Winter 2015 Schedule

Accounting

ACCT 105  Introduction to Accounting  5
This course provides the student with an introductory level understanding of the fundamentals of bookkeeping and accounting. The student is provided the procedures for completing the accounting cycle for both a service entity and a merchandising entity within a single proprietorship. Tech Prep credit available.

1002 01 MTWTh 01:00PM-02:05PM 1610 AUVIL J

ACCT&201  Prin of Accounting I  5
An introduction to the steps in the accounting cycle; accounting for merchandise; the adjusting process—deferrals and accruals; financial statements; cash transactions; receivables, inventories and internal controls. This course is the first in a three-course series designed for all accounting and business majors. Prerequisite: ACCT 105 highly recommended. SE

1012 01 MTWTh 09:15AM-10:20AM 1610 MICHIE L

ACCT&202  Prin of Accounting II  5
An introduction to the accounting for fixed assets and depreciation, intangible assets, current liabilities, corporations, partnerships, long-term liabilities, statement of cash flows, and financial statement analysis. This course is the second in a three-course series designed for all accounting and business majors. Prerequisite: ACCT 201. SE

1016 01 MTWTh 10:30AM-11:35AM 1610 MICHIE L

1018 OL1 ARR ARR  WILKS P

Online fee is $10.

Agriculture

AGR 263  Soils  5
Introduction to basic concepts of soil science, plant nutrition, and water management. Topics include: soil formation and development, soil structure and composition, physical properties of soils, soils minerals, soil chemistry, soil fertility, soil microorganisms, soil ecology, fertilizers, plant, soil and water relationships and irrigation management.

1136 01 DAILY 10:00AM-11:00AM 1508 BAIR

AGR 272  Sustainable Agriculture and Food Systems  5
Lab Fee: $10.00
Examination of social, economical and ecological consequences of the modern, industrial agriculture paradigm. Topics include history of agriculture, world views, the sustainability concept, alternative agriculture systems, world food systems, agroecology, ecological economics, biotechnology, local food systems and the geography of hunger.

1146 01H MW 12:00PM-02:00PM 1508 BAIR
Students need to have access to a reliable computer and Internet connection as this is a hybrid (online and face-to-face) course.

**Anthropology**

**ANTH&100 Survey of Anthropology 5**

Lab Fee: $10.00

An introduction to anthropology with a primary focus on cultural diversity of the human experience. The course surveys four subfields of Anthropology including sociobiology, anthropological linguistics, cultural anthropology, and applied anthropology. Major themes addressed throughout the course include cultural relativity, ethnocentrism, cultural change, the conflict between "foreign" anthropologist and "native" peoples, the role of anthropology in modern society, and anthropology as a "personal lens" of change. Students will complete a two part "field study", become familiar with The HRAF (human relations area file - a major electronic data base in Anthropology), and learn potential applications of becoming an anthropologist. Prerequisite: There are no prerequisites. Strongly recommended placement in MATH 095 or higher and placement in English 099 of higher. SS

1180 OL1 ARR ARR STAFF

Section OL1: All course work for this class will be completed online through Canvas. Students need to have access to a reliable internet connection. Check your Big Bend email the week before classes for log-in information and further course instructions. Fee is $10

**Art**

**ART 102 Design II 5**

Lab Fee: $8.00

An introduction to the study of color theory explored through projects. Design I, II, and III can be taken in any order. HP

1218 01 MTWTh 09:00AM-10:20AM 1911 PALKOVIC R

**ART 105 Drawing II 5**

Lab Fee: $8.00

Drawing II is a continuation in the exploration of drawing with emphasis on technique and interpretation of ideas using various media. You will learn drawing techniques with various media and develop an individual artistic voice by introducing content (meaning or message) into drawings. Drawing I, II, and III can be taken out of sequence. HP

1232 01 MTW 10:30AM-12:30PM 1906 HAGEL S

**ART 121 Ceramics I 2-5**

Lab Fee: $28.00

Experiments and design in clay applied to pottery and sculpture. Work in various hand construction methods, glazing and kiln firing. HP
ART 122  Ceramics II  2- 5
Lab Fee: $28.00
Ceramics II continues in experiments and design in clay applied to pottery and sculpture by throwing on the pottery wheel, glazing and kiln firing. Prerequisite: ART 121 or instructor permission. HP

ART 123  Ceramics III  2- 5
Lab Fee: $28.00
Advanced experiments and design in clay applied to pottery and sculpture by working in various hand construction methods and in pottery wheel, glazing and kiln firing. Prerequisite: ART 121, 122 or instructor permission. HP

ART 217  Western Art: Renaissance to Mid 19th Century  5
A survey of the history of western art and architecture from Renaissance times to the mid nineteenth century. We will explore the art of Leonardo daVinci and Michelangelo to the beginnings of photography in the mid nineteenth century. HP

ART 230  Painting/Drawing Workshop  5
Lab Fee: $8.00
A workshop class designed to allow experimentation with 2D media such as pencil, charcoal, pastels, watercolor, acrylic paint. Prerequisite: None but studio class such as drawing or painting recommended. HP

