number.....03.0103.51 01
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

Learning Outcomes

Upon successful completion of this course, students will:

1. Explain the structure and impact of biogeochemical cycles.
2. Describe energy transformations across trophic levels.
3. Illustrate abiotic/biotic interactions and symbiotic relationships.
4. Identify various types of natural resources, human impact on these resources, and common resource management practices.
5. Quantify and analyze the impact of lifestyle on the environment.
6. Depict evolutionary trends and adaptations to environmental changes.
7. Describe environmental hazards and risks and the social and economic ramifications.
8. Describe ecological and statistical techniques and approaches used in the study of environmental biology.

BIOL 2106 Environmental Biology (lab, 1 SCH version)
BIOL 2206 Environmental Biology (lab, 2 SCH version)

This laboratory-based course accompanies Biology 2306, Environmental Biology. Laboratory activities will reinforce principles of environmental systems and ecology, including biogeochemical cycles, energy transformations, abiotic interactions, symbiotic relationships, natural resources and their management, lifestyle analysis, evolutionary trends, hazards and risks, and approaches to ecological research.

Pre-/Co-requisite: BIOL 2306 Environmental Biology

Approval Number.....03.0103.51 01
maximum SCH per student.....2
maximum SCH per course.....2
maximum contact hours per course.....80

Learning Outcomes

Upon successful completion of this course, students will:

1. Apply scientific reasoning to investigate questions and utilize scientific tools such as microscopes and laboratory equipment to collect and analyze data.
2. Use critical thinking and scientific problem-solving to make informed decisions in the laboratory.

3. Communicate effectively the results of scientific investigations.
4. Explain the structure and impact of biogeochemical cycles.
5. Describe energy transformations across trophic levels.
6. Illustrate abiotic/biotic interactions and symbiotic relationships.
7. Identify various types of natural resources, human impact on these resources, and common resource management practices.
8. Quantify and analyze the impact of lifestyle on the environment.
9. Depict evolutionary trends and adaptations to environmental changes.
10. Describe environmental hazards and risks and the social and economic ramifications.
11. Describe ecological and statistical techniques and approaches used in the study of environmental biology.

BIOL 2406 Environmental Biology (lecture + lab)

This lecture and lab course should combine all of the elements of BIOL 2306 (lecture) and BIOL 2106 (lab), including the learning outcomes listed for both courses.

Approval Number.....03.0103.51 01
maximum SCH per student.....4
maximum SCH per course.....4
maximum contact hours per course.....96

BIOL 2416 Genetics (lecture + lab)
BIOL 2316 Genetics (lecture)
BIOL 2116 Genetics (lab)

Study of the principles of molecular and classical genetics and the function and transmission of hereditary material. May include population genetics and genetic engineering.

Approval Number.....26.0804.51 03
maximum SCH per student.....4
maximum SCH per course.....4
maximum contact hours per student.....112

BIOL 2420 Microbiology for Non-Science Majors (lecture + lab)
BIOL 2320 Microbiology for Non-Science Majors (lecture)
BIOL 2120 Microbiology for Non-Science Majors Laboratory (lab)

Study of the morphology, physiology, and taxonomy of representative groups of pathogenic and nonpathogenic microorganisms. Pure cultures of microorganisms grown on selected media are used in learning laboratory techniques. Includes a brief preview of food microbes, public health, and immunology.

Approval Number.....26.0503.51 03
maximum SCH per student.....4
maximum SCH per course.....4
maximum contact hours per course.....112

BIOL 2321 Microbiology for Science Majors (lecture)

Principles of microbiology, including metabolism, structure, function, genetics, and phylogeny of microbes. The course will also examine the interactions of microbes with each other, hosts, and the environment.

Recommended co-requisite: BIOL 2121 Microbiology for Science Majors Laboratory
Prerequisites: CHEM 1311 and 1111, or 1411 General Chemistry I (lecture and lab)

Plus one of the following biology sequences for majors:

BIOL 1306 and 1106, or 1406 Biology for Science Majors I (lecture and lab)
BIOL 1307 and 1107, or 1407 Biology for Science Majors II (lecture and lab)
or
BIOL 1311 and 1111, or 1411 General Botany (lecture and lab)
BIOL 1313 and 1113, or 1413 General Zoology (lecture and lab)

Approval Number.....26.0503.51 03
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

Learning Outcomes

Upon successful completion of this course, students will:

1. Provide examples of the impact of microorganisms on agriculture, environment, ecosystem, energy, and human health, including biofilms.
2. Identify unique structures, capabilities, and genetic information flow of microorganisms.
3. Compare the life cycles and structures of different types of viruses.
4. Discuss how microscopy has revealed the structure and function of microorganisms.
5. Give examples of the range of metabolic diversity exhibited by microorganisms, impact of metabolic characteristics on growth, and control of growth.
6. Describe evidence for the evolution of cells, organelles, and major metabolic pathways from early prokaryotes and how phylogenetic trees reflect evolutionary relationships.
7. Describe the causes and consequences of mutations on microbial evolution and the generation of diversity as well as human impacts on adaptation.
8. Classify interactions of microorganisms on human and non-human hosts as neutral, detrimental, or beneficial.

BIOL 2121 Microbiology for Science Majors (lab)

This laboratory-based course accompanies Biology 2321, Microbiology for Science Majors. Laboratory activities will reinforce principles of microbiology, including metabolism, structure, function, genetics, and phylogeny of microbes. The course will also examine the interactions of microbes with each other, hosts, and the environment.

Pre-/Co-requisite: BIOL 2321 Microbiology for Science Majors

Approval Number.....26.0503.51 03
maximum SCH per student.....1
maximum SCH per course.....1
maximum contact hours per course.....64

Learning Outcomes

Upon successful completion of this course, students will:

1. Apply scientific reasoning to investigate questions and utilize scientific tools such as microscopes and laboratory equipment to collect and analyze data.
2. Use critical thinking and scientific problem-solving to make informed decisions in the laboratory.
3. Communicate effectively the results of scientific investigations.
4. Provide examples of the impact of microorganisms on agriculture, environment, ecosystem, energy, and human health, including biofilms.
5. Identify unique structures, capabilities, and genetic information flow of microorganisms.
6. Compare the life cycles and structures of different types of viruses.
7. Discuss how microscopy has revealed the structure and function of microorganisms.
8. Give examples of the range of metabolic diversity exhibited by microorganisms, impact of metabolic characteristics on growth, and control of growth.
9. Describe evidence for the evolution of cells, organelles, and major metabolic pathways from early prokaryotes and how phylogenetic trees reflect evolutionary relationships.
10. Describe the causes and consequences of mutations on microbial evolution and the generation of diversity as well as human impacts on adaptation.
11. Classify interactions of microorganisms on human and non-human hosts as neutral, detrimental, or beneficial.

BIOL 2421 Microbiology for Science Majors (lecture + lab)

This lecture and lab course should combine all of the elements of BIOL 2321 (lecture) and BIOL 2121 (lab), including the learning outcomes listed for both courses.

Approval Number.....26.0503.51 03
maximum SCH per student.....4
maximum SCH per course.....4
maximum contact hours per course.....112

BIOL 2428 Vertebrate Zoology (lecture + lab)

Structure, development, physiology, and natural history of the vertebrate animals with emphasis on comparative evolution.

Approval Number.....26.0701.53 03
maximum SCH per student.....4
maximum SCH per course.....4
maximum contact hours per course.....112

BIOL 2289 Academic Cooperative (2 SCH version)
BIOL 2389 Academic Cooperative (3 SCH version)

An instructional program designed to integrate on-campus study with practical hands-on work experience in the biological sciences/life sciences. In conjunction with class seminars, the individual student will set specific goals and objectives in the study of living organisms and their systems.

Approval Number.....26.0101.52 03
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....144

BUSI (Business)

BUSI 1301 Business Principles

Introduction to the role of business in modern society. Includes overview of business operations, analysis of the specialized fields within the business organization, and development of a business vocabulary.

Approval Number.....52.0101.51 04
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

BUSI 1304 Business Report Writing & Correspondence (freshman level version)
BUSI 2304 Business Report Writing & Correspondence (sophomore level version)

Theory and applications for technical reports and correspondence in business.

Approval Number.....23.1303.52 12
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

BUSI 1307 Personal Finance

Personal and family accounts, budgets and budgetary control, bank accounts, charge accounts, borrowing, investing, insurance, standards of living, renting or home ownership, and wills and trust plans. (Cross-listed as HECO 1307) **NOTE:** This course is not part of the business field of study and may not transfer toward a degree in business.

Approval Number.....19.0401.51 09
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

BUSI 2301 Business Law (1st semester Business Law)

Principles of law which form the legal framework for business activity.

Approval Number.....22.0101.51 24
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

CHEM (Chemistry)

CHEM 1405 Introductory Chemistry I (lecture + lab)
CHEM 1305 Introductory Chemistry I (lecture)
CHEM 1105 Introductory Chemistry Laboratory I (lab)

CHEM 1407 Introductory Chemistry II (lecture + lab)
CHEM 1307 Introductory Chemistry II (lecture)
CHEM 1107 Introductory Chemistry Laboratory II (lab)

CHEM 1406 Introductory Chemistry I (lecture + lab, allied health emphasis)
CHEM 1306 Introductory Chemistry I (lecture, allied health emphasis)
CHEM 1106 Introductory Chemistry I (lab, allied health emphasis)
CHEM 1408 Introductory Chemistry II (lecture + lab, allied health emphasis)

Survey course introducing chemistry. Topics may include inorganic, organic, biochemistry, food/physiological chemistry, and environmental/consumer chemistry. Designed for allied health students and for students who are not science majors.

Approval Number.....40.0501.51 03
maximum SCH per student.....8
maximum SCH per course.....4
maximum contact hours per course.....112

CHEM 1311 General Chemistry I (lecture)

Fundamental principles of chemistry for majors in the sciences, health sciences, and engineering; topics include measurements, fundamental properties of matter, states of matter, chemical reactions, chemical stoichiometry, periodicity of elemental properties, atomic structure, chemical bonding, molecular structure, solutions, properties of gases, and an introduction to thermodynamics and descriptive chemistry.

Co-requisite: CHEM 1111 General Chemistry I Laboratory
Prerequisite: MATH 1314 College Algebra or equivalent academic preparation
High school chemistry is strongly recommended

Approval Number.....40.0501.52 03
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

Learning Outcomes

Upon successful completion of this course, students will:

1. Define the fundamental properties of matter.
2. Classify matter, compounds, and chemical reactions.
3. Determine the basic nuclear and electronic structure of atoms.
4. Identify trends in chemical and physical properties of the elements using the Periodic Table.
5. Describe the bonding in and the shape of simple molecules and ions.
6. Solve stoichiometric problems.
7. Write chemical formulas.
8. Write and balance equations.
9. Use the rules of nomenclature to name chemical compounds.
10. Define the types and characteristics of chemical reactions.
11. Use the gas laws and basics of the Kinetic Molecular Theory to solve gas problems.
12. Determine the role of energy in physical changes and chemical reactions.
13. Convert units of measure and demonstrate dimensional analysis skills.

CHEM 1111 General Chemistry I (lab)

Basic laboratory experiments supporting theoretical principles presented in CHEM 1311; introduction of the scientific method, experimental design, data collection and analysis, and preparation of laboratory reports.

Co-requisite: CHEM 1311 General Chemistry I

Approval Number.....40.0501.53 03
maximum SCH per student..... 1
maximum SCH per course 1
maximum contact hours per course 48

Learning Outcomes

Upon successful completion of this course, students will:

1. Use basic apparatus and apply experimental methodologies used in the chemistry laboratory.
2. Demonstrate safe and proper handling of laboratory equipment and chemicals.
3. Conduct basic laboratory experiments with proper laboratory techniques.
4. Make careful and accurate experimental observations.
5. Relate physical observations and measurements to theoretical principles.
6. Interpret laboratory results and experimental data, and reach logical conclusions.
7. Record experimental work completely and accurately in laboratory notebooks and communicate experimental results clearly in written reports.
8. Design fundamental experiments involving principles of chemistry.
9. Identify appropriate sources of information for conducting laboratory experiments involving principles of chemistry.

CHEM 1411 General Chemistry I (lecture + lab)

This lecture and lab course should combine all of the elements of 1311 General Chemistry I Lecture and 1111 General Chemistry I Lab, including the learning outcomes listed for both courses.

Approval Number.....40.0501.54 03
maximum SCH per student.....4
maximum SCH per course.....4
maximum contact hours per course.....96

CHEM 1312 General Chemistry II (lecture)

Chemical equilibrium; phase diagrams and spectrometry; acid-base concepts; thermodynamics; kinetics; electrochemistry; nuclear chemistry; an introduction to organic chemistry and descriptive inorganic chemistry.

Co-requisite: CHEM 1112 General Chemistry II Laboratory
Prerequisite: CHEM 1311 and CHEM 1111, or CHEM 1411 General Chemistry I (Lecture and Laboratory)

Approval Number.....40.0501.55 03
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

Learning Outcomes

Upon successful completion of this course, students will:

1. State the characteristics of liquids and solids, including phase diagrams and spectrometry.
2. Articulate the importance of intermolecular interactions and predict trends in physical properties.
3. Identify the characteristics of acids, bases, and salts, and solve problems based on their quantitative relationships.
4. Identify and balance oxidation-reduction equations, and solve redox titration problems.
5. Determine the rate of a reaction and its dependence on concentration, time, and temperature.
6. Apply the principles of equilibrium to aqueous systems using LeChatelier's Principle to predict the effects of concentration, pressure, and temperature changes on equilibrium mixtures.
7. Analyze and perform calculations with the thermodynamic functions, enthalpy, entropy, and free energy.
8. Discuss the construction and operation of galvanic and electrolytic electrochemical cells, and determine standard and non-standard cell potentials.
9. Define nuclear decay processes.
10. Describe basic principles of organic chemistry and descriptive inorganic chemistry.

CHEM 1112 General Chemistry II (lab)

Basic laboratory experiments supporting theoretical principles presented in CHEM 1312; introduction of the scientific method, experimental design, chemical instrumentation, data collection and analysis, and preparation of laboratory reports.

Co-requisite: CHEM 1312—General Chemistry II

Approval Number.....40.0501.56 03
maximum SCH per student..... 1
maximum SCH per course 1
maximum contact hours per course 48

Learning Outcomes

Upon successful completion of this course, students will:

1. Use basic apparatus and apply experimental methodologies used in the chemistry laboratory.
2. Demonstrate safe and proper handling of laboratory equipment and chemicals.
3. Conduct basic laboratory experiments with proper laboratory techniques.
4. Make careful and accurate experimental observations.
5. Relate physical observations and measurements to theoretical principles.
6. Interpret laboratory results and experimental data, and reach logical conclusions.
7. Record experimental work completely and accurately in laboratory notebooks and communicate experimental results clearly in written reports.
8. Design fundamental experiments involving principles of chemistry and chemical instrumentation.
9. Identify appropriate sources of information for conducting laboratory experiments involving principles of chemistry.

CHEM 1412 General Chemistry II (lecture + lab)

This lecture and lab course should combine all of the elements of 1312 General Chemistry II Lecture and 1112 General Chemistry II Lab, including the learning outcomes listed for both courses.

Approval Number.....40.0501.57 03
maximum SCH per student..... 4
maximum SCH per course 4
maximum contact hours per course 96

CHEM 1413 General Chemistry I (lecture + lab, allied health emphasis)
CHEM 1414 General Chemistry II (lecture + lab, allied health emphasis)

General principles, problems, fundamental laws, and theories. Course content provides a foundation for work in advanced chemistry and related sciences.

Approval Number.....40.0501.58 03
maximum SCH per student..... 8
maximum SCH per course 4
maximum contact hours per course 112

CHEM 2401 Analytical Chemistry I (lecture + lab)
CHEM 2301 Analytical Chemistry I (lecture)
CHEM 2101 Analytical Chemistry Laboratory I (lab)

CHEM 2402 Analytical Chemistry II (lecture + lab)
CHEM 2302 Analytical Chemistry II (lecture)
CHEM 2102 Analytical Chemistry Laboratory II (lab)

Principles and methods of quantitative chemical analysis dealing primarily with volumetric and gravimetric analysis and containing a brief introduction to physical methods.

Approval Number.....40.0502.51 03
maximum SCH per student.....8
maximum SCH per course.....4
maximum contact hours per course.....128

CHEM 1104 Chemical Calculations (1 SCH version)
CHEM 1204 Chemical Calculations (2 SCH version)

Study of the mathematical applications used in chemistry. Designed for science and engineering students.

Approval Number.....40.0502.52 03
maximum SCH per student.....2
maximum SCH per course.....2
maximum contact hours per course.....48

CHEM 1419 Introductory Organic Chemistry I
CHEM 1420 Introductory Organic Chemistry II

Survey course introducing organic chemistry. Not designed for students in science or pre-professional programs.

Approval Number.....40.0504.51 03
maximum SCH per student.....8
maximum SCH per course.....4
maximum contact hours per course.....112

CHEM 2323 Organic Chemistry I (lecture)

Fundamental principles of organic chemistry will be studied, including the structure, bonding, properties, and reactivity of organic molecules; and properties and behavior of organic compounds and their derivatives. Emphasis is placed on organic synthesis and mechanisms. Includes study of covalent and ionic bonding, nomenclature, stereochemistry, structure and reactivity, reaction mechanisms, functional groups, and synthesis of simple molecules. THIS COURSE IS INTENDED FOR STUDENTS IN SCIENCE OR PRE-PROFESSIONAL PROGRAMS.

Co-requisite: CHEM 2123 Organic Chemistry I Laboratory
Prerequisite: CHEM 1312 and CHEM 1112, or CHEM 1412 General Chemistry II (Lecture and Laboratory)

Approval Number.....40.0504.52 03
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

Learning Outcomes

Upon successful completion of this course, students will:

1. Classify organic compounds by structure, molecular orbitals, hybridization, resonance, tautomerism, polarity, chirality, conformation, and functionality.
2. Identify organic molecules using appropriate organic nomenclature.
3. Describe the principle reactions for syntheses of molecules, ions, and radicals.
4. Describe organic reactions in terms of radical and ionic mechanisms.
5. Describe the use of spectroscopic data to determine the structure of organic molecules.
6. Formulate appropriate reaction conditions for the synthesis of simple organic molecules.

CHEM 2123 Organic Chemistry I (lab, 1 SCH version)
CHEM 2223 Organic Chemistry I (lab, 2 SCH version)

This laboratory-based course accompanies CHEM 2323, Organic Chemistry I. Laboratory activities will reinforce fundamental principles of organic chemistry, including the structure, bonding, properties, and reactivity of organic molecules; and properties and behavior of organic compounds and their derivatives. Emphasis is placed on organic synthesis and mechanisms. Includes study of covalent and ionic bonding, nomenclature, stereochemistry, structure and reactivity, reaction mechanisms, functional groups, and synthesis of simple molecules. Methods for the purification and identification of organic compounds will be examined.

Co-requisite: CHEM 2323—Organic Chemistry I

Approval Number.....40.0504.52 03
maximum SCH per student..... 2
maximum SCH per course.....2
maximum contact hours per course.....80

Learning Outcomes

Upon successful completion of this course, students will:

1. Perform chemical experiments, analysis procedures, and waste disposal in a safe and responsible manner.
2. Utilize scientific tools such as glassware and analytical instruments to collect and analyze data.
3. Identify and utilize appropriate separation techniques such as distillation, extraction, and chromatography to purify organic compounds.
4. Record experimental work completely and accurately in laboratory notebooks, and communicate experimental results clearly in written reports.
5. Demonstrate a basic understanding of stereochemistry.
6. Classify organic compounds by structure, molecular orbitals, hybridization, resonance, tautomerism, polarity, chirality, conformation, and functionality in laboratory reports.
7. Identify organic molecules using appropriate organic nomenclature in laboratory reports.
8. Perform organic syntheses of molecules.
9. Describe organic reactions in terms of radical and ionic mechanisms in laboratory reports.

10. Use spectroscopic data to determine the structure of organic molecules.
11. Formulate appropriate reaction conditions for the synthesis of simple organic molecules.

CHEM 2423 Organic Chemistry I (lecture + lab)

This lecture and lab course should combine all of the elements of CHEM 2323 (lecture) and CHEM 2123 (lab), including the learning outcomes listed for both courses.

Approval Number.....40.0504.52 03
maximum SCH per student..... 4
maximum SCH per course 4
maximum contact hours per course 112

CHEM 2325 Organic Chemistry II (lecture)

Advanced principles of organic chemistry will be studied, including the structure, properties, and reactivity of aliphatic and aromatic organic molecules; and properties and behavior of organic compounds and their derivatives. Emphasis is placed on organic synthesis and mechanisms. Includes study of covalent and ionic bonding, nomenclature, stereochemistry, structure and reactivity, reaction mechanisms, functional groups, and synthesis of simple molecules. THIS COURSE IS INTENDED FOR STUDENTS IN SCIENCE OR PRE-PROFESSIONAL PROGRAMS.

Co-requisite: CHEM 2125 Organic Chemistry II Laboratory
Prerequisite: CHEM 2323 and CHEM 2123, or CHEM 2423 Organic Chemistry I (Lecture and Laboratory)

Approval Number.....40.0504.52 03
SCH per student 3
maximum SCH per course 3
maximum contact hours per course 48

Learning Outcomes

Upon successful completion of this course, students will:

1. Correlate molecular structure with physical and chemical properties of aliphatic and aromatic organic molecules.
2. Predict the mechanism and outcome of aliphatic and aromatic substitution and elimination reactions, given the conditions and starting materials.
3. Predict the chirality of reaction products based on enantiomeric and diastereomeric relationships.
4. Describe reaction mechanisms in terms of energetics, reaction kinetics, and thermodynamics.
5. Use spectroscopic techniques to characterize organic molecules and subgroups.

CHEM 2125 Organic Chemistry II (lab, 1 SCH version)
CHEM 2225 Organic Chemistry II (lab, 2 SCH version)

This laboratory-based course accompanies CHEM 2325, Organic Chemistry II. Laboratory activities reinforce advanced principles of organic chemistry, including the structure, properties, and reactivity of aliphatic and aromatic organic molecules; and properties and behavior of organic compounds and their derivatives. Emphasis is placed on organic synthesis and mechanisms. Includes study of covalent and ionic bonding, nomenclature, stereochemistry, structure and reactivity, reaction mechanisms, functional groups, and synthesis of simple molecules.

Co-requisite: CHEM 2325 Organic Chemistry II

Approval Number.....40.0504.52 03
maximum SCH per student..... 2
maximum SCH per course 2
maximum contact hours per course 80

Learning Outcomes

Upon successful completion of this course, students will:

1. Perform chemical experiments, analysis procedures, and waste disposal in a safe and responsible manner.
2. Utilize scientific tools such as glassware and analytical instruments to collect and analyze data.
3. Identify and utilize appropriate separation techniques such as distillation, extraction, and chromatography to purify organic compounds.
4. Record experimental work completely and accurately in laboratory notebooks, and communicate experimental results clearly in written reports.
5. Correlate molecular structure with physical and chemical properties of aliphatic and aromatic organic molecules.
6. Predict the mechanism and outcome of aliphatic and aromatic substitution and elimination reactions, given the conditions and starting materials.
7. Predict the chirality of reaction products based on enantiomeric and diastereomeric relationships.
8. Describe reaction mechanisms in terms of energetics, reaction kinetics, and thermodynamics.
9. Use spectroscopic techniques to characterize organic molecules and subgroups.

CHEM 2425 Organic Chemistry II (lecture + lab)

This lecture and lab course should combine all of the elements of CHEM 2325 (lecture) and CHEM 2125 (lab), including the learning outcomes listed for both courses.

Approval Number.....40.0504.52 03
maximum SCH per student.....4
maximum SCH per course 4
maximum contact hours per course 112

CHEM 2289 Academic Cooperative (2 SCH version)
CHEM 2389 Academic Cooperative (3 SCH version)

An instructional program designed to integrate on-campus study with practical hands-on work experience in the physical sciences. In conjunction with class seminars, the individual students will set specific goals and objectives in the scientific study of inanimate objects, processes of matter and energy, and associated phenomena.

Approval Number.....40.0101.53 03
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....144

CHIN (Chinese Language)

CHIN 1311 Beginning Chinese I (1st semester Chinese, 3 SCH version)
CHIN 1411 Beginning Chinese I (1st semester Chinese, 4 SCH version)
CHIN 1511 Beginning Chinese I (1st semester Chinese, 5 SCH version)

CHIN 1312 Beginning Chinese II (2nd semester Chinese, 3 SCH version)
CHIN 1412 Beginning Chinese II (2nd semester Chinese, 4 SCH version)
CHIN 1512 Beginning Chinese II (2nd semester Chinese, 5 SCH version)

Fundamental skills in listening comprehension, speaking, reading, and writing. Includes basic vocabulary, grammatical structures, and culture.

Approval Number.....16.0301.51 13
maximum SCH per student.....10
maximum SCH per course.....5
maximum contact hours per course.....112

CHIN 2311 Intermediate Chinese I (3rd semester Chinese)
CHIN 2312 Intermediate Chinese II (4th semester Chinese)

Review and application of skills in listening comprehension, speaking, reading, and writing. Emphasizes conversation, vocabulary acquisition, reading, composition, and culture.

Approval Number.....16.0301.52 13
maximum SCH per student.....6
maximum SCH per course.....3
maximum contact hours per course.....80

COMM (Communication)

COMM 1307 Introduction to Mass Communication

Study of the media by which entertainment and information messages are delivered. Includes an overview of the traditional mass media: their functions, structures, supports, and influences.

Approval Number.....09.0102.51 06
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

COMM 1316 News Photography I
COMM 1317 News Photography II

Problems and practices of photography for newspapers. Includes instruction in camera and equipment operation and maintenance, film and plate developing, and printing media.

Approval Number.....09.0401.55 06
maximum SCH per student.....6
maximum SCH per course.....3
maximum contact hours per course.....96

COMM 1318 Photography I (1st semester, journalism emphasis)

Introduction to the basics of photography. Includes camera operation, techniques, knowledge of chemistry, and presentation skills. Emphasis on design, history, and contemporary trends as a means of developing an understanding of photographic aesthetics.
(Cross-listed, with fine arts emphasis, as ARTS 2356)

Approval Number.....50.0605.51 26
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....96

COMM 1319 Photography II (2nd semester, journalism emphasis)

Extends the students' knowledge of technique and guides them in developing personal outlooks toward specific applications of the photographic process. (Cross-listed, with fine arts emphasis, as ARTS 2357)

Prerequisite: Photography I or its equivalent.

Approval Number.....50.0605.52 26
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....96

COMM 1129 News Publications I
COMM 1130 News Publications II
COMM 2129 News Publications III
COMM 2130 News Publications IV

COMM 1131 Other Publications I
COMM 1132 Other Publications II
COMM 2131 Other Publications III
COMM 2132 Other Publications IV

Students are required to work on the staff of at least one of the official college publications for prescribed periods under faculty supervision.

Approval Number.....09.0401.54 06
maximum SCH per student.....4
maximum SCH per course.....1
maximum contact hours per course.....80

COMM 1335 Survey of Radio/Television

Study of the development, regulation, economics, social impact, and industry practices in broadcasting and cable communication. Includes non-broadcast television, new technologies, and other communication systems.

Approval Number.....09.0102.52 06
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

COMM 1136 Television Production I (1 SCH version)
COMM 1236 Television Production I (2 SCH version)
COMM 1336 Television Production I (3 SCH version)

COMM 1137 Television Production II (1 SCH version)
COMM 1237 Television Production II (2 SCH version)
COMM 1337 Television Production II (3 SCH version)

COMM 1138 Television Production III (1 SCH version)
COMM 1238 Television Production III (2 SCH version)

Practical experience in the operation of television studio and control room equipment, including both pre- and post-production needs.

Approval Number.....10.0202.52 06
maximum SCH per student.....8
maximum SCH per course.....3
maximum contact hours per course.....96

COMM 2300 Media Literacy

Criticism and analysis of the function, role, and responsibility of the mass media in modern society from the consumer perspective. Includes the ethical problems and issues facing each media format, with the effect of political, economic, and cultural factors on the operation of the media.

Approval Number.....09.0102.53 06
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

COMM 2301 Introduction to Technology and Human Communication (Scheduled for Deletion fall 2014)

A survey of emerging interactive communication technologies and how they influence human communication, including interpersonal, group decision-making, and public and private communication contexts. (Cross-listed as SPCH 2301)

Approval Number.....09.0101.51 06
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

COMM 2302 Principles of Journalism

Exploration of ethical and legal boundaries as well as issues and problems facing today's journalist.

Approval Number.....09.0401.52 06
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

COMM 2303 Audio/Radio Production

Concepts and techniques of sound production, including the coordinating and directing processes. Hands-on experience with equipment, sound sources, and direction of talent.

Approval Number.....10.0202.51 06
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....64

COMM 2304 Introduction to Cinematic Production

Basic single-camera production concepts and techniques.

Approval Number.....50.0602.52 26
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

COMM 2305 Editing & Layout

Editing and layout processes, with emphasis on accuracy and fairness, including the principles and techniques of design.

Approval Number.....09.0401.51 06
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....96

COMM 2209 News Editing & Copy Reading I (2 SCH version)
COMM 2309 News Editing & Copy Reading I (3 SCH version)

COMM 2210 News Editing & Copy Reading II (2 SCH version)
COMM 2310 News Editing & Copy Reading II (3 SCH version)

Copy editing for errors of fact and interpretation of English. Includes newspaper style, headline writing, proofreading, and page makeup.

Approval Number.....09.0401.53 06
maximum SCH per student.....6
maximum SCH per course.....3
maximum contact hours per course.....96

COMM 2311 News Gathering & Writing I

Fundamentals of writing news for the mass media. Includes instruction in methods and techniques for gathering, processing, and delivering news in a professional manner.

Approval Number.....09.0401.57 06
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....96

COMM 2315 News Gathering & Writing II

Continuation of the aims and objectives of news gathering and writing with emphasis on advanced reporting techniques.

Approval Number.....09.0401.58 06
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....96

COMM 2316 Interviewing (Scheduled for deletion fall 2014)

Application of communication concepts in selected interview settings with emphasis on dyadic communication, questioning techniques, interview structure, and persuasion. (Cross-listed as SPCH 2316)

Approval Number.....09.0101.52 06
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

COMM 2120 Practicum in Electronic Media (1 SCH version)
COMM 2121 Practicum in Electronic Media (1 SCH version)
COMM 2122 Practicum in Electronic Media (1 SCH version)

COMM 2220 Practicum in Electronic Media (2 SCH version)

COMM 2324 Practicum in Electronic Media (3 SCH version)
COMM 2325 Practicum in Electronic Media (3 SCH version)
COMM 2326 Practicum in Electronic Media (3 SCH version)

Lecture and laboratory instruction and participation.

Approval Number.....09.0701.53 06
maximum SCH per student.....12
maximum SCH per course.....3
maximum contact hours per course.....96

COMM 2327 Introduction to Advertising

Fundamentals of advertising including marketing theory and strategy, copy writing, design, and selection of media.

Approval Number.....09.0903.51 06
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

COMM 2328 Advertising Art I
COMM 2329 Advertising Art II

Communication of ideas through processes and techniques of graphic design and illustration.

Approval Number.....50.0402.51 26
maximum SCH per student.....6
maximum SCH per course.....3
maximum contact hours per course.....48

COMM 2330 Introduction to Public Relations

Exploration of the history and development of public relations. Presentation of the theory behind and process of public relations, including the planning, implementation, and evaluation of PR campaigns.

Approval Number.....09.0902.51 06
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

COMM 2331 Radio/Television Announcing

Principles of announcing: study of voice, diction, pronunciation, and delivery. Experience in various types of announcing. Study of phonetics is recommended.

Approval Number.....09.0701.54 06
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

COMM 2332 Radio/Television News

Preparation and analysis of news styles for the electronic media.

Approval Number.....09.0402.52 06
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....96

COMM 2339 Writing for Radio, Television, & Film

Introduction to basic script formats, terminology, and writing techniques, including the writing of commercials, public service announcements, promotions, news, documentary, and fictional materials.

Approval Number.....09.0402.51 06
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

COMM 2366 Introduction to Film

Emphasis on the analysis of the visual and aural aspects of selected motion pictures, dramatic aspects of narrative films, and historical growth and sociological effect of film as an art. (Cross-listed as DRAM 2366)

Approval Number.....50.0602.51 26
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....96

COMM 2289 Academic Cooperative (2 SCH version)
COMM 2389 Academic Cooperative (3 SCH version)

An instructional program designed to integrate on-campus study with practical hands-on work experience. In conjunction with class seminars, the individual student will set specific goals and objectives in the study of communication.

Approval Number.....24.0103.52 12
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....144

COSC (Computer Science)

(Refer to BCIS for business-oriented programming courses.)

