

MATH 116E Technical Mathematics Expanded 3-5 Credits

Provides technical mathematical core material so that the student gains practical problem solving experience. May include arithmetic operation, integers, exponents, scientific notation, algebraic expressions, equations, metric system, trigonometry, and logarithms. This course satisfies the general education requirement for occupational/technical AAS degree.

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.

STAT 152 Intro to Statistics 3 Credits

Includes descriptive statistics, probability models, random variables, statistical estimation and hypothesis testing, linear regression analysis, and other topics. Designed to show the dependence of statistics on probability. It is recommended that students have completed prerequisites within two years of enrolling in this course.

Science (one course required)**ANTH 102 Physical Anthropology 3 Credits**

Introduction to the study of how humans, Homo sapiens, have emerged as a species and come to dominate the planet by examining processes of human biological and cultural evolution. Topics include inheritance, the emergence of primates, fossil hominids, the development of technology, and biological variability among modern humans. Satisfies general education science.

AST 101 General Astronomy 3 Credits

An introductory examination of the solar system, stellar systems, and stellar and galactic evolution according to currently accepted concepts. Introduces astronomical instruments and light theory.

BIOL 100 General Biology/Non Major 3 Credits

Basic biological concepts, interpretation and application of scientific methods, and effects of biological advances on society. Core curriculum science course; cannot be used for credit toward field of concentration in biology.

BIOL 190 Intro Cell/Molecular Biology 4 Credits

Structure and function of cells. Major molecules of life; composition and physiology of cellular organelles; cell metabolism, reproduction, motility, and gene function of both plant and animal cells. Required for biology majors. Concurrent enrollment in a corresponding lab section is required for this course.

CHEM 100 Molecules/Life Modrn Wrld 3 Credits

Introduction to chemistry in its many forms and applications, physical and organic, with consideration of environmental and social issues. Includes laboratory activities.

CHEM 121 General Chemistry I 4 Credits

Fundamentals of chemistry including reaction stoichiometry, atomic structure, chemical bonding, molecular structure, states of matter, and thermochemistry.

ENV 100 Humans and the Environment 3 Credits

Introduction to the relationship of man and his environment. Current thinking and research concerning the impact of industrialization and urbanization on environmental quality, including the population explosion; the potential decline of the affluent society by the depletion of natural resources; the pollution of air, land surface, and water; and the public agencies and policies designed to solve environmental problems.

GEOG 103 Physical Geog Earth Environmnt 3 Credits

Physical elements of the earth's natural features and their significance to man. Topics include earth form and motion, landforms, weather, climate, vegetation, and soils. Four laboratory experiences required.

GEOL 101 Exploring Planet Earth 3-4 Credits

Fundamental principles of geology including tectonic and surficial processes, oceans, atmosphere, environmental applications, and resources. Includes a laboratory component.

GEOL 132 Rocks and Minerals 3 Credits

An introduction to the more common or important minerals and rocks. Emphasizes the conditions of formation and hand sample identification. The economic value of minerals and rocks is presented.

NUTR 121	Human Nutrition	3 Credits
An introductory nutrition course for the beginning student. Course will center on the major nutrients and their roles in maintaining good health. Students will learn to recognize well-balanced diets and acquire shopping tips and preparation techniques for optimum utilization of food dollars. Class includes four required labs.		
PHYS 100	Introductory Physics	3 Credits
A concise treatment of the basic principles of physics. Includes mechanics, matter, electricity, magnetism, heat, sound, light, relativity, and nuclear physics.		
PHYS 107	Technical Physics I	3 Credits
Investigates traditional topics of physics. Topics include mechanics, electricity, basic solid state components, optics, gases, hydraulics, fluids, and thermodynamics. This course provides a basic understanding of how physical systems are related and their technical applications. Hands-on labs, demonstrations, and calculations are an integral part of the course.		
PHYS 152	Gen Physics II	4 Credits
A continuation of PHYS 151. Topics include electrostatics, circuits, magnetism, induction, AC circuits, electronics, light optics, special relativity, and an introduction in quantum theory. Lab included.		
U.S. and Nevada Constitutions: HIST 101 and HIST 102 or PSC 101		
HIST 101	U.S. History to 1877	3 Credits
Survey of U.S. political, social, economic, diplomatic, and cultural development from colonial times through Reconstruction. When taken with HIST 102 satisfies the GBC General Education American Constitutions and Institutions Requirement. HIST 101 and 102 need not be taken sequentially. Either class may be taken alone.		
HIST 102	U.S. History Since 1877	3 Credits
Survey of U.S. political, social, economic, diplomatic, and cultural development from 1877 to the present. Course satisfies the Nevada Constitution Requirement. When taken with HIST 101 satisfies the GBC General Education American Constitutions and Institutions Requirement. Can be used to satisfy the Nevada Constitution Requirement for out-of-state transfer students who have previously satisfied the United States Constitution Requirement. HIST 101 and 102 need not be taken sequentially. Either class may be taken alone.		
PSC 101	Intro American Politics	3 Credits
A survey of United States, national, state, and local governments with emphasis on the cultural aspects of the governing process. Satisfies the legislative requirement for the United States and Nevada Constitutions.		
Humanities or Fine Arts (one course required)		
ART 100	Visual Foundations	3 Credits
A beginning art class that includes a survey of art and the basic components of design. The class explores visual concepts as they relate to the history of art through class presentations, discussions, and a variety of media. Students should plan for three hours of studio work outside the class.		
ART 101	Drawing I	3 Credits
A disciplined foundation in drawing concepts based on visual observation skills.		
ART 107	Design Fundmntls I (2-D)	3 Credits
Explores the fundamentals of design using various media focusing on 2-D design.		
ART 160	Art Appreciation	3 Credits
Introduction to the visual arts, illustrating the place of art in its social and cultural setting.		
ART 260	Survey of Art History I	3 Credits
Presentation of the historical context of major and minor works of art from the ancient world to the Renaissance, art analysis, and criticism.		
ART 261	Survey of Art History II	3 Credits
A continuation of Survey of Art History I presenting major and minor works of art from the Renaissance to the present, art analysis, and criticism.		
ENG 203	Intro to Literary Study	3 Credits
Introduction to the elements of fiction, poetry, and drama used in the analysis of literature.		
ENG 205	Intro to Creative Writing	3 Credits
A creative writing course designed to introduce students to the production of fiction and poetry.		
ENG 223	Themes of Literature	3 Credits
Themes and ideas significant in literature.		
FIS 100	Introduction to Film	3 Credits
Introduction to the historical development of film as art. Considers the development of cinematic techniques (i.e., cinematography, editing, sound, etc.), cinematic genres (i.e., the western, romantic comedy, etc.) and narrative elements (i.e., plot, character, conflict, etc.) as exemplified by the work of major American and international directors.		
FREN 111	First Year French I	3-4 Credits
Development of language skills through practice in listening, speaking, reading, writing, and structural analysis. Language practice required.		
FREN 112	First Year French II	3-4 Credits
A continuation of FREN 111. Language practice required.		

