

Degree Description

This program prepares students for employment and advancement in secretarial positions in hospitals, physicians' offices, nursing homes, medical clinics and other health care installations. The emphasis is on medical terminology, medical document processing and medical transcription. The program also includes, business writing, word processing, medical software applications, database, office procedures, advanced document formatting, and electronic spreadsheet applications.

Semester I	Hours
POFT 1393 Special Topics: Introduction to Keyboarding ^{1,2} <i>or</i> POFT 2303 Speed and Accuracy Building	3 hours
POFT 1309 Administrative Office Procedures I ⁷	3 hours
POFT 1301 Business English	3 hours
POFT 1321 Business Math	3 hours
PSYC 2301 General Psychology <i>or</i> SOC1 1301 Introduction to Sociology	3 hours
	15 hours

Semester II	Hours
POFM 1302 Medical Software Applications ⁵	3 hours
POFT 2312 Business Correspondence & Communication ⁸	3 hours
ITSW 1301 Introduction to Word Processing ²	3 hours
HITT 1205 Medical Terminology I	2 hours
PHIL 2306 Introduction to Ethics	3 hours
HITT 1249 Pharmacology ⁷	2 hours
	16 hours

Semester III	Hours
POFI 2340 Advanced Word Processing ⁷	3 hours
POFM 1391 Special Topics in Medical Administrative Keyboarding ⁶	3 hours
Communications elective ⁹	3 hours
GOVT 2305 Federal Government <i>or</i> GOVT 2306 Texas Government <i>or</i> ECON 1301 Introduction To Economics	3 hours
POFM 2386 Internship-Medical Administration ^{3,7}	3 hours
	15 hours

Semester IV	Hours
Math elective <i>or</i> Life & Physical Science elective	3 hours
BMGT 1325 Office Management ^{4,8}	3 hours
POFM 2287 Internship-Medical Administration ^{3,8}	2 hours
MDCA 1343 Medical Insurance	3 hours
ITSC 1309 Integrated Software Applications I	3 hours
	14 hours

Total hours: 60 hours

- ¹ May be waived if the student has taken a keyboarding course (touch method) or if the student can keyboard at least 30 words per minute. Keyboarding test is required.
- ² May be eligible for articulation through the statewide ATC program. Please check with your high school counselor for more details.
- ³ Must meet Guidelines for Internships and have approval of the program director to enroll in this course.
- ⁴ This is a Capstone course, which brings together skills and knowledge learned in other classes and applies them in decision-making situations and in completing job tasks. Check for prerequisites.
- ⁵ 50 words per minute keyboarding goal
- ⁶ 60 words per minute keyboarding goal
- ⁷ Offered only in the fall semester.
- ⁸ Offered only in the spring semester.
- ⁹ SPCH 1311, 1315, 1321

Electives/General Education Courses

Communications

ENGL 1301 Composition I	3 hours
ENGL 2311 Technical & Business Writing	3 hours
COMM 1307 Introduction to Mass Communication	3 hours
SPCH 1311 Introduction to Speech Communication	3 hours
SPCH 1315 Public Speaking	3 hours
SPCH 1321 Business & Professional Communication	3 hours