ART 231  Oil Painting I  5
Lab Fee: $25.40
Introduction to the materials and techniques of oil painting. Painting from still-life and nature as well as creative composition. HP

ART 232  Oil Painting II  5
Lab Fee: $25.40
Advanced oil painting is an emphasis upon the student's artistic growth and the development of his or her own style and voice using oil painting techniques and materials. Prerequisite: ART 231 and 232 or instructor permission. HP
ART 233  Oil Painting III  5
Lab Fee:  $25.40
Introduction to the materials and techniques of oil painting. Painting from still-life and nature as well as creative composition. Prerequisite: ART 232 HP

1298 01  TTh 01:00PM-03:50PM  1907  PALKOVIC R

Automotive Technology

AUT 115  Automotive Shop Safety and Environmental Issues  1
Lab Fee:   $5.25
This course covers automotive shop safety rules, procedures, and shop equipment operation and is required before a student is allowed to work in the automotive laboratory. The proper handling, storage, and disposal of automotive related hazardous waste is also covered. Offered as regularly scheduled course during the fall quarter and offered by arrangement for students who enroll in the automotive program any other quarter.

1348 01  ARR  ARR  3308  MARTIN J

AUT 121  Automotive Electrical and Electronic Systems  15
Lab Fee:  $78.75
This comprehensive course covers both theory and operation of the electrical systems in today's high-tech vehicles. Topics covered include D.C. electrical theory, D.C. circuitry, Ohms Law, solid state components, batteries, starting circuits, charging circuits, lighting circuits, vehicle wiring and ignition systems. Emphasis will be placed on using modern electrical test equipment and procedures to diagnose and repair complex electrical systems. This course is designed to prepare the student for the ASE/NATEF Electrical Systems Certification test. Prerequisite: AUT 115

1352 01  MTWTh 09:00AM-03:00PM  3308  MARTIN J

AUT 132  Hydraulic Systems  3
Lab Fee:  $15.75
This course provides a student with the skills and knowledge necessary to maintain and service various hydraulic power transmission systems. Topics covered include hydraulic fundamentals, system operation, pump, valve and actuator service, as well as seals, lines and hydraulic system components. Prerequisite: AUT 115

1366 01  MTWTh 08:00AM-09:00AM  3308  MARTIN J

AUT 190  Projects Laboratory  2
Lab Fee:  $10.50
This course is for full-time automotive students who need extra project laboratory time to update or enhance their skills to meet program or certification requirements. Students will be directed to complete ASE/NATEF tasks not completed in the day classes. (May be repeated for credit up to six credits for each course; graded on pass/fail basis). Prerequisite: Concurrent enrollment in first or second year automotive program classes.
AUT 212 Automatic Transmission Repair  9  
Lab Fee: $47.25  
This course covers the theory, operation, service, and repair of various automatic transmission and transaxle assemblies. Classroom and laboratory instruction provide in-depth training using modern test equipment in the diagnosis and repair of these complex systems. This course will prepare students for the ASE/NATEF Automatic Transmission Repair Specialists Test. Prerequisite: AUT 115, AUT 121, AUT 131, AUT 132 or instructor approval.

AUT 213 Automotive Servicing I  6  
Lab Fee: $31.50  
Students, at the direction of the instructor, work on customer vehicles applying skills learned in previous automotive classes. Students will be required to complete ASE/NATEF tasks not completed in other courses. Customer relations, repair order preparation, scheduling, estimating, utilization of shop space and equipment, and hazardous waste management are covered to provide students with an understanding of repair shop operations. Prerequisite: Instructor permission or completion of first year automotive classes.

AUT 290 Projects Laboratory  2  
Lab Fee: $10.50  
This course is for full-time automotive students who need extra project laboratory time to update or enhance their skills to meet program or certification requirements. Students will be directed to complete ASE/NATEF tasks not completed in the day classes. (May be repeated for credit up to six credits for each course; graded on pass/fail basis). Prerequisite: Concurrent enrollment in first or second year automotive program classes.

AVF 111 Pre-Flight Ground School  1  
This course introduces the student to the aircraft, its flight manual, the basic federal aviation regulations, elementary principles of flight, aircraft operations, and BBCC flight rules. This course starts the week prior to the normal class starting date. All students accepted and alternates must attend this course. Pre-program counseling is done at this time, and flight training is started. Prerequisite: Accepted flight student status.
This course prepares the student to take the FAA private pilot knowledge examination. It includes elementary navigation, weather, federal aviation regulations, NTSB reporting procedures, radio procedures, AIM, advisory circulars, operating limitations, aircraft performance, principles of aerodynamics, power plants and systems, stall and spin awareness, ADM and judgment, preflight action and planning. Prerequisite: AVF 111 or Chief Pilot approval.

AVF 113 Meteorology 5

This course is designed for pilots but it is helpful for the non-aviation major to understand the basics of meteorology. A study in the nature of atmosphere, winds, temperature, moisture, air masses and frontal systems, weather forecasting utilizing charts and reports available from FAA FSS's; incorporates techniques for flying in various weather conditions. Prerequisite: AVF 112 or Chief Pilot approval. NS

AVF 131 Private Pilot Helicopter (Stage I) 4

The student will be instructed in the basic flying procedures and skills necessary for the first solo flight in a helicopter. Prerequisite: possess a valid student Pilot Certificate and hold a current medical certificate originally issued as a Class I or II.