HIST 208	World History I	3 Credits
Survey of world civilizations to 1600. Examines societies, cultures, and issues relative to Africa, the Americas, Asia, Europe, the Middle East and Oceania.		
HIST 209	World History II	3 Credits
Survey of world civilizations since 1600. Examines historical societies, cultures, and issues relative to Africa, the Americas, Asia, Europe, the Middle East, and Oceania.		
HUM 101	Intro to Humanities I	3 Credits
An introduction to humanities through a study of seven major arts including film, drama, music, literature, painting, sculpture, and architecture. Each of these arts is considered from the perspective of historical development, the elements used in creating works of art, meaning and form, and criticism and critical evaluation.		
HUM 111	Gateway to the Humanities	3 Credits
Through five distinct modules, students discover answers to all of the following questions: What attributes are irreducibly human - that is, independent of gender, race, culture, society, nationality, or philosophy? How do human beings relate to one another? How do we humans express ourselves? In what ways do we limit ourselves? The student will explore: philosophy/religion; language/linguistics; history; art and architecture; law and ethics; and literature/performance. Students will seek out applications of the humanities to chosen disciplines.		
HUM 210	Communicating Diversity	3 Credits
Communicating Diversity is a lower division course designed to familiarize students with the fundamentals of diversity and how those are expressed through communication. Students will develop a deep understanding of the way in which we communicate race, gender, class, sexual orientation, nationality, religion, and physical/mental ability and how it impacts our daily lives. This course will take an intersectional approach to understanding diversity and seek communication strategies for inclusivity. Emphasis will be placed on defining and developing the critical thinking skills necessary to push past oppression, marginalization, and other issues centralized around diverse populations. Students will be encouraged to investigate and discover diversity issues, solutions, and concepts at the local and global level using case studies, current events, and other significant moments in history.		
MUS 101	Music Fundamentals	3 Credits
Notation, terminology, intervals, and scales. Designed to furnish a foundation for musicianship. Recommended for teachers in public schools and all others desiring a basic music background.		
MUS 121	Music Appreciation	3 Credits
The historical and cultural background of music and origins to the twentieth century.		
MUS 125	History of Rock Music	3 Credits
The history and stylistic development of rock from its origins, through transitions, and subsequent revolutions.		
PHIL 101	Intro to Philosophy	3 Credits
Basic problems in different areas of philosophy such as ethics, political theory, metaphysics, and epistemology.		
PHIL 102	Critical Thinking	3 Credits
Covers non-symbolic introduction to logical thinking in everyday life, law, politics, science, advertising; common fallacies; and the uses of language, including techniques of persuasion.		
PHIL 135	Introduction to Ethics	3 Credits
Introduction to Ethics: critical introduction to classical and modern ethical theories such as utilitarianism, deontology, and virtue ethics. Emphasis throughout on applying the theories in various contexts such as social, political, or interpersonal. The ultimate goal will be to allow students to clarify their own thinking and positions on important ethical issues confronting society today.		
SPAN 111	First Year Spanish I	3 Credits
Development of language skills through practice in listening, speaking, reading, writing, and structural analysis. Language practice required.		
SPAN 112	First Yr Spanish II	3 Credits
A continuation of SPAN 111. Language practice required.		
SPAN 211	Second Year Spanish I	3 Credits
Considers structural review, conversation and writing, and readings in modern literature.		
THTR 100	Introduction to Theatre	3 Credits
A survey of the basic principles, facts, and theories providing an understanding of the art of theatre. Course also includes a special focus on the practical technical aspects of the theatre and on live theatre experiences.		
THTR 105	Introduction to Acting I	3 Credits
Examines acting fundamentals and focuses on development of vocal, physical, and creative tools to be used on stage.		
THTR 121	Stage Makeup	3 Credits
This course focuses on the history of makeup and basic approaches to applying make-up for the stage and screen. Make-up supplies will be studied, as well as techniques for corrective, old-age, character, stylized, and special effects makeup.		
THTR 204	Theatre Technology I	3 Credits
Lecture and discussion encompassing the philosophy and techniques of technical theatre.		