Life & Physical Science

BIOL 1406 Biology for Science Majors I	4 hours
BIOL 1407 Biology for Science Majors II	4 hours
BIOL 1408 Biology for Non-Science Majors I	4 hours
BIOL 1409 Biology for Non-Science Majors II	4 hours
BIOL 1411 General Botany	4 hours
BIOL 1413 General Zoology	4 hours
BIOL 2401 Anatomy & Physiology I	4 hours
BIOL 2402 Anatomy & Physiology II	4 hours
BIOL 2404 Anatomy & Physiology (specialized)	4 hours
CHEM 1405 Introductory Chemistry I	4 hours
CHEM 1411 General Chemistry I	4 hours
CHEM 1412 General Chemistry II	4 hours
ENVR 1301 Environmental Science I (lecture)	3 hours
ENVR 1101 Environmental Science I (lab)	1 hours
ENVR 1302 Environmental Science II - Lecture	3 hours
ENVR 1102 Environmental Science II (lab)	1 hours
ENVR 1401 Environmental Science I (lecture + lab)	4 hours
ENVR 1402 Environmental Science II	4 hours
GEOL 1301 Earth Sciences I for Non-Science Majors (lecture)	3 hours
GEOL 1101 Earth Sciences I for Non-Science Majors (lab)	1 hours
GEOL 1302 Earth Sciences II for Non-Science Majors (lecture)	3 hours
GEOL 1102 Earth Sciences II for Non-Science Majors (lab)	1 hours
GEOL 1303 Physical Geology (lecture)	3 hours
GEOL 1103 Physical Geology Laboratory	1 hours
GEOL 1304 Historical Geology (lecture)	3 hours
GEOL 1104 Historical Geology Laboratory	1 hours
GEOL 1401 Earth Sciences I for Non-Sciences Majors (lecture + lab)	4 hours
GEOL 1403 Physical Geology (lecture + lab)	4 hours
GEOL 1404 Historical Geology (lecture + lab)	4 hours
PHYS 1401 College Physics I	4 hours
PHYS 1402 College Physics II	4 hours
PHYS 1403 Stars and Galaxies	4 hours
PHYS 1404 Solar System	4 hours
PHYS 1405 Elementary Physics I	4 hours
PHYS 1407 Elementary Physics II	4 hours

Math

MATH 1314 College Algebra	3 hours
MATH 1316 Plane Trigonometry	3 hours
MATH 1324 Mathematics for Business & Social Sciences	3 hours
MATH 1325 Calculus for Business & Social Sciences	3 hours
MATH 1332 Contemporary Mathematics (Quantitative Reasoning)	3 hours
MATH 1342 Elementary Statistical Methods	3 hours
MATH 2412 Pre-Calculus Mathematics	4 hours
MATH 2413 Calculus I	4 hours
PHIL 2303 Introduction to Formal Logic	3 hours

Course Descriptions

POFT 1393 Special Topics: Introduction to Keyboarding

Address topics recently identified current events, skills, knowledges, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. Develops skill in keyboarding techniques with emphasis on alphabet, number, and symbol keys by touch and the development of acceptable speed and accuracy. Skills can be applied to computers and other equipment with keyboards. Emphasizes proper keyboarding technique. Semester Hours 3 (3 lec)

POFT 2303 Speed and Accuracy Building

Review, correct, and improve keyboarding techniques for the purpose of increasing speed and improving accuracy. This course is designed to be repeated multiple times to improve student proficiency. Prerequisite: POFT 1393. Semester Hours 3 (3 lec)

POFT 1309 Administrative Office Procedures I

Studies current office procedures, duties, and responsibilities applicable to an office environment including telephone skills, time management, travel and meeting arrangements, mail processing, human relations and interview skills are covered. Offered only in fall semester. Semester Hours 3 (3 lec)

POFT 1301 Business English

Introduces the practical application of basic language usage skills with emphasis on fundamentals of writing and editing for business. Students will apply the basic rules of grammar, spelling, capitalization, number usage, and punctuation; utilize terminology applicable to technical and business writing; develop proofreading and editing skills; and teaches how to write effective sentences and paragraphs for business applications. Semester Hours 3 (3 lec)

POFT 1321 Business Math

Instructs the fundamentals of business mathematics including analytical and problem-solving skills for critical thinking in business applications. Applies problem solving skills utilizing electronic calculators. Enables the student to use mathematical approaches in computing percents and their applications in business discounts, interest, taxes, payroll, markups, consumer and business credit investments, and other business applications. Semester Hours 3 (3 lec)

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. NOTE: Must have passed the reading portion of the TSI Assessment or have credit for INRW 0402. Semester Hours 3 (3 lec)

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. Semester Hours 3 (3 lec)

POFM 1302 Medical Software Applications

Presents medical software applications for the management and operation of health care information systems. End-of-course speed is 50 words per minutes with 5 or fewer errors on five 5-minute timed writings. Prerequisite: POFT 1393. Semester Hours 3 (2 lec/3 lab)

POFT 2312 Business Correspondence & Communication

Presents the development of writing skills and presentation skills to produce effective business documents. Offered only in spring semester. Prerequisite: POFT 1301 with a grade of C or better. Semester Hours 3 (3 lec)

