ENGL 1301 Composition and Rhetoric
3 Hours (3-0)
A course designed to assist students to become more proficient in grammar, mechanics, expository writing, vocabulary, and critical reading. Students are required to work on writing, vocabulary, grammar, and punctuation in writing lab.

ENGL 1302 Composition and Literature
3 Hours (3-0)
A course designed to enable students to further their composition skills by writing multi-paragraph essays, including a research paper; to write logically; and to read, research, analyze, and discuss the literary genres of poetry, short fiction, and drama. Course assignments will include a minimum of 6000 words of writing. Prerequisite: ENGL 1301.

ENGL 1303 Creative Writing
3 Hours (3-0)
A course designed to enable students to investigate and discuss the creative process, to study and practice techniques of creative writing; and to read, analyze, discuss, and write two or more of the following: narrative essays, poems, short stories, and researched reviews/abstracts. Course assignments will include a minimum of 6000 words of writing. Credit will be given only once for ENGL 2307.

ENGL 1304 Advanced Studies in Creative Writing
3 Hours (3-0)
An advanced course designed to enable students to investigate and discuss the creative Process; to study and practice techniques of creative writing; and to read, analyze, discuss, and write one or more of the following: narrative essays, poems, short stories, and plays. Credit will be given only once for ENGL 2308. Prerequisite: ENGL 1301.

ENGL 1305 Technical & Business Writing I
3 Hours (3-0)
First semester of a study designed to enable students to organize and prepare basic technical materials in the following areas: abstracts; proposals, technical descriptions, instructional processes, informational processes, technical definitions, progress reports; formal technical reports, graphics, and business correspondence. Course is designed also to enable students to analyze audience and present oral reports. Course assignments will include a minimum of 6000 words of writing. Prerequisite: ENGL 1301.

ENGL 1306 Technical & Business Writing II
3 Hours (3-0)
Second semester of a study designed to enable students to organize and prepare materials for college-level scientific, technical, or business writing. Course assignments will include a minimum of 6000 words of writing. Prerequisite: ENGL 1301.

ENGL 1307 Masterworks of British Literature
3 Hours (3-0)
The study of longer significant works of British literature, including study of movements, schools, or periods. Prerequisite: ENGL 1302. Course assignments will include a minimum of 6000 words of writing.

ENGL 1308 British Literature Anglo-Saxon Period through Neo-Classical
3 Hours (3-0)
A course designed to enable students to develop a historical perspective on the development of ideas and literary techniques by studying major authors, works, and trends in English literature from the Anglo-Saxon Period through the Neo-classical Age. Students will develop their critical thinking, research, and writing skills. Course assignments will include a minimum of 6000 words of writing. Prerequisite: ENGL 1302.
GERM 1412 Elementary German II
4 Hours (3-4)
This is a conversation course conducted primarily in German for the student who has completed German 1411 or its equivalent. Intensive oral-aural drill and classroom interaction will enable students to master the lexical and grammatical structures necessary in carrying on conversations in German. Prerequisite: GERM 1411.

GERM 2311 Intermediate German I
3 Hours (3-2)
This course is conducted in German, and it includes a comprehensive review of German grammar and structure. Through classroom drill, discussion, and composition, the course emphasizes vocabulary expansion and the acquisition of a basic knowledge of German culture and literature. Prerequisite: GERM 1412.

GERM 2312 Intermediate German II
3 Hours (3-2)
A course designed to provide fluency in spoken and written German through intensive grammar presentation and review, through conversational practice, and through composition and reading. The course is conducted in German. Prerequisite: GERM 2311.

GOVT 2301 Federal and State Government I
3 Hours (3-0)
This course is a comparative investigation of federal and state government. It covers the foundation and development of the constitutions of the United States and Texas (Federalism), local governments, political parties, and interest groups.

GOVT 2302 Federal and State Government II
3 Hours (3-0)
In this class students will study the legislative, executive (including the bureaucracy), and judicial systems of the U.S. and Texas, and selected problems of public policy.

GOVT 2304 Introduction to Political Science
3 Hours (3-0)
This course is the introduction to the study of political science as a discipline-political philosophy, the theory and organization of the modern state, comparative political systems, and international relations.

GOVT 2311 Mexican-American Politics
3 Hours (3-0)
This course examines the historical and socio-political culture, and the political experience of Mexican-Americans at the local, state, and national level in the United States.

GOVT 2389 Government Internship
3 Hours (3-4)
This course is 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 government.

GRPH 1359 Object Oriented Computer Graphics
3 Hours (2-4)
Mastery of the tools and transformation options of an industry standard draw program to create complex illustrations and follow them through to the color output stage. Mastery in the use of basic elements of good layout and design principles and use of the capabilities specific to vector (object oriented) drawing software to manipulate both text and graphics with emphasis on the use of bezier curves. Acquisition of images via scanning and the creative use of clip art is included.