AVF 132 Private Pilot Helicopter Stage 2 4

The student will continue development of flying skills to include solo flight, confined area operations, slope operations, night flying, and cross country navigation in a helicopter. Prerequisite: AVF 131

AVF 133 Private Pilot Helicopter Stage 3 4

The student shall gain proficiency and skill in maneuvers and navigation to the level of the Private Pilot Helicopter Practical Test standards, and will complete certification requirements of the Private Pilot Certificate - Helicopter. Prerequisite: AVF 132

AVF 141 Private Pilot Flight (Stage 1) 4

Scheduled flight time, ground critique, discussions, and observation time; both dual and solo flights. Instrument flight training is integrated with all phases of flying. Includes simulator time.

AVF 142 Private Pilot Flight (Stage 2) 4
Scheduled flight time, ground critique, discussions, and observation time; both dual and solo flights. Instrument flight training is integrated with all phases of flying. Includes simulator time. Prerequisite: AVF 141

AVF 143 Private Pilot Flight (Stage 3) 4

Scheduled flight time, ground critique, discussions and observation time; both dual and solo flights. Instrument flight training is integrated with all phases of flying. Includes simulator time. Prerequisite: AVF 142

AVF 190 Flight (Alternate) 1–4

Provides additional aircraft flight time to allow the student additional time to increase his/her skill or complete a course of study. Includes flight time and follow-up critique. Prerequisite: AVF 141

AVF 221 Commercial Pilot Ground School 5

Preparation for the FAA commercial pilot knowledge test. Includes study of applicable FAR's, accident reporting requirements of the NTSB; basic aerodynamics and the principles of flight; meteorology and the use of weather reports and forecasts; safe and efficient operation of aircraft; weight and balance computations; use of performance charts, performance limitations; use of navigation facilities, ADM judgment and CRM; principles and functions of aircraft systems; maneuvers, procedures and emergency operations; night and high-altitude operations; the National Airspace System. Prerequisite: AVF 113 & AVF 114

AVF 231 Commercial Pilot Helicopter (Stage 4) 4

The student shall gain proficiency and skill in commercial pilot scenarios and build additional cross country flight experience in a helicopter Prerequisite(s): Concurrent enrollment in instrument and commercial course required. Students enrolling in this flight course must possess a valid private pilot certificate rotorcraft-helicopter and hold a current medical certificate originally issued as a class I or II.

AVF 232 Commercial Pilot Helicopter (Stage 5) 4

The student will continue to develop the aeronautical skill and experience necessary to meet the requirements for the Commercial Pilot Certificate with a Rotorcraft category rating. Prerequisite: AVF 231

AVF 251 Commercial Pilot Flight (Stage 4) 4
Scheduled flight time, ground critique, discussion and observation time, dual, solo, cross-country, and instrument. Includes simulator time. Prerequisite: AVF 143

1470 01 MTWTh ARR 3001 MACDOUGALL J

**AVF 252 Commercial Pilot Flight (Stage 5) 4**

Scheduled flight time, ground critique, discussion and observation time; dual, solo, cross-country, instrument, and complex aircraft time. Includes simulator time. Prerequisite: AVF 251

1474 01 MTWTh ARR 3001 MACDOUGALL J

**AVF 253 Commercial Pilot Flight (Stage 7) 4**

Scheduled flight time, ground critique, discussion and observation time; dual, solo, and cross-country time. Includes 28 hours simulator time upon program completion. Prerequisite: AVF 261

1478 01 MTWTh ARR 3001 MACDOUGALL J

**AVF 254 Night Flying 1**

Provides an introduction to night flying and advanced instruction in night navigation, procedures, orientation, landings, takeoffs and techniques necessary for safe operation of airplanes at night. Prerequisite: AVF 142

1482 21 MTWTh ARR 3001 MACDOUGALL J

**AVF 261 Instrument Flight (Stage 6) 4**

Provides training in instrument flight procedures in preparation for the airplane instrument rating; includes simulator training. Prerequisite: AVF 252

1488 01 MTWTh ARR 3001 MACDOUGALL J

**AVF 270 Flight Instructor 4**

Preparation for the Certified Flight Instructor rating; includes flight time and critique. Prerequisite: Commercial license and instrument rating and Chief Pilot approval.

1492 01 ARR ARR 3001 MACDOUGALL J

**AVF 271 Flight Instructor Instrument - Airplane 2**

Provides the Flight Instructor applicant with the knowledge, skill and experience necessary to become an Instrument Instructor; includes flight time and critique. Prerequisite: Commercial/Instrument license, CFI single engine license and 10 hours as CFI with FII written passed and Chief Pilot approval.

1496 01 MTWTh ARR 3001 MACDOUGALL J

**AVF 275 Multi-Engine Flight Lab 2**

Preparation for the FAA Multi-Engine rating. Prerequisite: Commercial Pilot Certificate and Chief Pilot approval.