COSC 1301 Introduction to Computing (3 SCH version)
COSC 1401 Introduction to Computing (4 SCH version)

Overview of computer systems—hardware, operating systems, and microcomputer application software, including the Internet, word processing, spreadsheets, presentation graphics, and databases. Current issues such as the effect of computers on society, and the history and use of computers in business, educational, and other modern settings are also studied. This course is not intended to count toward a student's major field of study in business or computer science. (These courses are no longer cross-listed as BCIS 1301 and 1401)

Approval Number.....11.0101.51 07
maximum SCH per student.....4
maximum SCH per course.....4
maximum contact hours per course.....96

COSC 1309 Logic Design

A discipline approach to problem solving with structured techniques and representation of algorithms using pseudo code and graphical tools. Discussion of methods for testing, evaluation, and documentation.

Approval Number.....11.0201.51 07
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....80

COSC 1315 Fundamentals of Programming (3 SCH version)
COSC 1415 Fundamentals of Programming (4 SCH version)

Introduction to computer programming. Emphasis on the fundamentals of structured design, development, testing, implementation, and documentation. Includes coverage of language syntax, data and file structures, input/output devices, and disks/files.

Approval Number.....11.0201.52 07
maximum SCH per student.....4
maximum SCH per course.....4
maximum contact hours per course.....96

COSC 1317 FORTRAN Programming I (3 SCH version)
COSC 1417 FORTRAN Programming I (4 SCH version)

Introduction to computer programming in the FORTRAN programming language. Emphasis on the fundamentals of structured design, development, testing, implementation, and documentation. Includes coverage of language syntax, data and file structures, input/output devices, and disks/files.

Approval Number.....11.0201.52 07
maximum SCH per student.....4
maximum SCH per course.....4
maximum contact hours per course.....96

COSC 1318 PASCAL Programming I (3 SCH freshman version)
COSC 1418 PASCAL Programming I (4 SCH freshman version)

Introduction to computer programming in the PASCAL programming language. Emphasis on the fundamentals of structured design, development, testing, implementation, and documentation. Includes coverage of language syntax, data and file structures, input/output devices, and disks/files.

Approval Number.....11.0201.52 07
maximum SCH per student.....4
maximum SCH per course.....4
maximum contact hours per course.....96

COSC 1319 Assembly Language Programming I (3 SCH freshman version)
COSC 1419 Assembly Language Programming I (4 SCH freshman version)

Introduction to Assembly Language computer programming. Emphasis on the fundamentals of structured design, development, testing, implementation, and documentation. Includes coverage of language syntax, data and file structures, input/output devices, and disks/files.

Approval Number.....11.0201.52 07
maximum SCH per student.....4
maximum SCH per course.....4
maximum contact hours per course.....96

COSC 1320 C Programming (3 SCH version)
COSC 1420 C Programming I (4 SCH version)

Introduces the fundamental concepts of structured programming in the C language. Topics include data types; control structures; functions, structures, arrays, pointers, pointer arithmetic, unions, and files; the mechanics of running, testing, and debugging programs; introduction to programming; and introduction to the historical and social context of computing. (Cross listed as BCIS 1320 and BCIS 1420)

Prerequisite: None

Approval Number.....11.0201.52 07
maximum SCH per student.....4
maximum SCH per course.....4
maximum contact hours per course.....96

Learning Outcomes

Upon successful completion of this course, students will:

1. Analyze and explain the behavior of simple programs involving the fundamental programming constructs.
2. Modify and expand short programs that use standard conditional and iterative control structures and functions; choose appropriate conditional and iteration constructs for a given programming task.
3. Design, implement, test, and debug a program that uses each of the following fundamental programming constructs: basic computation, simple I/O, standard conditional and iterative structures, and the definition of functions.

4. Apply the techniques of structured (functional) decomposition to break a program into smaller pieces.
5. Describe the mechanics of parameter passing and demonstrate the difference between call-by-value and call-by-reference parameter passing.
6. Discuss the importance of algorithms in the problem-solving process, identify the necessary properties of good algorithms, and create algorithms for solving simple problems.
7. Use pseudocode or a programming language to implement, test, and debug algorithms for solving simple problems.
8. Discuss the representation and use of primitive data types and built-in data structures.
9. Explain the reasons for using different formats to represent numerical data.
10. Explain basic concepts of secure programming functions.
11. Discuss the properties of good software design.
12. Describe the phases of program translation from source code to executable code and the files produced by these phases; explain the software life cycle and its phases, including the deliverables that are produced.
13. Identify and describe the properties of a variable such as its associated address, value, scope, persistence, and size.
14. Explain how abstraction mechanisms support the creation of reusable software components.

COSC 1330 Computer Programming (3 SCH version)
COSC 1430 Computer Programming (4 SCH version)

Introduction to computer programming in various programming languages. Emphasis on the fundamentals of structured design, development, testing, implementation, and documentation. Includes coverage of language syntax, data and file structures, input/output devices, and disks/files.

Approval Number.....11.0201.52 07
maximum SCH per student.....4
maximum SCH per course.....4
maximum contact hours per course.....96

COSC 1333 PL/1 Programming I (3 SCH version)
COSC 1433 PL/1 Programming I (4 SCH version)

Introduction to computer programming in the PL/1 programming language. Emphasis on the fundamentals of structured design, development, testing, implementation, and documentation. Includes coverage of language syntax, data and file structures, input/output devices, and disks/files.

Approval Number.....11.0201.52 07
maximum SCH per student.....4
maximum SCH per course.....4
maximum contact hours per course.....96

COSC 1336 Programming Fundamentals I (3 SCH version)
COSC 1436 Programming Fundamentals I (4 SCH version)

This course introduces the fundamental concepts of structured programming, and provides a comprehensive introduction to programming for computer science and technology majors. Topics include software development methodology, data types, control structures, functions, arrays, and the mechanics of running, testing, and debugging. This course assumes computer literacy. (This course is included in the Field of Study Curriculum for Computer Science.)

Approval Number 11.0201.55 07
maximum SCH per student 4
maximum SCH per course 4
maximum contact hours per course 96

Learning Outcomes

Upon successful completion of this course, students will:

1. Describe how data are represented, manipulated, and stored in a computer.
2. Categorize different programming languages and their uses.
3. Understand and use the fundamental concepts of data types, structured programming, algorithmic design, and user interface design.
4. Demonstrate a fundamental understanding of software development methodologies, including modular design, pseudo code, flowcharting, structure charts, data types, control structures, functions, and arrays.
5. Develop projects that utilize logical algorithms from specifications and requirements statements.
6. Demonstrate appropriate design, coding, testing, and documenting of computer programs that implement project specifications and requirements.
7. Apply computer programming concepts to new problems or situations.

COSC 1337 Programming Fundamentals II (3 SCH version)
COSC 1437 Programming Fundamentals II (4 SCH version)

Review of control structures and data types with emphasis on structured data types. Applies the object-oriented programming paradigm, focusing on the definition and use of classes along with the fundamentals of object-oriented design. Includes basic analysis of algorithms, searching and sorting techniques, and an introduction to software engineering.

Prerequisite: COSC 1336/1436. (This course is included in the Field of Study Curriculum for Computer Science.)

Approval Number 11.0201.56 07
maximum SCH per student 4
maximum SCH per course 4
maximum contact hours per course 96

COSC 2315 Data Structures (3 SCH version)
COSC 2415 Data Structures (4 SCH version)

Further applications of programming techniques. Topics may include file access methods, data structures and modular programming, program testing and documentation, and other topics not normally covered in an introductory computer programming course.

Approval Number.....11.0201.53 07
maximum SCH per student.....4
maximum SCH per course.....4
maximum contact hours per course.....96

COSC 2317 FORTRAN Programming II (3 SCH version)
COSC 2417 FORTRAN Programming II (4 SCH version)

Further applications of programming techniques in the FORTRAN programming language. Topics may include file access methods, data structures and modular programming, program testing and documentation, and other topics not normally covered in an introductory computer programming course.

Approval Number.....11.0201.53 07
maximum SCH per student.....4
maximum SCH per course.....4
maximum contact hours per course.....96

COSC 2318 PASCAL Programming II (3 SCH version)
COSC 2418 PASCAL Programming II (4 SCH version)

Further applications of programming techniques in the PASCAL programming language. Topics may include file access methods, data structures and modular programming, program testing and documentation, and other topics not normally covered in an introductory computer programming course.

Approval Number.....11.0201.53 07
maximum SCH per student.....4
maximum SCH per course.....4
maximum contact hours per course.....96

COSC 2319 Assembly Language Programming II (3 SCH version)
COSC 2419 Assembly Language Programming II (4 SCH version)

Further applications of Assembly Language programming techniques. Topics may include file access methods, data structures and modular programming, program testing and documentation, and other topics not normally covered in an introductory computer programming course.

Approval Number.....11.0201.53 07
maximum SCH per student.....4
maximum SCH per course.....4
maximum contact hours per course.....96

COSC 2320 C Programming II (3 SCH version)
COSC 2420 C Programming II (4 SCH version)

Further applications of programming techniques in the C programming language. Topics may include file access methods, data structures and modular programming, program testing and documentation, and other topics not normally covered in an introductory computer programming course. (Cross-listed as BCIS 2320 or 2340)

Approval Number.....11.0201.53 07
maximum SCH per student.....4
maximum SCH per course.....4
maximum contact hours per course.....96

COSC 2325 Computer Organization and Machine Language (3 SCH version)
COSC 2425 Computer Organization and Machine Language (4 SCH version)

Basic computer organization; machine cycle, digital representation of data and instructions; assembly language programming, assembler, loader, macros, subroutines, and program linkages. (This course is included in the Field of Study Curriculum for Computer Science.)

Prerequisite: COSC 1336/1436.

Approval Number.....11.0201.54 07
maximum SCH per student.....4
maximum SCH per course.....4
maximum contact hours per course.....96

COSC 2330 Advanced Structured Languages (3 SCH version)
COSC 2430 Advanced Structured Languages (4 SCH version)

Further applications of programming techniques. Topics may include file access methods, data structures and modular programming, program testing and documentation, and other topics not normally covered in an introductory computer programming course.

Approval Number.....11.0201.53 07
maximum SCH per student.....4
maximum SCH per course.....4
maximum contact hours per course.....96

COSC 2333 PL/1 Programming II (3 SCH version)
COSC 2433 PL/1 Programming II (4 SCH version)

Further applications of programming techniques in the PL/1 programming language. Topics may include file access methods, data structures and modular programming, program testing and documentation, and other topics not normally covered in an introductory computer programming course.

Approval Number.....11.0201.53 07
maximum SCH per student.....4
maximum SCH per course.....4
maximum contact hours per course.....96

COSC 2336 Programming Fundamentals III (3 SCH version)
COSC 2436 Programming Fundamentals III (4 SCH version)

Further applications of programming techniques, introducing the fundamental concepts of data structures and algorithms. Topics include recursion, fundamental data structures (including stacks, queues, linked lists, hash tables, trees, and graphs), and algorithmic analysis.
Prerequisite: COSC 1337/1437. (This course is included in the Field of Study Curriculum for Computer Science.)

Approval Number.....11.0201.57 07
maximum SCH per student.....4
maximum SCH per course.....4
maximum contact hours per course.....96

CRIJ (Criminal Justice)

CRIJ 1301 Introduction to Criminal Justice

History, philosophy, and ethical considerations of criminal justice; the nature and impact of crime; and an overview of the criminal justice system, including law enforcement and court procedures.

Approval Number.....43.0104.51 24
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

CRIJ 1306 Court Systems & Practices

Study of the judiciary in the American criminal justice system and the adjudication processes and procedures.

Approval Number.....22.0101.54 24
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

CRIJ 1307 Crime in America

American crime problems in historical perspective, social and public policy factors affecting crime, impact and crime trends, social characteristics of specific crimes, and prevention of crime.

Approval Number.....45.0401.52 25
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

CRIJ 1310 Fundamentals of Criminal Law

Study of criminal law, its philosophical and historical development, major definitions and concepts, classifications and elements of crime, penalties using Texas statutes as illustrations, and criminal responsibility.

Approval Number.....22.0101.53 24
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

CRIJ 1313 Juvenile Justice System

A study of the juvenile justice process to include specialized juvenile law, role of the juvenile law, role of the juvenile courts, role of police agencies, role of correctional agencies, and theories concerning delinquency.

Approval Number.....43.0104.52 24
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

CRIJ 2301 Community Resources in Corrections

An introductory study of the role of the community in corrections; community programs for adults and juveniles; administration of community programs; legal issues; future trends in community treatment.

Approval Number.....43.0104.53 24
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

CRIJ 2313 Correctional Systems & Practices

Corrections in the criminal justice system; organization of correctional systems; correctional role; institutional operations; alternatives to institutionalization; treatment and rehabilitation; current and future issues.

Approval Number.....43.0104.54 24
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

CRIJ 2314 Criminal Investigation

Investigative theory; collection and preservation of evidence; sources of information; interview and interrogation; uses of forensic sciences; case and trial preparation.

Approval Number.....43.0104.55 24
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....80

CRIJ 2323 Legal Aspects of Law Enforcement

Police authority; responsibilities; constitutional constraints; laws of arrest, search, and seizure; police liability.

Approval Number.....43.0104.56 24
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

CRIJ 2328 Police Systems & Practices

The police profession; organization of law enforcement systems; the police role; police discretion; ethics; police-community interaction; current and future issues.

Approval Number.....43.0104.57 24
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

CZEC (Czech Language)

CZEC 1311 Beginning Czech I (1st semester Czech, 3 SCH version)
CZEC 1411 Beginning Czech I (1st semester Czech, 4 SCH version)
CZEC 1511 Beginning Czech I (1st semester Czech, 5 SCH version)

CZEC 1312 Beginning Czech II (2nd semester Czech, 3 SCH version)
CZEC 1412 Beginning Czech II (2nd semester Czech, 4 SCH version)
CZEC 1512 Beginning Czech II (2nd semester Czech, 5 SCH version)

Fundamental skills in listening comprehension, speaking, reading, and writing. Includes basic vocabulary, grammatical structures, and culture.

Approval Number.....16.0406.51 13
maximum SCH per student.....10
maximum SCH per course.....5
maximum contact hours per course.....112

CZEC 2311 Intermediate Czech I (3rd semester Czech)
CZEC 2312 Intermediate Czech II (4th semester Czech)

Review and application of skills in listening comprehension, speaking, reading, and writing. Emphasizes conversation, vocabulary acquisition, reading, composition, and culture.

Approval Number.....16.0406.52 13
maximum SCH per student.....6
maximum SCH per course.....3
maximum contact hours per course.....80

DANC (Dance)

DANC 1101 Dance Composition I
DANC 1102 Dance Composition II
DANC 1103 Dance Composition III
DANC 1201 Dance Composition (single-semester course, 2 SCH version)
DANC 1301 Dance Composition (single-semester course, 3 SCH version)

Development of basic principles and theories involved in composition. Emphasis is placed on movement principles, group and structural forms.

Approval Number.....50.0301.55 26
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....96

DANC 1110 Tap I (1 SCH version)
DANC 1210 Tap I (2 SCH version)

DANC 1111 Tap II (1 SCH version)
DANC 1211 Tap II (2 SCH version)

DANC 2110 Tap III (1 SCH version)
DANC 2208 Tap III (2 SCH version)

DANC 2111 Tap IV (1 SCH version)
DANC 2209 Tap IV (2 SCH version)

Instruction and participation in Tap dance technique.

Approval Number.....50.0301.52 26
maximum SCH per student.....18
maximum SCH per course.....3
maximum contact hours per course.....96

DANC 1112 Dance Practicum I (1 SCH version)
DANC 1212 Dance Practicum I (2 SCH version)

DANC 1113 Dance Practicum II (1 SCH version)
DANC 1213 Dance Practicum II (2 SCH version)

DANC 2112 Dance Practicum III (1 SCH version)
DANC 2212 Dance Practicum III (2 SCH version)

DANC 2113 Dance Practicum IV (1 SCH version)
DANC 2213 Dance Practicum IV (2 SCH version)

A practicum in dance as a performing art.

Approval Number.....50.0301.53 26
maximum SCH per student.....8
maximum SCH per course.....2
maximum contact hours per course.....96

DANC 1122 Folk I (1 SCH version)
DANC 1222 Folk I (2 SCH version)

DANC 1123 Folk II (1 SCH version)
DANC 1223 Folk II (2 SCH version)

DANC 2122 Folk III (1 SCH version)
DANC 2222 Folk III (2 SCH version)

DANC 2123 Folk IV (1 SCH version)
DANC 2223 Folk IV (2 SCH version)

Instruction and participation in Folk dance technique.

Approval Number.....50.0301.52 26
maximum SCH per student..... 18
maximum SCH per course 3
maximum contact hours per course 96

DANC 1128 Ballroom I (1 SCH version)
DANC 1228 Ballroom I (2 SCH version)
DANC 1129 Ballroom II (1 SCH version)

Instruction and participation in Ballroom dance technique.

Approval Number.....50.0301.52 26
maximum SCH per student..... 18
maximum SCH per course 3
maximum contact hours per course 96

DANC 1133 Country and Western I (1 SCH version)
DANC 1233 Country and Western I (2 SCH version)

DANC 1134 Country and Western II (1 SCH version)
DANC 1234 Country and Western II (2 SCH version)

Instruction and participation in Country and Western dance technique.

Approval Number.....50.0301.52 26
maximum SCH per student..... 18
maximum SCH per course 3
maximum contact hours per course 96

DANC 1141 Ballet I (1 SCH version)
DANC 1241 Ballet I (2 SCH version)
DANC 1341 Ballet I (3 SCH version)

DANC 1142 Ballet II (1 SCH version)
DANC 1242 Ballet II (2 SCH version)
DANC 1342 Ballet II (3 SCH version)

DANC 2141 Ballet III (1 SCH version)
DANC 2241 Ballet III (2 SCH version)
DANC 2341 Ballet III (3 SCH version)

DANC 2142 Ballet IV (1 SCH version)
DANC 2242 Ballet IV (2 SCH version)
DANC 2342 Ballet IV (3 SCH version)

Instruction and participation in ballet technique.

Approval Number.....50.0301.52 26
maximum SCH per student..... 18
maximum SCH per course 3
maximum contact hours per course 96

DANC 1145 Modern Dance I (1 SCH version)
DANC 1245 Modern Dance I (2 SCH version)
DANC 1345 Modern Dance I (3 SCH version)

DANC 1146 Modern Dance II (1 SCH version)
DANC 1246 Modern Dance II (2 SCH version)
DANC 1346 Modern Dance II (3 SCH version)

DANC 2145 Modern Dance III (1 SCH version)
DANC 2245 Modern Dance III (2 SCH version)
DANC 2345 Modern Dance III (3 SCH version)

DANC 2146 Modern Dance IV (1 SCH version)
DANC 2246 Modern Dance IV (2 SCH version)
DANC 2346 Modern Dance IV (3 SCH version)

Instruction and participation in modern dance technique.

Approval Number.....50.0301.52 26
maximum SCH per student..... 18
maximum SCH per course 3
maximum contact hours per course 96

DANC 1147 Jazz Dance I (1 SCH version)
DANC 1247 Jazz Dance I (2 SCH version)
DANC 1347 Jazz Dance I (3 SCH version)

DANC 1148 Jazz Dance II (1 SCH version)
DANC 1248 Jazz Dance II (2 SCH version)
DANC 1348 Jazz Dance II (3 SCH version)

DANC 2147 Jazz Dance III (1 SCH version)
DANC 2247 Jazz Dance III (2 SCH version)
DANC 2347 Jazz Dance III (3 SCH version)

DANC 2148 Jazz Dance IV (1 SCH version)
DANC 2248 Jazz Dance IV (2 SCH version)
DANC 2348 Jazz Dance IV (3 SCH version)

Instruction and participation in jazz dance technique.

Approval Number.....50.0301.52 26
maximum SCH per student..... 18
maximum SCH per course 3
maximum contact hours per course 96

DANC 1149 Ballet Folklórico I (1 SCH version)
DANC 1249 Ballet Folklórico I (2 SCH version)
DANC 1349 Ballet Folklórico I (3 SCH version)

DANC 1150 Ballet Folklórico II (1 SCH version)
DANC 1250 Ballet Folklórico II (2 SCH version)
DANC 1350 Ballet Folklórico II (3 SCH version)

DANC 2149 Ballet Folklórico III (1 SCH version)
DANC 2249 Ballet Folklórico III (2 SCH version)
DANC 2349 Ballet Folklórico III (3 SCH version)

DANC 2150 Ballet Folklórico IV (1 SCH version)
DANC 2250 Ballet Folklórico IV (2 SCH version)
DANC 2350 Ballet Folklórico IV (3 SCH version)

Instruction and participation in folk dance technique.

Approval Number.....50.0301.52 26
maximum SCH per student..... 18
maximum SCH per course 3
maximum contact hours per course 96

DANC 1151 Dance Performance I (1 SCH version)
DANC 1251 Dance Performance I (2 SCH version)
DANC 1351 Dance Performance I (3 SCH version)

DANC 1152 Dance Performance II (1 SCH version)
DANC 1252 Dance Performance II (2 SCH version)
DANC 1352 Dance Performance II (3 SCH version)

DANC 2151 Dance Performance III (1 SCH version)
DANC 2251 Dance Performance III (2 SCH version)
DANC 2351 Dance Performance III (3 SCH version)

DANC 2152 Dance Performance IV (1 SCH version)
DANC 2252 Dance Performance IV (2 SCH version)
DANC 2352 Dance Performance IV (3 SCH version)

Instruction and participation in dance performance.

Approval Number.....50.0301.52 26
maximum SCH per student..... 18
maximum SCH per course 3
maximum contact hours per course 96

DANC 1153 Spanish Ballet I (1 SCH version)
DANC 1253 Spanish Ballet I (2 SCH version)
DANC 1353 Spanish Ballet I (3 SCH version)

DANC 1154 Spanish Ballet II (1 SCH version)
DANC 1254 Spanish Ballet II (2 SCH version)
DANC 1354 Spanish Ballet II (3 SCH version)

DANC 2153 Spanish Ballet III (1 SCH version)
DANC 2253 Spanish Ballet III (2 SCH version)
DANC 2353 Spanish Ballet III (3 SCH version)

DANC 2154 Spanish Ballet IV (1 SCH version)
DANC 2254 Spanish Ballet IV (2 SCH version)
DANC 2354 Spanish Ballet IV (3 SCH version)

Instruction and participation in Spanish ballet technique.

Approval Number.....50.0301.52 26
maximum SCH per student..... 18
maximum SCH per course 3
maximum contact hours per course 96

DANC 1305 World Dance I
DANC 1306 World Dance II

Instruction in dance forms from at least three major cultures from three continents, with an emphasis on rhythmic awareness and movement development. The cultural origins, significance, and motivation, as well as the use of costumes and music will be explored in lecture and research. Instruction will include experiential and written assignments, live performances, guest artists, and multimedia resources.

Approval Number.....50.0301.56 26
maximum SCH per student.....6
maximum SCH per course.....3
maximum contact hours per course.....64

DANC 2210 Dance Repertory I
DANC 2211 Dance Repertory II

A practicum in dance as a performing art.

Approval Number.....50.0301.53 26
maximum SCH per student.....8
maximum SCH per course.....2
maximum contact hours per course.....96

DANC 2301 Problems in Dance

Instruction and participation in ballet, jazz, or modern dance technique.

Approval Number.....50.0301.52 26
maximum SCH per student.....18
maximum SCH per course.....3
maximum contact hours per course.....96

DANC 2303 Dance Appreciation I (may also be single-semester course)
DANC 2304 Dance Appreciation II

Survey of primitive, classical, and contemporary dance and its interrelationship with cultural developments and other art forms.

Approval Number.....50.0301.54 26
maximum SCH per student.....12
maximum SCH per course.....3
maximum contact hours per course.....96

DANC 2325 Anatomy & Kinesiology for Dance

Instruction and participation in ballet, jazz, or modern dance technique.

Approval Number.....50.0301.52 26
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....96

DANC 2289 Academic Cooperative (2 SCH version)
DANC 2389 Academic Cooperative (3 SCH version)

An instructional program designed to integrate on-campus study with practical hands-on work experience. In conjunction with class seminars, the individual student will set specific goals and objectives in the study of dance.

Approval Number.....24.0103.52 12
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....144

DRAM (Drama)

DRAM 1310 Introduction to Theater

Survey of all phases of theater including its history, dramatic works, stage techniques, production procedures, and relation to the fine arts. Participation in major productions may be required.

Approval Number.....50.0501.51 26
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....96

DRAM 1120 Theater Practicum I (1 SCH version)
DRAM 1220 Theater Practicum I (2 SCH version)
DRAM 1320 Theater Practicum I (3 SCH version)

DRAM 1121 Theater Practicum II (1 SCH version)
DRAM 1221 Theater Practicum II (2 SCH version)
DRAM 1321 Theater Practicum II (3 SCH version)

DRAM 2120 Theater Practicum III (1 SCH version)
DRAM 2220 Theater Practicum III (2 SCH version)

DRAM 2121 Theater Practicum IV (1 SCH version)

DRAM 1323 Basic Theater Practice (single-semester course)

Practicum in theater with emphasis on technique and procedures with experience gained in play productions.

Approval Number.....50.0506.53 26
maximum SCH per student.....9
maximum SCH per course.....3
maximum contact hours per course.....96

DRAM 1330 Stagecraft I
DRAM 2331 Stagecraft II

Study and application of visual aesthetics of design which may include the physical theater, scenery construction and painting, properties, lighting, costume, makeup, and backstage organization.

Approval Number.....50.0502.51 26
maximum SCH per student.....6
maximum SCH per course.....3
maximum contact hours per course.....96

DRAM 1141 Makeup (1 SCH version)
DRAM 1241 Makeup (2 SCH version)
DRAM 1341 Makeup (3 SCH version)

Design and execution of makeup for the purpose of developing believable characters. Includes discussion of basic makeup principles and practical experience of makeup application.

Approval Number.....50.0502.52 26
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....96

DRAM 1142 Introduction to Costume (1 SCH version)
DRAM 1242 Introduction to Costume (2 SCH version)
DRAM 1342 Introduction to Costume (3 SCH version)

Principles and techniques of costume design and construction for theatrical productions.

Approval Number.....50.0502.53 26
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....96

DRAM 1322 Stage Movement

Principles, practices, and exercises in body techniques and stage movement; emphasis on character movement and body control.

Approval Number.....50.0506.54 26
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....96

DRAM 1351 Acting I
DRAM 1352 Acting II
DRAM 2351 Acting III
DRAM 2352 Acting IV

Development of basic skills and techniques of acting including increased sensory awareness, ensemble performing, character analysis, and script analysis. Emphasis on the mechanics of voice, body, emotion, and analysis as tools for the actor.

Approval Number.....50.0506.51 26
maximum SCH per student..... 12
maximum SCH per course 3
maximum contact hours per course 96

DRAM 1161 Musical Theater I
DRAM 1162 Musical Theater II

Study and performance of works from the musical theater repertoire.
(Cross-listed as MUSI 1159 & 2159)

Approval Number.....50.0903.61 26
maximum SCH per student..... 2
maximum SCH per course 1
maximum contact hours per course 80

DRAM 2336 Voice for the Theater

Application of the performer's use of the voice as a creative instrument of effective communication. Encourages an awareness of the need for vocal proficiency and employs techniques designed to improve the performer's speaking abilities.

Approval Number.....50.0506.52 26
maximum SCH per student..... 3
maximum SCH per course 3
maximum contact hours per course 48

DRAM 2361 History of the Theater I
DRAM 2362 History of the Theater II
DRAM 2363 History of Musical Theater (single-semester course)

Development of theater art from the earliest times through the 20th century.

Approval Number.....50.0505.51 26
maximum SCH per student..... 6
maximum SCH per course 3
maximum contact hours per course 48

DRAM 2366 Development of the Motion Picture I
(may also be single-semester course)
DRAM 2367 Development of the Motion Picture II

Emphasis on the analysis of the visual and aural aspects of selected motion pictures, dramatic aspects of narrative films, and historical growth and sociological effect of film as an art. (Cross-listed as COMM 2366)

Approval Number.....50.0602.51 26
maximum SCH per student.....6
maximum SCH per course.....3
maximum contact hours per course.....96

DRAM 2289 Academic Cooperative (2 SCH version)
DRAM 2389 Academic Cooperative (3 SCH version)

An instructional program designed to integrate on-campus study with practical hands-on work experience. In conjunction with class seminars, the individual student will set specific goals and objectives in the study of drama.

Approval Number.....24.0103.52 12
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....144

ECON (Economics)

ECON 1301 Introduction to Economics

A survey of microeconomic and macroeconomic principles for non-business majors. Microeconomic topics will include supply and demand, consumer behavior, price and output decisions by firms under various market structures, factor markets, market failures, international trade, and exchange rates. Macroeconomic topics will include national income, unemployment, inflation, business cycles, aggregate supply and demand, monetary and fiscal policy, and economic growth.

Approval Number.....19.0402.52 09
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

Learning Outcomes

Upon successful completion of this course, students will:

1. Explain the scarcity/choice problem existing throughout the world.
2. Describe the economic system of the United States.
3. Utilize the basic demand and supply model to predict the effects of different market forces on equilibrium price and quantity.
4. Identify the four market structures and their effects on firm behavior.
5. Explain the concept of market failure and the alternatives to market processes in resource allocations.

6. Define and calculate gross domestic product, inflation rate, and unemployment rate.
7. Use aggregate supply and aggregate demand to predict the effects of fiscal and monetary policy actions on output, unemployment, and inflation.
8. Explain the benefits and costs of international trade and the role of international trade in the U.S. economy.

ECON 2301 Principles of Macroeconomics

An analysis of the economy as a whole including measurement and determination of Aggregate Demand and Aggregate Supply, national income, inflation, and unemployment. Other topics include international trade, economic growth, business cycles, and fiscal policy and monetary policy.

Approval Number.....45.0601.51 25
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

Learning Outcomes

Upon successful completion of this course, students will:

1. Explain the role of scarcity, specialization, opportunity cost and cost/benefit analysis in economic decision-making.
2. Identify the determinants of supply and demand; demonstrate the impact of shifts in both market supply and demand curves on equilibrium price and output.
3. Define and measure national income and rates of unemployment and inflation.
4. Identify the phases of the business cycle and the problems caused by cyclical fluctuations in the market economy.
5. Define money and the money supply; describe the process of money creation by the banking system and the role of the central bank.
6. Construct the aggregate demand and aggregate supply model of the macro economy and use it to illustrate macroeconomic problems and potential monetary and fiscal policy solutions.
7. Explain the mechanics and institutions of international trade and their impact on the macro economy.
8. Define economic growth and identify sources of economic growth.

ECON 2302 Principles of Microeconomics

Analysis of the behavior of individual economic agents, including consumer behavior and demand, producer behavior and supply, price and output decisions by firms under various market structures, factor markets, market failures, and international trade.

Approval Number.....45.0601.51 25
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

Learning Outcomes

Upon successful completion of this course, students will:

1. Explain the role of scarcity, specialization, opportunity cost and cost/benefit analysis in economic decision-making.
2. Identify the determinants of supply and demand; demonstrate the impact of shifts in both market supply and demand curves on equilibrium price and output.
3. Summarize the law of diminishing marginal utility; describe the process of utility maximization.
4. Calculate supply and demand elasticities, identify the determinants of price elasticity of demand and supply, and demonstrate the relationship between elasticity and total revenue.
5. Describe the production function and the Law of Diminishing Marginal Productivity; calculate and graph short-run and long-run costs of production.
6. Identify the four market structures by characteristics; calculate and graph the profit maximizing price and quantity in the output markets by use of marginal analysis.
7. Determine the profit maximizing price and quantity of resources in factor markets under perfect and imperfect competition by use of marginal analysis.
8. Describe governmental efforts to address market failure such as monopoly power, externalities, and public goods.
9. Identify the benefits of free trade using the concept of comparative advantage.

ECON 2311 Economic Geography

Analytical study of the historical development of particular economic distributions as they relate to social, cultural, political, and physical factors. Includes critical inquiry into the reasons for location of various types of economic activity, production, and marketing. (Cross-listed as GEOG 2312)

Approval Number.....45.0701.52 25
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

ECON 2289 Academic Cooperative (2 SCH version)
ECON 2389 Academic Cooperative (3 SCH version)

An instructional program designed to integrate on-campus study with practical hands-on experience in economics. In conjunction with class seminars, the individual student will set specific goals and objectives in the study of human social behavior and/or social institutions.