HART 1380, 2380 Cooperative Education
3 Hours (1-0-20)
Career related activities encountered in the student’s area of specialization are offered through a cooperative agreement between the college, employer, and student. Under supervision of the college and the employer, the student combines classroom learning with work experience. Directly related to a technical discipline, specific learning objectives guide the student through the paid work experience. This course may be repeated if topics and learning outcomes vary. The student is required to work for wages at least 20 hours per week in air conditioning, refrigeration or a related field.

HART 1391 Special Topics in Heating, Air Conditioning, and Refrigeration Technologies/Technicians
3 Hours (2-2)
Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student.

HART 1401 Basic Electricity for HVAC
4 Hours (3-3)
Principles of electricity as required by HVAC, including proper use of test equipment, electrical circuits, and component theory and operation. The class will begin with basic electricity and progress through the study of transformers, power distribution, electric motors, motor controls and circuitry. The student will be introduced to the proper operation of various electrical meters and test instruments. This course, and HART 1407 must be taken first as the prerequisite to all the HART classes.

HART 1407 Refrigeration Principles
4 Hours (3-3)
An introduction to the refrigeration cycle, heat transfer theory, temperature/pressure relationship, refrigerant handling, refrigeration components and safety. The student will learn proper soldering and brazing techniques using oxy-acetylene and air-acetylene. The student will also be introduced to the proper use of hand tools and test instruments required in both service and installation. This course, and HART 1401 must be taken first as the prerequisite for all the other HART courses.

HART 1441 Residential Air Conditioning
4 Hours (3-3)
A study of components, applications, and installation of mechanical air conditioning systems including operating conditions, troubleshooting, repair, and charging of air conditioning systems. This course covers proper recovery, recycle, and reclaim procedures. The student will also study the chemical make-up of refrigerants and how they affect the atmosphere. Replacement refrigerants and the problems they pose will also be covered. The student will gain a working knowledge of the various components used in air conditioning and refrigeration systems. The student will study various refrigerant oils and the type refrigerants they are designed for. Prerequisite: HART 1401 and HART 1407.

HART 1445 Gas and Electric Heating
4 Hours (3-3)
A study of the procedures and principles used in servicing heating systems including gas fired and electric furnaces. The student will be introduced to proper testing and troubleshooting techniques. The class will cover proper wiring, gas controls, thermostats, spark ignition and venting procedures. Prerequisite: HART 1401.
HART 2434 Advanced Air Conditioning Controls
4 Hours (3-3)
Theory and application of electrical control devices, electromechanical controls and/or pneumatic controls. This course covers the proper methods for troubleshooting electrical control devices and control circuits. The student will study the correct wiring for components such as lock-out relays, oil failure controls, and thermostats. The student will be introduced to solid state controls and their functions. Prerequisite: HART 1401.

HART 2436 Air Conditioning Troubleshooting
4 Hours (3-3)
An advanced course in application of troubleshooting principles and use of test instruments to diagnose air conditioning and refrigeration components and system problems including conducting performance tests. The student will use knowledge gained from previous classes or industry experience in order to improve their skill in determining system problems. Prerequisite: HART 1401 and HART 2442.

HART 2442 Commercial Refrigeration
4 Hours (3-3)
Theory of and practical application in the maintenance of commercial refrigeration; medium, and low temperature applications and ice machines. The student will be introduced to various controls and components used in these applications. This course covers piping procedures, wiring, operation, and troubleshooting. The student will also study air cooled, water cooled, and evaporative condensers and their applications. Prerequisite: HART 1401 and HART 1407.

HART 2445 Air Conditioning Systems Design
4 Hours (4-0)
A study of the properties of air and results of cooling, heating, humidifying or dehumidifying; heat gain and heat loss calculations including equipment selection and balancing the air system. This course covers psychometrics and design procedures developed to select proper equipment for air conditioning systems. The student will be introduced to Manual J for heating and cooling loads. The student will also study proper duct sizing and design techniques. Prerequisite: HART 1401 or Instructor Approval. Capstone course.

HART 2449 Heat Pumps
4 Hours (3-3)
A study of heat pumps, heat pump control circuits, defrost controls, auxiliary heat, air flow, and other topics related to heat pump systems. This course covers specialized refrigeration systems such as heat pumps, cascade systems, chill water systems, and gas absorption systems. The student will learn the distinctive type controls and equipment necessary for these systems. Prerequisite: HART 1401 and HART 1407.

HIST 1301 United States History To 1877
3 Hours (3-0)
This course is a survey of U.S. history from the beginnings through Reconstruction. It includes such topics as the European heritage, the colonies in North America, the creation and development of the American nation, and the sectional differences that led to the Civil War and Reconstruction.

HIST 1302 United States History Since 1877
3 Hours (3-0)
This class is a survey of U.S. history from Reconstruction to the present. Topics include the development of the West, the growth of big business and its accompanying problems, American Imperialism, the causes and results of World Wars I and II, and the post war world. May be taken before 1301.