1504 01 MTWTh ARR 3001 MACDOUGALL J
**AVF 276  Simulator Training/Instrument Training  .5- 1**

Designed to fit the individual and particular needs of each pilot in Instrument Training, refresher or FAA currency requirements. Prerequisite: Instructor approval.

1508 01  MTWTh ARR  3002  MACDOUGALL J

**AVF 290  Flight (Alternate)  1- 4**

Provides additional aircraft flight time to allow the student additional time to increase his/her skill or complete a course of study. Includes flight time and follow-up critique. Prerequisite: AVF 141.

1512 01  MTWTh ARR  3001  MACDOUGALL J

**AVF 291  Multi-Engine - Instructor  2**


1517 01  MTWTh ARR  3001  MACDOUGALL J

### Aviation Maintenance

**AMT 148  AMT General Electricity  1- 7**

This course covers the theory of basic electricity and applied Physics. This course is FAA approved under 14 CFR Part 147. Prerequisite: instructor approval.

1548 01  ARR  ARR  3200  DANNENBERG K

**AMT 149  AMT Airframe Electricity  3**

This course covers aircraft electrical systems, electrical generators motors and regulators, aircraft communication and navigation systems. This course is FAA approved under 14 CFR Part 147. Prerequisite: instructor approval.

1554 01  ARR  ARR  3200  BORG C

**AMT 150  AMT General  4-16**

Lab Fee: $192.00

*Variable Credit Lab Fees are calculated at the highest rate*

This course will cover aviation applied physics, application of aircraft drawing, function of weight and balance control, operation and cleaning of aircraft, identification and application of aircraft materials. The use of maintenance forms and publications in the aviation industry. This course is approved under FAA Part 147. Prerequisite: instructor approval.

1558 01  MTWTh ARR  3200  DANNENBERG K

**AMT 151  Airframe Mechanic I  4-22**

Lab Fee: $264.00

*Variable Credit Lab Fees are calculated at the highest rate*
This course will cover aircraft airframe structures, including wood, fabric and sheet metal, airframe inspection, application of finishes and assembly of fixed wing and rotary wing components and structures, balancing and rigging of airframe structures and components. This course is FAA approved under 14 CFR Part 147. Prerequisite: instructor approval.

1564 01 MTWTh ARR 3200 BORG C
AMT 152 Airframe Mechanic II 4-21
Lab Fee: $252.00

*Variable Credit Lab Fees are calculated at the highest rate*

This course will cover aircraft airframe systems and components. To provide the skills in checking, overhaul, repairs, installation, removal, servicing, inspection, and troubleshooting of landing gear systems, hydraulic and pneumatic power systems, cabin atmosphere control systems, aircraft instruments, communication and navigation system lab, aircraft fuel systems, aircraft electrical systems, position and warning systems, ice and rain control systems, and fire protection systems. This course is FAA approved under 14 CFR Part 147. Prerequisite: instructor approval.

1568 01 MTWTh ARR 3200 BORG C
AMT 153 Airframe Mechanic III 4-24
Lab Fee: $288.00

*Variable Credit Lab Fees are calculated at the highest rate*

As required by the Federal Aviation Administration, the airframe program is a minimum of 750 hr. of instruction with approximately 25% of the instruction in a class room environment and 75% of the instruction in a lab environment. AMT 153 is designed to allow students more time to achieve FAA required proficiency levels and to allow students to further their proficiency levels in aviation airframe related studies. This course will cover any area of the FAA required airframe curriculum that the student is deficient in, or if all required competencies have been met, the student may further their proficiency levels in any airframe related area of study. This course is FAA approved under 14 CFR part 147. Prerequisite: AMT 150, 151, 152, MAP 100 and instructor approval.

1574 01 MTWTh ARR 3200 BORG C
AMT 251 Powerplant Mechanics I 4-16
Lab Fee: $192.00

*Variable Credit Lab Fees are calculated at the highest rate*

As required by the Federal Aviation Administration, the Powerplant program is a minimum of 750 hr. of instruction with approximately 25% of the instruction in a class room environment and 75% of the instruction in a lab environment. There is approximately 30 hours of extra time at the end of the Powerplant program, which is to be used for make-up time or for further competency enhancement. This course is FAA approved under 14 CFR Part 147. This course will cover two areas:

1. Powerplant theory and maintenance, including the inspection, repair, overhaul, service, troubleshooting, removal, and installation of aircraft reciprocating and turbine engines.
2. Powerplant systems and components, including the inspection, repair, overhaul, service, troubleshooting, removal, and installation of aircraft reciprocating and turbine engine instrument, fire protection, electrical, lubrication, ignition, starting, fuel metering, induction, airflow, cooling, exhaust, propellers, unducted fans, and auxiliary power unit systems. Prerequisite: Instructor permission

