



**MATH 120 Fund of College Math 3 Credits**

Includes set theory, logic, consumer mathematics, measurement, geometry, probability, and statistics. Course is broad in scope, emphasizing applications. It is recommended that students have completed prerequisites within two years of enrolling in this course.

**MATH 120E Fund of College Math Expanded 3 Credits**

Fundamentals of College Mathematics with Corequisite Support: Includes real numbers, consumer mathematics, variation, functions, relations, graphs, geometry, probability, and statistics. Course is broad in scope, emphasizing applications. Fulfills the lower-division mathematics requirement for a Bachelor of Arts Degree. Satisfies mathematics requirement for baccalaureate degrees.

**MATH 126 Precalculus I 3 Credits**

A third course in algebra that stresses polynomial, quadratic, rational, exponential, and logarithmic functions, including their graphs and applications; complex numbers; systems of equations; and basic operations with matrices and determinants, including Cramer's rule. It is recommended that students have completed prerequisites within two years of enrolling in this course.

**MATH 126E Precalculus I Expanded 3 Credits**

Precalculus I Expanded with Co-requisite support: Includes equations, relations, functions, graphing; polynomial, rational, exponential, logarithmic, and circular functions with applications; coordinate geometry of lines and conics; analytic trigonometry; matrices and determinants; and binomial theorem. It is recommended that students have completed prerequisites within two years of enrolling in this course.

**Human Relations (one course required)****BUS 110 Human Relations Employmnt 1-3 Credits**

Introduces students to the principles and skills of effective communication in business and professional settings. It provides information on how to communicate with superiors, co-workers, subordinates, clients, and customers. Three-credit course includes a computation component. Repeatable up to a total of three credits.

**HMS 200 Ethics in Human Services 3 Credits**

Real life applications for personal and professional boundaries, beliefs, ethics, values, morals, and codes of conduct in human relationships using ethical decision-making, problem-solving, and critical-thinking activities are emphasized. This course may be repeated up to three times for continuing education credit. (Check with individual licensing boards prior to registering).

**MGT 283 Intro Human Resource Mgt 3 Credits**

Duties and responsibilities of personnel management. Areas covered include employee needs, human relationships, orienting and training employees, benefit programs, and economics of supervision.

**PSY 208 Psy of Human Relations 3 Credits**

Explores the relationships between human beings and assists in the development of interpersonal communication skills which can be used personally and professionally.

**Program Requirements****WELD 105 Draw/Weld Symbol Int 3 Credits**

An introduction to the interpretation of basic elements of blueprints, sketches, and interpretation of welding symbols.

**WELD 110 Basic Arc Welding Principles .5-5.5 Credits**

Course provides students with the basic knowledge and understanding to complete fillet and groove welds in the 1G and 1F positions using the shielded metal arc welding (SMAW) process on plain carbon steel. (15 contact hours per credit)

**WELD 150 Metallurgy Fund for Weld .5-3 Credits**

Explore the basic scientific theory as well as the practical side of metallurgy as it pertains to the welding field. May be repeated up to three credits.

**WELD 275 Line Boring 5.5 Credits**

This course is designed to give the student a basic understanding of the principles of Line Boring and Bore Welding used in the mining industry for bore repair applications.

**WELD 210 Advanced Welding Principles .5-5.5 Credits**

Course provides students with the advanced knowledge to produce high quality welds in all positions on plain carbon steel, using the shielded metal arc welding (SMAW) process. Requires passing a 2G-3G limited thickness qualification test on plain carbon steel. (15 contact hours per credit)

**WELD 220 Gas Metal & Flux Cord Arc Weld .5-11 Credits**

Course provides students with the knowledge to produce high quality welds in all positions on plain carbon steel, using the gas metal arc welding (GMAW) short circuit transfer mode and flux cored arc welding (FCAW) processes. Also requires use of the spray transfer mode for the 1F-2F and 1G positions on plain carbon steel. (15 contact hours per credit)

**WELD 240 Gas Tungsten Arc Weld 1-8 Credits**

Course provides students with the knowledge to produce high quality welds in all positions on plain carbon steel, aluminum, and stainless steel using the gas tungsten arc welding (GTAW) process. (15 contact hours per credit)

**WELD 260 Pipe Welding 8 Credits**

Course provides students with the knowledge of pipe welding principles using shielded metal arc welding processes. (15 contact hours per credit)

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**Suggested Course Sequence****1st Semester - Fall**

Course Credits English/Communications\* 3-5 Mathematics\* 3 Human Relations\* 1-3 WELD 105 3 WELD 110 5.5 WELD 210 5.5 WELD 240 7 TOTAL 28-32 \*Choose with advisor

**2nd Semester - Spring**

Course Credits WELD 150 3 WELD 275 5.5 WELD 220 11 WELD 260 8 TOTAL 27.5

**Note:** Students who have credit for WELD 136 from previous course enrollment or CTE college credit contact a GBC advisor. Course requirements include 5.5 units of WELD 110 or 2.5 units of WELD 110 and 3 units of WELD 136.