ITSW 1301 Introduction to Word Processing

Presents an overview of the production of documents, tables, and graphics. Students will identify word processing terminology and concepts, create technical documents, format and edit documents, use simple tools and utilities, and print documents. Presents pagination, merging and storage of documents. Prerequisite: POFT 1393 with a grade of C or better or a keyboarding skill of 30 words a minute using touch method. Semester Hours 3 (2 lec/2 lab)

HITT 1205 Medical Terminology I

Study of medical terms through word origin and structure. Introduction to abbreviations and symbols, surgical and diagnostic procedures, and medical specialties. Semester Hours 2 (2 lec)

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. Semester Hours 3 (3 lec)

HITT 1249 Pharmacology

Presents an overview of the basic concepts of the pharmacological treatment of various diseases affecting major body systems. Identifies the drugs associated with the treatment process and examines drug therapy, dosages, actions, and drugs administration routes. Emphasis on drug interactions with each body system, pharmaceutical medical terminology, and generic and trade names of drugs. Offered only in fall semester. Semester Hours 2 (2 lec)

POFI 2340 Advanced Word Processing

Presents advanced techniques in merging, macros, graphics, and desktop publishing. Includes extensive formatting for technical documents. Emphasis is on business applications. Students will design and create macros, use advanced formatting features, import data, and use graphic and special functions to enhance documents. Emphasizes advanced printing techniques. Offered only in fall semester. Prerequisite: ITSW 1301 with a grade of C or better or consent of the program director. Semester Hours 3 (2 lec/2 lab)

POFM 1391 Special Topics in Medical Administrative Keyboarding

Develops skill in the operation of the keyboard by touch while applying proper keyboarding techniques. Emphasis on continued keyboarding skills in document formatting, emphasizing speed and accuracy. Emphasis on proofreading, editing, following instructions, and keying documents from various copy. Formatting basic documents, such as letters, reports, tables and business forms. End-of-Course Competency Standard: keyboard 60 words a minute with 5 or fewer errors. Prerequisites: POFM 1302 and ITSW 1301 with a grade of C or better and keyboarding skills of 30 words a minute using touch method. Semester Hours 3 (2 lec/3 lab)

GOVT 2305 Federal Government

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. NOTE: Must have passed the reading portion of the TSI Assessment or have credit for INRW 0402. Semester Hours 3 (3 lec)

GOVT 2306 Texas Government

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. NOTE: Must have passed the reading portion of the TSI Assessment or have credit for INRW 0402. Semester Hours 3 (3 lec)

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. Semester Hours 3 (3 lec)

POFM 2386 Internship-Medical Administration

Establishes a work-based learning experience that enables the student to apply specialized occupational theory, skills and concepts. A learning plan is developed by the college and the employer. This may be a paid or unpaid experience. Course covers interpersonal and job-related skills. Prerequisites: POFT 1309, ITSW 1301, POFI 2340 and POFT 2301 with a minimum grade of C. An approved workstation and consent of program director. Semester Hours 3 (1 lec/15 lab)

BMGT 1325 Office Management

Presents systems, procedures, and practices related to organizing and planning office work, controlling employees' performance, and exercising leadership skills. Offered only in spring semester. Prerequisite: POFT 1301, POFT 1309, ITSW 1301, or POFT 2301 with a grade of C or better. Semester Hours 3 (3 lec)

POFM 2287 Internship-Medical Administration

Establishes a work-based learning experience that enables the student to apply specialized occupational theory, skills and concepts. A learning plan is developed by the college and the employer. This may be a paid or unpaid experience. Course covers ergonomics and interpersonal and job-related skills. Prerequisites: An approved work station and consent of the program director. POFT 1309, ITSW 1301, POFI 2340 and POFT 2301 with a minimum grade of C. Semester Hours 2 (1 lec/11 lab)

MDCA 1343 Medical Insurance

Emphasizes medical office coding procedures for payment and reimbursement by patient or third party for ambulatory care settings. Prerequisite: Successful completion of required pre-requisites with a grade of C or better. Semester Hours 3 (3 lec)

ITSC 1309 Integrated Software Applications I

Introduces business productivity software suites using word processing, spreadsheets, databases, and/or presentation software. Semester Hours 3 (2 lec/2 lab)