Lab Fee: $168.00

*Variable Credit Lab Fees are calculated at the highest rate*

As required by the Federal Aviation Administration, the Powerplant program is a minimum of 750 hr. of instruction with approximately 25% of the instruction in a classroom environment and 75% of the instruction in a lab environment. There is approximately 30 hours of extra time at the end of the Powerplant program, which is to be used for make-up time or for further competency enhancement. This course is FAA approved under 14 CFR Part 147. This course will cover two areas:
1. Powerplant theory and maintenance, including the inspection, repair, overhaul, service, troubleshooting, removal, and installation of aircraft reciprocating and turbine engines.
2. Powerplant systems and components, including the inspection, repair, overhaul, service, troubleshooting, removal, and installation of aircraft reciprocating and turbine engine instrument, fire protection, electrical, lubrication, ignition, starting, fuel metering, induction, airflow, cooling, exhaust, propellers, unducted fans, and auxiliary power unit systems. Prerequisite: Instructor permission

Lab Fee: $192.00

*Variable Credit Lab Fees are calculated at the highest rate*

As required by the Federal Aviation Administration, the Powerplant program is a minimum of 750 hr. of instruction with approximately 25% of the instruction in a classroom environment and 75% of the instruction in a lab environment. There is approximately 30 hours of extra time at the end of the Powerplant program, which is to be used for make-up time or for further competency enhancement. This course is FAA approved under 14 CFR Part 147. This course will cover two areas:
1. Powerplant theory and maintenance, including the inspection, repair, overhaul, service, troubleshooting, removal, and installation of aircraft reciprocating and turbine engines.
2. Powerplant systems and components, including the inspection, repair, overhaul, service, troubleshooting, removal, and installation of aircraft reciprocating and turbine engine instrument, fire protection, electrical, lubrication, ignition, starting, fuel metering, induction, airflow, cooling, exhaust, propellers, unducted fans, and auxiliary power unit systems. Prerequisite: Instructor permission

Lab Fee: $192.00

*Variable Credit Lab Fees are calculated at the highest rate*
As required by the Federal Aviation Administration, the Powerplant program is a minimum of 750 hr. of instruction with approximately 25% of the instruction in a class room environment and 75% of the instruction in a lab environment. AMT 254 is designed to allow students more time to achieve FAA required proficiency levels and to allow students to further their proficiency levels in aviation Powerplant related studies. This course will cover any area of the FAA required Powerplant curriculum that the student is deficient in, or if all required competencies have been met, the student may further their proficiency levels in any Powerplant related area of study. This course is FAA approved under 14 CFR Part 147. Prerequisite: AMT 251, 252, 253 and instructor permission.

1598 01 MTWTh ARR 3200 MOORE D
CPT 130 Composite Repair 4
Lab Fee: $48.00

Students will inspect, test, and repair composite structures. This course explains how imperfections affect composite properties and provide hands on training for the repair of defects. Areas of emphasis include structural and non-structural evaluation, material handling, surface preparation, and repair procedures. Prerequisite: Completion of AMT 111, AMT 121, AMT 161, and AMT 201

2101 21 MW 05:00PM-07:45PM 3200 DANNENBERG K
Biology

BIOL&100 Survey of Biology 5
Lab Fee: $18.80

A study of basic biological principles common to living organisms, this course is intended for non-majors who desire a lab science requirement. Topics of study include: scientific thinking, basic chemistry, cell structure and membrane transport, energy and cell pathways, DNA and gene expression, chromosomes and cell division, genes and inheritance, and evolution and natural selection. Related investigations take place in a required two-hour lab period each week. There will be no required dissections in the laboratory. LS

1600 01 MTWTh 08:15AM-09:05AM 1203 DUVALL K
Lab M 01:30AM-03:30PM 1211 DUVALL K
1602 02 TWTh 11:45AM-12:50PM 1910 WHITNEY M
Lab M 10:45AM-12:45PM 1211 WHITNEY M
BIOL&170 Human Biology 5
Lab Fee: $10.00

This course offers a broad overview of the human body for the non-science major. Topics of study include unifying biological principles such as basic cell chemistry, cell biology, and metabolism, as well as the biology of selected human systems. Issues related to human biology will also be examined. This course does not include a lab. NS

1605 OL1 ARR ARR HALEY G
Online fee is $10.

**BIOL&222  Majors Cell/Molecular  5**

Lab Fee: $18.80

The second quarter in a three-quarter general biology series, this series is designed for life-science majors, for pre-professional students, and for students intending to take advanced courses in the biological sciences. Topics of study include: structure and function of biological molecules, structure and function of prokaryotic and eukaryotic cells, membrane transport, energetics and cell metabolism, cell communication, chromosome structure and replication, gene expression, cell division, classical genetics, and developmental genetics. Math/Science distribution requirement may not include more than 5 credits from BIOL& 211 and BIOL& 222 although graduation credit can be awarded for both. Related investigations take place in a three-hour lab period each week. NOTE: This majors' biology sequence may be taken in the following order: BIOL& 222, 223, and 221, with instructor's permission.

Prerequisite: Successful completion of BIOL& 221 with a 2.0 or better and successful completion of either CHEM& 121 or CHEM& 161 with a 2.0 or better, or instructor's permission. NOTE: Students taking only BIOL& 222 as an alternative to BIOL& 211 must have instructor permission and may satisfy the CHEM& 121 prerequisite with recent high school chemistry with a B or better.