Approval Number.....45.0101.51 25
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....144

EDUC (Education)

EDUC 1100 Learning Framework (1 SCH version)
EDUC 1200 Learning Framework (2 SCH version)
EDUC 1300 Learning Framework (3 SCH version)

A study of the: research and theory in the psychology of learning, cognition, and motivation; factors that impact learning, and application of learning strategies. Theoretical models of strategic learning, cognition, and motivation serve as the conceptual basis for the introduction of college-level student academic strategies. Students use assessment instruments (e.g., learning inventories) to help them identify their own strengths and weaknesses as strategic learners. Students are ultimately expected to integrate and apply the learning skills discussed across their own academic programs and become effective and efficient learners. Students developing these skills should be able to continually draw from the theoretical models they have learned. (Cross-listed as PSYC 1300)

(NOTE: While traditional study skills courses include some of the same learning strategies – e.g., note-taking, reading, test preparation etc. – as learning framework courses, the focus of study skills courses is solely or primarily on skill acquisition. Study skills courses, which are not under-girded by scholarly models of the learning process, are not considered college-level, and, therefore, are distinguishable from Learning Framework courses.)

Approval Number.....42.2701.51 25
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

EDUC 1301 Introduction to the Teaching Profession

An enriched, integrated pre-service course and content experience that:

1) provides active recruitment and institutional support of students interested in a teaching career, especially in high need fields;
2) provides students with opportunities to participate in early field observations at all levels of P-12 schools with varied and diverse student populations;
3) provides students with support from college and school faculty, preferably in small cohort groups, for the purpose of introduction to and analysis of the culture of schooling and classrooms;
4) course content should be aligned as applicable with State Board for Educator Certification Pedagogy and Professional Responsibilities standards; and
5) course must include a minimum of 16 contact hours of field experience in P-12 classrooms.

Approval Number.....13.0101.51 09
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....64

EDUC 1325 Principles and Practices of Multicultural Education

An examination of cultural diversity found in society and reflected in the classroom. Topics include the study of major cultures and their influence on lifestyle, behavior, learning, intercultural communication and teaching, as well as psychosocial stressors encountered by diverse cultural groups.

Approval Number.....13.0101.52 09
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

EDUC 2301 Introduction to Special Populations

An enriched, integrated pre-service course and content experience that:

1) provides an overview of schooling and classrooms from the perspectives of language, gender, socioeconomic status, ethnic and academic diversity, and equity with an emphasis on factors that facilitate learning;
2) provides students with opportunities to participate in early field observations of P-12 special populations;
3) should be aligned as applicable with State Board for Educator Certification Pedagogy and Professional Responsibilities standards;
4) must include a minimum of 16 contact hours of field experience in P-12 classrooms with special populations; and
5) Pre-requisite for this course is EDUC 1301.

Approval Number.....13.1001.51 09
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....64

ENGL (English)

ENGL 1301 Composition I

Intensive study of and practice in writing processes, from invention and researching to drafting, revising, and editing, both individually and collaboratively. Emphasis on effective rhetorical choices, including audience, purpose, arrangement, and style. Focus on writing the academic essay as a vehicle for learning, communicating, and critical analysis.

Note: ENGL 1301 is a pre-requisite for all 2000-level literature courses.

Approval Number.....23.1301.51 12
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....64

Learning Outcomes

Upon successful completion of this course, students will:

1. Demonstrate knowledge of individual and collaborative writing processes.
2. Develop ideas with appropriate support and attribution.
3. Write in a style appropriate to audience and purpose.
4. Read, reflect, and respond critically to a variety of texts.
5. Use Edited American English in academic essays.

ENGL 1302 Composition II

Intensive study of and practice in the strategies and techniques for developing research-based expository and persuasive texts. Emphasis on effective and ethical rhetorical inquiry, including primary and secondary research methods; critical reading of verbal, visual, and multimedia texts; systematic evaluation, synthesis, and documentation of information sources; and critical thinking about evidence and conclusions.

Prerequisite: ENGL 1301 or its equivalent

Approval Number.....23.1301.51 12
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....64

Learning Outcomes

Upon successful completion of this course, students will:

1. Demonstrate knowledge of individual and collaborative research processes.
2. Develop ideas and synthesize primary and secondary sources within focused academic arguments, including one or more research-based essays.
3. Analyze, interpret, and evaluate a variety of texts for the ethical and logical uses of evidence.
4. Write in a style that clearly communicates meaning, builds credibility, and inspires belief or action.
5. Apply the conventions of style manuals for specific academic disciplines (e.g., APA, CMS, MLA, etc.)

ENGL 2307 Creative Writing I
ENGL 2308 Creative Writing II

Practical experience in the techniques of imaginative writing. May include fiction, nonfiction, poetry, screenwriting, or drama.

Approval Number.....23.1302.51 12
maximum SCH per student.....6
maximum SCH per course.....3
maximum contact hours per course.....48

ENGL 2311 Technical & Business Writing (single-semester course)
ENGL 2314 Technical & Business Writing I
ENGL 2315 Technical & Business Writing II

Intensive study of and practice in professional settings. Focus on the types of documents necessary to make decisions and take action on the job, such as proposals, reports, instructions, policies and procedures, e-mail messages, letters, and descriptions of products and services. Practice individual and collaborative processes involved in the creation of ethical and efficient documents.

Approval Number.....23.1303.51 12
maximum SCH per student.....6
maximum SCH per course.....3
maximum contact hours per course.....48

Learning Outcomes

Upon successful completion of this course, students will:

1. Recognize, analyze, and accommodate diverse audiences.
2. Produce documents appropriate to audience, purpose, and genre.
3. Analyze the ethical responsibilities involved in technical communication.
4. Locate, evaluate, and incorporate pertinent information.
5. Develop verbal, visual, and multimedia materials as necessary, in individual and/or collaborative projects, as appropriate.
6. Edit for appropriate style, including attention to word choice, sentence structure, punctuation, and spelling.
7. Design and test documents for easy reading and navigation.

ENGL 2321 British Literature (single-semester course)

A survey of the development of British literature from the Anglo-Saxon period to the present. Students will study works of prose, poetry, drama, and fiction in relation to their historical, linguistic, and cultural contexts. Texts will be selected from a diverse group of authors and traditions.

Prerequisite: ENGL 1301 (Composition I)

Approval Number.....23.1404.51 12
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

Learning Outcomes

Upon successful completion of this course, students will:

1. Identify key ideas, representative authors and works, significant historical or cultural events, and characteristic perspectives or attitudes expressed in the literature of different periods or regions.
2. Analyze literary works as expressions of individual or communal values within the social, political, cultural, or religious contexts of different literary periods.
3. Demonstrate knowledge of the development of characteristic forms or styles of expression during different historical periods or in different regions.

4. Articulate the aesthetic principles that guide the scope and variety of works in the arts and humanities.
5. Write research-based critical papers about the assigned readings in clear and grammatically correct prose, using various critical approaches to literature.

ENGL 2322 British Literature I

A survey of the development of British literature from the Anglo-Saxon period to the Eighteenth Century. Students will study works of prose, poetry, drama, and fiction in relation to their historical, linguistic, and cultural contexts. Texts will be selected from a diverse group of authors and traditions.

Prerequisite: ENGL 1301 (Composition I)

Approval Number.....23.1404.51 12
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

Learning Outcomes

Upon successful completion of this course, students will:

1. Identify key ideas, representative authors and works, significant historical or cultural events, and characteristic perspectives or attitudes expressed in the literature of different periods or regions.
2. Analyze literary works as expressions of individual or communal values within the social, political, cultural, or religious contexts of different literary periods.
3. Demonstrate knowledge of the development of characteristic forms or styles of expression during different historical periods or in different regions.
4. Articulate the aesthetic principles that guide the scope and variety of works in the arts and humanities.
5. Write research-based critical papers about the assigned readings in clear and grammatically correct prose, using various critical approaches to literature.

ENGL 2323 British Literature II

A survey of the development of British literature from the Romantic period to the present. Students will study works of prose, poetry, drama, and fiction in relation to their historical and cultural contexts. Texts will be selected from a diverse group of authors and traditions.

Prerequisite: ENGL 1301 (Composition I)

Approval Number.....23.1404.51 12
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

Learning Outcomes

Upon successful completion of this course, students will:

1. Identify key ideas, representative authors and works, significant historical or cultural events, and characteristic perspectives or attitudes expressed in the literature of different periods or regions.

2. Analyze literary works as expressions of individual or communal values within the social, political, cultural, or religious contexts of different literary periods.
3. Demonstrate knowledge of the development of characteristic forms or styles of expression during different historical periods or in different regions.
4. Articulate the aesthetic principles that guide the scope and variety of works in the arts and humanities.
5. Write research-based critical papers about the assigned readings in clear and grammatically correct prose, using various critical approaches to literature.

ENGL 2326 American Literature (single-semester course)

A survey of American literature from the period of exploration and settlement to the present. Students will study works of prose, poetry, drama, and fiction in relation to their historical and cultural contexts. Texts will be selected from among a diverse group of authors for what they reflect and reveal about the evolving American experience and character.

Prerequisite: ENGL 1301 (Composition I)

Approval Number.....23.1402.51 12
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

Learning Outcomes

Upon successful completion of this course, students will:

1. Identify key ideas, representative authors and works, significant historical or cultural events, and characteristic perspectives or attitudes expressed in the literature of different periods or regions.
2. Analyze literary works as expressions of individual or communal values within the social, political, cultural, or religious contexts of different literary periods.
3. Demonstrate knowledge of the development of characteristic forms or styles of expression during different historical periods or in different regions.
4. Articulate the aesthetic principles that guide the scope and variety of works in the arts and humanities.
5. Write research-based critical papers about the assigned readings in clear and grammatically correct prose, using various critical approaches to literature.

ENGL 2327 American Literature I

A survey of American literature from the period of exploration and settlement through the Civil War. Students will study works of prose, poetry, drama, and fiction in relation to their historical and cultural contexts. Texts will be selected from among a diverse group of authors for what they reflect and reveal about the evolving American experience and character.

Prerequisite: ENGL 1301 (Composition I)

Approval Number.....23.1402.51 12
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

Learning Outcomes

Upon successful completion of this course, students will:

1. Identify key ideas, representative authors and works, significant historical or cultural events, and characteristic perspectives or attitudes expressed in the literature of different periods or regions.
2. Analyze literary works as expressions of individual or communal values within the social, political, cultural, or religious contexts of different literary periods.
3. Demonstrate knowledge of the development of characteristic forms or styles of expression during different historical periods or in different regions.
4. Articulate the aesthetic principles that guide the scope and variety of works in the arts and humanities.
5. Write research-based critical papers about the assigned readings in clear and grammatically correct prose, using various critical approaches to literature.

ENGL 2328 American Literature II

A survey of American literature from the Civil War to the present. Students will study works of prose, poetry, drama, and fiction in relation to their historical and cultural contexts. Texts will be selected from among a diverse group of authors for what they reflect and reveal about the evolving American experience and character.

Prerequisite: ENGL 1301 (Composition I)

Approval Number.....23.1402.51 12
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

Learning Outcomes

Upon successful completion of this course, students will:

1. Identify key ideas, representative authors and works, significant historical or cultural events, and characteristic perspectives or attitudes expressed in the literature of different periods or regions.
2. Analyze literary works as expressions of individual or communal values within the social, political, cultural, or religious contexts of different literary periods.
3. Demonstrate knowledge of the development of characteristic forms or styles of expression during different historical periods or in different regions.
4. Articulate the aesthetic principles that guide the scope and variety of works in the arts and humanities.
5. Write research-based critical papers about the assigned readings in clear and grammatically correct prose, using various critical approaches to literature.

ENGL 2331 World Literature (single-semester course)

A survey of world literature from the ancient world to the present. Students will study works of prose, poetry, drama, and fiction in relation to their historical and cultural contexts. Texts will be selected from a diverse group of authors and traditions.

Prerequisite: ENGL 1301 (Composition I)

Approval Number.....16.0104.52 13
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

Learning Outcomes

Upon successful completion of this course, students will:

1. Identify key ideas, representative authors and works, significant historical or cultural events, and characteristic perspectives or attitudes expressed in the literature of different periods or regions.
2. Analyze literary works as expressions of individual or communal values within the social, political, cultural, or religious contexts of different literary periods.
3. Demonstrate knowledge of the development of characteristic forms or styles of expression during different historical periods or in different regions.
4. Articulate the aesthetic principles that guide the scope and variety of works in the arts and humanities.
5. Write research-based critical papers about the assigned readings in clear and grammatically correct prose, using various critical approaches to literature.

ENGL 2332 World Literature I

A survey of world literature from the ancient world through the sixteenth century. Students will study works of prose, poetry, drama, and fiction in relation to their historical and cultural contexts. Texts will be selected from a diverse group of authors and traditions.

Prerequisite: ENGL 1301 (Composition I)

Approval Number.....16.0104.52 13
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

Learning Outcomes

Upon successful completion of this course, students will:

1. Identify key ideas, representative authors and works, significant historical or cultural events, and characteristic perspectives or attitudes expressed in the literature of different periods or regions.
2. Analyze literary works as expressions of individual or communal values within the social, political, cultural, or religious contexts of different literary periods.
3. Demonstrate knowledge of the development of characteristic forms or styles of expression during different historical periods or in different regions.
4. Articulate the aesthetic principles that guide the scope and variety of works in the arts and humanities.

5. Write research-based critical papers about the assigned readings in clear and grammatically correct prose, using various critical approaches to literature.

ENGL 2333 World Literature II

A survey of world literature from the seventeenth century to the present. Students will study works of prose, poetry, drama, and fiction in relation to their historical and cultural contexts. Texts will be selected from a diverse group of authors and traditions.

Prerequisite: ENGL 1301 (Composition I)

Approval Number.....16.0104.52 13
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

Learning Outcomes

Upon successful completion of this course, students will:

1. Identify key ideas, representative authors and works, significant historical or cultural events, and characteristic perspectives or attitudes expressed in the literature of different periods or regions.
2. Analyze literary works as expressions of individual or communal values within the social, political, cultural, or religious contexts of different literary periods.
3. Demonstrate knowledge of the development of characteristic forms or styles of expression during different historical periods or in different regions.
4. Articulate the aesthetic principles that guide the scope and variety of works in the arts and humanities.
5. Write research-based critical papers about the assigned readings in clear and grammatically correct prose, using various critical approaches to literature.

ENGL 2341 Forms of Literature (single-semester course)
ENGL 2342 Forms of Literature I
ENGL 2343 Forms of Literature II

The study of one or more literary genres including, but not limited to, poetry, fiction, drama, and film.

Prerequisite: ENGL 1301 (Composition I)

Approval Number.....16.0104.51 13
maximum SCH per student.....6
maximum SCH per course.....3
maximum contact hours per course.....48

ENGL 2351 Mexican-American Literature

A survey of Mexican-American/Chicano/a literature including fiction, non-fiction, poetry, and drama.

Prerequisite: ENGL 1301 (Composition I)

Approval Number.....05.0203.55 25
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

ENGL 2289 Academic Cooperative (2 SCH version)
ENGL 2389 Academic Cooperative (3 SCH version)

An instructional program designed to integrate on-campus study with practical hands-on work experience. In conjunction with class seminars, the individual student will set specific goals and objectives in the study of English language and literature.

Approval Number.....24.0103.52 12
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....144

ENGR (Engineering)

ENGR 1101 Introduction to Engineering I
ENGR 1102 Introduction to Engineering II
ENGR 1201 Introduction to Engineering (single-semester course)

An introduction to the engineering profession with emphasis on technical communication and team-based engineering design.

Prerequisite: MATH 1314—College Algebra or equivalent academic preparation

Approval Number.....14.0101.51 10
maximum SCH per student.....2
maximum SCH per course.....2
maximum contact hours per course.....64

Note: Some mechanical engineering programs will accept the course ENGR 1201 for transfer credit and as applicable to the engineering major, while others will accept the course for transfer credit only. The student is advised to check with the school to which he or she wants to transfer for specific applicability of this course to the engineering major.

Learning Outcomes

Upon successful completion of this course, students will:

1. Describe the engineering profession and engineering ethics, including professional practice and licensure.

2. Use technical communication skills to explain the analysis and results of introductory laboratory exercises in engineering and computer science.
3. Explain the engineering analysis and design process.
4. Analyze data collected during laboratory exercises designed to expose students to the different engineering disciplines.
5. Describe the impact engineering has had on the modern world.
6. As part of a team, design a simple engineering device, write a design report, and present the design.
7. Demonstrate computer literacy.

ENGR 1204 Engineering Graphics I (2 SCH version)
ENGR 1304 Engineering Graphics I (3 SCH version)

Introduction to computer-aided drafting using CAD software and sketching to generate two- and three-dimensional drawings based on the conventions of engineering graphical communication; topics include spatial relationships, multi-view projections and sectioning, dimensioning, graphical presentation of data, and fundamentals of computer graphics.

Prerequisite: MATH 1314—College Algebra or equivalent academic preparation

Approval Number.....15.1301.51 11
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....96

Learning Outcomes

Upon successful completion of this course, students will:

1. Discuss the basic steps in the design process.
2. Demonstrate proficiency in freehand sketching.
3. Demonstrated proficiency in geometric modeling and computer aided drafting and design (CADD).
4. Communicate design solutions through sketching and computer graphics software using standard graphical representation methods.
5. Solve problems using graphical geometry, projection theory, visualization methods, pictorial sketching, and geometric (solid) modeling techniques.
6. Demonstrate proper documentation and data reporting practices.
7. Complete a project involving creation of 3D rapid prototype models.
8. Function as part of a design team as a team leader and as a team member.

ENGR 1205 Engineering Graphics II (Descriptive Geometry, 2 SCH version)
ENGR 1305 Engineering Graphics II (Descriptive Geometry, 3 SCH version)

Introduction to spatial relationships, multi-view projection and sectioning, dimensioning, graphical presentation of data, and fundamentals of computer graphics.

Approval Number.....15.1301.52 12
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....96

ENGR 1307 Plane Surveying (3 SCH version)
ENGR 1407 Plane Surveying (4 SCH version)

Development of skills necessary to recognize and solve problems in surveying; introduction and use of various precision instruments used for surveying, including level, theodolites, electronic distance measuring equipment, and total stations for collecting field data; introduction of Global Positioning Systems (GPS) and Geographic Information Systems (GIS) and their use in surveying; and use of graphic design software, such as AutoCAD or Microstation, in surveying problems.

Prerequisites: MATH 1316 - Plane Trigonometry or equivalent; ENGR 1304 Engineering Graphics I

Approval Number.....15.1102.51 11
maximum SCH per student.....4
maximum SCH per course.....4
maximum contact hours per course.....96

Learning Outcomes

Upon successful completion of this course, students will:

1. State the different classifications and types of surveys.
2. Apply principles of trigonometry to surveying problems.
3. Perform necessary unit conversions in surveying.
4. Demonstrate skills necessary for field work such as safety, note keeping, and instrument care.
5. Operate surveying equipment such as level, theodolite, total station, electronic distance measuring equipment, and surveying tape.
6. Determine the expected value and error bounds associated with measurements.
7. Perform horizontal and vertical measurements using standard surveying equipment for distance, angles, and contours.
8. Perform traverse and area calculations, including traverse closure.
9. Perform field layout for typical civil engineering applications such as highway geometrics and land development.

ENGR 2301 Engineering Mechanics - Statics (3 SCH version)
ENGR 2401 Engineering Mechanics - Statics (4 SCH version)

Basic theory of engineering mechanics, using calculus, involving the description of forces, moments, and couples acting on stationary engineering structures; equilibrium in two and three dimensions; free-body diagrams; friction; centroids; centers of gravity; and moments of inertia.

Prerequisite: PHYS 2325 University Physics I and PHYS 2125 University Physics I (Lab), or PHYS 2425 University Physics I (Lecture and Lab)

Concurrent enrollment in or previous completion of MATH 2414 Calculus II

Approval Number.....14.1101.52 10
maximum SCH per student.....4
maximum SCH per course.....4
maximum contact hours per course.....64

Learning Outcomes

Upon successful completion of this course, students will:

1. State the fundamental principles used in the study of mechanics.
2. Define magnitude and directions of forces and moments and identify associated scalar and vector products.
3. Draw free body diagrams for two- and three-dimensional force systems.
4. Solve problems using the equations of static equilibrium.
5. Compute the moment of force about a specified point or line.
6. Replace a system of forces by an equivalent simplified system.
7. Analyze the forces and couples acting on a variety of objects.
8. Determine unknown forces and couples acting on objects in equilibrium.
9. Analyze simple trusses using the method of joints or the method of sections.
10. Determine the location of the centroid and the center of mass for a system of discrete particles and for objects of arbitrary shape.
11. Analyze structures with a distributed load.
12. Calculate moments of inertia for lines, areas, and volumes.
13. Apply the parallel axis theorem to compute moments of inertia for composite regions.
14. Solve problems involving equilibrium of rigid bodies subjected to a system of forces and moments that include friction.
15. Solve problems involving dry sliding friction, including problems with wedges and belts.

ENGR 2302 Engineering Mechanics - Dynamics (3 SCH version)
ENGR 2402 Engineering Mechanics - Dynamics (4 SCH version)

Basic theory of engineering mechanics, using calculus, involving the motion of particles, rigid bodies, and systems of particles; Newton's Laws; work and energy relationships; principles of impulse and momentum; application of kinetics and kinematics to the solution of engineering problems.

Prerequisites: ENGR 2301 Engineering Mechanics: Statics

Approval Number.....14.1101.53 10
maximum SCH per student.....4
maximum SCH per course.....4
maximum contact hours per course.....64

Learning Outcomes

Upon successful completion of this course, students will:

1. Express dynamic quantities as vectors in terms of Cartesian components, polar coordinates, and normal-tangential coordinates.
2. Compute mass moments of inertia for systems of particles and rigid bodies.
3. Solve kinematic problems involving rectilinear and curvilinear motion of particles.
4. Solve kinetic problems involving a system of particles using Newton's Second Law.
5. Apply the principles of work and energy, conservation of energy, impulse and momentum, and conservation of momentum to the solution of engineering problems involving particles and systems of particles.
6. Solve kinematic problems involving the translation and rotation of a rigid body.
7. Solve kinetic problems involving planar translation and rotation of rigid bodies.

8. Apply the principles of work and energy, conservation of energy, impulse and momentum, and conservation of momentum to the solution of engineering problems involving rigid bodies in planar motion.

ENGR 2303 Engineering Mechanics - Statics & Dynamics (3 SCH version)
ENGR 2403 Engineering Mechanics - Statics & Dynamics (4 SCH version)

Combined, single-semester study of statics and dynamics. Calculus-based study of dynamics of rigid bodies, force-mass-acceleration, work-energy, and impulse-momentum computation.

Prerequisite: the first calculus-based physics course.

Approval Number.....14.1101.54 10
maximum SCH per student.....4
maximum SCH per course.....4
maximum contact hours per course.....64

ENGR 2304 Programming for Engineers

Programming principles and techniques for matrix and array operations, equation solving, and numeric simulations applied to engineering problems and visualization of engineering information; platforms include spreadsheets, symbolic algebra packages, engineering analysis software, and laboratory control software.

Approval Number.....11.0201.52 07
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....96

Learning Outcomes

Upon successful completion of this course, students will:

1. Use matrix and array operations for equation solving.
2. Identify the strengths and weaknesses of the conventional programming languages.
3. Use spreadsheets and their built-in features to solve a variety of engineering problems, applying both quantitative and qualitative methodologies.
4. Describe methods for the design of programs that control equipment or analyze data.
5. Write computer programs to solve engineering problems and perform engineering simulations using common software tools.
6. Graphically present engineering data, results, and conclusions.

ENGR 2305 Electrical Circuits I

Principles of electrical circuits and systems. Basic circuit elements (resistance, inductance, mutual inductance, capacitance, independent and dependent controlled voltage, and current sources). Topology of electrical networks; Kirchhoff ’s laws; node and mesh analysis; DC circuit analysis; operational amplifiers; transient and sinusoidal steady-state analysis; AC circuit analysis; first- and second-order circuits; Bode plots; and use of computer simulation software to solve circuit problems.

Prerequisite or Co-requisite: MATH 2320 Differential Equations

Prerequisites: PHYS 2325 and PHYS 2125, or PHYS 2425 University Physics I (lecture and lab); MATH 2414 Calculus II

Approval Number.....14.1001.51 10
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....64

Learning Outcomes

Upon successful completion of this course, students will:

1. Explain basic electrical concepts, including electric charge, current, electrical potential, electrical power, and energy
2. Apply concepts of electric network topology: nodes, branches, and loops to solve circuit problems, including the use of computer simulation.
3. Analyze circuits with ideal, independent, and controlled voltage and current sources.
4. Apply Kirchhoff's voltage and current laws to the analysis of electric circuits.
5. Explain the relationship of voltage and current in resistors, capacitors, inductors, and mutual inductors.
6. Derive and solve the governing differential equations for a time-domain first-order and second-order circuit, including singularity function source models.
7. Determine the Thévenin or Norton equivalent of a given network that may include passive devices, dependent sources, and independent sources in combination.
8. Analyze first and second order AC and DC circuits for steady-state and transient response in the time domain and frequency domain.
9. Derive relations for and calculate the gain and input impedance of a given operational amplifier circuit for both DC and frequency domain AC circuits using an ideal operational amplifier model.
10. Apply computer mathematical and simulation programs to solve circuit problems.

ENGR 2105 Electrical Circuits I Laboratory

Laboratory experiments supporting theoretical principles presented in ENGR 2305 involving DC and AC circuit theory, network theorems, time, and frequency domain circuit analysis. Introduction to principles and operation of basic laboratory equipment; laboratory report preparation.

Co-requisite: ENGR 2305 Electrical Circuits I

Approval Number.....14.1001.55 10
maximum SCH per student.....1
maximum SCH per course.....1
maximum contact hours per course.....64

Learning Outcomes

Upon successful completion of this course, students will:

1. Prepare laboratory reports that clearly communicate experimental information in a logical and scientific manner.
2. Conduct basic laboratory experiments involving electrical circuits using laboratory test equipment such as multimeters, power supplies, signal generators, and oscilloscopes.
3. Explain the concepts of Thévenin-equivalent circuits and linear superposition and apply them to laboratory measurements.

4. Predict and measure the transient and sinusoidal steady-state responses of simple RC and RLC circuits.
5. Predict the behavior and make measurements of simple operational-amplifier circuits.
6. Relate physical observations and measurements involving electrical circuits to theoretical principles.
7. Evaluate the accuracy of physical measurements and the potential sources of error in the measurements.

ENGR 2405 Electrical Circuits I (lecture + lab) (THIS IS A NEW COURSE)

This lecture and lab course should combine all of the elements of ENGR 2305 (lecture) and ENGR 2105 (lab), including the learning outcomes listed for both courses.

Approval Number.....14.1001.51 10
maximum SCH per student.....4
maximum SCH per course.....4
maximum contact hours per course.....128

ENGR 2306 Introduction to Digital Systems

Introduction to theory and design of digital logic, circuits, and systems. Number systems, operations and codes; logic gates; Boolean Algebra and logic simplification; Karnaugh maps; combinational logic; functions of combinational Logic; flip-flops and related devices; counters; shift registers; sequential logic; memory and storage.

Co-requisite: ENGR 2106 Introduction to Digital Systems Laboratory

Prerequisite: MATH 1314 College Algebra or equivalent academic preparation

Approval Number.....14.1001.56 10
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

Learning Outcomes

Upon successful completion of this course, students will:
1. Utilize binary and hexadecimal numbers.
2. Solve problems involving digital codes, operations, and number systems.
3. Define, describe, and analyze fundamentals of Boolean algebra and digital logic gates.
4. Describe, analyze, design, and fabricate combinational logic circuits.
5. Describe, analyze, design, and fabricate sequential logic circuits.
6. Describe and explain the fundamentals of memory operations.
7. Apply computer mathematical and/or simulation tools to solve digital systems problems.

ENGR 2106 Introduction to Digital Systems Laboratory

Basic laboratory experiments supporting theoretical principles presented in ENGR 2306 involving design, construction, and analysis of combinational and sequential digital circuits and systems, including logic gates, adders, multiplexers, encoders, decoders, arithmetic logic units, latches, flip-flops, registers, and counters; preparation of laboratory reports.

Co-requisite: ENGR 2306 Introduction to Digital Systems

Approval Number.....14.1001.57 10
maximum SCH per student..... 1
maximum SCH per course 1
maximum contact hours per course 48

Learning Outcomes

Upon successful completion of this course, students will:

1. Prepare laboratory reports that clearly communicate experimental information in a logical and scientific manner.
2. Conduct basic laboratory experiments involving design and construction of digital circuits and systems.
3. Relate physical observations and measurements involving digital circuits and systems to theoretical principles.
4. Evaluate the accuracy of physical measurements and the potential sources of error in the measurements.
5. Design fundamental experiments involving principles of digital circuits and systems.
6. Identify and apply appropriate sources of information for conducting laboratory experiments involving digital circuits and systems.
7. Apply computer mathematical and/or simulation tools to solve digital systems problems.

Note: Some baccalaureate engineering programs will accept the course ENGR 2306 for transfer credit and as applicable to the engineering major, while others will accept the course for transfer credit only. The student is advised to check with the school to which he or she wants to transfer for specific applicability of this course to the engineering major.

ENGR 2406 Introduction to Digital Systems (Lecture and Lab)

This lecture and lab course should combine all of the elements of ENGR 2306 Introduction to Digital Systems and ENGR 2106 Introduction to Digital Systems Lab, including the learning outcomes listed for both courses.

Approval Number.....14.1001.58 10
maximum SCH per student..... 4
maximum SCH per course 4
maximum contact hours per course 96

ENGR 2307 Fundamentals of Circuit Analysis

Basic concepts of electrical engineering using calculus; the fundamentals of electrical and electronic components and circuits, circuit analysis, network principles, motors, and steady-state and transient responses; application of Laplace transforms; and use of computational software to solve network problems; application of the principles to the solution of electrical engineering problems; relationship between basic principles and advanced applications.

Co-requisite: ENGR 2107 Fundamentals of Circuit Analysis Laboratory
Prerequisite: PHYS 2326 University Physics II

Approval Number.....14.1001.52 10
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

Learning Outcomes

Upon successful completion of this course, students will:

1. Define basic electrical concepts, including electrical potential, electrical current, and electrical power.
2. Discuss concepts of electrical network topology, including nodes, branches, and loops.
3. State the characteristics of ideal independent and controlled voltage and current sources.
4. Define the relationship of voltage and current in resistors, capacitors, inductors, and mutual inductors.
5. Use Kirchhoff's laws in the analysis of electrical circuits.
6. Articulate the concepts of Thévenin and Norton equivalent circuits, and apply the concepts to circuit analysis.
7. Analyze first and second order AC and DC circuits for steady-state and transient response.
8. Analyze simple operational amplifier circuits using an ideal operational amplifier model.
9. Apply basic transformer models, including voltage and current relationships to turns ratio, circuit components, and reflected impedance calculations in engineering problems.

ENGR 2107 Fundamentals of Circuit Analysis Laboratory

Basic laboratory experiments supporting theoretical principles presented in ENGR 2307 involving electrical and electronic components and circuits, including circuit analysis, network principles, motors, and steady-state and transient responses, and preparation of laboratory reports.

Co-requisite: ENGR 2307 Fundamentals of Circuit Analysis

Approval Number.....14.1001.53 10
maximum SCH per student.....1
maximum SCH per course.....1
maximum contact hours per course.....48

Learning Outcomes

Upon successful completion of this course, students will:

1. Prepare laboratory reports that clearly communicate experimental information in a logical and scientific manner.
2. Conduct basic laboratory experiments involving electrical circuits.
3. Relate physical observations and measurements involving electrical circuits to theoretical principles.
4. Evaluate the accuracy of physical measurements and the potential sources of error in the measurements.
5. Design fundamental experiments involving principles of electrical circuits.
6. Identify appropriate sources of information for conducting laboratory experiments involving electrical circuits.

ENGR 2407 Fundamentals of Circuit Analysis (Lecture + Lab)

Note: The lecture and lab course should combine all of the elements of 2307 Fundamentals of Circuit Analysis Lecture and 2107 Fundamentals of Circuit Analysis Lab, including the learning outcomes listed for both courses.

Approval Number.....14.1001.54 10
maximum SCH per student.....4
maximum SCH per course.....4
maximum contact hours per course.....96

ENGR 2308 Engineering Economics

Methods used for determining the comparative financial desirability of engineering alternatives. Provides the student with the basic tools required to analyze engineering alternatives in terms of their worth and cost, an essential element of engineering practice. The student is introduced to the concept of the time value of money and the methodology of basic engineering economy techniques. The course will address some aspects of sustainability and will provide the student with the background to enable them to pass the Engineering Economy portion of the Fundamentals of Engineering exam.