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 is on effective rhetorical choices, including audience, purpose, arrangement, and style. Focus is on writing the academic essay as a vehicle for learning, communication, and critical analysis. Prerequisite: TSI complete in Reading and Writing or the equivalent. Semester Hours 3 (3 lec)

ENGL 2311 Technical & Business Writing

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 of individual and collaborative processes involved in the creation of ethical and efficient documents. Prerequisite: Passing score on writing portion of TSI Assessment or credit for ENGL 0301. Semester Hours 3 (3 lec)

COMM 1307 Introduction to Mass Communication

Survey of basic content and structural elements of mass media and their functions and influences on society. Semester Hours 3 (3 lec)

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. Semester Hours 3 (3 lec)

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. Semester Hours 3 (3 lec)

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. Semester Hours 3 (3 lec)

BIOL 1406 Biology for Science Majors I

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. NOTE: Must have passed the reading and writing portion of the TSI Assessment or have credit for INRW 0402. Semester Hours 4 (3 lec/3 lab)

BIOL 1407 Biology for Science Majors II

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. Prerequisite: BIOL 1406 with a minimum grade of C. Semester Hours 4 (3 lec/3 lab)

BIOL 1408 Biology for Non-Science Majors I

Provides a survey of biological principles with an emphasis on humans, including chemistry of life, cells, structure, function, and reproduction. Semester Hours 4 (3 lec/3 lab)

BIOL 1409 Biology for Non-Science Majors II

This course will provide and reinforce a survey and of biological principles with an emphasis on humans, including evolution, ecology, plant and animal diversity, and physiology. Semester hours 4 (3 lec/3 lab)

BIOL 1411 General Botany

Fundamental biological concepts relevant to plant physiology, life cycle, growth and development, structure and function, and cellular and molecular metabolism. Includes the role of plants in the environment, evolution, and phylogeny of major plant groups, algae, and fungi. This course is intended for science majors. Semester Hours 4 (3 lec/3 lab)

BIOL 1413 General Zoology

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. Semester Hours 4 (3 lec/3 lab)

BIOL 2401 Anatomy & Physiology I

Anatomy and Physiology I is the first part of a two-course sequence. It is a study of the structure and function of the human body including cells, tissues and organs of the following systems: integumentary, skeletal, muscular, and nervous and special senses. Emphasis is on interrelationships among systems and regulation of physiological functions involved in maintaining homeostasis. NOTE: Must have passed the reading and writing portion of the TSI Assessment or have credit for INRW 0402. Semester Hours 4 (3 lec/3 lab)

BIOL 2402 Anatomy & Physiology II

Anatomy and Physiology II is the second part of a two-course sequence. It is a study of the structure and function of the human body including the following systems: endocrine, cardiovascular, immune, lymphatic, respiratory, digestive (including nutrition), urinary (including fluid and electrolyte balance), and reproductive (including human development and genetics). Emphasis is on interrelationships among systems and regulation of physiological functions involved in maintaining homeostasis. Prerequisite: BIOL 2401 with a grade of C or better. Semester Hours 4(3 lec/3 lab)

BIOL 2404 Anatomy & Physiology (specialized)

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. Semester Hours 4 (3 lec/3 lab)

CHEM 1405 Introductory Chemistry I

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. Semester Hours 4 (3 lec/3 lab)

CHEM 1411 General Chemistry I

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. Includes basic laboratory experiments supporting theoretical principles presented in CHEM 1411, as well as an introduction of the scientific method, experimental design, data collection and analysis, and preparation of laboratory reports. Prerequisite: MATH 1314 with a minimum grade of C, passing score on non-credit equivalency exam for MATH 1314, or consent of division chair. High school chemistry is strongly recommended. Semester Hours 4 (3 lec/3 lab)

CHEM 1412 General Chemistry II

Chemical equilibrium, phase diagrams and spectrometry, acid-base concepts, thermodynamics, kinetics, electrochemistry, nuclear chemistry, an introduction to organic chemistry and descriptive inorganic chemistry. Includes basic laboratory experiments supporting theoretical principles presented in CHEM 1412, as well as an introduction of the scientific method, experimental design, chemical instrumentation, data collection and analysis, and preparation of laboratory reports. Prerequisite: CHEM 1411 with a grade of C or better. Semester Hours 4 (3 lec/4 lab)

ENVR 1301 Environmental Science I (lecture)