HIST 1316 History of Christianity
3 Hours (3-0)
This course is an historical survey of the development of Christianity and its role in world history, from its origins to the present time covering theological and institutional issues. Course may be taken for either credit or non-credit. Also PHIL 1316.

HIST 2301 Texas History
3 Hours (3-0)
This class covers the history of Texas from pre-Columbian times to the present. Topics will include native American cultures, colonization by Europeans, the Texas Republic, the Civil War, and modern Texas. Emphasis will be given to the roles of ethnic groups and women. May be substituted for one semester of U.S. History.

HIST 2311 Western Civilization I
3 Hours (3-0)
This course is a history of Western civilization before c. 1500, stressing the origin and development of political, economic, and religious institutions. The class also covers the theory and practice of historical research.

HIST 2312 Western Civilization II
3 Hours (3-0)
This course is a history of Western civilization since c. 1500, stressing imperialism, nationalism, revolution, and the rise of science. The class also covers the theory and practice of historical research.

HIST 2321 World Civilizations I
3 Hours (3-0)
This class surveys the origin and development of civilizations in Asia, Africa, Europe, and the Americas from the beginning to c 1500. Material stresses the origin and development of political, economic, and religious institutions. The class also covers the theory and practice of historical research.

HIST 2322 World Civilizations II
3 Hours (3-0)
This course continues the development of world civilizations in response to Western expansion from c. 1500. Topics stress imperialism, nationalism, revolution, and rise of science. The class also covers the theory and practice of historical research.

HIST 2323 Eastern Civilization
3 Hours (3-0)
This course is a history of Eastern civilization. It covers Islamic, Indian, Chinese, and Japanese civilizations from their beginnings to the present. The class also covers the theory and practice of historical research.

HIST 2327 Mexican-American History
3 Hours (3-0)
This course is a general survey of the experience of Americans of Mexican ancestry in the development of American society. The class will emphasize Native American and Spanish culture along with political, economic, and social events.

HART 1407
All degrees with the exception of the AAS require students to complete the Core Curriculum. The Core Curriculum was established by the Texas legislature and the Texas Higher Education Coordinating Board to facilitate the transfer of courses between state supported institutions of higher education in Texas and to provide students with the basis of a liberal education. In order to obtain most degrees from a state supported institution in Texas, a student must complete the Core Curriculum. Thus, once a student has completed the Core Curriculum at one institution, it has been completed at all state supported institutions. Courses are chosen from the following areas. Consult degree programs for specific requirements. The required number of semester credit hours is noted in parenthesis beside each area.

### 010 - Communications (9)
ENGL 1301 and 1302, one course chosen from SPCH 1311, 1315, 1318, or 1321

### 020 - Mathematics (3)
MATH 1314, MATH 1316, MATH 1324, MATH 1414, MATH 2412, MATH 2413, MATH 2414, MATH 2415

### 030 - Natural Sciences (8)
BIOL 1406, BIOL 1407, BIOL 1408, BIOL 1409, BIOL 1424, BIOL 2401, BIOL 2402, BIOL 2421, CHEM 1405, CHEM 1411, CHEM 1412, GEOL 1401, GEOL 1403, GEOL 1404, GEOL 1405, GEOL 1447, PHYS 1401, PHYS 1402, PHYS 1403, PHYS 1404, PHYS 1415, PHYS 1417, PHYS 2425, PHYS 2426

### 040 - Humanities (3)
ENGL 2321, ENGL 2322, ENGL 2323, ENGL 2326, ENGL 2327, ENGL 2328, ENGL 2331, ENGL 2332, ENGL 2333, ENGL 2342, ENGL 2343, FREN 2311, FREN 2312, GERM 2311, GERM 2312, HUMA 1301, HUMA 1302, LATI 2311, LATI 2312, PHIL 1301, PHIL 2303, PHIL 2306, SPAN 2311, SPAN 2312

### 050 - Visual and Performing Arts (3)
ARTS 1301, ARTS 1303, ARTS 1304, DRAM 1310, DRAM 2361, DRAM 2362, DRAM 2366, MUSI 1306, MUSI 1308, MUSI 1309, MUSI 1310

### 060 - 070 - 080 - Social and Behavioral Sciences (15)
**U.S. History (6):** HIST 1301, HIST 1302, HIST 2301
**Government/Political Science (6):** GOVT 2301, GOVT 2302
**Other Social/Behavioral Sciences (3):** ANTH 2302, ANTH 2351, COMM 2300, ECON 2301, ECON 2302, GEOG 1303, HIST 2311, HIST 2312, PSYC 2301, SOCI 1301, SOCI 1306

### 090 - Fitness and Wellness (1)
KINE 1100, KINE 1101, KINE 1102, KINE 1103, KINE 1104, KINE 1105, KINE 1106, KINE 1107, KINE 1108, KINE 1109, KINE 1110, KINE 1113, KINE 1117, KINE 1118, KINE 1119, KINE 1120, KINE 1125, KINE 1126.

**Total: 42 semester credit hours**