Prerequisites: MATH 2413 Calculus I
Prerequisites or Co-requisites: ECON 2301 Principles of Macroeconomics or ECON 2302 Principles of Microeconomics

Approval Number.....14.9999.51 10
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

Learning Outcomes

Upon successful completion of this course, students will:

1. Apply different methods to calculate the time value of money.
2. Construct cash flow diagrams for a given problem.
3. Estimate total revenue, total cost, and break even points.
4. Calculate the uniform series payment, given principal, interest rate, and pay period.
5. Perform project evaluation, including cost/benefit analysis.
6. Articulate principles of taxation and depreciation.
7. Perform capital budgeting, cost comparisons, and replacement analyses.
8. Solve problems at a level consistent with expectations of the engineering economics portion of the Fundamentals of Engineering exam.

ENGR 2332 Mechanics of Materials (3 SCH version)
ENGR 2432 Mechanics of Materials (4 SCH version)

Stresses, deformations, stress-strain relationships, torsions, beams, shafts, columns, elastic deflections in beams, combined loading, and combined stresses.

Approval Number.....14.1101.51 10
maximum SCH per student.....4
maximum SCH per course.....4
maximum contact hours per course.....64

ENGR 2333 Elementary Chemical Engineering (THIS IS A NEW COURSE.)

This course is the foundation for nearly all future chemical engineering courses and analysis. A strong foundation in mathematics, physics, and chemistry is required for application to the solution of problems in industrial chemistry. Students will receive an introduction to chemical engineering calculations, unit equations, process stoichiometry, material and energy balances, and states of matter, and will apply the laws of conservation of mass and energy to reacting and non-reacting, simple and complex chemical systems.

Prerequisites: ENGR 1201 Introduction to Engineering, CHEM 1312 and CHEM 1112, or CHEM 1412 General Chemistry II (Lecture and Laboratory), MATH 2414 Calculus II, PHYS 2425 University Physics I

Approval Number.....14.0701.51 10
maximum SCH per student..... 3
maximum SCH per course.....3
maximum contact hours per course..... 48

Learning Outcomes

Upon successful completion of this course, students will:

1. Apply various systems of units to chemical engineering problems.
2. Define and relate process variables.
3. Describe qualitatively the basic unit operations of chemical processes and the principles of operation for each.
4. Use a systematic approach to solve chemical engineering problems by identifying variables, drawing a process flow chart from a written description, applying degrees of freedom analysis, and formulating mathematical expressions.
5. Apply material balances for reacting and non-reacting systems.
6. Apply energy balances for reacting and non-reacting systems.
7. Present basic engineering information in reports.

ENGR 2334 Chemical Engineering Thermodynamics I (THIS IS A NEW COURSE.)

Fundamental concepts of energy and thermodynamics (e.g., temperature, thermodynamic equilibrium, and heat) will be introduced; the course emphasizes techniques in the application of the fundamentals of thermodynamics to various processes as they frequently occur in chemical and bimolecular engineering. Provides the basic skills and tools necessary in designing and analyzing real-life engineering systems. Serves as preparation for other advanced courses in thermodynamics, energy conversion, heat transfer, etc.

Prerequisite: MATH 2415 Calculus III

Approval Number.....14.0701.52 10
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course..... 48

Learning Outcomes

Upon successful completion of this course, students will:

1. Apply knowledge of math, engineering, and science to perform energy calculations of engineering systems and analyze the feasibility of the processes undergone by the systems.

2. Describe basic thermodynamic properties and their interrelationships.
3. Describe basic states of matter (solid, liquid, gas).
4. Define units of pressure, temperature, density, mass, and moles, SI and English system, and use conversions.
5. Use thermodynamic tables and diagrams and apply equations of state, such as the Ideal Gas Law.
6. Distinguish between steady-state and transient processes, open and closed systems.
7. Describe the meaning of specific volume, enthalpy, and internal energy and how to obtain them from thermodynamic tables and diagrams.
8. Apply first- and second-law analysis to thermodynamic processes and cycles.
9. Analyze systems, process feasibility, and efficiency for open and closed systems.
10. Define the meaning of isentropic processes; obtain entropy from thermodynamic tables and diagrams.

ENGT (Engineering Technology)

ENGT 1401 Circuits I for Engineering Technology (lecture + lab)

Fundamental concepts of electrical science including potential, current and power in DC circuits. Fundamental laws and relationships applied to the analysis of circuits and networks: capacitance, inductance and magnetism; and single-frequency concepts; use of calculators and computer software in design and analysis of circuits. Standard instrumentation used in test and measurement of DC circuits and systems will be introduced.

Prerequisite: MATH 1314 College Algebra or the equivalent. (This course is included in the Field of Study Curriculum for Engineering Technology.)

Approval Number.....15.0303.51 11
maximum SCH per student.....4
maximum SCH per course.....4
maximum contact hours per course.....96

ENGT 1402 Circuits II for Engineering Technology (lecture + lab)

Complex AC circuit including transient analysis. Network theorems are applied to the solution of AC circuits. Resonance, filters, AC power and three-phase circuits are covered in detail. Continued application of calculators and computer design and analysis of circuits. Standard instrumentation used in testing AC circuits and systems and measurement of AC circuits and systems will be introduced.

Prerequisite: ENGT 1401 and MATH 2312 or 2412, Pre-Calculus, or MATH 1316, Trigonometry. (This course is included in the Field of Study Curriculum for Engineering Technology.)

Approval Number.....15.0303.52 11
maximum SCH per student.....4
maximum SCH per course.....4
maximum contact hours per course.....96

ENGT 1407 Digital Fundamentals (lecture + lab)

Analysis, design, and simulation of combinational and sequential systems using: classical Boolean algebra techniques, laboratory hardware experiments and computer simulation. Introduction to programmable logic devices (PLDs) and application-specific integrated circuits using software tool to the design and analysis of digital logic circuits and systems. Standard instrumentation used in testing digital circuits and systems will be introduced.

Prerequisite: MATH 1314, College Algebra, or the equivalent. (This course is included in the Field of Study Curriculum for Engineering Technology.)

Approval Number.....15.0303.53 11
maximum SCH per student.....4
maximum SCH per course.....4
maximum contact hours per course.....96

ENGT 1409 AC/DC Circuits for Engineering Technology

Fundamentals of DC circuits and AC circuits operation including Ohm's law, Kirchoff's law, networks, transformers, resonance, phasors, capacitive and inductive and circuit analysis techniques. (This course is included in the Field of Study Curriculum for Engineering Technology.)

Approval Number.....15.0303.54 11
maximum SCH per student.....4
maximum SCH per course.....4
maximum contact hours per course.....96

ENGT 2304 Materials and Methods for Engineering Technology

A continuation of the study of the nature, origin and properties of building materials, methods, and equipment for their integrated use in completing construction projects. A study of selecting and specifying materials with consideration for economy, quality and performance in the construction of modern buildings. (This course is included in the Field of Study Curriculum for Engineering Technology.)

Approval Number.....15.0805.52 11
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....64

ENGT 2307 Engineering Materials I for Engineering Technology (lecture + lab)

Instruction in the making and forming of steel and the classification of steel, cast iron, and aluminum. Topics include mechanical and physical properties, non-destructive testing principles of alloying, selection of metals, iron carbon diagrams, principles of hardening and tempering steel, and the metallurgical aspects of machining. Topics will also include an overview of properties and uses of polymers and ceramics. (This course is included in the Field of Study Curriculum for Engineering Technology.)

Approval Number.....15.0805.51 11
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....64

ENGT 2310 Introduction to Manufacturing Processes

Exploration of a variety of methods used in manufacturing. Theory and application of processes including but not limited to metal forming, welding, machining, heat treating, plating, assembly procedures, process controls considerations, casting and injection molding. (This course is included in the Field of Study Curriculum for Engineering Technology.)

Approval Number.....15.0612.51 11
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....64

ENVR (Environmental Science)

ENVR 1401 Environmental Science I (lecture + lab)
ENVR 1301 Environmental Science I (lecture)
ENVR 1101 Environmental Science I (lab)

ENVR 1402 Environmental Science II (lecture + lab)
ENVR 1302 Environmental Science II (lecture)
ENVR 1102 Environmental Science II (lab)

General interest course requiring a minimum of previous science background and relating scientific knowledge to problems involving energy and the environment. May or may not include a laboratory.

Approval Number.....03.0103.52 01
maximum SCH per student.....8
maximum SCH per course.....4
maximum contact hours per course.....96

FORE (Forestry)

FORE 1301 Introduction to Forestry (lecture + lab)

Introduction to forest plant and animal communities and the importance of forest resource management.

Approval Number.....03.0506.51 01
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....80

FORE 1314 Dendrology (lecture + lab)

Identification, distribution and silvicultural characteristics of angiosperms and gymnosperms. Field trips required.

Approval Number.....03.0506.52 01
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....80

FORE 2309 Forest Ecology (lecture + lab)

Climate, edaphic and biotic factors and their relation to woody plant growth and development. Factors will be discussed at the individual plant and forest community levels.

Approval Number.....03.0506.53 01
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....80

FORS (Forensic Science)

FORS 2440 Introduction to Forensic Science (lecture + lab)

Survey of the procedures of crime scene investigation in gathering evidence and applicable scientific technologies that follow established protocols by first responders; a preview of how criminalists in forensic laboratories will process the gathered evidence presented.

Approval Number.....43.0106.51 24
maximum SCH per student.....4
maximum SCH per course.....4
maximum contact hours per course.....96

FORS 2450 Introduction to Forensic Psychology (lecture + lab)

Survey of current perspectives and technologies in the analysis of criminal mind suggested by crime scene evidence; introduction applications of forensic psychology including the history and current practice of criminal profiling in the apprehension of serial killers as sexual predators.

Prerequisite: PSYC 2301 General Psychology

Approval Number.....43.0106.52 24
maximum SCH per student.....4
maximum SCH per course.....4
maximum contact hours per course.....96

FREN (French Language)

FREN 1100 Conversational French I (1 SCH version)
FREN 1200 Conversational French I (2 SCH version)
FREN 1300 Conversational French I (3 SCH version)

FREN 1110 Conversational French II (1 SCH version)
FREN 1210 Conversational French II (2 SCH version)
FREN 1310 Conversational French II (3 SCH version)

Basic practice in comprehension and production of the spoken language.

Approval Number.....16.0901.54 13
maximum SCH per student.....6
maximum SCH per course.....3
maximum contact hours per course.....48

FREN 1311 Beginning French I (1st semester French, 3 SCH version)
FREN 1411 Beginning French I (1st semester French, 4 SCH version)
FREN 1511 Beginning French I (1st semester French, 5 SCH version)

FREN 1312 Beginning French II (2nd semester French, 3 SCH version)
FREN 1412 Beginning French II (2nd semester French, 4 SCH version)
FREN 1512 Beginning French II (2nd semester French, 5 SCH version)

Fundamental skills in listening comprehension, speaking, reading, and writing. Includes basic vocabulary, grammatical structures, and culture.

Approval Number.....16.0901.51 13
maximum SCH per student.....10
maximum SCH per course.....5
maximum contact hours per course.....112

FREN 2303 Introduction to French Literature I
FREN 2304 Introduction to French Literature II

Readings representative of this culture.

Approval Number.....16.0901.53 13
maximum SCH per student.....6
maximum SCH per course.....3
maximum contact hours per course.....48

FREN 2306 Intermediate French Conversation

Basic practice in comprehension and production of the spoken language.

Approval Number.....16.0901.54 13
maximum SCH per student.....6
maximum SCH per course.....3
maximum contact hours per course.....48

FREN 2311 Intermediate French I (3rd semester French)
FREN 2312 Intermediate French II (4th semester French)

Review and application of skills in listening comprehension, speaking, reading, and writing. Emphasizes conversation, vocabulary acquisition, reading, composition, and culture.

Approval Number.....16.0901.52 13
maximum SCH per student.....6
maximum SCH per course.....3
maximum contact hours per course.....80

FREN 2289 Academic Cooperative (2 SCH version)
FREN 2389 Academic Cooperative (3 SCH version)

An instructional program designed to integrate on-campus study with practical hands-on work experience. In conjunction with class seminars, the individual student will set specific goals and objectives in the study of French language and literature.

Approval Number.....24.0103.52 12
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....144

GEOG (Geography)

GEOG 1300 Principles of Geography (single-semester course, combines physical & cultural)
GEOG 1301 Physical Geography
GEOG 1302 Cultural Geography

Introduction to the concepts which provide a foundation for continued study of geography. Includes the different elements of natural environment as related to human activities, modes of living, and map concepts. The first semester emphasizes physical geography and the second semester emphasizes cultural geography.

Approval Number.....45.0701.51 25
maximum SCH per student.....6
maximum SCH per course.....3
maximum contact hours per course.....48

GEOG 1303 World Regional Geography
GEOG 1304 Geography of Middle America
GEOG 1305 Geography of North America

Study of major world regions with emphasis on prevailing conditions and developments, including emerging conditions and trends, and the awareness of diversity of ideas and practices found in those regions. Course content may include one or more regions.

Approval Number.....45.0701.53 25
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

GEOG 2312 Economic Geography

Analytical study of the historical development of particular economic distributions as they relate to social, cultural, political, and physical factors. Includes critical inquiry into the reasons for location of various types of economic activity, production, and marketing. (Cross-listed as ECON 2311)

Approval Number.....45.0701.52 25
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

GEOG 2289 Academic Cooperative (2 SCH version)
GEOG 2389 Academic Cooperative (3 SCH version)

An instructional program designed to integrate on-campus study with practical hands-on experience in geography. In conjunction with class seminars, the individual student will set specific goals and objectives in the study of human social behavior and/or social institutions.

Approval Number.....45.0101.51 25
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....144

GEOL (Geology)

GEOL 1401 Earth Sciences I (lecture + lab)
GEOL 1301 Earth Sciences I (lecture)
GEOL 1101 Earth Sciences Laboratory I (lab)

GEOL 1402 Earth Sciences II (lecture + lab)
GEOL 1302 Earth Sciences II (lecture)
GEOL 1102 Earth Sciences Laboratory II (lab)

Survey of physical and historical geology, astronomy, meteorology, oceanography, and related sciences.

Approval Number.....40.0601.51 03
maximum SCH per student.....8
maximum SCH per course.....4
maximum contact hours per course.....96

GEOL 1403 Physical Geology (lecture + lab)
GEOL 1303 Physical Geology (lecture)
GEOL 1103 Physical Geology Laboratory (lab)

Principles of physical and historical geology. Study of the earth's composition, structure, and internal and external processes. Includes the geologic history of the earth and the evolution of life.

Approval Number.....40.0601.54 03
maximum SCH per student.....4
maximum SCH per course.....4
maximum contact hours per course.....112

GEOL 1404 Historical Geology (lecture + lab)
GEOL 1304 Historical Geology (lecture)
GEOL 1104 Historical Geology Laboratory (lab)

Principles of physical and historical geology. Study of the earth's composition, structure, and internal and external processes. Includes the geologic history of the earth and the evolution of life.

Approval Number.....40.0601.54 03
maximum SCH per student.....4
maximum SCH per course.....4
maximum contact hours per course.....112

GEOL 1405 Environmental Geology (lecture + lab)
GEOL 1305 Environmental Geology (lecture)
GEOL 1105 Environmental Geology Laboratory (lab)

The earth as a habitat. Interrelationships between humans and the environment. Geologic factors in urban and regional land use planning.

Approval Number.....03.0103.53 01
maximum SCH per student.....4
maximum SCH per course.....4
maximum contact hours per course.....96

GEOL 1445 Oceanography (lecture + lab)
GEOL 1345 Oceanography (lecture)
GEOL 1145 Oceanography (lab)

Survey of physical and historical geology, astronomy, meteorology, oceanography, and related sciences.

Approval Number.....40.0601.51 03
maximum SCH per student.....4
maximum SCH per course.....4
maximum contact hours per course.....96

GEOL 1447 Meteorology (lecture + lab)
GEOL 1347 Meteorology (lecture)
GEOL 1147 Meteorology (lab)

Survey of meteorology and related sciences.

Approval Number.....40.0601.51 03
maximum SCH per student.....4
maximum SCH per course.....4
maximum contact hours per course.....96

GEOL 2405 Optical Mineralogy (lecture + lab)
GEOL 2305 Optical Mineralogy (lecture)
GEOL 2105 Optical Mineralogy (lab)

Principles and methods of optical crystallography and optical properties of minerals.

Approval Number.....40.0601.53 03
maximum SCH per student.....4
maximum SCH per course.....4
maximum contact hours per course.....96

GEOL 2407 Geological Field Methods (lecture + lab)
GEOL 2307 Geological Field Methods (lecture)
GEOL 2107 Geological Field Methods (lab)

Collection of field data, interpretation and construction of geologic and topographic maps, and examination of petrologic systems in a field setting.

Approval Number.....40.0601.55 03
maximum SCH per student.....4
maximum SCH per course.....4
maximum contact hours per course.....96

GEOL 2309 Mineralogy & Petrology I (3 SCH version)
GEOL 2409 Mineralogy & Petrology I (4 SCH version)

GEOL 2310 Elementary Geophysics (single-semester course)

GEOL 2311 Mineralogy & Petrology II (3 SCH version)
GEOL 2411 Mineralogy & Petrology II (4 SCH version)

Study of mineral crystallography, chemistry, classification, identification, and occurrence. Includes the genesis, classification, and identification of igneous, sedimentary, and metamorphic rocks.

Prerequisite: three hours of Chemistry.

Approval Number.....40.0601.52 03
maximum SCH per student.....8
maximum SCH per course.....4
maximum contact hours per course.....96

GEOL 2289 Academic Cooperative (2 SCH version)
GEOL 2389 Academic Cooperative (3 SCH version)

An instructional program designed to integrate on-campus study with practical hands-on work experience in the physical sciences. In conjunction with class seminars, the individual students will set specific goals and objectives in the scientific study of inanimate objects, processes of matter and energy, and associated phenomena.

Approval Number.....40.0101.53 03
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....144

GERM (German Language)

GERM 1100 Conversational German I (1 SCH version)
GERM 1200 Conversational German I (2 SCH version)
GERM 1300 Conversational German I (3 SCH version)

GERM 1110 Conversational German II (1 SCH version)
GERM 1210 Conversational German II (2 SCH version)
GERM 1310 Conversational German II (3 SCH version)

Basic practice in comprehension and production of the spoken language.

Approval Number.....16.0501.54 13
maximum SCH per student.....6
maximum SCH per course.....3
maximum contact hours per course.....48

GERM 1311 Beginning German I (1st semester German, 3 SCH version)
GERM 1411 Beginning German I (1st semester German, 4 SCH version)
GERM 1511 Beginning German I (1st semester German, 5 SCH version)

GERM 1312 Beginning German II (2nd semester German, 3 SCH version)
GERM 1412 Beginning German II (2nd semester German, 4 SCH version)
GERM 1512 Beginning German II (2nd semester German, 5 SCH version)

Fundamental skills in listening comprehension, speaking, reading, and writing. Includes basic vocabulary, grammatical structures, and culture.

Approval Number.....16.0501.51 13
maximum SCH per student.....10
maximum SCH per course.....5
maximum contact hours per course.....112

GERM 1313 Scientific German (3 SCH version)
GERM 1413 Scientific German (4 SCH version)

The reading of specially prepared scientific texts and a review of grammar. May replace Intermediate German for pre-medical and science students.

Approval Number.....16.0501.53 13
maximum SCH per student.....4
maximum SCH per course.....4
maximum contact hours per course.....64

GERM 2311 Intermediate German I (3rd semester German)
GERM 2312 Intermediate German II (4th semester German)

Review and application of skills in listening comprehension, speaking, reading, and writing. Emphasizes conversation, vocabulary acquisition, reading, composition, and culture.

Approval Number.....16.0501.52 13
maximum SCH per student.....6
maximum SCH per course.....3
maximum contact hours per course.....80

GERM 2289 Academic Cooperative (2 SCH version)
GERM 2389 Academic Cooperative (3 SCH version)

An instructional program designed to integrate on-campus study with practical hands-on work experience. In conjunction with class seminars, the individual student will set specific goals and objectives in the study of German language and literature.

Approval Number.....24.0103.52 12
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....144

GOVT (Government)

(NOTE: Texas Education Code, Subchapter F, Section 51.301 requires students graduating with a baccalaureate or lesser degree from a public institution in Texas to have credit for six SCH in government or political science including the Constitution of the United States and the constitutions of the states, with special emphasis on Texas. The statute does not specify how the required course content should be distributed over the required six SCH. Two instructional patterns, represented by the TCCN course sequences GOVT 2301 & 2302 or GOVT 2305 & 2306, evolved among institutions. Because combination of a course from one sequence with a course from the other sequence would not always successfully fulfill the content requirement of Section 51.301, students were urged to complete all six SCH at a single institution. Inevitably, however, students combined courses from the two sequences. Only the following alternative combinations fulfill the content requirement of Section 51.301: GOVT 2301 and 2305; GOVT 2301 and 2306.

The following combinations will NOT satisfy the content requirement of §51.301: GOVT 2302 & 2305 (omits study of the Texas constitution); GOVT 2302 & 2306 (omits study of the U.S. Constitution). Students with credit for GOVT 2302 & 2305, GOVT 2302 & 2306, or equivalent combinations may satisfy the legislative requirement by earning credit for GOVT 2107, a 1 SCH course providing the required constitutional content missing from these two course combinations.

To avoid the problems in transfer effective fall 2013 one of the sequences is deleted (GOVT 2301 & GOVT 2302). The sequence remaining in the ACGM to fulfill the content requirement of Section 51.301 is GOVT 2305 & GOVT 2306.**)**

GOVT 2107 Federal and Texas Constitutions

A study of the United States and state constitutions, with special emphasis on Texas.

Pre-requisite: By permission only. Enrollment limited to students who have already completed a minimum of 6 SCH of GOVT courses but have not satisfied the statutory requirement for study of the federal and state constitutions. Ensures compliance with TEC §51.301.

Approval Number.....45.1002.52 25
maximum SCH per student..... 1
maximum SCH per course 1
maximum contact hours per course 16

Learning Outcomes

Upon successful completion of this course, students will:

1. Explain the origin and development of constitutional democracy in the United States.
2. Explain the origin and development of the Texas constitution.
3. Analyze the similarities and differences between the current U.S. and Texas constitutions.

GOVT 2304 Introduction to Political Science

Introductory survey of the discipline of political science focusing on the scope, and methods of the field, and the substantive topics in the discipline including the theoretical foundations of politics, political interaction, political institutions and how political systems function.

Approval Number.....45.1001.52 25
maximum SCH per student..... 3
maximum SCH per course 3
maximum contact hours per course 48

Learning Outcomes

Upon successful completion of this course, students will:

1. Define and apply political terms and concepts.
2. Define political science and identify the subfields.
3. Compare and contrast different political systems and institutions.
4. Apply the methods used to study politics.
5. Critically interpret and analyze contemporary political issues and problems.

GOVT 2305 Federal Government (Federal constitution & topics)

Origin and development of the U.S. Constitution, structure and powers of the national government including the legislative, executive, and judicial branches, federalism, political participation, the national election process, public policy, civil liberties and civil rights.

Approval Number.....45.1002.51 25
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

Learning Outcomes

Upon successful completion of this course, students will:

1. Explain the origin and development of constitutional democracy in the United States.
2. Demonstrate knowledge of the federal system.
3. Describe separation of powers and checks and balances in both theory and practice.
4. Demonstrate knowledge of the legislative, executive, and judicial branches of the federal government.
5. Evaluate the role of public opinion, interest groups, and political parties in the political system.
6. Analyze the election process.
7. Describe the rights and responsibilities of citizens
8. Analyze issues and policies in U.S. politics.

GOVT 2306 Texas Government (Texas constitution & topics)

Origin and development of the Texas constitution, structure and powers of state and local government, federalism and inter-governmental relations, political participation, the election process, public policy, and the political culture of Texas

Approval Number.....45.1002.51 25
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

Learning Outcomes

Upon successful completion of this course, students will:

1. Explain the origin and development of the Texas constitution.
2. Describe state and local political systems and their relationship with the federal government.
3. Describe separation of powers and checks and balances in both theory and practice in Texas.
4. Demonstrate knowledge of the legislative, executive, and judicial branches of Texas government.
5. Evaluate the role of public opinion, interest groups, and political parties in Texas.
6. Analyze the state and local election process.
7. Identify the rights and responsibilities of citizens.
8. Analyze issues, policies and political culture of Texas.

GOVT 2311 Mexican-American Politics

The study of Mexican-American/Chicano/a politics within the American political experience.

Approval Number.....05.0203.54 25
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

GOVT 2289 Academic Cooperative (2 SCH version)
GOVT 2389 Academic Cooperative (3 SCH version)

An instructional program designed to integrate on-campus study with practical hands-on experience in government. In conjunction with class seminars, the individual student will set specific goals and objectives in the study of human social behavior and/or social institutions.

Approval Number.....45.0101.51 25
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....144

GREE (Greek Language)

GREE 1311 Beginning Greek I (1st semester Greek, 3 SCH version)
GREE 1411 Beginning Greek I (1st semester Greek, 4 SCH version)
GREE 1511 Beginning Greek I (1st semester Greek, 5 SCH version)

GREE 1312 Beginning Greek II (2nd semester Greek, 3 SCH version)
GREE 1412 Beginning Greek II (2nd semester Greek, 4 SCH version)
GREE 1512 Beginning Greek II (2nd semester Greek, 5 SCH version)

Essentials of grammar, reading of easy prose, Greek mythology and civilization, and building of English vocabulary derived from Greek.

Approval Number.....16.0601.51 13
maximum SCH per student.....10
maximum SCH per course.....5
maximum contact hours per course.....112

GREE 2311 Intermediate Greek I (3rd semester Greek)
GREE 2312 Intermediate Greek II (4th semester Greek)

Greek drama and selections from the *Iliad*.

Approval Number.....16.0601.52 13
maximum SCH per student.....6
maximum SCH per course.....3
maximum contact hours per course.....80

HECO (Home Economics)

HECO 1101 Home Economics Perspectives (1 SCH version)

Study of home economics and its history, philosophy, and content areas.

Approval Number.....19.0101.51 09
maximum SCH per student..... 1
maximum SCH per course 1
maximum contact hours per course 16

HECO 1307 Personal Finance

Personal and family accounts, budgets and budgetary control, bank accounts, charge accounts, borrowing, investing, insurance, standards of living, renting or home ownership, and wills and trust plans. (Cross-listed as BUSI 1307)

Approval Number.....19.0401.51 09
maximum SCH per student..... 3
maximum SCH per course 3
maximum contact hours per course 48

HECO 1315 Food Preparation & Meal Management

Study of scientific principles involved in the selection and preparation of high quality foods. Management of time, money, and energy resources in the planning, preparation, and service of meals.

Approval Number.....19.0501.52 09
maximum SCH per student..... 3
maximum SCH per course 3
maximum contact hours per course 96

HECO 1320 Textiles

Analysis of fibers, yarns, fabrics, and finishes as related to end use, performance, and care of textile products.

Approval Number.....19.0901.52 09
maximum SCH per student..... 3
maximum SCH per course 3
maximum contact hours per course 96

HECO 1322 Nutrition & Diet Therapy

Study of the chemical, physical, and sensory properties of food; nutritional quality; and food use and diet applications. (Cross-listed as BIOL 1322)

Approval Number.....19.0501.51 09
maximum SCH per student..... 3
maximum SCH per course 3
maximum contact hours per course 48

HECO 1325 Housing & Interior Design I
HECO 1326 Housing & Interior Design II

Study of the psychological, sociological, economic, and aesthetic factors in the selection of housing and in the planning and analysis of interior home environments.

Approval Number.....19.0601.51 09
maximum SCH per student.....6
maximum SCH per course.....3
maximum contact hours per course.....96

HECO 1328 Clothing Selection, Design, & Construction I
HECO 1329 Clothing Selection, Design, & Construction II

Selection, design, and construction of clothing apparel and accessories.

Approval Number.....19.0905.51 09
maximum SCH per student.....6
maximum SCH per course.....3
maximum contact hours per course.....96

HECO 2311 Fashion Merchandising

Principles, techniques, and practices for successful merchandising of fashion products.

Approval Number.....52.1902.51 04
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....96

HIST (History)

HIST 1301 United States History I

A survey of the social, political, economic, cultural, and intellectual history of the United States from the pre-Columbian era to the Civil War/Reconstruction period. United States History I includes the study of pre-Columbian, colonial, revolutionary, early national, slavery and sectionalism, and the Civil War/Reconstruction eras. Themes that may be addressed in United States History I include: American settlement and diversity, American culture, religion, civil and human rights, technological change, economic change, immigration and migration, and creation of the federal government.

Approval Number.....54.0102.51 25
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

Learning Outcomes

Upon successful completion of this course, students will:

1. Create an argument through the use of historical evidence.
2. Analyze and interpret primary and secondary sources.
3. Analyze the effects of historical, social, political, economic, cultural, and global forces on this period of United States history.

HIST 1302 United States History II

A survey of the social, political, economic, cultural, and intellectual history of the United States from the Civil War/Reconstruction era to the present. United States History II examines industrialization, immigration, world wars, the Great Depression, Cold War and post-Cold War eras. Themes that may be addressed in United States History II include: American culture, religion, civil and human rights, technological change, economic change, immigration and migration, urbanization and suburbanization, the expansion of the federal government, and the study of U.S. foreign policy.

Approval Number.....54.0102.51 25
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

Learning Outcomes

Upon successful completion of this course, students will:

1. Create an argument through the use of historical evidence.
2. Analyze and interpret primary and secondary sources.
3. Analyze the effects of historical, social, political, economic, cultural, and global forces on this period of United States history.

HIST 2301 Texas History

A survey of the political, social, economic, cultural, and intellectual history of Texas from the pre-Columbian era to the present. Themes that may be addressed in Texas History include: Spanish colonization and Spanish Texas; Mexican Texas; the Republic of Texas; statehood and secession; oil, industrialization, and urbanization; civil rights; and modern Texas.

Approval Number.....54.0102.52 25
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

Learning Outcomes

Upon successful completion of this course, students will:

1. Create an argument through the use of historical evidence.
2. Analyze and interpret primary and secondary sources.
3. Analyze the effects of historical, social, political, economic, cultural, and global forces on Texas history.

HIST 2311 Western Civilization I

A survey of the social, political, economic, cultural, religious, and intellectual history of Europe and the Mediterranean world from human origins to the 17th century. Themes that should be addressed in Western Civilization I include the cultural legacies of Mesopotamia, Egypt, Greece, Rome, Byzantium, Islamic civilizations, and Europe through the Middle Ages, Renaissance, and Reformations.

Approval Number.....54.0101.54 25
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

Learning Outcomes

Upon successful completion of this course, students will:

1. Create an argument through the use of historical evidence.
2. Analyze and interpret primary and secondary sources.
3. Analyze the effects of historical, social, political, economic, and cultural forces on this period of western history.

HIST 2312 Western Civilization II

A survey of the social, political, economic, cultural, religious, and intellectual history of Europe and the Mediterranean world from the 17th century to the modern era. Themes that should be addressed in Western Civilization II include absolutism and constitutionalism, growth of nation states, the Enlightenment, revolutions, classical liberalism, industrialization, imperialism, global conflict, the Cold War, and globalism.

Approval Number.....54.0101.54 25
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

Learning Outcomes

Upon successful completion of this course, students will:

1. Create an argument through the use of historical evidence.
2. Analyze and interpret primary and secondary sources.
3. Analyze the effects of historical, social, political, economic, and cultural forces on this period of western history.

HIST 2313 History of England I
HIST 2314 History of England II

Survey of the political, social, economic, military, cultural, and intellectual development of England from prehistory to the present.

Approval Number.....54.0101.54 25
maximum SCH per student.....6
maximum SCH per course.....3
maximum contact hours per course.....48

HIST 2321 World Civilizations I

A survey of the social, political, economic, cultural, religious, and intellectual history of the world from the emergence of human cultures through the 15th century. The course examines major cultural regions of the world in Africa, the Americas, Asia, Europe, and Oceania and their global interactions over time. Themes include the emergence of early societies, the rise of civilizations, the development of political and legal systems, religion and philosophy, economic systems and trans-regional networks of exchange. The course emphasizes the development, interaction and impact of global exchange.

Approval Number.....54.0101.53 25
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

Learning Outcomes

Upon successful completion of this course, students will:

1. Create an argument through the use of historical evidence.
2. Analyze and interpret primary and secondary sources.
3. Analyze the effects of historical, social, political, economic, cultural, and global forces on this period of world history.

HIST 2322 World Civilizations II

A survey of the social, political, economic, cultural, religious, and intellectual history of the world from the 15th century to the present. The course examines major cultural regions of the world in Africa, the Americas, Asia, Europe, and Oceania and their global interactions over time. Themes include maritime exploration and transoceanic empires, nation/state formation and industrialization, imperialism, global conflicts and resolutions, and global economic integration. The course emphasizes the development, interaction and impact of global exchange.

Approval Number.....54.0101.53 25
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

Learning Outcomes

Upon successful completion of this course, students will:

1. Create an argument through the use of historical evidence.
2. Analyze and interpret primary and secondary sources.
3. Analyze the effects of historical, social, political, economic, cultural, and global forces on this period of world history.