A survey of the forces, including humans, that shape our physical and biologic environment, and how they affect life on Earth. Introduction to the science and policy of global and regional environmental issues, including pollution, climate change, and sustainability of land, water, and energy resources. Semester Hours 3 (3 lec)

ENVR 1101 Environmental Science I (lab)

This laboratory-based course accompanies ENVR 1301 Environmental Science (lecture). Activities will cover methods used to collect and analyze environmental data. Prerequisite: Credit for or concurrent enrollment in ENVR 1301. Semester Hour 1 (3 lab)

ENVR 1302 Environmental Science II - Lecture

General interest course requiring a minimum of previous science background and relating scientific knowledge to problems involving energy and the environment. Semester Hours 3 (3 lec)

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. Lab exercises relate scientific knowledge to problems involving energy and the environment. Includes research projects related to the historical development of current environmental practices and concerns. May include other research projects dealing with current or potential environmental concerns. Prerequisite: Credit for or concurrent enrollment in ENVR 1302. Semester Hour 1 (3 lab)

ENVR 1401 Environmental Science I (lecture + lab)

A survey of the forces, including humans, that shape our physical and biologic environment, and how they affect life on Earth. Introduction to the science and policy of global and regional environmental issues, including pollution, climate change, and sustainability of land, water, and energy resources. The laboratory activities will cover methods used to collect and analyze environmental data. Semester Hours 4 (3 lec/3 lab)

ENVR 1402 Environmental Science II

General interest course requiring a minimum of previous science background and relating scientific knowledge to problems involving energy and the environment. Lab exercises relate scientific knowledge to problems involving energy and the environment. Includes research projects related to the historical development of current environmental practices and concerns. May include other research projects dealing with current or potential environmental concerns. Semester Hours 4 (3 lec/3 lab)

GEOL 1301 Earth Sciences I for Non-Science Majors (lecture)

Survey of geology, meteorology, oceanography and astronomy. Semester Hours 3 (3 lec)

GEOL 1101 Earth Sciences I for Non-Science Majors (lab)

This laboratory-based course accompanies GEOL 1301 Earth Sciences I. Activities will cover methods used to collect and analyze data in geology, meteorology, oceanography and astronomy. Prerequisite: GEOL 1301. Semester Hours 1 (3 lab)

GEOL 1302 Earth Sciences II for Non-Science Majors (lecture)

Extension of the study of geology, astronomy, meteorology and oceanography, focusing on natural resources, hazards and climate variability. Prerequisite: GEOL 1401, 1403 or 1404. Semester Hours 3 (3 lec)

GEOL 1102 Earth Sciences II for Non-Science Majors (lab)

This laboratory-based course accompanies GEOL 1302 Earth Sciences II. Activities will focus on methods used to collect and analyze data related to natural resources, hazards and climate variability. Prerequisite: Credit for or concurrent enrollment in GEOL 1302. Semester Hour 1 (3 lab)

GEOL 1303 Physical Geology (lecture)

Introduction to the study of the materials and processes that have modified and shaped the surface and interior of Earth over time. These processes are described by theories based on experimental data and geologic data gathered from field observations. Semester Hours 3 (3 lec)

GEOL 1103 Physical Geology Laboratory

This laboratory-based course accompanies GEOL 1303 Physical Geology. Laboratory activities will cover methods used to collect and analyze earth science data. Prerequisite: GEOL 1303 or concurrent enrollment. Semester Hour 1 (3 lab)

GEOL 1304 Historical Geology (lecture)

A comprehensive survey of the history of life and major events in the physical development of Earth as interpreted from rocks and fossils. Prerequisites: GEOL 1303 or 1403. Semester Hours 3 (3 lec)

GEOL 1104 Historical Geology Laboratory

This laboratory-based course accompanies GEOL 1304 Historical Geology. Laboratory activities will introduce methods used by scientists to interpret the history of life and major events in the physical development of earth from rocks and fossils. Prerequisite: GEOL 1304. Semester Hour 1 (3 lab)

GEOL 1401 Earth Sciences I for Non-Sciences Majors (lecture + lab)

Survey of geology, meteorology, oceanography, and astronomy. The lab activities will cover methods used to collect and analyze data in geology, meteorology, oceanography and astronomy. Semester Hours 4 (3 lec/3 lab)