**LS**

1620 01  MTWTh 09:15AM-10:05AM  1203  DUVALL K
Lab  T 02:15PM-05:15PM  1211  DUVALL K

**BIOL&241  Human A & P 1  5**

Lab Fee: $18.80

An analysis of the structure and function of human skeletal, muscular, nervous and endocrine systems as well as the role of receptor-ligand interactions and introductory histology. Emphasis will be given to the homeostatic relationships between systems. Four hours of lab per week will be devoted to hands-on experience with required cat dissection as well as computer analysis of muscle physiology. Tissue slides, models and skeletons will be utilized. Lab is required for credit. Prerequisite(s): Students may qualify for BIOL& 241 in any one of the following ways: 1) a grade of 2.0 or better in BIOL& 211 or BIOL& 222 and in CHEM& 121 or above, or a transcript from another college for those classes 2) a year of high school Anatomy and Physiology and Chemistry within the last 2 years with a grade of B or better. 3) a score of 3 or better in Advanced Placement Biology AND a year of high school Chemistry within the last 2 years with a B or better OR INSTRUCTORS PERMISSION

1630 01  MW  01:00PM-02:15PM  1250  JACOBS B
Lab  MW  02:30PM-04:30PM  1209  JACOBS B
1632 02  MW  01:00PM-02:15PM  1250  JACOBS B
Lab  TTh  01:00PM-03:00PM  1209  JACOBS B
1634 03H ARR ARR  JACOBS B
Lab  MW  02:30PM-04:30PM  1209  JACOBS B

Section 03H incorporates both traditional class time and a distance education component. Students attend weekly laboratory sessions and take tests on campus; class lectures and assignments are accessed online. Online fee is $10.
Section 04H incorporates both traditional class time and a distance education component. Students attend weekly laboratory sessions and take tests on campus; class lectures and assignments are accessed online.

**BIOL&242 Human A & P 2  5**

Lab Fee: $18.80

The second quarter of a two-quarter sequence. Includes the structure, function and pathology of the cardiovascular, lymphatic, respiratory, digestive, urinary and reproductive systems. Emphasis will be given to the homeostatic relationships between systems. Four hours of lab per week will be devoted to human autopsy slides, required hands-on experience with cat and organ dissection and experimental procedures in cardiovascular function as well as computer analysis of renal function. Lab is required for credit. Prerequisite(s): A minimum grade of 2.0 in BIOL&241 or equivalent. LS

Section 02H incorporates both traditional class time and a distance education component. Students attend weekly laboratory sessions and take tests on campus; class lectures and assignments are accessed online.

**Botany**

**BOT 130 Botany  5**

Lab Fee: $18.80

A study of the basic principles of plant life. Topics include: plant cells, tissues, and organs; plant physiology, transport, and reproduction; plant diversity and genetics, as well as a look at how society uses and relies on plants. Related investigations take place during two hours of lab each week. Laboratory topics reinforce classroom learning and include a study of plant structures and plant diversity. A greenhouse is available for class use during student plant propagation projects. LS

**Business**

**BUS& 101 Intro to Business  5**

An introductory analysis of the business world including aspects of finance, industrial stocks and bonds, commodities and foreign exchange, unions and the labor movement, managerial control, decision making and personnel relations. SE
BUS 120  Human Relations on the Job  4

Practical application oriented study of interpersonal skills and attitudes necessary to work with others. Topics included are: maintaining professionalism, adapting/coping with change and stress, work ethics, motivation, conflict resolution, team work and customer relations. Prerequisite: Placement in ENGL 099 or above.

BUS 121  Business English  5

This course is designed to prepare students for today's offices where clear and concise writing is based on a sound understanding of grammar and is considered to be an essential job skill. Prerequisite: BBCC English placement exam ENGL099 or successful completion of ENGL098 with a 2.0 or higher.

BUS 161  Business Calculators  2

Lab Fee: $9.40

Touch control training on the ten-key electronic display/printing calculator. Basic functions; development of proficiency with proration, percentage, interest, discount, present value, and profit computations. Prerequisite: Math placement of MATH 090 or above.

BUS 200  Supervision  5

The student will look at management in organizations and the information, tools, qualities, and skills needed to successfully manage others while fostering a positive work environment and contributing to organizational success. Prerequisite: BUS 120

BUS& 201  Business Law  5

This course provides an introduction to the nature and sources of law and overview of law typically relating to the operation of businesses from the point of view of owners, managers, employees, customers, and suppliers with an emphasis on contracts and sales.

BIM 101  Basic Keyboarding  2
This course gives emphasis to learning the keyboard; namely, the alphabet, numbers, and symbols. This course is designed for the individual who has never taken a keyboarding class, who may want to renew keyboarding skills, or who wants to change keyboarding habits.

1795 01 MTWTh ARR 1613 BERRY-GUERIN

Start & end date: 01/05/15 to 02/19/15

This is not an online course; it is a self-paced course. See your Canvas class site for information.

1796 02H MTWTh ARR 1613 BERRY-GUERIN

Start & end date: 01/26/15 to 03/18/15

This is not an online course; it is a self-paced course. See your Canvas class site for information. Online fee is $10.