HIST 2323 Eastern Civilizations (single-semester course)

Survey of ancient and medieval history with emphasis on Asian, African, and European cultures Includes the modern history and culture of Asia, Africa, Europe, and the Americas.

Approval Number.....54.0101.53 25
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

HIST 2327 Mexican-American History I
HIST 2328 Mexican-American History II

Historical, economic, social, and cultural development of Mexican-Americans/Chicanos/as. (May be applied to U.S. History requirement.)

Approval Number.....05.0203.52 25
maximum SCH per student.....6
maximum SCH per course.....3
maximum contact hours per course.....48

HIST 2381 African-American History

Historical, economic, social, and cultural development of minority groups. May include African-American, Mexican American, Asian American, and Native American issues.

Approval Number.....45.1101.53 25
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

HIST 2289 Academic Cooperative (2 SCH version)
HIST 2389 Academic Cooperative (3 SCH version)

An instructional program designed to integrate on-campus study with practical hands-on experience in history. In conjunction with class seminars, the individual student will set specific goals and objectives in the study of human social behavior and/or social institutions.

Approval Number.....45.0101.51 25
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....144

HORT (Horticulture)

HORT 1301 Horticulture (3 SCH version)
HORT 1401 Horticulture (4 SCH version)

Structure, growth, and development of horticultural plants from a practical and scientific approach. Environmental effects, basic principles of propagation, greenhouse and outdoor production, nutrition, pruning, chemical control of growth, pest control, and landscaping. (Cross-listed as AGRI 1315 & 1415)

Approval Number.....01.0601.51 01
maximum SCH per student.....4
maximum SCH per course.....4
maximum contact hours per course.....96

HUMA (Humanities)

HUMA 1301 Introduction to the Humanities I
HUMA 1302 Introduction to the Humanities II

An interdisciplinary, multi-perspective assessment of cultural, political, philosophical, and aesthetic factors critical to the formulation of values and the historical development of the individual and of society.

Approval Number.....24.0103.51 12
maximum SCH per student.....6
maximum SCH per course.....3
maximum contact hours per course.....48

HUMA 1305 Introduction to Mexican-American Studies

Introduction to the field of Mexican-American/Chicano/a Studies from its inception to the present. Interdisciplinary survey designed to introduce students to the salient cultural, economic, educational, historical, political, and social aspects of the Mexican-American/Chicano/a experience.

Approval Number.....05.0203.51 25
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

HUMA 1311 Mexican-American Fine Arts Appreciation

An examination of Mexican-American/Chicano/a artistic expressions in the visual and performing arts.

Approval Number.....50.0703.54 26
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

HUMA 1315 Fine Arts Appreciation

Understanding purposes and processes in the visual and musical arts including evaluation of selected works.

Approval Number.....50.0101.51 26
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

HUMA 2319 American Minority Studies

Historical, economic, social, and cultural development of minority groups. May include African-American, Mexican American, Asian American, and Native American issues.

Approval Number.....45.1101.53 25
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

HUMA 2323 World Cultures

Study of human beings, their antecedents and related primates, and their cultural behavior and institutions. Introduces the major sub-fields: physical and cultural anthropology, archeology, linguistics, and ethnology. (Cross-listed as ANTH 2346)

Approval Number.....45.0201.51 25
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

ITAL (Italian Language)

ITAL 1311 Beginning Italian I (1st semester Italian, 3 SCH version)
ITAL 1411 Beginning Italian I (1st semester Italian, 4 SCH version)
ITAL 1511 Beginning Italian I (1st semester Italian, 5 SCH version)

ITAL 1312 Beginning Italian II (2nd semester Italian, 3 SCH version)
ITAL 1412 Beginning Italian II (2nd semester Italian, 4 SCH version)
ITAL 1512 Beginning Italian II (2nd semester Italian, 5 SCH version)

Fundamental skills in listening comprehension, speaking, reading, and writing. Includes basic vocabulary, grammatical structures, and culture.

Approval Number.....16.0902.51 13
maximum SCH per student..... 10
maximum SCH per course 5
maximum contact hours per course 112

ITAL 2311 Intermediate Italian I (3rd semester Italian)
ITAL 2312 Intermediate Italian II (4th semester Italian)

Review and application of skills in listening comprehension, speaking, reading, and writing. Emphasizes conversation, vocabulary acquisition, reading, composition, and culture.

Approval Number.....16.0902.52 13
maximum SCH per student.....6
maximum SCH per course 3
maximum contact hours per course 80

JAPN (Japanese Language)

JAPN 1300 Conversational Japanese I
JAPN 1310 Conversational Japanese II

Fundamental skills in listening comprehension, speaking, reading, and writing. Includes basic vocabulary, grammatical structures, and culture.

Approval Number.....16.0302.51 13
maximum SCH per student.....6
maximum SCH per course 3
maximum contact hours per course 80

JAPN 1311 Beginning Japanese I (1st semester Japanese, 3 SCH version)
JAPN 1411 Beginning Japanese I (1st semester Japanese, 4 SCH version)
JAPN 1511 Beginning Japanese I (1st semester Japanese, 5 SCH version)

JAPN 1312 Beginning Japanese II (2nd semester Japanese, 3 SCH version)
JAPN 1412 Beginning Japanese II (2nd semester Japanese, 4 SCH version)
JAPN 1512 Beginning Japanese II (2nd semester Japanese, 5 SCH version)

Fundamental skills in listening comprehension, speaking, reading, and writing. Includes basic vocabulary, grammatical structures, and culture.

Approval Number.....16.0302.51 13
maximum SCH per student..... 10
maximum SCH per course 5
maximum contact hours per course 112

JAPN 2311 Intermediate Japanese I (3rd semester Japanese)
JAPN 2312 Intermediate Japanese II (4th semester Japanese)

Review and application of skills in listening comprehension, speaking, reading, and writing. Emphasizes conversation, vocabulary acquisition, reading, composition, and culture.

Approval Number.....16.0302.52 13
maximum SCH per student.....6
maximum SCH per course 3
maximum contact hours per course 80

KINE (Kinesiology): See PHED Listings

KORE (Korean Language)

KORE 1311 Beginning Korean I (1st semester Korean, 3 SCH version)
KORE 1411 Beginning Korean I (1st semester Korean, 4 SCH version)
KORE 1511 Beginning Korean I (1st semester Korean, 5 SCH version)

KORE 1312 Beginning Korean II (2nd semester Korean, 3 SCH version)
KORE 1412 Beginning Korean II (2nd semester Korean, 4 SCH version)
KORE 1512 Beginning Korean II (2nd semester Korean, 5 SCH version)

Fundamental skills in listening comprehension, speaking, reading, and writing. Includes basic vocabulary, grammatical structures, and culture.

Approval Number.....16.0303.51 13
maximum SCH per student..... 10
maximum SCH per course 5
maximum contact hours per course 112

KORE 2311 Intermediate Korean I (3rd semester Korean)
KORE 2312 Intermediate Korean II (4th semester Korean)

Review and application of skills in listening comprehension, speaking, reading, and writing. Emphasizes conversation, vocabulary acquisition, reading, composition, and culture.

Approval Number.....16.0303.52 13
maximum SCH per student.....6
maximum SCH per course.....3
maximum contact hours per course.....80

LANG (Foreign Languages)

LANG 1311 Foreign Language I (1st semester, 3 SCH version)
LANG 1411 Foreign Language I (1st semester, 4 SCH version)
LANG 1511 Foreign Language I (1st semester, 5 SCH version)

LANG 1312 Foreign Language II (2nd semester, 3 SCH version)
LANG 1412 Foreign Language II (2nd semester, 4 SCH version)
LANG 1512 Foreign Language II (2nd semester, 5 SCH version)

These courses are intended to serve as generic foreign language credits for students in the International Baccalaureate Diploma program. They are for transcripting purposes only, and may not be submitted for state reimbursement.

Approval Number..... not applicable
maximum SCH per student.....10
maximum SCH per course.....5
maximum contact hours per course..... not applicable

LATI (Latin Language)

LATI 1311 Elementary Latin I (1st semester Latin, 3 SCH version)
LATI 1411 Elementary Latin I (1st semester Latin, 4 SCH version)
LATI 1511 Elementary Latin I (1st semester Latin, 5 SCH version)

LATI 1312 Elementary Latin II (2nd semester Latin, 3 SCH version)
LATI 1412 Elementary Latin II (2nd semester Latin, 4 SCH version)
LATI 1512 Elementary Latin II (2nd semester Latin, 5 SCH version)

Grammar and vocabulary. Emphasis on the value of Latin as a background for the study of English and modern foreign languages.

Approval Number.....16.1203.51 13
maximum SCH per student.....10
maximum SCH per course.....5
maximum contact hours per course.....112

LATI 2311 Intermediate Latin I (3rd semester Latin)
LATI 2312 Intermediate Latin II (4th semester Latin)

Review of grammar and readings in Roman literary works.

Approval Number.....16.1203.52 13
maximum SCH per student.....6
maximum SCH per course.....3
maximum contact hours per course.....80

MATH (Mathematics)

MATH 1314 College Algebra (3 SCH version)
MATH 1414 College Algebra (4 SCH version)

In-depth study and applications of polynomial, rational, radical, exponential and logarithmic functions, and systems of equations using matrices. Additional topics such as sequences, series, probability, and conics may be included.

Approval Number.....27.0101.54 19
maximum SCH per student.....4
maximum SCH per course.....4
maximum contact hours per course.....64

Learning Outcomes

Upon successful completion of this course, students will:

1. Demonstrate and apply knowledge of properties of functions, including domain and range, operations, compositions, and inverses.
2. Recognize and apply polynomial, rational, radical, exponential and logarithmic functions and solve related equations.
3. Apply graphing techniques.
4. Evaluate all roots of higher degree polynomial and rational functions.
5. Recognize, solve and apply systems of linear equations using matrices.

MATH 1316 Plane Trigonometry

In-depth study and applications of trigonometry including definitions, identities, inverse functions, solutions of equations, graphing, and solving triangles. Additional topics such as vectors, polar coordinates and parametric equations may be included.

Approval Number.....27.0101.53 19
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

Learning Outcomes

Upon successful completion of this course, students will:

1. Compute the values of trigonometric functions for key angles in all quadrants of the unit circle measured in both degrees and radians.
2. Graph trigonometric functions and their transformations.

3. Prove trigonometric identities.
4. Solve trigonometric equations.
5. Solve right and oblique triangles.
6. Use the concepts of trigonometry to solve applications.

MATH 1324 Mathematics for Business & Social Sciences I (Finite Mathematics)

Topics from college algebra (linear equations, quadratic equations, functions and graphs, inequalities), mathematics of finance (simple and compound interest, annuities), linear programming, matrices, systems of linear equations, applications to management, economics, and business. (The content level of MATH 1324 is expected to be at or above the level of college algebra, MATH 1314)

Approval Number.....27.0301.52 19
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....64

MATH 1325 Mathematics for Business & Social Sciences II (Business Calculus, 3 SCH version)
MATH 1425 Mathematics for Business & Social Sciences II (Business Calculus, 4 SCH version*)*

Limits and continuity, derivatives, graphing and optimization, exponential and logarithmic functions, antiderivatives, integration, applications to management, economics, and business.

Prerequisite: MATH 1324 or equivalent. (The content level of MATH 1325 is expected to be below the content level of Calculus I, MATH 2413)

Approval Number.....27.0301.53 19
maximum SCH per student.....4
maximum SCH per course.....4
maximum contact hours per course.....64

MATH 1332 Contemporary Mathematics I (Math for Liberal Arts Majors I)
MATH 1333 Contemporary Mathematics II (Math for Liberal Arts Majors II)

Topics may include introductory treatments of sets, logic, number systems, number theory, relations, functions, probability and statistics. Appropriate applications are included.

Approval Number.....27.0101.51 19
maximum SCH per student.....6
maximum SCH per course.....3
maximum contact hours per course.....48

MATH 1350 Fundamentals of Mathematics I

Concepts of sets, functions, numeration systems, number theory, and properties of the natural numbers, integers, rational, and real number systems with an emphasis on problem solving and critical thinking. Prerequisite: College Algebra or the equivalent.

Approval Number.....27.0101.56 19
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

MATH 1351 Fundamentals of Mathematics II

Concepts of geometry, probability, and statistics, as well as applications of the algebraic properties of real numbers to concepts of measurement with an emphasis on problem solving and critical thinking. This course is designed specifically for students who seek middle grade (4 through 8) teacher certification.

Prerequisite: MATH 1350, College Algebra or the equivalent.

Approval Number.....27.0101.57 19
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

MATH 1342 Elementary Statistical Methods (3 SCH version, freshman level)
MATH 1442 Elementary Statistical Methods (4 SCH version, freshman level)
MATH 2342 Elementary Statistical Methods (3 SCH version, sophomore level)
MATH 2442 Elementary Statistical Methods (4 SCH version, sophomore level)

Collection, analysis, presentation and interpretation of data, and probability. Analysis includes descriptive statistics, correlation and regression, confidence intervals and hypothesis testing. Use of appropriate technology is recommended.

Approval Number.....27.0501.51 19
maximum SCH per student.....4
maximum SCH per course.....4
maximum contact hours per course.....96

Learning Outcomes

Upon successful completion of this course, students will:

1. Explain the use of data collection and statistics as tools to reach reasonable conclusions.
2. Recognize, examine and interpret the basic principles of describing and presenting data.
3. Compute and interpret empirical and theoretical probabilities using the rules of probabilities and combinatorics.
4. Explain the role of probability in statistics.
5. Examine, analyze and compare various sampling distributions for both discrete and continuous random variables.
6. Describe and compute confidence intervals.
7. Solve linear regression and correlation problems.
8. Perform hypothesis testing using statistical methods.

MATH 1348 Analytic Geometry

Lines, circles, and other conic sections; transformation of coordinates; polar coordinates; and parametric equations.

Approval Number.....27.0101.55 19
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

MATH 2312 Pre-Calculus Math (3 SCH version)
MATH 2412 Pre-Calculus Math (4 SCH version)

In-depth combined study of algebra, trigonometry, and other topics for calculus readiness.

Approval Number.....27.0101.58 19
maximum SCH per student.....4
maximum SCH per course.....4
maximum contact hours per course.....80

Learning Outcomes

Upon successful completion of this course, students will:

1. Demonstrate and apply knowledge of properties of functions.
2. Recognize and apply algebraic and transcendental functions and solve related equations.
3. Apply graphing techniques to algebraic and transcendental functions.
4. Compute the values of trigonometric functions for key angles in all quadrants of the unit circle measured in both degrees and radians.
5. Prove trigonometric identities.
6. Solve right and oblique triangles.

MATH 2313 Calculus I (3 SCH version)
MATH 2413 Calculus I (4 SCH version)
MATH 2513 Calculus I (5 SCH version) (Scheduled for deletion fall 2014)

Limits and continuity; the Fundamental Theorem of Calculus; definition of the derivative of a function and techniques of differentiation; applications of the derivative to maximizing or minimizing a function; the chain rule, mean value theorem, and rate of change problems; curve sketching; definite and indefinite integration of algebraic, trigonometric, and transcendental functions, with an application to calculation of areas.

Prerequisite: MATH 2412—Pre-Calculus Math or equivalent preparation

Approval Number.....27.0101.59 19
maximum SCH per student.....5
maximum SCH per course.....5
maximum contact hours per course.....96

Learning Outcomes

Upon successful completion of this course, students will:

1. Develop solutions for tangent and area problems using the concepts of limits, derivatives, and integrals.

2. Draw graphs of algebraic and transcendental functions considering limits, continuity, and differentiability at a point.
3. Determine whether a function is continuous and/or differentiable at a point using limits.
4. Use differentiation rules to differentiate algebraic and transcendental functions.
5. Identify appropriate calculus concepts and techniques to provide mathematical models of real-world situations and determine solutions to applied problems.
6. Evaluate definite integrals using the Fundamental Theorem of Calculus.
7. Articulate the relationship between derivatives and integrals using the Fundamental Theorem of Calculus.

MATH 2314 Calculus II (3 SCH version)
MATH 2414 Calculus II (4 SCH version)

Differentiation and integration of transcendental functions; parametric equations and polar coordinates; techniques of integration; sequences and series; improper integrals.

Prerequisite: MATH 2413 - Calculus I

Approval Number.....27.0101.60 19
maximum SCH per student.....4
maximum SCH per course.....4
maximum contact hours per course.....96

Learning Outcomes

Upon successful completion of this course, students will:

1. Use the concepts of definite integrals to solve problems involving area, volume, work, and other physical applications.
2. Use substitution, integration by parts, trigonometric substitution, partial fractions, and tables of anti-derivatives to evaluate definite and indefinite integrals.
3. Define an improper integral.
4. Apply the concepts of limits, convergence, and divergence to evaluate some classes of improper integrals.
5. Determine convergence or divergence of sequences and series.
6. Use Taylor and MacLaurin series to represent functions.
7. Use Taylor or MacLaurin series to integrate functions not integrable by conventional methods.
8. Use the concept of polar coordinates to find areas, lengths of curves, and representations of conic sections.

MATH 2315 Calculus III (3 SCH version)
MATH 2415 Calculus III (4 SCH version)

Advanced topics in calculus, including vectors and vector-valued functions, partial differentiation, Lagrange multipliers, multiple integrals, and Jacobians; application of the line integral, including Green's Theorem, the Divergence Theorem, and Stokes' Theorem.

Prerequisite: MATH 2414—Calculus II

Approval Number.....27.0101.61 19
maximum SCH per student.....4
maximum SCH per course.....4
maximum contact hours per course.....96

Learning Outcomes

Upon successful completion of this course, students will:

1. Perform calculus operations on vector-valued functions, including derivatives, integrals, curvature, displacement, velocity, acceleration, and torsion.
2. Perform calculus operations on functions of several variables, including partial derivatives, directional derivatives, and multiple integrals.
3. Find *extrema* and tangent planes.
4. Solve problems using the Fundamental Theorem of Line Integrals, Green's Theorem, the Divergence Theorem, and Stokes' Theorem.
5. Apply the computational and conceptual principles of calculus to the solutions of real-world problems.

MATH 2316 Calculus IV

MATH 2417 Accelerated Calculus I (4 SCH version)
MATH 2419 Accelerated Calculus II (4 SCH version)

Functions, limits, continuity, differentiation, integration, applications, sequences and series, vector analysis, partial differentiation, and multiple integration. This course may include topics in analytic geometry.
(**NOTE:** A standard calculus sequence may consist of three or four courses. Courses within a sequence may carry three, four, or five semester hours of credit; and courses within the same sequence may carry different semester hour values, e.g. five SCH for Calculus I, four SCH for Calculus II, and three SCH for Calculus III. The Accelerated Calculus sequence, MATH 2417 & 2419, covers the same content as three- or four-semester sequences in a shortened format.)

Approval Number.....27.0101.62 19
maximum SCH per student.....8
maximum SCH per course.....4
maximum contact hours per course.....96

MATH 2318 Linear Algebra (3 SCH version)
MATH 2418 Linear Algebra (4 SCH version)

Introduces and provides models for application of the concepts of vector algebra. Topics include finite dimensional vector spaces and their geometric significance; representing and solving systems of linear equations using multiple methods, including Gaussian elimination and matrix inversion; matrices; determinants; linear transformations; quadratic forms; eigenvalues and eigenvector; and applications in science and engineering.

Pre-requisite: MATH 2414 - Calculus II

Approval Number.....27.0101.63 19
maximum SCH per student.....4
maximum SCH per course.....4
maximum contact hours per course.....64

Learning Outcomes

Upon successful completion of this course, students will:

1. Be able to solve systems of linear equations using multiple methods, including Gaussian elimination and matrix inversion.
2. Be able to carry out matrix operations, including inverses and determinants.
3. Demonstrate understanding of the concepts of vector space and subspace.
4. Demonstrate understanding of linear independence, span, and basis.
5. Be able to determine eigenvalues and eigenvectors and solve problems involving eigenvalues.
6. Apply principles of matrix algebra to linear transformations.
7. Demonstrate application of inner products and associated norms.

MATH 2320 Differential Equations (3 SCH version)
MATH 2420 Differential Equations (4 SCH version)

Ordinary differential equations, including linear equations, systems of equations, equations with variable coefficients, existence and uniqueness of solutions, series solutions, singular points, transform methods, and boundary value problems; application of differential equations to real-world problems.

Prerequisite: MATH 2414—Calculus II

Approval Number.....27.0101.64 19
maximum SCH per student.....4
maximum SCH per course.....4
maximum contact hours per course.....64

Learning Outcomes

Upon successful completion of this course, students will:

1. Identify homogeneous equations, homogeneous equations with constant coefficients, and exact and linear differential equations.
2. Solve ordinary differential equations and systems of equations using:
   a) Direct integration
   b) Separation of variables
   c) Reduction of order
   d) Methods of undetermined coefficients and variation of parameters
   e) Series solutions
   f) Operator methods for finding particular solutions
   g) Laplace transform methods
3. Determine particular solutions to differential equations with given boundary conditions or initial conditions.
4. Analyze real-world problems in fields such as Biology, Chemistry, Economics, Engineering, and Physics, including problems related to population dynamics, mixtures, growth and decay, heating and cooling, electronic circuits, and Newtonian mechanics.

MATH 2321 Differential Equations and Linear Algebra (3 SCH version)
MATH 2421 Differential Equations and Linear Algebra (4 SCH version)

This course emphasizes solution techniques. Ordinary differential equations, vector spaces, linear transformations, matrix/vector algebra, eigenvectors, Laplace Transform, and systems of equations.

Prerequisite: up to 12 SCH of calculus. (This course is included in the Field of Study Curriculum for Engineering.)

Approval Number.....27.0101.65 19
maximum SCH per student.....4
maximum SCH per course.....4
maximum contact hours per course.....80

MATH 2305 Discrete Mathematics (3 SCH version)
MATH 2405 Discrete Mathematics (4 SCH version)

A course designed to prepare math, computer science, and engineering majors for a background in abstraction, notation, and critical thinking for the mathematics most directly related to computer science. Topics include: logic, relations, functions, basic set theory, countability and counting arguments, proof techniques, mathematical induction, combinatorics, discrete probability, recursion, sequence and recurrence, elementary number theory, graph theory, and mathematical proof techniques.

Prerequisite: MATH 2313/2413/2513 - Calculus I

Approval Number.....27.0101.66 19
maximum SCH per student.....4
maximum SCH per course.....4
maximum contact hours per course.....96

Learning Outcomes

Upon successful completion of this course, students will:

1. Construct mathematical arguments using logical connectives and quantifiers.
2. Verify the correctness of an argument using propositional and predicate logic and truth tables.
3. Demonstrate the ability to solve problems using counting techniques and combinatorics in the context of discrete probability.
4. Solve problems involving recurrence relations and generating functions.
5. Use graphs and trees as tools to visualize and simplify situations.
6. Perform operations on discrete structures such as sets, functions, relations, and sequences.
7. Construct proofs using direct proof, proof by contraposition, proof by contradiction, proof by cases, and mathematical induction.
8. Apply algorithms and use definitions to solve problems to prove statements in elementary number theory.

MUAP (Applied Music)

Individual Instruction

Individual instruction in voice or brass, percussion, woodwind, stringed, or keyboard instruments.

Approval Number.....50.0903.54 26
maximum SCH per student..... 20
maximum SCH per course 3
maximum contact hours per course 32

The common number format for MUAP courses is a 4-digit number. The 1st digit denotes the level of the course (1 for freshman, 2 for sophomore) and the 2nd digit represents the SCH value. A range of possible 3rd & 4th digits identifies the subject and course sequence.

MUEN (Music Ensemble)

The common number format for MUEN courses is a 4-digit number. The 1st digit denotes the level of the course (1 for freshman, 2 for sophomore) and the 2nd digit represents the SCH value. A range of possible 3rd & 4th digits identifies the subject and course sequence.

Approval Number	Course	3rd & 4th digits
50.0903.55 26	Major (Large) Instrumental Ensembles	21 through 30
50.0903.56 26	Chamber (Small) Instrumental Ensembles	31 through 40
50.0903.57 26	Major (Large) Vocal Ensembles	41 through 50
50.0903.58 26	Chamber (Small) Vocal Ensembles	51 through 60

This arrangement allows institutions to assign up to 20 distinct numbers under each of the 4 CIP codes, for a total of 80 possible courses; no attempt has been made in the TCCN system to standardize individual numbers within these ranges.

Major (Large) Instrumental Ensembles

Concert band, marching band, campus band, laboratory band (jazz/stage), symphony or orchestral group.

Approval Number.....50.0903.55 26
maximum SCH per student..... 8
maximum SCH per course 2
maximum contact hours per course 96

Chamber (Small) Instrumental Ensembles

Smaller instrumental ensembles: wind, string, percussion, piano, or laboratory (jazz, rock, fusion, or contemporary).

Approval Number.....50.0903.56 26
maximum SCH per student..... 8
maximum SCH per course 2
maximum contact hours per course 64

Major (Large) Vocal Ensembles

Any major choral group, campus choir, chorus, or swing choir.

Approval Number.....50.0903.57 26
maximum SCH per student.....8
maximum SCH per course.....2
maximum contact hours per course.....96

Chamber (Small) Vocal Ensembles

Vocal ensemble, glee club, madrigals, or small swing choir.

Approval Number.....50.0903.58 26
maximum SCH per student.....8
maximum SCH per course.....2
maximum contact hours per course.....64

MUSI (Music)

MUSI 1304 Foundations of Music

Study of the fundamentals of music for prospective classroom teachers with an introduction to melodic, rhythmic, and harmonic elements. Emphasis on participation in singing and reading music.

Approval Number.....50.0904.54 26
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....80

MUSI 1301 Fundamentals of Music I
MUSI 1302 Fundamentals of Music II
MUSI 1303 Fundamentals of Music (single-semester course)

Introduction to the basic elements of music theory for non-music majors: scales, intervals, keys, triads, elementary ear training, keyboard harmony, notation, meter, and rhythm. (Does not apply to a music major degree.)

Approval Number.....50.0904.55 26
maximum SCH per student.....6
maximum SCH per course.....3
maximum contact hours per course.....48

MUSI 1306 Music Appreciation

Understanding music through the study of cultural periods, major composers, and musical elements. Illustrated with audio recordings and live performances. (Does not apply to a music major degree.)

Approval Number.....50.0902.51 26
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

MUSI 1307 Music Literature (single-semester course)
MUSI 1308 Music Literature I
MUSI 1309 Music Literature II

Survey of the principal musical forms and cultural periods as illustrated in the literature of major composers.

Approval Number.....50.0902.52 26
maximum SCH per student.....6
maximum SCH per course.....3
maximum contact hours per course.....80

MUSI 1310 American Music

General survey of various styles of music in America. Topics may include jazz, ragtime, folk, rock, and contemporary art music.

Approval Number.....50.0902.53 26
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

MUSI 1114 Piano Class for Music Majors I
MUSI 1115 Piano Class for Music Majors II
MUSI 2114 Piano Class for Music Majors III
MUSI 2115 Piano Class for Music Majors IV

Class piano instruction for music majors with an emphasis on the practical application of music theory involving harmonization, transposition, and related keyboard skills.

Approval Number.....50.0904.51 26
maximum SCH per student.....4
maximum SCH per course.....1
maximum contact hours per course.....48

MUSI 1211 Music Theory I (2 SCH version)
MUSI 1311 Music Theory I (3 SCH version)
MUSI 1212 Music Theory II (2 SCH version)
MUSI 1312 Music Theory II (3 SCH version)

Analysis and writing of tonal melody and diatonic harmony up to and including the chords. Analysis and writing of small compositional forms. Correlated study at the keyboard.

Approval Number.....50.0904.51 26
maximum SCH per student.....6

maximum SCH per course 3
maximum contact hours per course 96

MUSI 1116 Sight Singing & Ear Training I (1 SCH version)
MUSI 1216 Sight Singing & Ear Training I (2 SCH version)
MUSI 1117 Sight Singing & Ear Training II (1 SCH version)
MUSI 1217 Sight Singing & Ear Training II (2 SCH version)

Singing tonal music in treble, bass, alto, and tenor clefs. Aural study, including dictation, of rhythm, melody, and diatonic harmony.

Approval Number.....50.0904.56 26
maximum SCH per student..... 4
maximum SCH per course 2
maximum contact hours per course 48

NOTE: The maximum SCH combination of Theory and Sight Singing and Ear Training is 4 SCH. An institution offering Theory I at 3 SCH must offer Sight Singing and Ear Training at 1 SCH for a total of 4 SCH for the combination. Likewise, an institution may select Theory I at 2 SCH and may select Sight Singing and Ear Training I at 2 SCH for a maximum of 4 SCH for the combination.

MUSI 1157 Opera Workshop I (1 SCH version)
MUSI 1257 Opera Workshop I (2 SCH version)
MUSI 1158 Opera Workshop II (1 SCH version)
MUSI 1258 Opera Workshop II (2 SCH version)
MUSI 2157 Opera Workshop III
MUSI 2158 Opera Workshop IV

Performance of portions of or complete operas and the study of the integration of music, acting, and staging of an opera.

Approval Number.....50.0908.52 26
maximum SCH per student..... 4
maximum SCH per course 2
maximum contact hours per course 48

MUSI 1159 Musical Theater I
MUSI 2159 Musical Theater II

Study and performance of works from the musical theater repertoire. (Cross-listed as DRAM 1161 & 1162)

Approval Number.....50.0903.61 26
maximum SCH per student..... 2
maximum SCH per course 1
maximum contact hours per course 80

MUSI 1160 Italian Diction
MUSI 1161 English Diction
MUSI 2160 German Diction
MUSI 2161 French Diction

Study of phonetic sounds of the English, French, German, or Italian languages to promote the ability to sing in those languages.

Approval Number.....50.0908.53 26
maximum SCH per student.....4
maximum SCH per course.....1
maximum contact hours per course.....32

MUSI 1163 Jazz Improvisation I (1 SCH version)
MUSI 1263 Jazz Improvisation I (2 SCH version)

MUSI 1164 Jazz Improvisation II (1 SCH version)
MUSI 1264 Jazz Improvisation II (2 SCH version)

MUSI 2163 Jazz Improvisation III
MUSI 2164 Jazz Improvisation IV

Materials and practices for improvisation or extemporaneous performance in the jazz idiom.

Approval Number.....50.0903.65 26
maximum SCH per student.....4
maximum SCH per course.....2
maximum contact hours per course.....48

MUSI 1166 Woodwind Class I
MUSI 1167 Woodwind Class II
MUSI 2166 Woodwind Class III
MUSI 2167 Woodwind Class IV

Class instruction in the fundamental techniques of playing and teaching woodwind instruments.

Approval Number.....50.0903.51 26
maximum SCH per student.....4
maximum SCH per course.....1
maximum contact hours per course.....48

MUSI 1178 Brass Class I
MUSI 1179 Brass Class II
MUSI 2178 Brass Class III
MUSI 2179 Brass Class IV

Class instruction in the fundamental techniques of playing and teaching brass instruments.

Approval Number.....50.0903.51 26
maximum SCH per student.....4
maximum SCH per course.....1
maximum contact hours per course.....48

MUSI 1181 Piano Class I
MUSI 1182 Piano Class II
MUSI 2181 Piano Class III
MUSI 2182 Piano Class IV

Class instruction in the fundamentals of keyboard technique for beginning piano students.

Approval Number.....50.0907.51 26
maximum SCH per student.....4
maximum SCH per course.....1
maximum contact hours per course.....48

MUSI 1183 Voice Class I
MUSI 1184 Voice Class II
MUSI 2183 Voice Class III
MUSI 2184 Voice Class IV

Class instruction in the fundamentals of singing including breathing, tone production, and diction. Designed for students with little or no previous voice training.

Approval Number.....50.0908.51 26
maximum SCH per student.....4
maximum SCH per course.....1
maximum contact hours per course.....48

MUSI 1186 Composition I (1 SCH version)
MUSI 1286 Composition I (2 SCH version)
MUSI 1386 Composition I (3 SCH version, freshman level)

MUSI 1187 Composition II (1 SCH version)
MUSI 1287 Composition II (2 SCH version)
MUSI 2386 Composition II (3 SCH version, sophomore-level)

MUSI 2186 Composition III (1 SCH version)
MUSI 2286 Composition III (2 SCH version)

MUSI 2187 Composition IV

Individual or class instruction in music composition. Composing in small forms for simple media in both traditional styles and styles of the student's choice.

Approval Number.....50.0904.53 26
maximum SCH per student.....9
maximum SCH per course.....3
maximum contact hours per course.....48

MUSI 1188 Percussion Class I
MUSI 1189 Percussion Class II
MUSI 2188 Percussion Class III
MUSI 2189 Percussion Class IV

Class instruction in the fundamental techniques of playing and teaching percussion instruments.