WELD 200 Metal Art 3 Credits

This course is designed to give the student the basic understanding of two dimensional 2D and three-dimensional 3D metal art. Also covered in this course we will discuss different Cutting, Welding and metal finishing techniques that are used in this discipline as it relates to metal art.

Technology (embedded into the diesel curriculum)

DT 101 Basic Diesel Engines 1-6 Credits

A review of basic engine operation with an emphasis on operating principles, nomenclature, components, and design, and terminology. May be repeated up to 18 credits.

Program Requirements**DT 100 Shop Practices .5-4 Credits**

An introduction to hand tool identification and proper use, shop safety, and other topics including screw thread, hydraulic hose, and fitting identification. Also covers measuring devices.

DT 101 Basic Diesel Engines 1-6 Credits

A review of basic engine operation with an emphasis on operating principles, nomenclature, components, and design, and terminology. May be repeated up to 18 credits.

DT 102 Basic Vehicle Electronics 1-9 Credits

A lecture and laboratory course study of AC and DC electricity as used in mobile equipment. Emphasis on charging systems, starting systems, lighting systems, and wiring diagrams. Troubleshooting and repairing of electrical components, electronic controls systems, and voltage drops analysis will be covered. May be taught in modules.

DT 105 Mobile Air Conditioning 1-5 Credits

A lecture and laboratory course covering heating and refrigeration theory. Includes heating and air conditioning components, control systems, service evacuation, charging, overhaul, and replacement of major components.

DT 106 Heavy Duty Trans/Power Tr 1-8 Credits

The theory and operation of heavy equipment power trains will be covered in detail with emphasis on power shift transmissions. Students will become familiar with driveline angle calculations, gear ratios, clutches, differentials, and transmission electronic control systems. May be repeated up to eight credits.

DT 201 Diesel Brakes/Pneumatics 2.5 Credits

The principles of pneumatic brake systems are discussed in detail, with emphasis on cam-operated brakes. Pneumatic brake valves, schematic drawings, and foundation brake troubleshooting will be included in this technical course.

DT 215 Electronic Diesel Engines 1-9 Credits

Designed to give individuals knowledge of electronic diesel engine controls as they apply to major diesel engine manufacturers. Emphasis is placed on engine sensors, electronic injection systems, and engine operating systems. No prerequisite but students having experience with diesel engines and basic electronics will find it helpful. Course may be taught in modules.

IT 208 Fluid Power 1-9 Credits

A review of fluid power mechanics with an emphasis on schematic symbols, circuit operation and design, hydraulic component theory and operation, and hydraulic terminology. Course may be taught in modules.

WELD 136 Welding Maintenance Tech I 1-3 Credits

In this course the Maintenance Technician will learn safety in welding and Oxy-Fuel Cutting operations. Also covered in this course, the Maintenance Technician will gain an understanding of electrodes and electrode selection as well as develop an understanding on Shielded Metal Arc Welding equipment that is used in the shop and field environments. The Maintenance Technician will perform the operation of using high alloy electrodes to extract broken bolts. The Maintenance Technician will become knowledgeable in the MSHA and OSHA fabrication regulations regarding hand railing. Repeatable up to three times. (Formerly WELD 135, Welding for the Maintenance Technician I)

WELD 235 Welding Maintenance Tech II 1-3 Credits

The course is designed to give the Maintenance Technician a basic understanding of the principles of the Flux Cored Arc Welding process with hands-on training. The course will also cover the Carbon Arc Cutting process, joint designs, welding symbols, weld testing and inspection. Repeatable up to three times. Suggested Course Sequence

1st Semester - Fall

Course Credits DT 100 3 DT 102 8 IT 208 8 English/Communications* 3 Mathematics* 3 PSC 101 3 WELD 136 3 Humanities/Fine Arts* 3 TOTAL 34

2nd Semester

Course Credits DT 101 5.5 DT 105 2 DT 106 8 DT 201 2.5 DT 215 8 English/Communications* 3 Science* 3 WELD 235 3 TOTAL 35

