ENGL 1301 Composition and Rhetoric
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 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 2307 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 2308 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 2311 Technical Writing
3 Hours (3-0)
A course 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 2314 Technical & Business Writing I
3 Hours (3-0)
First 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 2315 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 2314.

ENGL 2321 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 2322 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.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Hours (Type)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 0372</td>
<td>Intermediate Algebra</td>
<td>3 (3-0)</td>
<td>This course is intermediate in difficulty between the introductory and college algebra courses and is designed to bridge the gap between the courses. This course will enable students to become proficient in factoring, solving quadratic equations and systems of equations, working with conic sections, and functions Co-require: MATH 0170. Prerequisite: Requires a “C” or greater in MATH 0371 and a “P” in MATH 0170 or “P” in MATH 0174-0176 (FLEX Introductory Algebra sequence) or a satisfactory score on an algebra placement test or 230 on THEA. Course fee.</td>
</tr>
<tr>
<td>MATH 1314</td>
<td>College Algebra</td>
<td>3 (3-0)</td>
<td>This course is designed to enable students to become proficient in the following algebraic topics: polynomials, rational expressions, exponents, radicals, linear equations and inequalities, quadratic equations, exponential and logarithmic equations, applications systems of equations, and binomial expansion. Prerequisite: Requires a “C” or greater in MATH 0392 and a “P” in MATH 0170 or a “P” in MATH 0177-0179 or a satisfactory score on an algebra placement test or 270 on THEA. Course fee.</td>
</tr>
<tr>
<td>MATH 1316</td>
<td>Trigonometry</td>
<td>3 (3-0)</td>
<td>This course is designed to enable students to become proficient in trigonometric and inverse trigonometric functions, the solution of triangles, identities, trigonometric equations, applications complex numbers, and logarithms. Prerequisite: Requires a “C” or greater in MATH 1314 or a satisfactory score on an algebra placement test. Course fee.</td>
</tr>
<tr>
<td>MATH 1324</td>
<td>Mathematics for Business &amp; Social Sciences I</td>
<td>3 (3-0)</td>
<td>This course is designed to enable students to solve elementary business problems involving the following topics: sets, linear relations and functions, elementary matrix theory, systems of linear equations and inequalities, linear programming by the simplex method, simple and compound interest, annuities, amortization, and bonds. Requires a “B” or greater in MATH 0391 and a “P” in MATH 0190 or a satisfactory score on an algebra placement test. Course fee.</td>
</tr>
<tr>
<td>MATH 1325</td>
<td>Mathematics for Business &amp; Social Sciences II</td>
<td>3 (3-0)</td>
<td>This course is designed to enable students to learn quantitative methods for analyzing business problems. The topics to be studied are: Limits and continuity, derivatives, graphing and optimization, exponential and logarithmic functions, antiderivatives, integration, applications to management, economics, and business. Prerequisite: Requires a “C” or greater in MATH 1324. Course fee.</td>
</tr>
<tr>
<td>MATH 1342</td>
<td>Statistics</td>
<td>3 (3-0)</td>
<td>This course is designed to enable students to learn the introductory techniques of collection, presentation, analysis, and interpretation of data. Correlation methods, analysis of variance, dispersion, sampling, quality control, reliability, mathematical models, and regression analysis are also studied. Students will become proficient in use of computer technology such as Excel. Prerequisite: Requires a “B” or greater in MATH 0391 and a “P” in MATH 0190 or a higher level math course or a satisfactory score on an Algebra placement test. Course fee.</td>
</tr>
<tr>
<td>MATH 1350</td>
<td>Fundamentals of Mathematics I</td>
<td>3 (3-0)</td>
<td>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. This course is designed specifically for students who seek middle grade (4-8) teacher certification. Prerequisite: Requires a “C” or greater in MATH 1314 or equivalent. Course fee.</td>
</tr>
<tr>
<td>MATH 1351</td>
<td>Fundamentals of Mathematics II</td>
<td>3 (3-0)</td>
<td>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 (4-8) teacher certification. Prerequisite: Requires a “C” or greater in MATH 1350, or “C” or greater in MATH 1314 or equivalent. Course fee.</td>
</tr>
<tr>
<td>MATH 1414</td>
<td>College Algebra</td>
<td>4 (4-0)</td>
<td>This course is designed to enable students to become proficient in the following algebraic topics: polynomials, rational expressions, exponents, radicals, linear equations and inequalities, quadratic equations, exponential and logarithmic equations, systems of equations, and binomial expansion. Prerequisite: Requires a “C” or greater in MATH 0391 and a “P” in MATH 0190 or a “P” in MATH 0196-0199 or a satisfactory score on an algebra placement test or 270 on THEA. This course is designed for students needing more time to successfully complete College Algebra. Course fee.</td>
</tr>
<tr>
<td>MATH 2412</td>
<td>Pre-Calculus</td>
<td>4 (4-0)</td>
<td>This course is designed to enable students to become proficient in applications of algebra and trigonometry to the study of elementary functions and their graphs including polynomial, rational, exponential, logarithmic, and trigonometric functions. Some topics from analytical geometry are discussed. Prerequisite: Requires a “C” or greater in MATH 1314 or a satisfactory score on an algebra placement test. Course fee.</td>
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<tr>
<td>MATH 2413</td>
<td>Calculus I</td>
<td>4 (4-0)</td>
<td>This course is designed to enable students to become proficient in introductory analytic geometry, the theory of limits, differential calculus of algebraic and trigonometric functions, applications of differentiation, antiderivatives, and the definite integral. Prerequisite: Requires a “C” or greater in MATH 1316 or a “C” or better in MATH 2412 or a satisfactory score on a precalculus placement test. Course fee.</td>
</tr>
<tr>
<td>MATH 2414</td>
<td>Calculus II</td>
<td>4 (4-0)</td>
<td>This course is designed to enable students to become proficient in the differentiation and integration of transcendental functions, techniques of integration, and applications of the definite integral, indeterminate forms, and improper integrals. Prerequisite: Requires a “C” or greater in MATH 2413. Course fee.</td>
</tr>
<tr>
<td>MATH 2415</td>
<td>Calculus III</td>
<td>4 (4-0)</td>
<td>This course will enable students to become proficient in indeterminate forms, improper integrals, sequences, series, vectors, and the differential and integral calculus of functions of several variables. Prerequisite: Requires a “C” or greater in MATH 2414. Course fee.</td>
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</tbody>
</table>
MATH 2420 Differential Equations
4 Hours (4-0)
This course is designed to produce student proficiency in first order equations, linear differential equations, differential operators, Laplace transforms, and the applications of differential equations. It also introduces power series methods, linear systems, and numerical methods. Prerequisite: Requires a “C” or greater in MATH 2415. Course fee.