Approval Number.....50.0903.51 26
maximum SCH per student.....4
maximum SCH per course.....1
maximum contact hours per course.....48

MUSI 1195 Strings Class I
MUSI 1196 Strings Class II
MUSI 2195 Strings Class III
MUSI 2196 Strings Class IV

Class instruction in the fundamental techniques of playing and teaching stringed instruments.

Approval Number.....50.0903.51 26
maximum SCH per student.....4
maximum SCH per course.....1
maximum contact hours per course.....48

MUSI 1290 Electronic Music I (2 SCH version)
MUSI 1390 Electronic Music I (3 SCH version)

MUSI 1291 Electronic Music II (2 SCH version)
MUSI 1391 Electronic Music II (3 SCH version)

Introduction to the use of synthesizers, computers, sequencing and music printing software, multi-track recorders and other MIDI (Music Instrument Digital Interface) devices in the notation, arrangement, composition and performance of music. Prerequisite should be the completion of either a Music Fundamentals, Music Theory, Private Piano, or Class Piano Course.

Approval Number.....50.0904.58 26
maximum SCH per student.....6
maximum SCH per course.....3
maximum contact hours per course.....48

MUSI 1192 Guitar Class I
MUSI 1193 Guitar Class II
MUSI 2192 Guitar Class III
MUSI 2193 Guitar Class IV

Class instruction in the fundamental techniques of playing guitar.

Approval Number.....50.0911.51 26
maximum SCH per student.....4
maximum SCH per course.....1
maximum contact hours per course.....48

MUSI 2211 Music Theory III (2 SCH version)
MUSI 2311 Music Theory III (3 SCH version)

MUSI 2212 Music Theory IV (2 SCH version)
MUSI 2312 Music Theory IV (3 SCH version)

Advanced harmony part writing and keyboard analysis and writing of more advanced tonal harmony including chromaticism and extended tertian structures. Introduction to 20th century compositional procedures and survey of the traditional large forms of composition. Correlated study at the keyboard.

Approval Number.....50.0904.52 26
maximum SCH per student.....6
maximum SCH per course.....3
maximum contact hours per course.....96

MUSI 2116 Sight Singing & Ear Training III (1 SCH version)
MUSI 2216 Sight Singing & Ear Training III (2 SCH version)

MUSI 2117 Sight Singing & Ear Training IV (1 SCH version)
MUSI 2217 Sight Singing & Ear Training IV (2 SCH version)

Singing more difficult tonal music including modal, ethnic, and 20th century materials. Aural study, including dictation of more complex rhythm, melody, chromatic harmony, and extended tertian structures.

Approval Number.....50.0904.57 26
maximum SCH per student.....4
maximum SCH per course.....2
maximum contact hours per course.....96

NOTE: The maximum SCH combination of Theory and Sight Singing and Ear Training is 4 SCH. An institution offering Theory III at 3 SCH must offer Sight Singing and Ear Training at 1 SCH for a total of 4 SCH for the combination. Likewise, an institution may select Theory III at 2 SCH and may select Sight Singing and Ear Training III at 2 SCH for a maximum of 4 SCH for the combination.

MUSI 2289 Academic Cooperative (2 SCH version)
MUSI 2389 Academic Cooperative (3 SCH version)

An instructional program designed to integrate on-campus study with practical hands-on work experience. In conjunction with class seminars, the individual student will set specific goals and objectives in the study of music.

Approval Number.....24.0103.52 12
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....144

PHED (Physical Education)

NOTE: "KINE" (Kinesiology) may be used as an alternate Common Numbering rubric for PHED courses.

Physical Activities

Instruction and participation in physical and recreational activities. (Physical Fitness and Sport majors may have the option of eight credits.)

(**NOTE:** Any number in the ranges 1100-1150 and 2100-2150 may be used for Physical Education activity, as opposed to theory/classroom, courses. Because such courses are so numerous and their specific course equivalency typically is not a significant transfer credit issue, no attempt has been made in the ACGM and the TCCN Matrix to standardize individual numbers within these ranges.)

Approval Number.....36.0108.51 23
maximum SCH per student.....4 (non-major); 8 (major)
maximum SCH per course.....1
maximum contact hours per course.....48

Recreational Dance

Instruction and participation in folk, social, tap, or other dance forms.

(NOTE: These courses are recreational in nature and should bear the KINE/PHED prefix instead of the DANC prefix.)

Approval Number.....36.0114.51 23
maximum SCH per student.....4 (non-major); 8 (major)
maximum SCH per course.....2
maximum contact hours per course.....64

PHED 1151 Scuba Diving I (1 SCH version)
PHED 1251 Scuba Diving I (2 SCH version)
PHED 1152 Scuba Diving II (1 SCH version)
PHED 1252 Scuba Diving II (2 SCH version)

Participation and instruction in advanced aquatic activities. Prerequisite: demonstrated swimming skills.

Approval Number.....36.0108.54 23
maximum SCH per student.....4
maximum SCH per course.....2
maximum contact hours per course.....64

PHED 1153 Lifeguard Training (1 SCH version)
PHED 1253 Lifeguard Training (2 SCH version)

PHED 2155 Water Safety (1 SCH version)
PHED 2255 Water Safety (2 SCH version)

Participation and instruction in advanced aquatic activities. Prerequisite: demonstrated swimming skills.

Approval Number.....36.0108.53 23
maximum SCH per student.....4
maximum SCH per course.....2
maximum contact hours per course.....64

PHED 1164 Introduction to Physical Fitness & Sport
(Also see PHED 1238 & 1301)

Orientation to the field of physical fitness and sport. Includes the study and practice of activities and principles that promote physical fitness. (Cross-listed as PHED 1238 & 1301)

Approval Number.....31.0501.52 23
maximum SCH per student.....1
maximum SCH per course.....1
maximum contact hours per course.....48

PHED 1238 Introduction to Physical Fitness & Sport
(Also see PHED 1164 & 1301)

Orientation to the field of physical fitness and sport. Includes the study and practice of activities and principles that promote physical fitness. (Cross-listed as PHED 1164 & 1301)

Approval Number.....31.0501.52 23
maximum SCH per student.....2
maximum SCH per course.....2
maximum contact hours per course.....48

PHED 1301 Introduction to Physical Fitness & Sport
(Also see PHED 1164 & 1238)

Orientation to the field of physical fitness and sport. Includes the study and practice of activities and principles that promote physical fitness. (Cross-listed as PHED 1164 & 1238)

Approval Number.....31.0501.52 23
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

PHED 1165 Drug Use & Abuse (1 SCH version)
PHED 1346 Drug Use & Abuse (3 SCH version)

Study of the use and abuse of drugs in today's society. Emphasizes the physiological, sociological, and psychological factors. (Cross-listed as SOCI 2340)

Approval Number.....51.1504.52 16
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

PHED 1166 First Aid
(Also see PHED 1206 & 1306)

Instruction in and practice of first aid techniques. (Cross-listed as PHED 1206 & 1306)

Approval Number.....51.1504.53 16
maximum SCH per student.....1
maximum SCH per course.....1
maximum contact hours per course.....48

PHED 1206 First Aid (2 SCH version)
PHED 1306 First Aid (3 SCH version)
(Also see PHED 1166)

Instruction in and practice of first aid techniques. (Cross-listed as PHED 1166)

Approval Number.....51.1504.53 16
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

PHED 1304 Personal/Community Health I (may also be single-semester course)
PHED 1305 Personal/Community Health II

Investigation of the principles and practices in relation to personal and community health.

Approval Number.....51.1504.51 16
maximum SCH per student.....6
maximum SCH per course.....3
maximum contact hours per course.....48

PHED 1308 Sports Officiating I
PHED 1309 Sports Officiating II

Instruction in rules, interpretation, and mechanics of officiating selected sports.

Approval Number.....31.0101.51 23
maximum SCH per student.....6
maximum SCH per course.....3
maximum contact hours per course.....64

PHED 1321 Coaching/Sports/Athletics I
PHED 1322 Coaching/Sports/Athletics II

Study of the history, theories, philosophies, rules, and terminology of competitive sports. Includes coaching techniques.

Approval Number.....31.0505.51 23
maximum SCH per student.....6
maximum SCH per course.....3
maximum contact hours per course.....64

PHED 1331 Physical Education for Elementary Education Majors

An overview of the program of activities in elementary school physical education. Includes the study and practice of activities and principles that promote physical fitness with an emphasis on historical development, philosophical implications, physical fitness, and kinesiology.

Approval Number.....31.0501.52 23
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

PHED 1332 Game Skills
PHED 1333 Rhythm Skills
PHED 1336 Introduction to Recreation I
PHED 1337 Introduction to Recreation II

Fundamental theory and concepts of recreational activities with emphasis on programs, planning, and leadership.

Approval Number.....31.0101.51 23
maximum SCH per student.....6
maximum SCH per course.....3
maximum contact hours per course.....48

PHED 1338 Concepts of Physical Fitness

Concepts and use of selected physiological variables of fitness, individual testing and consultation, and the organization of sports and fitness programs.

Approval Number.....31.0501.51 23
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....96

PHED 2156 Taping and Bandaging

This course provides the fundamental taping and bandaging techniques used in the prevention and care of athletic related injuries.

Approval Number.....51.0913.51 16
maximum SCH per student.....1
maximum SCH per course.....1
maximum contact hours per course.....16

PHED 2356 Care and Prevention of Athletic Injuries

Prevention and care of athletic injuries with emphasis on qualities of a good athletic trainer, avoiding accidents and injuries, recognizing signs and symptoms of specific sports injuries and conditions, immediate and long-term care of injuries, and administration procedures in athletic training.

Approval Number.....51.0913.52 16
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

PHIL (Philosophy)

PHIL 1301 Introduction to Philosophy

A study of major issues in philosophy and/or the work of major philosophical figures in philosophy. Topics in philosophy may include theories of reality, theories of knowledge, theories of value, and their practical applications.

Approval Number.....38.0101.51 12
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

Learning Outcomes

Upon successful completion of this course, students will:

1. Read, analyze, and critique philosophical texts.
2. Demonstrate knowledge of key concepts, major arguments, problems, and terminology in philosophy.
3. Present logically persuasive arguments both orally and in writing.
4. Demonstrate critical thinking skills in evaluation and application of philosophical concepts to various aspects of life.
5. Evaluate the personal and social responsibilities of living in a diverse world.

PHIL 1304 Introduction to World Religions

A comparative study of world religions, including but not limited to Hinduism, Buddhism, Judaism, Christianity, and Islam.

Approval Number.....38.0201.52 12
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

Learning Outcomes

Upon successful completion of this course, students will:

1. Read, analyze, and critique religious texts.
2. Demonstrate knowledge of beliefs, practices, values, and terminology of major world religions.
3. Trace the historical developments and cultural expressions of world religions.
4. Articulate key conceptual distinctions in world religions.
5. Communicate understanding of world religions, orally or in writing.
6. Communicate ways of living responsibly in a world where people have diverse religious beliefs.

PHIL 1316 History of Religions I
PHIL 1317 History of Religions II

A comparative study of world religions, including but not limited to Hinduism, Buddhism, Judaism, Christianity, and Islam.

Approval Number.....38.0201.51 12
maximum SCH per student.....6
maximum SCH per course.....3
maximum contact hours per course.....48

Learning Outcomes

Upon successful completion of this course, students will:

1. Read, analyze, and critique religious texts.
2. Demonstrate knowledge of diverse beliefs, practices, and values of selected religious traditions.
3. Trace and present orally or in writing the origin and historical developments of selected religious traditions.
4. Communicate understanding of selected religious traditions, orally or in writing.
5. Discuss ways of living responsibly in a world where people have diverse religious beliefs.

PHIL 2303 Introduction to Formal Logic

The purpose of the course is to introduce the student to symbolic logic, including syllogisms, propositional and predicate logic, and logical proofs in a system of rules.

Approval Number.....38.0101.52 12
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

Learning Outcomes

Upon successful completion of this course, students will:

1. Determine the logical structure of English arguments by identifying premises and conclusions.
2. Understand basic concepts in logic, such as truth functionality, validity, soundness, counter-examples, tautology, self-contradiction, logical equivalence, logical contradictoriness, and logical consistence.
3. Translate English statements into propositional and/or predicate notation.
4. Determine the validity of symbolic propositional or predicate arguments using such methods as direct/indirect truth tables, natural deduction, and/or the finite universe method.

PHIL 2306 Introduction to Ethics

The systematic evaluation of classical and/or contemporary ethical theories concerning the good life, human conduct in society, morals, and standards of value.

Approval Number.....38.0101.53 12
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

Learning Outcomes

Upon successful completion of this course, students will:

1. Read, analyze, and critique philosophical texts.
2. Define and appropriately use important terms such as relativism, virtue, duty, rights, utilitarianism, natural law, egoism, altruism, autonomy, and care ethics.
3. Demonstrate knowledge of major arguments and problems in ethics.
4. Present and discuss well-reasoned ethical positions in writing.
5. Apply ethical concepts and principles to address moral concerns.
6. Apply course material to various aspects of life.
7. Discuss ways of living responsibly in a world where people have diverse ethical beliefs.

PHIL 2307 Introduction to Social & Political Philosophy

A study of major issues in social and political theory and/or the work of major philosophical figures in this area.

Approval Number.....38.0101.54 12
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

Learning Outcomes

Upon successful completion of this course, students will:

1. Read, analyze, and critique texts in social and political philosophy.
2. Define and appropriately use important terms common to social and political philosophy.
3. Demonstrate knowledge of major forms of government and social systems.
4. Assess and evaluate social and political theories orally and/or in writing.
5. Apply course materials to social and political concerns including living responsibly in a world where people have diverse political priorities.
6. Apply course material to various aspects of life.
7. Discuss ways of living responsibly in a world where people have diverse political beliefs.

PHIL 2316 Classical Philosophy

Study of major philosophers and philosophical themes from the ancient through medieval periods.

Approval Number.....38.0101.55 12
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

Learning Outcomes

Upon successful completion of this course, students will:

1. Read, analyze, and critique philosophical texts.
2. Demonstrate knowledge of major arguments, problems, and terminology in philosophy.
3. Trace and present orally or in writing the origin and historical developments of selected philosophical traditions.
4. Articulate key conceptual distinctions in philosophy.
5. Present logically persuasive arguments in writing.
6. Demonstrate an ability to discuss and reflect upon the application of the course material to various aspects of life.

PHIL 2317 Seventeenth- and Eighteenth-Century Philosophy

Study of major philosophers and philosophical themes from the seventeenth through the eighteenth centuries.

Approval Number.....38.0101.55 12
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

Learning Outcomes

Upon successful completion of this course, students will:

1. Read, analyze, and critique philosophical texts.
2. Demonstrate knowledge of major arguments, problems, and terminology in philosophy.
3. Trace and present orally or in writing the origin and historical developments of selected philosophical traditions.
4. Articulate key conceptual distinctions in philosophy.
5. Present logically persuasive arguments in writing.
6. Apply course material to various aspects of life.

PHIL 2318 Nineteenth- and Twentieth-Century Philosophy

Study of major philosophers and philosophical themes from the nineteenth century to the present.

Approval Number.....38.0101.55 12
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

Learning Outcomes

Upon successful completion of this course, students will:

1. Read, analyze, and critique philosophical texts.
2. Demonstrate knowledge of major arguments, problems, and terminology in philosophy.
3. Trace and present orally or in writing the origin and historical developments of selected philosophical traditions.
4. Articulate key conceptual distinctions in philosophy.
5. Present logically persuasive arguments in writing.
6. Apply course material to various aspects of life.

PHIL 2321 Philosophy of Religion

A study of the major issues in the philosophy of religion such as the existence and nature of God, the relationships between faith and reason, the nature of religious language, religious experience, and the problem of evil.

Approval Number.....38.0201.53 12
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

Learning Outcomes

Upon successful completion of this course, students will:

1. Read, analyze, and critique texts in the philosophy of religion.
2. Demonstrate knowledge of major arguments, problems, and terminology in the philosophy of religion.
3. Articulate key concepts and issues in the philosophy of religion.
4. Write logically persuasive assessments of key concepts and issues.
5. Discuss the application of philosophy to various aspects of religion.
6. Evaluate the personal and social responsibilities of living in a diverse world.

PHIL 2289 Academic Cooperative (2 SCH version)
PHIL 2389 Academic Cooperative (3 SCH version)

An instructional program designed to integrate on-campus study with practical hands-on work experience. In conjunction with class seminars, the individual student will set specific goals and objectives in the study of philosophy.

Approval Number.....24.0103.52 12
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....144

PHYS (Physics)

PHYS 1301 College Physics I (lecture)

Fundamental principles of physics, using algebra and trigonometry; the principles and applications of classical mechanics and thermodynamics, including harmonic motion, mechanical waves and sound, physical systems, Newton's Laws of Motion, and gravitation and other fundamental forces; with emphasis on problem solving.

Co-requisite: PHYS 1101 – College Physics I Laboratory
Prerequisites: MATH 1314 – College Algebra AND MATH 1316 – Plane Trigonometry or MATH 2312/2412 Pre-Calculus

Approval Number.....40.0801.53 03
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

Learning Outcomes

Upon successful completion of this course, students will:

1. Determine the components of linear motion (displacement, velocity, and acceleration), and especially motion under conditions of constant acceleration.
2. Apply Newton's laws to physical problems including gravity.
3. Solve problems using principles of energy.
4. Use principles of impulse and linear momentum to solve problems.
5. Solve problems in rotational kinematics and dynamics, including the determination of the location of the center of mass and center of rotation for rigid bodies in motion.

6. Solve problems involving rotational and linear motion.
7. Describe the components of a wave and relate those components to mechanical vibrations, sound, and decibel level.
8. Demonstrate an understanding of equilibrium, including the different types of equilibrium.
9. Discuss simple harmonic motion and its application to quantitative problems or qualitative questions.
10. Solve problems using the principles of heat and thermodynamics.
11. Solve basic fluid mechanics problems.

PHYS 1101 College Physics I (lab)

This laboratory-based course accompanies PHYS 1301, College Physics I. Laboratory activities will reinforce fundamental principles of physics, using algebra and trigonometry; the principles and applications of classical mechanics and thermodynamics, including harmonic motion, mechanical waves and sound, physical systems, Newton's Laws of Motion, and gravitation and other fundamental forces; emphasis will be on problem solving.

Co-requisite: PHYS 1301—College Physics I

Approval Number.....40.0801.53 03
maximum SCH per student..... 1
maximum SCH per course 1
maximum contact hours per course 64

Learning Outcomes

Upon successful completion of this course, students will:

1. Demonstrate techniques to set up and perform experiments, collect data from those experiments, and formulate conclusions from an experiment.
2. Record experimental work completely and accurately in laboratory notebooks, and communicate experimental results clearly in written reports.
3. Determine the components of linear motion (displacement, velocity, and acceleration), and especially motion under conditions of constant acceleration.
4. Apply Newton's laws to physical problems including gravity.
5. Solve problems using principles of energy.
6. Describe the components of a wave and relate those components to mechanical vibrations, sound, and decibel level.
7. Use principles of impulse and linear momentum to solve problems.
8. Solve problems in rotational kinematics and dynamics, including the determination of the location of the center of mass and center of rotation for rigid bodies in motion.
9. Solve problems involving rotational and linear motion.
10. Demonstrate an understanding of equilibrium, including the different types of equilibrium.
11. Discuss simple harmonic motion and its application to quantitative problems or qualitative questions.
12. Solve problems using the principles of heat and thermodynamics.
13. Solve basic fluid mechanics problems.

PHYS 1401 College Physics I (lecture + lab)

This lecture and lab course should combine all of the elements of PHYS 1301 (lecture) and PHYS 1101 (lab), including the learning outcomes listed for both courses.

Approval Number.....40.0801.53 03
maximum SCH per student.....4
maximum SCH per course.....4
maximum contact hours per course.....112

PHYS 1302 College Physics II (lecture)

Fundamental principles of physics, using algebra and trigonometry; the principles and applications of electricity and magnetism, including circuits, electrostatics, electromagnetism, waves, sound, light, optics, and modern physics topics; with emphasis on problem solving.

Co-requisite: PHYS 1102 – College Physics II Laboratory
Prerequisites: PHYS 1301 and PHYS 1101, or PHYS 1401 – College Physics I (lecture and laboratory)

Approval Number.....40.0801.53 03
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

Learning Outcomes

Upon successful completion of this course, students will:

1. Solve problems involving the inter-relationship of fundamental charged particles, and electrical forces, fields, and currents.
2. Apply Kirchhoff's Rules to analysis of circuits with potential sources, capacitance, inductance, and resistance, including parallel and series capacitance and resistance.
3. Solve problems in the electrostatic interaction of point charges through the application of Coulomb's Law.
4. Solve problems involving the effects of magnetic fields on moving charges or currents, and the relationship of magnetic fields to the currents which produce them.
5. Use Faraday's and Lenz's laws to determine electromotive forces and solve problems involving electromagnetic induction.
6. Articulate the principles of reflection, refraction, diffraction, interference, and superposition of waves.
7. Describe the characteristics of light and the electromagnetic spectrum.

PHYS 1102 College Physics II (lab)

This laboratory-based course accompanies PHYS 1302, College Physics II. Laboratory activities will reinforce fundamental principles of physics, using algebra and trigonometry; the principles and applications of electricity and magnetism, including circuits, electrostatics, electromagnetism, waves, sound, light, optics, and modern physics topics; with emphasis on problem solving.

Co-requisite: PHYS 1302 – College Physics II

Approval Number.....40.0801.53 03
maximum SCH per student.....1
maximum SCH per course.....1
maximum contact hours per course.....64

Learning Outcomes

Upon successful completion of this course, students will:

1. Develop techniques to set up and perform experiments, collect data from those experiments, and formulate conclusions from an experiment.
2. Demonstrate the collections, analysis, and reporting of data using the scientific method.
3. Record experimental work completely and accurately in laboratory notebooks, and communicate experimental results clearly in written reports.
4. Solve problems involving the inter-relationship of fundamental charged particles, and electrical forces, fields, and currents.
5. Apply Kirchhoff's Rules to analysis of circuits with potential sources, capacitance, inductance, and resistance, including parallel and series capacitance and resistance.
6. Solve problems in the electrostatic interaction of point charges through the application of Coulomb's Law.
7. Solve problems involving the effects of magnetic fields on moving charges or currents, and the relationship of magnetic fields to the currents which produce them.
8. Use Faraday's and Lenz's laws to determine electromotive forces and solve problems involving electromagnetic induction.
9. Solve problems applying the principles of reflection, refraction, diffraction, interference, and superposition of waves.
10. Solve practical problems involving optics, lenses, mirrors, and optical instruments.

PHYS 1402 College Physics II (lecture + lab)

This lecture and lab course should combine all of the elements of PHYS 1302 (lecture) and PHYS 1102 (lab), including the learning outcomes listed for both courses.

Approval Number.....40.0801.53 03
maximum SCH per student.....4
maximum SCH per course.....4
maximum contact hours per course.....112

PHYS 1405 Elementary Physics I (lecture + lab)
PHYS 1305 Elementary Physics I (lecture)
PHYS 1105 Elementary Physics Laboratory I (lab)

PHYS 1407 Elementary Physics II (lecture + lab)
PHYS 1307 Elementary Physics II (lecture)
PHYS 1107 Elementary Physics Laboratory II (lab)

PHYS 1410 Elementary Physics (single-semester course, lecture + lab)
PHYS 1310 Elementary Physics (single-semester course, lecture)
PHYS 1110 Elementary Physics (single-semester course, lab)

Conceptual level survey of topics in physics intended for liberal arts and other non-science majors. May or may not include a laboratory.

Approval Number.....40.0801.51 03
maximum SCH per student.....8
maximum SCH per course.....4
maximum contact hours per course.....96

PHYS 1403 Stars and Galaxies (lecture + lab)
PHYS 1303 Stars and Galaxies (lecture)
PHYS 1103 Stars and Galaxies Laboratory (lab)

Study of stars, galaxies, and the universe outside our solar system. May or may not include a laboratory. (Cross-listed as ASTR 1403, 1303, & 1103)

Approval Number.....40.0201.51 03
maximum SCH per student.....4
maximum SCH per course.....4
maximum contact hours per course.....96

PHYS 1404 Solar System (lecture + lab)
PHYS 1304 Solar System (lecture)
PHYS 1104 Solar System Laboratory (lab)

Study of the sun and its solar system, including its origin. May or may not include a laboratory. (Cross-listed as ASTR 1404, 1304, & 1104)

Approval Number.....40.0201.52 03
maximum SCH per student.....4
maximum SCH per course.....4
maximum contact hours per course.....96

PHYS 1415 Physical Science I (lecture + lab)
PHYS 1315 Physical Science I (lecture)
PHYS 1115 Physical Science Laboratory I (lab)

PHYS 1417 Physical Science II (lecture + lab)
PHYS 1317 Physical Science II (lecture)
PHYS 1117 Physical Science Laboratory II (lab)

Course, designed for non-science majors, that surveys topics from physics, chemistry, geology, astronomy, and meteorology. May or may not include a laboratory.

Approval Number.....40.0101.51 03
maximum SCH per student.....8
maximum SCH per course.....4
maximum contact hours per course.....96

PHYS 2325 University Physics I (lecture)

Fundamental principles of physics, using calculus, for science, computer science, and engineering majors; the principles and applications of classical mechanics, including harmonic motion, physical systems and thermodynamics; and emphasis on problem solving.

Co-requisite: PHYS 2125—University Physics I Laboratory
Prerequisite: MATH 2413—Calculus I

Approval Number.....40.0101.52 03
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

Learning Outcomes

Upon successful completion of this course, students will:

1. Determine the components of linear motion (displacement, velocity, and acceleration), and especially motion under conditions of constant acceleration.
2. Solve problems involving forces and work.
3. Apply Newton's laws to physical problems.
4. Identify the different types of energy.
5. Solve problems using principles of conservation of energy.
6. Define the principles of impulse, momentum, and collisions.
7. Use principles of impulse and momentum to solve problems.
8. Determine the location of the center of mass and center of rotation for rigid bodies in motion.
9. Discuss rotational kinematics and dynamics and the relationship between linear and rotational motion.
10. Solve problems involving rotational and linear motion.
11. Define equilibrium, including the different types of equilibrium.
12. Discuss simple harmonic motion and its application to real-world problems.
13. Solve problems involving the First and Second Laws of Thermodynamics.

PHYS 2125 University Physics Laboratory I (lab)

Basic laboratory experiments supporting theoretical principles presented in PHYS 2325 involving the principles and applications of classical mechanics, including harmonic motion and physical systems; experimental design, data collection and analysis, and preparation of laboratory reports.

Co-requisite: PHYS 2325—University Physics I

Approval Number.....40.0101.53 03
maximum SCH per student..... 1
maximum SCH per course 1
maximum contact hours per course 48

Learning Outcomes

Upon successful completion of this course, students will:

1. Prepare laboratory reports that clearly communicate experimental information in a logical and scientific manner.
2. Conduct basic laboratory experiments involving classical mechanics.
3. Relate physical observations and measurements involving classical mechanics to theoretical principles.
4. Evaluate the accuracy of physical measurements and the potential sources of error in the measurements.
5. Design fundamental experiments involving principles of classical mechanics.
6. Identify appropriate sources of information for conducting laboratory experiments involving classical mechanics.

PHYS 2425 University Physics I (lecture + lab)

This lecture and lab course should combine all of the elements of PHYS 2325 University Physics I Lecture and PHYS 2125 University Physics I Lab, including the learning outcomes listed for both courses.

Approval Number.....40.0101.54 03
maximum SCH per student..... 4
maximum SCH per course 4
maximum contact hours per course 96

PHYS 2326 University Physics II (lecture)

Principles of physics for science, computer science, and engineering majors, using calculus, involving the principles of electricity and magnetism, including circuits, electromagnetism, waves, sound, light, and optics.

Co-requisite: PHYS 2126 University Physics II Laboratory
Prerequisites: PHYS 2325 University Physics I, MATH 2414 Calculus II

Approval Number.....40.0101.55 03
maximum SCH per student..... 3
maximum SCH per course 3
maximum contact hours per course 48

Learning Outcomes

Upon successful completion of this course, students will:

1. Articulate the fundamental concepts of electricity and electromagnetism, including electrostatic potential energy, electrostatic potential, potential difference, magnetic field, induction, and Maxwell's Laws.
2. State the general nature of electrical forces and electrical charges, and their relationship to electrical current.
3. Solve problems involving the inter-relationship of electrical charges, electrical forces, and electrical fields.
4. Apply Kirchhoff's Laws to analysis of circuits with potential sources, capacitance, and resistance, including parallel and series capacitance and resistance.
5. Calculate the force on a charged particle between the plates of a parallel-plate capacitor.
6. Apply Ohm's law to the solution of problems.
7. Describe the effects of static charge on nearby materials in terms of Coulomb's Law.
8. Use Faraday's and Lenz's laws to find the electromotive forces.
9. Describe the components of a wave and relate those components to mechanical vibrations, sound, and decibel level.
10. Articulate the principles of reflection, refraction, diffraction, interference and superposition of waves.
11. Solve real-world problems involving optics, lenses, and mirrors.

PHYS 2126 University Physics Laboratory II (lab)

Laboratory experiments supporting theoretical principles presented in PHYS 2326 involving the principles of electricity and magnetism, including circuits, electromagnetism, waves, sound, light, and optics; experimental design, data collection and analysis, and preparation of laboratory reports.

Co-requisite: PHYS 2326—University Physics II

Approval Number.....40.0101.56 03
maximum SCH per student..... 1
maximum SCH per course 1
maximum contact hours per course 48

Learning Outcomes

Upon successful completion of this course, students will:

1. Prepare laboratory reports that clearly communicate experimental information in a logical and scientific manner.
2. Conduct basic laboratory experiments involving electricity and magnetism.
3. Relate physical observations and measurements involving electricity and magnetism to theoretical principles.
4. Evaluate the accuracy of physical measurements and the potential sources of error in the measurements.
5. Design fundamental experiments involving principles of electricity and magnetism.
6. Identify appropriate sources of information for conducting laboratory experiments involving electricity and magnetism.

PHYS 2426 University Physics II (lecture + lab)

Note: This lecture and lab course should combine all of the elements of 2326 University Physics II Lecture and 2126 University Physics II Lab, including the learning outcomes listed for both courses.

Approval Number.....40.0101.57 03
maximum SCH per student.....4
maximum SCH per course.....4
maximum contact hours per course.....96

PHYS 2427 University Physics III (3rd semester course, lecture + lab)

Calculus-level physics sequence, with laboratories, that includes study of mechanics, heat, waves, electricity and magnetism.

Approval Number.....40.0801.54 03
maximum SCH per student.....4
maximum SCH per course.....4
maximum contact hours per course.....112

PHYS 2289 Academic Cooperative (2 SCH version)
PHYS 2389 Academic Cooperative (3 SCH version)

An instructional program designed to integrate on-campus study with practical hands-on work experience in the physical sciences. In conjunction with class seminars, the individual students will set specific goals and objectives in the scientific study of inanimate objects, processes of matter and energy, and associated phenomena.

Approval Number.....40.0101.58 03
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....144

PORT (Portuguese Language)

PORT 1311 Beginning Portuguese I (1st semester Portuguese, 3 SCH version)
PORT 1411 Beginning Portuguese I (1st semester Portuguese, 4 SCH version)
PORT 1511 Beginning Portuguese I (1st semester Portuguese, 5 SCH version)

PORT 1312 Beginning Portuguese II (2nd semester Portuguese, 3 SCH version)
PORT 1412 Beginning Portuguese II (2nd semester Portuguese, 4 SCH version)
PORT 1512 Beginning Portuguese II (2nd semester Portuguese, 5 SCH version)

Fundamental skills in listening comprehension, speaking, reading, and writing. Includes basic vocabulary, grammatical structures, and culture.

Approval Number.....16.0904.51 13
maximum SCH per student..... 10
maximum SCH per course 5
maximum contact hours per course 112

PORT 2311 Intermediate Portuguese I (3rd semester Portuguese)
PORT 2312 Intermediate Portuguese II (4th semester Portuguese)

Review and application of skills in listening comprehension, speaking, reading, and writing. Emphasizes conversation, vocabulary acquisition, reading, composition, and culture.

Approval Number.....16.0904.52 13
maximum SCH per student.....6
maximum SCH per course 3
maximum contact hours per course 80

PSYC (Psychology)

PSYC 1100 Learning Framework (1 SCH version)
PSYC 1200 Learning Framework (2 SCH version)
PSYC 1300 Learning Framework (3 SCH version)

A study of the 1) research and theory in the psychology of learning, cognition, and motivation, 2) factors that impact learning, and 3) application of learning strategies. Theoretical models of strategic learning, cognition, and motivation serve as the conceptual basis for the introduction of college-level student academic strategies. Students use assessment instruments (e.g., learning inventories) to help them identify their own strengths and weaknesses as strategic learners. Students are ultimately expected to integrate and apply the learning skills discussed across their own academic programs and become effective and efficient learners. Students developing these skills should be able to continually draw from the theoretical models they have learned. (Cross-listed as EDUC 1300)

(NOTE: While traditional study skills courses include some of the same learning strategies—e.g., note-taking, reading, test preparation etc.—as learning framework courses, the focus of study skills courses is solely or primarily on skill acquisition. Study skills courses, which are not under-girded by scholarly models of the learning process, are not considered college-level and therefore are distinguishable from Learning Framework courses.)