BIM 102 Document Formatting 1-4

Lab Fee: $36.00

*Variable Credit Lab Fees are calculated at the highest rate*

This course gives primary emphasis to the formatting of business documents using Microsoft Word. Prerequisite: BIM101/Keyboarding Skills.

1802 01 MTWTh ARR 1613 BERRY-GUERIN

This is not an online course; it is a self-paced course that requires attendance. See your Canvas class site for information.

BIM 103 The Administrative Professional 2

Lab Fee: $28.00

This course is an introduction to the administrative professional career.

1806 01H MTWTh ARR 1613 BERRY-GUERIN/WILLINGHAM

This course is designed for BIM program students. Two days of attendance are required. Attendance is required on January 7 at 2:30 p.m. or January 8 at 9:15 a.m. and March 11 at 2:30 p.m. or March 12 at 9:15 a.m. This is a hybrid course. Students need to have access to a good, reliable Internet connection. Online fee is $10.

BIM 104 Intermediate Keyboarding 1-3

Lab Fee: $27.00

*Variable Credit Lab Fees are calculated at the highest rate*

This course gives emphasis to improving keyboarding speed and accuracy. Prerequisite: BIM 101/Basic Keyboarding Skills

1814 01 MTWTh ARR 1613 BERRY-GUERIN
Start & end date: 01/05/15 to 02/19/15
This is not an online course; it is a self-paced course that requires regular attendance. See your Canvas class site for information.

1815 02 MTWTh ARR 1613 BERRY-GUERIN

Start & end date: 01/26/15 to 03/18/15
This is not an online course; it is a self-paced course that requires regular attendance. See your Canvas class site for information.

**BIM 106 Advanced Keyboarding 1-3**

Lab Fee: $27.00

*Variable Credit Lab Fees are calculated at the highest rate*

This course gives emphasis to improving keyboarding speed and accuracy.
Prerequisite(s): BIM 104

1817 01 MTWTh ARR 1613 BERRY-GUERIN

Start & end date: 01/05/15 to 02/19/15
This is not an online course; it is a self-paced course that requires regular attendance. See your Canvas class site for information.

1818 02 MTWTh ARR 1613 BERRY-GUERIN

Start & end date: 01/26/15 to 03/18/15
This is not an online course; it is a self-paced course that requires regular attendance. See your Canvas class site for information.

**BIM 109 Internet Communications 1**

Lab Fee: $9.00

This course will introduce the functions of email communications and the fundamental use and sharing of Web Applications.

1823 01 MTWTh ARR 1613 BERRY-GUERIN

Start & end date: 01/05/15 to 02/19/15
This is not an online course; it is a self-paced course that requires attendance. See your Canvas class site for information.

1824 02 MTWTh ARR 1613 BERRY-GUERIN

Start & end date: 01/26/15 to 03/18/15
This is not an online course; it is a self-paced course that requires attendance. See your Canvas class site for information.

**BIM 110 Microsoft Office Essentials 1-3**
This course is an introduction to Microsoft Office Suite 2013. This course is not intended for Business Information Management majors. Credit cannot be earned in both BIM 110 and BIM 108.

1825 01 MTWTh ARR 1613 BERRY-GUERIN

Start & end date: 01/05/15 to 02/19/15

This is not an online course; it is a self-paced course. See your Canvas class site for information.

1827 02H MTWTh ARR 1613 BERRY-GUERIN

Start & end date: 01/26/15 to 03/18/15

This is not an online course; it is a self-paced course. See your Canvas class site for information. Online fee is $10.

**BIM 111 Introduction to Computers in the Medical Office 1-3**

Lab Fee: $27.00

*Variable Credit Lab Fees are calculated at the highest rate*

This course covers the general flow of information in a medical office and the role that computers play. Students will learn how to use medical office software for activities such as entering data, billing, filing claims, scheduling, and printing reports. Prerequisite: basic computer skills.

1828 01 MTWTh ARR 1613 BERRY-GUERIN

This is not an online course; it is a self-paced course. See your Canvas class site for information.

**BIM 112 Proof & Edit 1-3**

Lab Fee: $27.00

*Variable Credit Lab Fees are calculated at the highest rate*

This course gives students the opportunity to learn different proofreading techniques and then emphasizes practice using those techniques. Prerequisite: BUS 121, BIM 102.

1830 01 MTWTh ARR 1613 BERRY-GUERIN

This is not an online course; it is a self-paced course. See your Canvas class site for information.

**BIM 114 Medical Office Accounts Receivable I 2**

This is a basic class in billing medical insurance in clinic settings. Coding, specific form requirements, account aging, posting payments and adjustments to patient accounts will be covered. Issues related to overall medical business offices will also be part of the class. Prerequisite: HED 150 & 151 or instructor permission.

1836 21 Th 04:30PM-06:30PM 1612 STAFF
BIM 116  Intro to the Medical Office  2

This class will focus on telephone and collection techniques for medical business office personnel. The course will cover receptionist skills, making appointments and referrals, retrieving billing information, collection practices, consumer protection, bankruptcy laws, and handling patient concerns and questions. Prerequisites: HED 150 & 151; introductory computing class or approval of instructor.