MCHN 1320 Precision Tools and Measurement
3 Hours (3-0)
An introduction to the modern science of dimensional metrology. Emphasis on the identification, selection, and application of various types of precision instruments associated with the machining trade. Practice of basic layout and piece part measurements while using standard measuring tools.

MRKG 1311 Principles of Marketing
3 Hours (3-0)
Introduction to the marketing mix functions and process. Includes identification of consumer and organizational needs and explanation of environmental issues. Students will identify the marketing mix components in relation to market segmentation; explain the environmental factors which influence consumer and organizational decision-making processes; and outline a marketing plan.

MUAP 1166, 1167 Woodwind Instruments I, II
1 Hour (2-1)

MUAP 1168 Brass Instruments
1 Hour (2-1)

MUAP 1169, 1170, 2169, 2170 Brass Instruction I, II, III, IV
1 Hour (0-2)

MUAP 1171, 1172, 2171, 2172 String Instruction I, II, III, IV
1 Hour (0-2)

MUAP 1173, 1174, 2173, 2174 Percussion Instruction I, II, III, IV
1 Hour (0-2)

MUAP 1175, 1176, 2175, 2176 Woodwind Instruction I, II, III, IV
1 Hour (0-2)

MUAP 1177, 1178, 2177, 2178 Keyboard Instruction I, II, III, IV
1 Hour (0-2)
Intermediate piano. A series of courses designed to provide students with the skills necessary to perform artistically at the piano in a variety of performance settings. One 30-minute private lesson per week. Prerequisite: Instructor’s permission.

MUAP 1179, 1180, 2179, 2180 Voice Instruction I, II, III, IV
1 Hour (0-2)

MUAP 1188 Percussion Instruments
1 Hour (2-1)

MUAP 1190, 2190 String Instruments I, II
1 Hour (2-1)

MUAP 1269, 1270, 2269, 2270 Brass Instruction I, II, III, IV
2 Hours (0-2)

MUAP 1271, 1272, 2271, 2272 String Instruction I, II, III, IV
2 Hours (0-2)

MUAP 1273, 1274, 2273, 2274 Percussion Instruction I, II, III, IV
2 Hours (0-2)

MUAP 1275, 1276, 2275, 2276 Woodwind Instruction I, II, III, IV
2 Hours (0-2)

MUAP 1277, 1278, 2277, 2278 Keyboard Instruction I, II, III, IV
2 Hours (0-2)
Advanced Piano. A series of courses designed to provide students with the skills necessary to perform artistically at the piano in a variety of performance settings. One 60-minute private lesson per week. Prerequisite: Instructor’s permission.

MUAP 1279, 1280, 2279, 2280 Keyboard Instruction I, II, III, IV
2 Hours (0-2)
Advanced piano. A series of courses designed to provide students with the skills necessary to perform artistically at the piano in a variety of performance settings. One 60-minute private lesson per week. Prerequisite: Instructor’s permission.

MUAP 2240 Instrumental Techniques
2 Hours (2-2)

MUEN 1121, 1122, 2121, 2122 Wind Ensemble I, II, III, IV
1 Hour (0-5)

MUEN 1123, 1124, 2123, 2124 Band I, II, III, IV
1 Hour (0-5)

MUEN 1125, 1126, 2125, 2126 Orchestra I, II, III, IV
1 Hour (0-5)

MUEN 1131, 1132, 2131, 2132 Studio Ensemble I, II, III, IV
1 Hour (0-4)

MUEN 1133, 1134, 2133, 2134 Brass Ensemble I, II, III, IV
1 Hour (0-4)

MUEN 1135, 1136, 2135, 2136 String Ensemble I, II, III, IV
1 Hour (0-4)

MUEN 1137, 1138, 2137, 2138 Woodwind Ensemble I, II, III, IV
1 Hour (0-4)

MUEN 1139, 1140, 2139, 2140 Percussion Ensemble I, II, III, IV
1 Hour (0-4)

MUEN 1141, 1142, 2141, 2142 Chamber Singers I, II, III, IV
1 Hour (0-5)

MUEN 1143, 1144, 2143, 2144 Chorale I, II, III, IV
1 Hour (0-5)

MUEN 1145, 1146, 2145, 2146 Women’s Choir I, II, III, IV
1 Hour (0-5)
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 1342, 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**