Approval Number.....42.2701.51 25
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

PSYC 2301 General Psychology

General Psychology is a survey of the major psychological topics, theories and approaches to the scientific study of behavior and mental processes.

Approval Number.....42.0101.51 25
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

Learning Outcomes

Upon successful completion of this course, students will:

1. Identify various research methods and their characteristics used in the scientific study of psychology.
2. Describe the historical influences and early schools of thought that shaped the field of psychology.
3. Describe some of the prominent perspectives and approaches used in the study of psychology.
4. Use terminology unique to the study of psychology.
5. Describe accepted approaches and standards in psychological assessment and evaluation.
6. Identify factors in physiological and psychological processes involved in human behavior.

PSYC 2302 Applied Psychology (Scheduled for deletion fall 2014)

Survey of the applications of psychological knowledge and methods in such fields as business, industry, education, medicine, law enforcement, social work, and government work.

Approval Number.....42.0101.52 25
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

PSYC 2306 Human Sexuality

This course will provide an overview of the broad field of human sexuality. Topics will be covered from various perspectives – biological, sociological, anthropological, etc., but will focus primarily on the psychological perspective. The goal is for each student to learn factual, scientifically-based information that will provoke thought and contribute to his/her own decision-making on sexual issues outside of the classroom.
(Cross-listed as SOCI 2306)

Approval Number.....42.0101.53 25
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

Learning Outcomes

Upon successful completion of this course, students will:

1. Identify common myths of human sexual functioning.
2. Identify human sexual behaviors and sexual responses.
3. Explain the relationship between sexuality and developmental changes throughout the lifespan.
4. Describe the causes, symptoms, and treatments for sexually transmitted infections and the behaviors that increase and decrease the risk of contracting an STI.
5. Describe the principles of effective communication and the specific barriers to effective communication about sex and sexuality.
6. Use an academic sexual vocabulary.
7. Discuss cultural differences in sexual attitudes and behaviors.
8. Identify the occurrence and causes of sexual variations.
9. Identify contraceptive methods and how these methods prevent conception.

PSYC 2307 Adolescent Psychology

This course explores the physical, behavioral, mental, emotional, and social changes that accompany growth and development in adolescence. The purpose of this course is provide an overview of theories, research, issues, and applications related to adolescent development.

Approval Number.....42.2703.51 25
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

Learning Outcomes

Upon successful completion of this course, students will:

1. Describe the major theoretical perspectives in normal adolescent development.
2. Identify major changes in physical, cognitive and socioemotional development associated with adolescence.
3. Distinguish between normal and abnormal behavior (psychological problems) and development within adolescence.
4. Identify factors that put adolescents at risk.

PSYC 2308 Child Psychology

This course will address psychological development from conception through middle childhood with references to physical, cognitive, social and personality changes. Students will examine the interplay of biological factors, human interaction, social structures and cultural forces in development.

Approval Number.....42.2703.51 25
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

Learning Outcomes

Upon successful completion of this course, students will:

1. Describe how human beings change physically, cognitively, socially and emotionally from conception through childhood.
2. Identify fundamental concepts and theories, both recent and historical, within the field of child psychology.
3. Evaluate research issues and methodologies used to investigate developmental phenomena.
4. Describe the process of development and the multiple sources of influence on a developing child.

PSYC 2311 Adult Development (Scheduled for deletion fall 2014)

Study of the relationship of the physical, emotional, social and mental factors of growth and development of children and throughout the lifespan.

Approval Number.....42.2703.51 25
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

PSYC 2314 Lifespan Growth & Development

Life-Span Growth and Development is a study of social, emotional, cognitive and physical factors and influences of a developing human from conception to death.

Approval Number.....42.2703.51 25
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

Learning Outcomes

Upon successful completion of this course, students will:

1. Describe the stages of the developing person at different periods of the life span from birth to death.
2. Discuss the social, political, economic, and cultural forces that affect the development process of the individual.
3. Identify factors of responsible personal behavior with regard to issues such as sexual activity, substance abuse, marriage and parenting.

4. Explain the biosocial, cognitive and psychological influences throughout the lifespan as an ongoing set of processes, involving both continuity and change.
5. Describe the different developmental perspectives of the major theories of development (i.e. cognitive, learning, humanistic and psychodynamic).
6. Identify examples of some of the cultural and ethnic differences that influence development throughout the lifespan.
7. Discuss the various causes or reasons for disturbances in the developmental process.

PSYC 2315 Psychology of Adjustment

Study of the processes involved in adjustment of individuals to their personal and social environments.

Approval Number.....42.0101.56 25
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

PSYC 2316 Psychology of Personality

Study of various approaches to determinants, development, and assessment of personality.

Approval Number.....42.0101.57 25
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

PSYC 2317 Statistical Methods in Psychology

Study of statistical methods used in psychological research, assessment, and testing. Includes the study of measures of central tendency and variability, statistical inference, correlation and regression as these apply to psychology.

Approval Number.....42.0101.52 25
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

PSYC 2319 Social Psychology

Study of individual behavior within the social environment. May include topics such as the socio-psychological process, attitude formation and change, interpersonal relations, and group processes. (Cross-listed as SOCI 2326)

Approval Number.....42.2707.51 25
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

PSYC 2289 Academic Cooperative (2 SCH version)
PSYC 2389 Academic Cooperative (3 SCH version)

An instructional program designed to integrate on-campus study with practical hands-on experience in psychology. In conjunction with class seminars, the individual student will set specific goals and objectives in the study of human social behavior and/or social institutions.

Approval Number.....45.0101.51 25
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....144

RNSG (Nursing)

RNSG 1413 Foundations for Nursing Practice
RNSG 1513 Foundations for Nursing Practice

Introduction to the role of the professional nurse as a provider of care, coordinator of care, and member of a profession. Topics include but are not limited to the fundamental concepts of nursing practice, history of professional nursing, a systematic framework for decision-making, mechanisms of disease, the needs and problems that nurses help patients manage, and basic psychomotor skills. Emphasis on knowledge, judgment, skills and professional values within a legal/ethical framework. This course lends itself to a blocked approach. (This course is included in the Field of Study Curriculum for Nursing.)

Approval Number.....51.3801.51 14
Maximum SCH per student.....5
Maximum SCH per course.....5
Maximum contact hours per course.....144

RNSG 1105 Nursing Skills I
RNSG 1205 Nursing Skills I

Study of the concepts and principles essential for demonstrating competence in the performance of nursing procedures. Topics include knowledge, judgment, skills, and professional values within a legal/ethical framework. This course lends itself to a blocked approach. (This course is included in the Field of Study Curriculum for Nursing.)

Approval Number.....51.3801.52 14
Maximum SCH per student.....2
Maximum SCH per course.....2
Maximum contact hours per course.....80

RNSG 1144 Nursing Skills II
RNSG 1244 Nursing Skills II

Study of the concepts and principles necessary to perform intermediate or advanced nursing skills; and demonstrate competence in the performance of nursing procedures. Topics include knowledge, judgment, skills and professional values within a legal/ethical framework. This course lends itself to a blocked approach. (This course is included in the Field of Study Curriculum for Nursing.)

Approval Number.....51.3801.53 14
Maximum SCH per student.....2
Maximum SCH per course.....2
Maximum contact hours per course.....80

RNSG 1209 Introduction to Nursing
RNSG 1309 Introduction to Nursing

Overview of nursing and the role of the professional nurse as a provider of care, coordinator of care, and member of a profession. Topics include knowledge, judgment, skills and professional values with a legal/ethical framework. This course lends itself to a blocked approach. (This course is included in the Field of Study Curriculum for Nursing.)

Approval Number.....51.3801.54 14
Maximum SCH per student.....3
Maximum SCH per course.....3
Maximum contact hours per course.....96

RNSG 2213 Mental Health Nursing (single-semester course)
RNSG 2313 Mental Health Nursing (single-semester course)
RNSG 2113 Mental Health Nursing I
RNSG 2114 Mental Health Nursing II

Principles and concepts of mental health, psychopathology, and treatment modalities related to the nursing care of clients and their families. This course lends itself to a blocked approach. (This course is included in the Field of Study Curriculum for Nursing.) (Note: 2113 & 2114 each represent half the required course content and must be offered as a 2-course sequence. A student may not receive credit for both of the single-semester offering and the 2-course sequence.)

Approval Number.....51.3801.55 14
Maximum SCH per student.....3
Maximum SCH per course.....3
Maximum contact hours per course.....64

RNSG 1412 Nursing Care of the Childbearing and Childrearing Family
RNSG 1512 Nursing Care of the Childbearing and Childrearing Family

Study of the concepts related to the provision of nursing care for childbearing and childrearing families; application of systematic problem-solving processes and critical thinking skills, including a focus on the childbearing family during preconception, prenatal, antepartum, neonatal, and postpartum periods and the childrearing family from birth to adolescence; and competency in knowledge, judgment, skill, and professional values within a legal/ethical framework. This course lends itself to a blocked approach. (This course is included in the Field of Study Curriculum for Nursing.)

Approval Number.....51.3801.56 14
Maximum SCH per student.....5
Maximum SCH per course.....5
Maximum contact hours per course.....176

RNSG 1151 Care of the Childbearing Family
RNSG 1251 Care of the Childbearing Family

Study of concepts related to the provision of nursing care for childbearing families. Topics may include selected complications. Topics include knowledge judgment, skills, and professional values within a legal/ethical framework. This course lends itself to a blocked approach. (This course is included in the Field of Study Curriculum for Nursing.)

Approval Number.....51.3801.57 14
Maximum SCH per student.....2
Maximum SCH per course.....2
Maximum contact hours per course.....80

RNSG 2101 Care of Children and Families (single-semester course)
RNSG 2201 Care of Children and Families (single-semester course)
RNSG 2102 Care of Children and Families I
RNSG 2103 Care of Children and Families II

Study of concepts related to the provision of nursing care for children and their families, emphasizing judgment, and professional values within a legal/ethical framework. This course lends itself to a blocked approach. (This course is included in the Field of Study Curriculum for Nursing.) (Note: 2102 & 2103 each represent half the required course content and must be offered as a 2-course sequence. A student may not receive credit for both the single-semester offering and the 2-course sequence.)

Approval Number.....51.3801.58 14
Maximum SCH per student.....2
Maximum SCH per course.....2
Maximum contact hours per course.....80

RNSG 2208 Maternal/Newborn Nursing and Women's Health
RNSG 2308 Maternal/Newborn Nursing and Women's Health

Study of concepts related to the provision of nursing care for normal childbearing families and those at risk, as well as women's health issues; competency in knowledge, judgment, skill, and professional values within a legal/ethical framework, including a focus on normal and high-risk needs for the childbearing family during the preconception, prenatal, intrapartum, neonatal, and postpartum periods; and consideration of selected issues in women's health. This course lends itself to a blocked approach. (This course is included in the Field of Study Curriculum for Nursing.)

Approval Number.....51.3801.59 14
Maximum SCH per student.....3
Maximum SCH per course.....3
Maximum contact hours per course.....96

RNSG 1331 Principles of Clinical Decision-making (single-semester course)
RNSG 1431 Principles of Clinical Decision-making (single-semester course)
RNSG 1231 Principles of Clinical Decision-making I
RNSG 1232 Principles of Clinical Decision-making II

Examination of selected principles related to the continued development of the professional nurse as a provider of care, coordinator of care, and member of a profession. Emphasis on clinical decision making for clients in medical-surgical settings experiencing health problems involving fluid and electrolytes; perioperative care; pain; respiratory disorders; peripheral vascular disorders; immunologic disorders; and infectious disorders. Discussions of knowledge, judgment, skills, and professional values within a legal/ethical framework. This course lends itself to a blocked approach. (This course is included in the Field of Study Curriculum for Nursing.) (Note: 1231 & 1232 each represent half the required course content and must be offered as a 2-course sequence. A student may not receive credit for both the single-semester offering and the 2-course sequence.)

Approval Number.....51.3801.61 14
Maximum SCH per student.....4
Maximum SCH per course.....4
Maximum contact hours per course.....128

RNSG 1347 Concepts of Clinical Decision-making (single-semester course)
RNSG 1447 Concepts of Clinical Decision-making (single-semester course)
RNSG 1247 Concepts of Clinical Decision-making I
RNSG 1248 Concepts of Clinical Decision-making II

Integration of previous knowledge and skills into the continued development of the professional nurse as a provider of care, coordinator of care, and member of a profession. Emphasis on clinical decision-making for clients in medical-surgical settings experiencing health problems involving gastrointestinal disorders, endocrine and metabolic disorders, reproductive and sexual disorders, musculoskeletal disorders, eye-ear-nose-throat disorders and integumentary disorders. Discussion of knowledge, judgment, skills, and professional values within a legal/ethical framework. This course lends itself to a blocked approach. (This course is included in the Field of Study Curriculum for Nursing.) (Note: 1247 & 1248 each represent half the required course content and must be offered as a 2-course sequence. A student may not obtain credit for both the single-semester offering and the 2-course sequence.)

Approval Number.....51.3801.62 14
Maximum SCH per student.....4
Maximum SCH per course.....4
Maximum contact hours per course.....128

RNSG 1341 Common Concepts of Adult Health
RNSG 1441 Common Concepts of Adult Health

Study of the general principles of caring for selected adult clients and families in structured settings with common medical-surgical health care needs related to each body system. Emphasis on knowledge judgment, skills, and professional values within a legal/ethical framework. This course lends itself to a blocked approach. (This course is included in the Field of Study Curriculum for Nursing.)

Approval Number.....51.3801.63 14
Maximum SCH per student.....4
Maximum SCH per course.....4
Maximum contact hours per course.....128

RNSG 1343 Complex Concepts of Adult Health
RNSG 1443 Complex Concepts of Adult Health

Integration of previous knowledge and skills related to common adult health needs into the continued development of the professional nurse as a provider of care, coordinator of care, and member of a profession in the care of adult clients/families in structured health care settings with complex medical-surgical health care needs associated with each body system. Emphasis on knowledge, judgments, skills, and professional values within a legal/ethical framework. This course lends itself to a blocked approach. (This course is included in the Field of Study Curriculum for Nursing.)

Approval Number.....51.3801.64 14
Maximum SCH per student.....4
Maximum SCH per course.....4
Maximum contact hours per course.....128

RNSG 1423* Introduction to Professional Nursing for Integrated Programs
RNSG 1523* Introduction to Professional Nursing for Integrated Programs
(*single-semester courses)
RNSG 1222 Introduction to Professional Nursing for Integrated Programs I
RNSG 1223 Introduction to Professional Nursing for Integrated Programs II

Introduction to the profession of nursing including the roles of the registered nurse with emphasis on health promotion and primary disease prevention across the life span; essential components of the nursing health assessment; identification of deviations from expected health patterns; the application of a systematic, problem-solving process to provide basic nursing care to diverse clients across the life span; and applicable competencies in knowledge, judgment, skills, and professional values within a legal/ethical framework. This course lends itself to an integrated approach. (This course is included in the Field of Study Curriculum for Nursing.) (Note: 1222 & 1223 each represent half the required course content and must be offered as a 2-course sequence. A student may not receive credit for both the single-semester offering and the 2-course sequence.)

Approval Number.....51.3801.65 14
Maximum SCH per student.....5
Maximum SCH per course.....5
Maximum contact hours per course.....144

RNSG 1119 Integrated Nursing Skills I
RNSG 1219 Integrated Nursing Skills I

Study of the concepts and principles essential for demonstrating competence in the performance of basic nursing skills for care of diverse clients across the life span. Topics include knowledge, judgment, skills, and professional values within a legal/ethical framework. This course lends itself to an integrated approach. (Field of Study Course)

Approval Number.....51.3801.66 14
Maximum SCH per student.....2
Maximum SCH per course.....2
Maximum contact hours per course.....80

RNSG 1129 Integrated Nursing Skills II
RNSG 1229 Integrated Nursing Skills II

Study of the concepts and principles necessary to perform intermediate or advanced nursing skills for care of diverse clients across the life span. Topics include knowledge, judgment, skills, and professional values within a legal/ethical framework. This course lends itself to an integrated approach. (Field of Study Course)

Approval Number.....51.3801.67 14
Maximum SCH per student.....2
Maximum SCH per course.....2
Maximum contact hours per course.....80

RNSG 2404* Integrated Care of the Client with Common Health Care Needs
RNSG 2504* Integrated Care of the Client with Common Health Care Needs
(*single-semester courses)
RNSG 2203 Integrated Care of the Client with Common Health Care Needs I
RNSG 2204 Integrated Care of the Client with Common Health Care Needs II

Application of a systematic problem-solving process and critical thinking skills to provide nursing care to diverse clients/families across the life span with common health care needs including, but not limited to, common childhood/adolescent diseases, uncomplicated perinatal care, mental health concepts, perioperative care, frequently occurring adult health problems and health issues related to aging. Emphasis on secondary disease prevention and collaboration with members of the multidisciplinary health care team. Content includes applicable competencies in knowledge, judgment, skills, and professional values within a legal/ethical framework. This course lends itself to an integrated approach. (This course is included in the Field of Study Curriculum for Nursing.)

(**Note:** 2203 & 2204 each represent half the required course content and must be offered as a 2-course sequence. A student may not receive credit for both the single-semester offering and the 2-course sequence.)

Approval Number.....51.3801.68 14
Maximum SCH per student.....5
Maximum SCH per course.....5
Maximum contact hours per course.....128

CLINICAL

The clinical courses do not have common course numbers. Institutions should number these courses according to the following procedure: The common number format for RNSG clinical courses is a four digit number. The 1st digit denotes the level of the course (1 for freshman, 2 for sophomore) and the 2nd digit represents the SCH value. Clinical courses may be offered for 1 to 6 semester credit hours. The 3rd and 4th digits range from 60 to 63 and identify the course sequence.

RNSG XX60 Clinical
RNSG XX61 Clinical
RNSG XX62 Clinical
RNSG XX63 Clinical

A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional. (This course is included in the Field of Study Curriculum for Nursing.)

Approval Number.....51.3801.69 14
Maximum SCH per student..... 19
Maximum SCH per course 6
Maximum contact hours per course 576

RUSS (Russian Language)

RUSS 1311 Beginning Russian I (1st semester Russian, 3 SCH version)
RUSS 1411 Beginning Russian I (1st semester Russian, 4 SCH version)
RUSS 1511 Beginning Russian I (1st semester Russian, 5 SCH version)

RUSS 1312 Beginning Russian II (2nd semester Russian, 3 SCH version)
RUSS 1412 Beginning Russian II (2nd semester Russian, 4 SCH version)
RUSS 1512 Beginning Russian II (2nd semester Russian, 5 SCH version)

Fundamental skills in listening comprehension, speaking, reading, and writing. Includes basic vocabulary, grammatical structures, and culture.

Approval Number.....16.0402.51 13
maximum SCH per student..... 10
maximum SCH per course 5
maximum contact hours per course 112

RUSS 2311 Intermediate Russian I (3rd semester Russian)
RUSS 2312 Intermediate Russian II (4th semester Russian)

Review and application of skills in listening comprehension, speaking, reading, and writing. Emphasizes conversation, vocabulary acquisition, reading, composition, and culture.

Approval Number.....16.0402.52 13
maximum SCH per student.....6
maximum SCH per course 3
maximum contact hours per course 80

SGNL (American Sign Language)

(NOTE: According to the Texas Education Code, section 51.303(c), "American Sign Language is recognized as a language, and any state institute of higher education may offer an elective course in American Sign Language. A student is entitled to count credit received for a course in American Sign Language toward satisfaction of a foreign language requirement of the institution of higher education where it is offered." Beginning in 2000, the federal CIP code classification shifted ASL to the area of Foreign Languages, Literatures, and Linguistics.)

SGNL 1201 Beginning American Sign Language I (1st semester ASL, 2 SCH version)
SGNL 1301 Beginning American Sign Language I (1st semester ASL, 3 SCH version)
SGNL 1401 Beginning American Sign Language I (1st semester ASL, 4 SCH version)
SGNL 1501 Beginning American Sign Language I (1st semester ASL, 5 SCH version)

SGNL 1202 Beginning American Sign Language II (2nd semester ASL, 2 SCH version)
SGNL 1302 Beginning American Sign Language II (2nd semester ASL, 3 SCH version)
SGNL 1402 Beginning American Sign Language II (2nd semester ASL, 4 SCH version)
SGNL 1502 Beginning American Sign Language II (2nd semester ASL, 5 SCH version)

Introduction to American Sign Language covering finger spelling, vocabulary, and basic sentence structure in preparing individuals to interpret oral speech for the hearing impaired.

Approval Number.....16.1603.51 13
maximum SCH per student..... 10
maximum SCH per course 5
maximum contact hours per course 112

SGNL 2301 Intermediate American Sign Language I (3rd semester ASL)
SGNL 2302 Intermediate American Sign Language II (4th semester ASL)

Review and application of conversational skills in American Sign Language; interpreting from signing to voice as well as from voice to signing. Introduction to American Sign Language literature and folklore.

Approval Number.....16.1603.52 13
maximum SCH per student..... 6
maximum SCH per course 3
maximum contact hours per course 80

SOCI (Sociology)

SOCI 1301 Introduction to Sociology

The scientific study of human society, including ways in which groups, social institutions, and individuals affect each other. Causes of social stability and social change are explored through the application of various theoretical perspectives, key concepts, and related research methods of sociology. Analysis of social issues in their institutional context may include topics such as social stratification, gender, race/ethnicity, and deviance.

Approval Number.....45.1101.51 25
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

Learning Outcomes

Upon successful completion of this course, students will:

1. Compare and contrast the basic theoretical perspectives of sociology.
2. Identify the various methodological approaches to the collection and analysis of data in sociology.
3. Describe key concepts in sociology.
4. Describe the empirical findings of various subfields of sociology.
5. Explain the complex links between individual experiences and broader institutional forces.

SOCI 1306 Social Problems

Application of sociological principles and theoretical perspectives to major social problems in contemporary society such as inequality, crime and violence, substance abuse, environmental issues, deviance, or family problems.

Approval Number.....45.1101.52 25
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

Learning Outcomes

Upon successful completion of this course, students will:

1. Describe how the sociological imagination can be used to explain the emergence and implications of contemporary social problems.
2. Explain the nature of social problems from at least one sociological perspective, e.g., critical, functional, interpretive, etc.
3. Identify multidimensional aspects of social problems including the global, political, economic, and cultural dimensions of social problems.
4. Discuss how "solutions" to social problems are often contentious due to diverse values in society.
5. Describe how the proposed "solutions" to a social problem, including social policies, may bring rise to other social problems.

SOCI 2301 Marriage & the Family

Sociological and theoretical analysis of the structures and functions of the family, the varied cultural patterns of the American family, and the relationships that exist among the individuals within the family, as well as the relationships that exist between the family and other institutions in society.

Approval Number.....45.1101.54 25
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

Learning Outcomes

Upon successful completion of this course, students will:

1. Demonstrate understanding of the family and marriage as social institutions through theoretical perspectives.
2. Examine the diversity and complexity of contemporary families.
3. Explore changing cultural attitudes about marriage and alternatives to marriage.
4. Critically evaluate such issues as sexuality, partner choice, resolving marital issues, having and raising children, and combining work with family.
5. Demonstrate understanding of the relationship between theories and research methods used in the scientific study of marriage and family.
6. Describe some of the historical changes and current trends regarding the structural nature of the American family including the role of gender in relationships.
7. Identify causes and consequences of relevant problems within contemporary families.

SOCI 2306 Human Sexuality

This course will provide an overview of the broad field of human sexuality. Topics will be covered from various perspectives – biological, sociological, anthropological, etc., but will focus primarily on the psychological perspective. The goal is for each student to learn factual, scientifically-based information that will provoke thought and contribute to his/her own decision-making on sexual issues outside of the classroom. (Cross-listed as PSYC 2306)

Approval Number.....42.0101.53 25
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

Learning Outcomes

Upon successful completion of this course, students will:

1. Identify common myths of human sexual functioning.
2. Identify human sexual behaviors and sexual responses.
3. Explain the relationship between sexuality and developmental changes throughout the lifespan.
4. Describe the causes, symptoms, and treatments for sexually transmitted infections and the behaviors that increase and decrease the risk of contracting an STI.
5. Describe the principles of effective communication and the specific barriers to effective communication about sex and sexuality.
6. Use an academic sexual vocabulary.
7. Discuss cultural differences in sexual attitudes and behaviors.

8. Identify the occurrence and causes of sexual variations.
9. Identify contraceptive methods and how these methods prevent conception.

SOCI 2319 Minority Studies

This course studies minority-majority group relations, addressing their historical, cultural, social, economic, and institutional development in the United States. Both sociological and social psychological levels of analysis will be employed to discuss issues including experiences of minority groups within the context of their cultural heritage and tradition, as well as that of the dominant culture. Core concepts to be examined include (but are not limited to) social inequality, dominance/subordination, prejudice, and discrimination. Particular minority groups discussed may include those based on poverty, race/ethnicity, gender, sexual orientation, age, disability, or religion.

Approval Number.....45.1101.53 25
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

Learning Outcomes

Upon successful completion of this course, students will:

1. Explain how the concept of social inequality pertains to minority group status defined in terms of identities that may include: social class, race/ethnicity, gender, sexual orientation, age, disability, or religion.
2. Differentiate between important concepts and theories of prejudice and discrimination including the effects of prejudice and discrimination on the everyday lives of minority group members in the context of social institutions.
3. Analyze the history of culture, experiences of inequality, and current life opportunities of various minority groups in the United States with contrasting reference to other countries.
4. Analyze minority group interactions in the United States focusing on immigration and migration patterns, assimilation processes, and adjustments to American life.

SOCI 2320 Minority Studies II (Scheduled for deletion fall 2014)

Historical, economic, social, and cultural development of minority groups. May include African-American, Mexican American, Asian American, and Native American issues.

Approval Number.....45.1101.53 25
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

SOCI 2326 Social Psychology

Study of individual behavior within the social environment. May include topics such as the socio-psychological process, attitude formation and change, interpersonal relations, and group processes. (Cross-listed as PSYC 2319)

Approval Number.....42.2707.51 25
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

SOCI 2336 Criminology

The course surveys various theories of crime, with an emphasis on understanding the social causes of criminal behavior. The techniques for measuring crime as a social phenomenon and the characteristics of criminals are examined. This course addresses crime types (such as consensual or white-collar crimes), the criminal justice system, and other social responses to crime.

Approval Number.....45.0401.51 25
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

Learning Outcomes

Upon successful completion of this course, students will:

1. Define key concepts associated with criminology.
2. Identify major criminological theories.
3. Describe the major categories of crime.
4. Explain the various methodological approaches used to research crime and criminal behavior.
5. Describe the components and explain the dynamics of the criminal justice system.

SOCI 2339 Juvenile Delinquency (Scheduled for deletion fall 2014)

Nature, extent, and causes of juvenile delinquency; youthful offenders and their career patterns; institutional controls and correctional programs.

Approval Number.....45.0401.51 25
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

SOCI 2340 Drug Use & Abuse

Study of the use and abuse of drugs in today's society. Emphasizes the physiological, sociological, and psychological factors. (Cross-listed as PHED 1165 & PHED 1346)

Approval Number.....51.1504.52 16
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

SOCI 2289 Academic Cooperative (2 SCH version)
SOCI 2389 Academic Cooperative (3 SCH version)

An instructional program designed to integrate on-campus study with practical hands-on experience in sociology. In conjunction with class seminars, the individual student will set specific goals and objectives in the study of human social behavior and/or social institutions.

Approval Number.....45.0101.51 25
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....144

SOCW (Social Work)

SOCW 2361 Introduction to Social Work

Development of the philosophy and practice of social work in the United States, survey of the fields and techniques of social work.

Approval Number.....44.0701.51 24
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

SOCW 2362 Social Welfare as a Social Institution

Introduction to the study of modern social work, the underlying philosophy and ethics of social work, and the major divisions and types of social work together with their methods and objectives.

Approval Number.....44.0701.52 24
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

SPAN (Spanish Language)

SPAN 1100* Beginning Spanish Conversation I (1 SCH version)
SPAN 1110* Beginning Spanish Conversation II (1 SCH version)

SPAN 1200* Beginning Spanish Conversation I (2 SCH version)
SPAN 1210* Beginning Spanish Conversation II (2 SCH version)

SPAN 1300 Beginning Spanish Conversation I (3 SCH version)
SPAN 1310* Beginning Spanish Conversation II (3 SCH version)

SPAN 2106* Intermediate Spanish Conversation (1 SCH version)
SPAN 2206* Intermediate Spanish Conversation (2 SCH version)
SPAN 2306* Intermediate Spanish Conversation (3 SCH version)
***Scheduled for deletion fall 2014**

Basic practice in comprehension and production of the spoken language.

Approval Number.....16.0905.54 13
maximum SCH per student.....6
maximum SCH per course.....3
maximum contact hours per course.....48

SPAN 1305 Intensive Beginning Spanish (Scheduled for deletion fall 2014)

Fundamental skills in listening comprehension, speaking, reading, and writing. Includes basic vocabulary, grammatical structures, and culture. Covers material comparable to separate 1st- and 2nd-semester Spanish courses.

Approval Number.....16.0905.51 13
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....112

SPAN 1311 Beginning Spanish I (1st semester Spanish, 3 SCH version)
SPAN 1411 Beginning Spanish I (1st semester Spanish, 4 SCH version)
SPAN 1511 Beginning Spanish I (1st semester Spanish, 5 SCH version)

Basic Spanish language skills in listening, speaking, reading, and writing within a cultural framework. Students will acquire the vocabulary and grammatical structures necessary to communicate and comprehend at the beginner level.

Approval Number.....16.0905.51 13
maximum SCH per student.....5
maximum SCH per course.....5
maximum contact hours per course.....112

Learning Outcomes

Upon successful completion of this course, students will:

1. Engage in conversations using level-appropriate grammatical structures including narrating events that take place in the present and producing questions and responses on a variety of topics dealing with everyday life.
2. Demonstrate understanding of level-appropriate spoken Spanish.
3. Write simple sentences and organize them into short paragraphs.
4. Read and comprehend level-appropriate texts.
5. Identify and discuss traditions, customs and values of the Hispanic world.
6. Compare and contrast the traditions, customs and values of the Hispanic world with characteristics of their own culture.

SPAN 1312 Beginning Spanish II (2nd semester Spanish, 3 SCH version)
SPAN 1412 Beginning Spanish II (2nd semester Spanish, 4 SCH version)
SPAN 1512 Beginning Spanish II (2nd semester Spanish, 5 SCH version)

Continued development of basic Spanish language skills in listening, speaking, reading, and writing within a cultural framework. Students acquire the vocabulary and grammatical structures necessary to communicate and comprehend at the high beginner to low intermediate level.

Approval Number.....16.0905.51 13
maximum SCH per student.....5
maximum SCH per course.....5
maximum contact hours per course.....112

Learning Outcomes

Upon successful completion of this course, students will:

1. Engage in conversations using level-appropriate grammatical structures including narrating events that take place in the past.
2. Demonstrate understanding of level-appropriate spoken Spanish produced by Spanish speakers of diverse origins.
3. Write simple to moderately complex sentences using level-appropriate grammatical structures and organize them into cohesive paragraphs.
4. Read and comprehend level-appropriate authentic texts.
5. Identify and discuss traditions, customs and values of the Hispanic world.
6. Compare and contrast the traditions, customs and values of the Hispanic word with characteristics of their own culture.

SPAN 2311 Intermediate Spanish I (3rd semester Spanish)
SPAN 2312 Intermediate Spanish II (4th semester Spanish)

The consolidation of skills acquired at the introductory level. Further development of proficiency in listening, speaking, reading and writing. Emphasis on comprehension, appreciation, and interpretation of the cultures of the Spanish-speaking world.

Approval Number.....16.0905.52 13
maximum SCH per student.....6
maximum SCH per course.....3
maximum contact hours per course.....80

SPAN 2311 Intermediate Spanish I (3rd semester Spanish)

Learning Outcomes

Upon successful completion of this course, students will:

1. Demonstrate comprehension of authentic spoken discourse produced by Spanish speakers of diverse origins.
2. Produce oral Spanish comprehensible to native speakers using complex grammatical structures to narrate, describe and elicit information.
3. Demonstrate increasing comprehension of authentic written texts in a variety of genres.
4. Write descriptions and narratives at a low intermediate level using complex grammatical structures.
5. Formulate cohesive paragraphs and short/simple essays.
6. Describe cultural practices and products of the Spanish-speaking world drawing on authentic materials including literature and the visual arts.