GEOL 1403 Physical Geology (lecture + lab)

Introduction to the study of the materials and processes that have modified and shaped the surface and interior of Earth over time. These processes are described by theories based on experimental data and geologic data gathered from field observations. Laboratory activities will cover methods used to collect and analyze earth science data. Semester Hours 4 (3 lec/3 lab)

GEOL 1404 Historical Geology (lecture + lab)

A comprehensive survey of the history of life and major events in the physical development of Earth as interpreted from rocks and fossils. Laboratory activities will introduce methods used by scientists to interpret the history of life and major events in the physical development of earth from rocks and fossils. Prerequisite: GEOL 1303 or 1403. Semester Hours 4 (3 lec/3 lab)

PHYS 1401 College Physics I

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. Prerequisite: MATH 1316, 2412 or 2413 with a grade of C or better. Semester Hours 4 (3 lec/3 lab)

PHYS 1402 College Physics II

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. Prerequisite: PHYS 1401. Semester Hours 4 (3 lec/3 lab)

PHYS 1403 Stars and Galaxies

Study of stars, galaxies, and the universe outside our solar system. Semester Hours 4 (3 lec/3 lab)

PHYS 1404 Solar System

Study of the sun and its solar system, including its origin. Semester Hours 4 (3 lec/3 lab)

PHYS 1405 Elementary Physics I

Conceptual level survey of topics in physics intended for liberal arts and other non-science majors. Semester Hours 4 (3 lec/3 lab)

PHYS 1407 Elementary Physics II

Conceptual level survey of topics in physics intended for liberal arts and other non-science majors. Semester Hours 4 (3 lec/3 lab)

MATH 1314 College Algebra

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. Graphing calculator required. Recommended Prerequisite: TSI complete. Prerequisite: MATH 0311 or consent of division chair. Semester Hours 3 (3 lec)

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. Graphing calculator required. Prerequisite: MATH 1314 with a minimum grade of C, or passing score on non-credit equivalency exam for MATH 1314, or consent of division chair. Semester Hours 3 (3 lec)

MATH 1324 Mathematics for Business & Social Sciences

The application of common algebraic functions, including polynomial, exponential, logarithmic and rational, to problems in business, economics and the social sciences are addressed. The applications include mathematics of finance, including simple and compound interest and annuities; systems of linear equations; matrices, linear programming; and probability, including expected value. Prerequisite: MATH 0311 or consent of division chair. Semester Hours 3 (3 lec)

MATH 1325 Calculus for Business & Social Sciences

This course is the basic study of limits and continuity, differentiation, optimization and graphing, and integration of elementary functions, with emphasis on applications in business, economics and social sciences. This course is not a substitute for MATH 2413, Calculus I. Prerequisite: MATH 1324 or equivalent or consent of division chair. Semester Hours 3 (3 lec)

MATH 1332 Contemporary Mathematics (Quantitative Reasoning)

Intended for Non STEM (Science, Technology, Engineering, and Mathematics) majors. Topics include introductory treatments of sets and logic, financial mathematics, probability and statistics with appropriate applications. Number sense, proportional reasoning, estimation, technology, and communication should be embedded throughout the course. Additional topics may be covered. Graphing calculator required. Prerequisite: TSI math complete or MATH 0308 or consent of division chair. Semester Hours 3 (3 lec)

MATH 1342 Elementary Statistical Methods

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. Graphing calculator required. Prerequisite: TSI math complete or MATH 0308 or completion of college-level math course or consent of division chair. Semester Hours 3 (3 lec)

MATH 2412 Pre-Calculus Mathematics

In-depth combined study of algebra, trigonometry, and other topics for calculus readiness. Prerequisite: MATH 1314 with a minimum grade of C, or passing score on non-credit equivalency exam for MATH 1314, or consent of division chair. Semester Hours 4 (4 lec)

MATH 2413 Calculus I

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. Graphing calculator required. Prerequisite: MATH 2412 with a minimum grade of C, or both MATH 1314 and MATH 1316 with minimum grades of C, or passing score on non-credit equivalency exam for MATH 2412, or consent of division chair. Semester Hours 4 (4 lec)

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. Semester Hours 3 (3 lec)