SPAN 2312 Intermediate Spanish II (4th semester Spanish)

Learning Outcomes

Upon successful completion of this course, students will:

1. Summarize authentic spoken discourse produced by Spanish speakers of diverse origins.
2. Produce Spanish comprehensible to native speakers using complex grammatical structures to communicate analytical and interpretive information in both impromptu and prepared speech.
3. Demonstrate increasing comprehension of authentic written texts in a variety of genres.

4. Write evaluations and critiques at a high intermediate level using complex grammatical structures.
5. Formulate cohesive paragraphs and essays.
6. Interpret cultural practices and products of the Spanish speaking world drawing on authentic materials including literature and the visual arts.

SPAN 2313 Spanish for Native/Heritage Speakers I
SPAN 2315 Spanish for Native/Heritage Speakers II

Builds upon existing oral proficiencies of heritage speakers of Spanish. Enhances proficiencies in the home-based language by developing a full range of registers including public speaking and formal written discourse. Emphasis on comprehension, appreciation, and interpretation of the cultures of the Spanish-speaking world.

Approval Number.....16.0905.52 13
maximum SCH per student.....6
maximum SCH per course.....3
maximum contact hours per course.....80

SPAN 2313 Spanish for Native/Heritage Speakers I

Learning Outcomes

Upon successful completion of this course, students will:

1. Write dialogues, descriptions and narratives demonstrating:
   - Correct orthography and punctuation
   - Cohesion between sentences
   - Appropriate register
2. Demonstrate an expanded vocabulary.
3. Apply strategies for linking ideas in complex sentences.
4. Identify similarities and differences among distinct varieties of Spanish.
5. Give oral presentations in a formal register appropriate for professional and academic settings.
6. Describe cultural practices and products of the Spanish speaking world drawing on authentic materials including literature and the visual arts.

SPAN 2315 Spanish for Native/Heritage Speakers II

Learning Outcomes

Upon successful completion of this course, students will:

1. Write evaluations, explanations and other types of academic writing demonstrating development of rhetorical skills.
2. Demonstrate an expanded vocabulary in discourse.
3. Apply strategies for linking ideas in complex sentences.
4. Identify similarities and differences among distinct varieties of Spanish.
5. Give oral presentations in a formal register appropriate for professional and academic settings.
6. Interpret cultural practices and products of the Spanish speaking world drawing on authentic materials including literature and the visual arts.

SPAN 2316 Career Spanish I (Scheduled for deletion fall 2014)
SPAN 2317 Career Spanish II (Scheduled for deletion fall 2014)

Basic practice in comprehension and production of the spoken language.

Approval Number.....16.0905.54 13
maximum SCH per student.....6
maximum SCH per course.....3
maximum contact hours per course.....48

SPAN 2321* Introduction to Spanish Literature I (Iberian)
SPAN 2322* Introduction to Spanish Literature II (Iberian)
SPAN 2323* Introduction to Latin American Literature
SPAN 2324* Spanish Culture
*** Scheduled for deletion fall 2014**

Representative readings of the culture.

Approval Number.....16.0905.53 13
maximum SCH per student.....6
maximum SCH per course.....3
maximum contact hours per course.....48

SPAN 2289 Academic Cooperative (2 SCH version)
SPAN 2389 Academic Cooperative (3 SCH version)

An instructional program designed to integrate on-campus study with practical hands-on work experience. In conjunction with class seminars, the individual student will set specific goals and objectives in the study of Spanish language and literature.

Approval Number.....24.0103.52 12
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....144

SPCH (Speech)

SPCH 1144 Forensic Activities I
SPCH 1145 Forensic Activities II
SPCH 1146 Parliamentary Procedure
SPCH 2144 Forensic Activities III
SPCH 2145 Forensic Activities IV

Laboratory experience for students who participate in forensic activities.

Approval Number.....23.1304.60 12
maximum SCH per student.....4
maximum SCH per course.....1
maximum contact hours per course.....64

SPCH 1311 Introduction to Speech Communication

Introduces basic human communication principles and theories embedded in a variety of contexts including interpersonal, small group, and public speaking.

Approval Number.....23.1304.51 12
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

Learning Outcomes

Upon successful completion of this course, students will:

1. Apply the principles of human communication including: perception, verbal communication, nonverbal communication, listening, and audience analysis.
2. Demonstrate how to establish and maintain relationships through the use of interpersonal communication.
3. Apply small group communication skills including: problem solving, group roles, leadership styles, and cohesiveness.
4. Develop, research, organize, and deliver formal public speeches
5. Recognize how to communicate within diverse environments

SPCH 1315 Public Speaking

Application of communication theory and practice to the public speaking context, with emphasis on audience analysis, speaker delivery, ethics of communication, cultural diversity, and speech organizational techniques to develop students' speaking abilities, as well as ability to effectively evaluate oral presentations.

Approval Number.....23.1304.53 12
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

Learning Outcomes

Upon successful completion of this course, students will:

1. Demonstrate an understanding of the foundational models of communication.
2. Apply elements of audience analysis.
3. Demonstrate ethical speaking and listening skills by analyzing presentations for evidence and logic
4. Research, develop and deliver extemporaneous speeches with effective verbal and nonverbal techniques.
5. Demonstrate effective usage of technology when researching and/or presenting speeches.
6. Identify how culture, ethnicity and gender influence communication.
7. Develop proficiency in presenting a variety of speeches as an individual or group (e.g. narrative, informative or persuasive).

SPCH 1318 Interpersonal Communication

Application of communication theory to interpersonal relationship development, maintenance, and termination in relationship contexts including friendships, romantic partners, families, and relationships with co-workers and supervisors.

Approval Number.....23.1304.54 12
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

Learning Outcomes

Upon successful completion of this course, students will:

1. Exhibit understanding of interpersonal theories and principles.
2. Demonstrate ability to analyze and critique verbal and nonverbal interactions in mediated and face-to-face contexts.
3. Identify perceptual processes as they relate to self and others.
4. Demonstrate critical thinking ability by effectively researching, evaluating, and applying communication theories in oral and/or written assignments.
5. Demonstrate understanding of the relevance of cross-cultural, co-cultural, gender and age influences on human communication.
6. Demonstrate ability to identify, evaluate, and apply conflict styles and conflict management techniques in dyads and/or groups.
7. Identify types of and barriers to effective listening.

SPCH 1321 Business & Professional Communication

Study and application of communication within the business and professional context. Special emphasis will be given to communication competencies in presentations, dyads, teams and technologically mediated formats.

Approval Number.....23.1304.52 12
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

Learning Outcomes

Upon successful completion of this course, students will:

1. Demonstrate communication competence and critical thinking through an understanding of the foundational communication models.
2. Demonstrate essential public speaking skills in professional presentations.
3. Demonstrate written and oral competencies as it relates to employment (including job searches, interviews, interpersonal interaction, conflict management, leadership and performance appraisals.)
4. Apply essential dyadic and small group processes as they relate to the workplace.
5. Utilize various technologies as they relate to competent communication.
6. Demonstrate effective cross-cultural communication.

SPCH 1342 Voice & Diction

Physiology and mechanics of effective voice production with practice in articulation, pronunciation, and enunciation.

Approval Number.....23.1304.58 12
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....96

SPCH 2301 Introduction to Technology and Human Communication (Scheduled for deletion fall 2014)

A survey of emerging interactive communication technologies and how they influence human communication, including interpersonal, group decision-making, and public and private communication contexts. (Cross-listed as COMM 2301)

Approval Number.....09.0101.51 06
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

SPCH 2316 Interviewing (Scheduled for deletion fall 2014)

Application of communication concepts in selected interview settings with emphasis on dyadic communication, questioning techniques, interview structure, and persuasion. (Cross-listed as COMM 2316)

Approval Number.....09.0101.52 06
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

SPCH 2333 Discussion & Small Group Communication

Discussion and small group theories and techniques as they relate to group process and interaction.

Approval Number.....23.1304.56 12
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

SPCH 2335 Argumentation & Debate

Theories and practice in argumentation and debate including analysis, reasoning, organization, evidence, and refutation.

Approval Number.....23.1304.59 12
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

SPCH 2341 Oral Interpretation

Theories and techniques in analyzing and interpreting literature. Preparation and presentation of various literary forms.

Approval Number.....23.1304.57 12
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

SPCH 2289 Academic Cooperative (2 SCH version)
SPCH 2389 Academic Cooperative (3 SCH version)

An instructional program designed to integrate on-campus study with practical hands-on work experience. In conjunction with class seminars, the individual student will set specific goals and objectives in the study of speech.

Approval Number.....24.0103.52 12
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....144

TECA (Early Childhood Education)

TECA 1303 Families, School, & Community

1) A study of the child, family, community, and schools, including parent education and involvement, family and community lifestyles, child abuse, and current family life issues;
2) course content must be aligned as applicable with State Board for Educator Certification Pedagogy and Professional Responsibilities standards;
3) requires students to participate in field experiences with children from infancy through age 12 in a variety of settings with varied and diverse populations; and
4) course includes a minimum of 16 hours of field experiences.

Approval Number.....13.0101 52 09
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....80

TECA 1311 Educating Young Children

1) An introduction to the education of the young child, including developmentally appropriate practices and programs, theoretical and historical perspectives, ethical and professional responsibilities, and current issues;
2) course content must be aligned as applicable with State Board for Educator Certification Pedagogy and Professional Responsibilities standards;
3) requires students to participate in field experiences with children from infancy through age 12 in a variety of settings with varied and diverse populations;
4) course includes a minimum of 16 hours of field experiences.

Approval Number.....13.1202 51 09
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....80

TECA 1318 Wellness of the Young Child

1) A study of the factors that impact the well-being of the young child including healthy behavior, food, nutrition, fitness, and safety practices. Focus on local and national standards and legal implications of relevant policies and regulations;
2) course content must be aligned as applicable with State Board for Educator Certification Pedagogy and Professional Responsibilities standards;
3) requires students to participate in field experiences with children from infancy through age 12 in a variety of settings with varied and diverse populations;
4) course includes a minimum of 16 hours of field experiences.

Approval Number.....13.0101 53 09
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....80

TECA 1354 Child Growth & Development

A study of the physical, emotional, social, and cognitive factors impacting growth and development of children through adolescence.

Approval Number.....13.1202 52 09
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....48

VIET (Vietnamese Language)

VIET 1311 Beginning Vietnamese I (1st semester Vietnamese, 3 SCH version)
VIET 1411 Beginning Vietnamese I (1st semester Vietnamese, 4 SCH version)
VIET 1511 Beginning Vietnamese I (1st semester Vietnamese, 5 SCH version)

VIET 1312 Beginning Vietnamese II (2nd semester Vietnamese, 3 SCH version)
VIET 1412 Beginning Vietnamese II (2nd semester Vietnamese, 4 SCH version)
VIET 1512 Beginning Vietnamese II (2nd semester Vietnamese, 5 SCH version)

Fundamental skills in listening comprehension, speaking, reading, and writing. Includes basic vocabulary, grammatical structures, and culture.

Approval Number.....16.1408.51 13
maximum SCH per student.....10
maximum SCH per course.....5
maximum contact hours per course.....112

VIET 2311 Intermediate Vietnamese I (3rd semester Vietnamese)
VIET 2312 Intermediate Vietnamese II (4th semester Vietnamese)

Review and application of skills in listening comprehension, speaking, reading, and writing. Emphasizes conversation, vocabulary acquisition, reading, composition, and culture.

Approval Number.....16.1408.52 13
maximum SCH per student.....6
maximum SCH per course.....3
maximum contact hours per course.....96

Developmental Education

The following courses and interventions are developmental and do not result in degree or transferable credit. These courses and interventions may be offered for funding reimbursement.

Developmental educators should consider the application of Cross-Disciplinary Standards, as appropriate, in their courses and interventions. See the Texas College and Career Readiness Standards.

Student Success Course

Psychology of learning and success. Examines factors that underlie learning, success, and personal development in higher education. Topics covered include information processing, memory, strategic learning, self-regulation, goal setting, motivation, educational and career planning, and learning styles. Techniques of study such as time management, listening and note taking, text marking, library and research skills, preparing for examinations, and utilizing learning resources are covered. Includes courses in college orientation and developments of students' academic skills that apply to all disciplines.

Approval Number.....32.0101.52 12
maximum SCH per student.....9
maximum SCH per course.....3
maximum contact hours per course.....96

Developmental Mathematics

Topics in mathematics such as arithmetic operations, basic algebraic concepts and notation, geometry, and real and complex number systems.

This course may be taught in a 3 SCH or 4 SCH format.

Approval Number.....32.0104.51 19
maximum SCH per student.....12
maximum SCH per course.....4
maximum contact hours per course.....96

Intermediate Algebra

A study of relations and functions, inequalities, algebraic expressions and equations (absolute value, polynomial, radical, rational), with a special emphasis on linear and quadratic expressions and equations.

Approval Number.....32.0104.52 19
maximum SCH per student.....3
maximum SCH per course.....3
maximum contact hours per course.....64

Learning Outcomes

Upon successful completion of this course, students will:

1. Define, represent, and perform operations on real and complex numbers.

2. Recognize, understand, and analyze features of a function.
3. Recognize and use algebraic (field) properties, concepts, procedures (including factoring), and algorithms to combine, transform, and evaluate absolute value, polynomial, radical, and rational expressions.
4. Identify and solve absolute value, polynomial, radical, and rational equations.
5. Identify and solve absolute value and linear inequalities.
6. Model, interpret and justify mathematical ideas and concepts using multiple representations.
7. Connect and use multiple strands of mathematics in situations and problems, as well as in the study of other disciplines.

Developmental Reading

Development of reading and higher order thinking skills necessary for college readiness.

Approval Number.....32.0108.52 12
maximum SCH per student.....9
maximum SCH per course.....3
maximum contact hours per course.....96

Learning Outcomes

Upon successful completion of this course, students will:

1. Locate explicit textual information, draw complex inferences, and describe, analyze, and evaluate the information within and across multiple texts of varying lengths.
2. Comprehend and use vocabulary effectively in oral communication, reading, and writing.
3. Describe, analyze, and evaluate information within and across a range of texts.
4. Identify and analyze the audience, purpose, and message across a variety of texts.
5. Describe and apply insights gained from reading a variety of texts.

Developmental Writing

Development of college-level writing focusing on idea generation, drafting, organization, revision, and utilization of standard English.

Approval Number.....32.0108.53 12
maximum SCH per student.....9
maximum SCH per course.....3
maximum contact hours per course.....96

Learning Outcomes

Upon successful completion of this course, students will:

1. Compose a variety of texts that demonstrate clear focus, the logical development of ideas, and the use of appropriate language that advances the writer's purpose.
2. Determine and use effective approaches and rhetorical strategies for given writing situations.
3. Generate ideas and gather information relevant to the topic and purpose, incorporating the ideas and words of other writers in student writing using established strategies.
4. Evaluate relevance and quality of ideas and information to formulate and develop a claim.

5. Develop and use effective revision strategies to strengthen the writer's ability to compose college-level writing assignments.
6. Edit writing to conform to the conventions of standard English.

Integrated Reading/Writing (IRW)

Integration of critical reading and academic writing skills. The course fulfills TSI requirements for reading and/or writing.

Approval Number.....32.0108.59 12
maximum SCH per student.....9
Maximum SCH per course 4
maximum contact hours per course 96

Learning Outcomes

Upon successful completion of this course, students will:

1. Locate explicit textual information, draw complex inferences, and describe, analyze, and evaluate the information within and across multiple texts of varying lengths.
2. Comprehend and use vocabulary effectively in oral communication, reading, and writing.
3. Identify and analyze the audience, purpose, and message across a variety of texts.
4. Describe and apply insights gained from reading and writing a variety of texts.
5. Compose a variety of texts that demonstrate reading comprehension, clear focus, logical development of ideas, and use of appropriate language that advance the writer's purpose.
6. Determine and use effective approaches and rhetorical strategies for given reading and writing situations.
7. Generate ideas and gather information relevant to the topic and purpose, incorporating the ideas and words of other writers in student writing using established strategies.
8. Evaluate relevance and quality of ideas and information in recognizing, formulating, and developing a claim.
9. Develop and use effective reading and revision strategies to strengthen the writer's ability to compose college-level writing assignments.
10. Recognize and apply the conventions of standard English in reading and writing.

Writing for Non-Native Speakers

Focuses on strategies and techniques of writing and composition. Open only to non-native speakers.

Approval Number.....32.0108.54 12
maximum SCH per student.....9
maximum SCH per course 3
maximum contact hours per course 96

Learning Outcomes

Upon successful completion of this course, students will:

1. Write a clear, well-organized, multi-paragraph essay using a logical sequence in a prescribed rhetorical mode.
2. Demonstrate ability to use the writing process by generating ideas, drafting, revising, and editing.

3. Demonstrate functional vocabulary knowledge in a variety of contexts at a level appropriate for college level courses.
4. Write coherent and cohesive sentences in a variety of common patterns.
5. Recognize and use proper English mechanics.
6. Demonstrate proficiency in basic skills related to research-based academic writing, such as paraphrasing, summarizing, quoting, and citing sources according to prescribed style guidelines.

ESOL Oral Communication

Develops listening and speaking skills in speakers of languages other than English and prepares them to function in educational, vocational and/or personal English-speaking contexts.

Approval Number.....32.0108.55 12
maximum SCH per student.....9
maximum SCH per course.....3
maximum contact hours per course.....96

Learning Outcomes

Upon successful completion of this course, students will:

1. Demonstrate understanding of authentic oral texts (e.g., lectures, news casts, pod casts) that contain sophisticated vocabulary and structures by successfully completing comprehension tasks, such as answering questions, note-taking, outlining, paraphrasing, summarizing, or evaluating the content, etc. [comprehension tasks such as identifying main, supporting ideas, and implied meaning are subsumed.]
2. Plan and deliver formal oral presentations using appropriate vocabulary and syntax, recognizable organization, clear pronunciation, non-verbal cues, and appropriate volume and intonation, and respond appropriately to questions.
3. Speak with fluency, using complex and accurate language, clear pronunciation and prosodic elements (e.g., intonation, rhythm, word and sentence stress).
4. Demonstrate the ability to use a range of formal and informal language appropriate to context.
5. Participate in discussions in formal and informal settings using active listening skills and making appropriate and extended comments.
6. Assess own language production and use appropriate self-monitoring strategies such as re-phrasing, re-directing, asking for clarification, and circumlocution.
7. Analyze and evaluate oral expression by listening critically for elements that reflect an awareness of situation, audience, purpose, and diverse points of view.
8. Demonstrate knowledge of a wide range of cultural conventions and references in oral and nonverbal communication.

ESOL Reading and Vocabulary

Develops English reading proficiency and vocabulary for academic, career, or personal purposes in speakers of languages other than English and prepares them to function in a multicultural, multilingual society.

Approval Number.....32.0108.56 12
maximum SCH per student.....9

maximum SCH per course 3
maximum contact hours per course 96

Learning Outcomes

Upon successful completion of this course, students will:

1. Comprehend and summarize texts, including the identification main idea, supporting details, audience, and purpose of text.
2. Interpret and critically analyze author's bias, purpose, and perspective in academic materials.
3. Make inferences and draw conclusions from a variety of college level texts.
4. Respond critically, orally and in writing, to various kinds of college level texts.
5. Understand and use academic vocabulary and linguistically complex structures across a variety of disciplines and genres.
6. Demonstrate knowledge of cultural and historical references to American society in written materials.

Grammar for Non-native Speakers

Focuses on Standard English grammar usage for academic purposes. Open only to non-native speakers.

Approval Number.....32.0108.57 12
maximum SCH per student..... 9
maximum SCH per course 3
maximum contact hours per course 96

Learning Outcomes

Upon successful completion of this course, students will:

1. Use verb tenses and voice with proficiency.
2. Use simple, compound, and complex sentences structures including phrases and clauses with proficiency.
3. Use parts of speech (nouns, pronouns, verbs, adjectives, adverbs, prepositions, interjections, conjunctions) and determiners (quantifiers, articles, demonstratives, possessives) appropriately and with proficiency.
4. Use appropriate word choice, word form, and word order with proficiency.

Non-Semester-Length/Non-Course Competency-Based Options and Interventions (NCBO)

Note: Approved non-semester-length developmental education interventions became eligible for formula funding beginning fall 2010 and subject to limitations prescribed by law. In order to receive funding, institutions must ensure that for each intervention student hours are logged and there is an instructor of record who can assist students upon request. Institutions may request reimbursement for non-semester-length interventions within the contact hour parameters identified below for each type of developmental education intervention.

Student Success Course (NCBO)

Psychology of learning and success. Examines factors that underlie learning, success, and personal development in higher education. Topics covered include information processing, memory, strategic learning, self-regulation, goal setting, motivation, educational and career planning, and learning styles. Techniques of study such as time management, listening and note taking, text marking, library and research skills, preparing for examinations, and utilizing learning resources are covered. Includes courses in college orientation and developments of students' academic skills that apply to all disciplines.

Approval Number.....32.0101.53 12
minimum contact hours per student.....4
maximum contact hours per student.....96
minimum contact hours per course.....4
maximum contact hours per course.....96

Developmental Mathematics (NCBO)

Topics in mathematics such as arithmetic operations, basic algebraic concepts and notation, geometry, and real and complex number systems.

Approval Number.....32.0104.53 19
minimum contact hours per student.....4
maximum contact hours per student.....288
minimum contact hours per course.....4
maximum contact hours per course.....96

Intermediate Algebra (NCBO)

A study of relations and functions, inequalities, algebraic expressions and equations (absolute value, polynomial, radical, rational), with a special emphasis on linear and quadratic expressions and equations.

Approval Number.....32.0104.54 19
minimum contact hours per student.....4
maximum contact hours per student.....64
minimum contact hours per course.....4
maximum contact hours per course.....64

Learning Outcomes

Upon successful completion of this course, students will:

1. Define, represent, and perform operations on real and complex numbers.
2. Recognize, understand, and analyze features of a function.
3. Recognize and use algebraic (field) properties, concepts, procedures (including factoring), and algorithms to combine, transform, and evaluate absolute value, polynomial, radical, and rational expressions.
4. Identify and solve absolute value, polynomial, radical, and rational equations.
5. Identify and solve absolute value and linear inequalities.
6. Model, interpret and justify mathematical ideas and concepts using multiple representations.
7. Connect and use multiple strands of mathematics in situations and problems, as well as in the study of other disciplines.

Developmental Reading (NCBO)

Development of reading and higher order thinking skills necessary for college readiness.

Approval Number.....32.0108.61 12
minimum contact hours per student.....4
maximum contact hours per student.....288
minimum contact hours per course.....4
maximum contact hours per course.....96

Learning Outcomes

Upon successful completion of this course, students will:

1. Locate explicit textual information, draw complex inferences, and describe, analyze, and evaluate the information within and across multiple texts of varying lengths.
2. Comprehend and use vocabulary effectively in oral communication, reading, and writing.
3. Describe, analyze, and evaluate information within and across a range of texts.
4. Identify and analyze the audience, purpose, and message across a variety of texts.
5. Describe and apply insights gained from reading a variety of texts.

Developmental Writing (NCBO)

Development of college-level writing focusing on idea generation, drafting, organization, revision, and utilization of standard English.

Approval Number.....32.0108.62 12
minimum contact hours per student.....4
maximum contact hours per student.....288
minimum contact hours per course.....4
maximum contact hours per course.....96

Learning Outcomes

Upon successful completion of this course, students will:

1. Compose a variety of texts that demonstrate clear focus, the logical development of ideas, and the use of appropriate language that advances the writer's purpose.

2. Determine and use effective approaches and rhetorical strategies for given writing situations.
3. Generate ideas and gather information relevant to the topic and purpose, incorporating the ideas and words of other writers in student writing using established strategies.
4. Evaluate relevance and quality of ideas and information to formulate and develop a claim.
5. Develop and use effective revision strategies to strengthen the writer's ability to compose college-level writing assignments.
6. Edit writing to conform to the conventions of standard English.

Integrated Reading/Writing (IRW) (NCBO)

Integration of critical reading and academic writing skills. The intervention fulfills TSI requirements for reading and/or writing.

Approval Number.....32.0108.60 12
minimum contact hours per student.....4
maximum contact hours per student..... 288
minimum contact hours per course.....4
maximum contact hours per course..... 96

Learning Outcomes

Upon successful completion of this course, students will:

1. Locate explicit textual information, draw complex inferences, and describe, analyze, and evaluate the information within and across multiple texts of varying lengths.
2. Comprehend and use vocabulary effectively in oral communication, reading, and writing.
3. Identify and analyze the audience, purpose, and message across a variety of texts.
4. Describe and apply insights gained from reading and writing a variety of texts.
5. Compose a variety of texts that demonstrate reading comprehension, clear focus, logical development of ideas, and use of appropriate language that advance the writer's purpose.
6. Determine and use effective approaches and rhetorical strategies for given reading and writing situations.
7. Generate ideas and gather information relevant to the topic and purpose, incorporating the ideas and words of other writers in student writing using established strategies.
8. Evaluate relevance and quality of ideas and information in recognizing, formulating, and developing a claim.
9. Develop and use effective reading and revision strategies to strengthen the writer's ability to compose college-level writing assignments.
10. Recognize and apply the conventions of standard English in reading and writing.

Writing for Non-Native Speakers (NCBO)

Focuses on strategies and techniques of writing and composition. Open only to non-native speakers.

Approval Number.....32.0108.63 12
minimum contact hours per student.....4
maximum contact hours per student..... 288
minimum contact hours per course.....4
maximum contact hours per course..... 96

Learning Outcomes

Upon successful completion of this course, students will:

1. Write a clear, well-organized, multi-paragraph essay using a logical sequence in a prescribed rhetorical mode.
2. Demonstrate ability to use the writing process by generating ideas, drafting, revising, and editing.
3. Demonstrate functional vocabulary knowledge in a variety of contexts at a level appropriate for college level courses.
4. Write coherent and cohesive sentences in a variety of common patterns.
5. Recognize and use proper English mechanics.
6. Demonstrate proficiency in basic skills related to research-based academic writing, such as paraphrasing, summarizing, quoting, and citing sources according to prescribed style guidelines.

ESOL Oral Communication (NCBO)

Develops listening and speaking skills in speakers of languages other than English and prepares them to function in educational, vocational and/or personal English-speaking contexts.

Approval Number.....32.0108.64 12
minimum contact hours per student.....4
maximum contact hours per student..... 288
minimum contact hours per course.....4
maximum contact hours per course..... 96

Learning Outcomes

Upon successful completion of this course, students will:

1. Demonstrate understanding of authentic oral texts (e.g., lectures, news casts, pod casts) that contain sophisticated vocabulary and structures by successfully completing comprehension tasks, such as answering questions, note-taking, outlining, paraphrasing, summarizing, or evaluating the content, etc. [comprehension tasks such as identifying main, supporting ideas, and implied meaning are subsumed.]
2. Plan and deliver formal oral presentations using appropriate vocabulary and syntax, recognizable organization, clear pronunciation, non-verbal cues, and appropriate volume and intonation, and respond appropriately to questions.
3. Speak with fluency, using complex and accurate language, clear pronunciation and prosodic elements (e.g., intonation, rhythm, word and sentence stress).
4. Demonstrate the ability to use a range of formal and informal language appropriate to context.
5. Participate in discussions in formal and informal settings using active listening skills and making appropriate and extended comments.
6. Assess own language production and use appropriate self-monitoring strategies such as re-phrasing, re-directing, asking for clarification, and circumlocution.
7. Analyze and evaluate oral expression by listening critically for elements that reflect an awareness of situation, audience, purpose, and diverse points of view.
8. Demonstrate knowledge of a wide range of cultural conventions and references in oral and nonverbal communication.

ESOL Reading and Vocabulary (NCBO)

Develops English reading proficiency and vocabulary for academic, career, or personal purposes in speakers of languages other than English and prepares them to function in a multicultural, multilingual society.

Approval Number.....32.0108.65 12
minimum contact hours per student.....4
maximum contact hours per student.....288
minimum contact hours per course.....4
maximum contact hours per course.....96

Learning Outcomes

Upon successful completion of this course, students will:

1. Comprehend and summarize texts, including the identification of main idea, supporting details, audience, and purpose of text.
2. Interpret and critically analyze author's bias, purpose, and perspective in academic materials.
3. Make inferences and draw conclusions from a variety of college level texts.
4. Respond critically, orally and in writing, to various kinds of college level texts.
5. Understand and use academic vocabulary and linguistically complex structures across a variety of disciplines and genres.
6. Demonstrate knowledge of cultural and historical references to American society in written materials.

Grammar for Non-Native Speakers (NCBO)

Focuses on Standard English grammar usage for academic purposes. Open only to nonnative speakers.

Approval Number.....32.0108.66 12
minimum contact hours per student.....4
maximum contact hours per student.....288
minimum contact hours per course.....4
maximum contact hours per course.....96

Learning Outcomes

Upon successful completion of this course, students will:

1. Use verb tenses and voice with proficiency.
2. Use simple, compound, and complex sentences structures including phrases and clauses with proficiency.
3. Use parts of speech (nouns, pronouns, verbs, adjectives, adverbs, prepositions, interjections, conjunctions) and determiners (quantifiers, articles, demonstratives, possessives) appropriately and with proficiency.
4. Use appropriate word choice, word form, and word order with proficiency.

Appendix A: Lecture/Lab Table

Please note that this table shows the many allowable lecture/lab combinations for academic courses, but not all possible combinations will fit with each academic course. For any particular course, be sure to follow the parameters given in the ACGM course entry for the number of credit hours and contact hours.

Table 1. Lecture–Lab Credit/Contact Hour Combinations for Academic Courses

SEMESTER CREDIT HOURS	Contact Hour Range per Semester	COMBINATIONS		
		Lecture/ week	Lab/week	Contact/ semester
1 SCH	16-64	0	2	32
		0	3	48
		0	4	64
		1	0	16
		1	1	32
2 SCH	32-128	0	5	80
		0	6	96
		0	7	112
		0	8	128
		1	2	48
		1	3	64
		1	4	80
		2	0	32
		2	1	48
3 SCH	48-144	1	5	96
		1	6	112
		1	7	128
		1	8	144
		2	2	64
		2	3	80
		2	4	96
		3	0	48
		3	1	64
4 SCH	64-160	1	9	160
		2	5	112
		2	6	128
		2	7	144
		2	8	160
		3	2	80
		3	3	96
		3	4	112
		4	0	64
		4	1	80
5 SCH	80-176	2	9	176
		3	5	128
		3	6	144
		3	7	160
		3	8	176
		4	2	96
		4	3	112
		4	4	128
		5	0	80
		5	1	96

Appendix B: Funding Categories

Funding Category Names and Funding Codes

Category Name	First 2, 4, or 6 Digits of CIP Code*	Funding Code
Agriculture	01, 03	1
Architecture & Precision Production Trades	04, 47.04, 48	2
Biology, Physical Sciences & Science Technologies	26, 40, 41	3
Business Management, Marketing & Administrative Services	11.0202, 11.05, 11.09, 22.03, 51.07, 52	4
Career Pilot	49.0102	5
Communication	09, 10, 13.05	6
Computer and Information Sciences	11*	7
Construction Trades	46	8
Consumer and Homemaking Education	12, 13*, 19	9
Engineering	14	10
Engineering Related	15	11
English Language, Literature, Philosophy, Humanities & Interdisciplinary	23, 24, 25, 30, 32*, 38	12
Foreign Languages	16	13
Health Occupations – Dental Assisting, Medical Lab, and Associate Degree Nursing	51.0601 51.0802 51.1000 51.3801	14
Health Occupations – Dental Hygiene	51.0602	15
Health Occupations – Other (Excludes Dental Hygiene, Dental Assisting, Medical Lab, Associate Degree Nursing, Vocational Nursing, and Respiratory Therapy	51*	16
Health Occupations – Respiratory Therapy	51.0908	17
Health Occupations – Vocational Nursing	51.3901	18
Mathematics	27, 32.0104	19
Mechanics and Repairers – Automotive	47*	20
Mechanics and Repairers – Diesel, Aviation, Mechanics & Transportation Workers	47.0605, 47.0607, 47.0608, 47.0609,49	21
Mechanics and Repairers – Electronics	47.01, 47.02	22
Physical Education and Fitness	31, 36.0108, 36.0114	23
Protective Services and Public Administration	22*, 43, 44	24
Psychology, Social Sciences, and History	42, 45,54	25
Visual and Performing Arts	50	26
Non-State Funded	02, 08, 20, 21, 28, 29, 33, 34, 35, 36*, 37, 39	99

*The four and six-digit CIP codes, when listed separately, are not included in their corresponding two-digit CIP code funding area.