1846 21 T  04:30PM-06:30PM  1612  STAFF

BIM 130  Filing  1- 2

Lab Fee:  $18.00

*Variable Credit Lab Fees are calculated at the highest rate*

This course introduces basic filing rules for alphabetic, numeric, subject, and geographic filing.

1850 01 MTWTh ARR  1613  BERRY-GUERIN

Start & end date:  01/05/15 to 02/19/15

This is not an online course; it is a self-paced course. See your Canvas class site for information.

1852 02H MTWTh ARR  1613  BERRY-GUERIN

Start & end date:  01/26/15 to 03/18/15

This is not an online course; it is a self-paced course. See your Canvas class site for information. Online fee is $10.

BIM 173  Word Processing I  1- 5

Lab Fee:  $45.00

*Variable Credit Lab Fees are calculated at the highest rate*

This course is an in-depth introduction to Microsoft Word 2013. The focus is to learn functions of Word 2013, to apply these functions to business situations, and begin preparing students for the Microsoft Office Specialist exam. Tech Prep credit available. Prerequisite: BIM102 or instructor permission

1860 01H MTWTh ARR  1613  BERRY-GUERIN

This is not an online course; it is a self-paced course. See your Canvas class site for information. Online fee is $10.

BIM 177  Office Information Management Lab  1- 6

Lab Fee:  $54.00

*Variable Credit Lab Fees are calculated at the highest rate*

This course allows individual study in one of the business information management subject areas. Study and credit hours determined at the time of enrollment by the instructor. Prerequisite: Instructor Permission.
BIM 180  Introduction to Microsoft Office 1-5
Lab Fee: $45.00
*Variable Credit Lab Fees are calculated at the highest rate*
This course is an introduction to the basic functions of Microsoft Office 2013 - Word, Excel, Access, PowerPoint, and Integration. This course is intended for Business Information Management and Accounting students. Prerequisite: BIM102/OFF102 and successful completion of MFC090/MATH090/MATH094 or BBCC Placement Exam into MATH095 or higher.

BIM 181  Introduction to Microsoft Office: Word 1-3
Lab Fee: $27.00
*Variable Credit Lab Fees are calculated at the highest rate*
This course provides an introduction to Microsoft Word. It is not intended for Business Information Management Program students.

BIM 182  Introduction to Microsoft Office: Excel 1-3
Lab Fee: $27.00
*Variable Credit Lab Fees are calculated at the highest rate*
This course provides an introduction to Microsoft Excel. It is not intended for Business Information Management Program students. Prerequisite: Successful completion of MATH90 or BBCC placement exam into MATH095 or higher.
This is not an online course; it is a self-paced course. See your Canvas class site for information.

BIM 183  Introduction to Microsoft Office: Access  1- 3
Lab Fee:  $27.00

*Variable Credit Lab Fees are calculated at the highest rate*

This course provides a brief introduction to Microsoft Access. It is intended for students not majoring in the Business Information Management Program.

BIM 184  Introduction to Microsoft Office: PowerPoint  1- 3
Lab Fee:  $27.00

*Variable Credit Lab Fees are calculated at the highest rate*

This course provides an introduction to Microsoft PowerPoint. It is not intended for Business Information Management Program students. Prerequisite: Successful completion of MATH90 or BBCC placement exam into MATH095 or higher.
Lab Fee: $45.00

*Variable Credit Lab Fees are calculated at the highest rate*

This course is an in-depth introduction to Microsoft Excel 2013. The focus is to learn functions of Excel, to apply this knowledge to business situations, and to begin preparing students for the Microsoft Office Specialist Expert exams. Prerequisite: Successful completion of BUS102-Business Mathematics, BBCC placement exam into MATH099 or higher, or successful completion of all MATH095 modules.

1900 01H MTWTh ARR 1613 BERRY-GUERIN

This is not an online course; it is a self-paced course. See your Canvas class site for information. Online fee is $10.

**BIM 194 Presentations 1-5**

Lab Fee: $45.00

*Variable Credit Lab Fees are calculated at the highest rate*

This is an in-depth Microsoft PowerPoint 2013 course. The focus of this course is to learn presentation functions, to apply this material to business situations, and to prepare students for the MOS Expert Exam.

1906 01H MTWTh ARR 1613 BERRY-GUERIN

This is not an online course; it is a self-paced course. See your Canvas class site for information. Online fee is $10.

**BIM 198 Special Topics 1-5**

Lab Fee: $45.00

*Variable Credit Lab Fees are calculated at the highest rate*

This course provides individual study in one of the office information technology subject areas. Study and credit hours determined at the time of enrollment by the instructor. Prerequisite: Instructor permission.

1916 01 MTWTh ARR 1613 BERRY-GUERIN

See your Canvas class site for information.

**BIM 210 Internet 1-2**

Lab Fee: $18.00

*Variable Credit Lab Fees are calculated at the highest rate*

This course is an introduction to the Internet, web browsers, search engines, and search techniques.

1920 01 MTWTh ARR 1613 BERRY-GUERIN

Start & end date: 01/05/15 to 02/19/15

This is not an online course; it is a self-paced course. See your Canvas class site for information.
This is not an online course; it is a self-paced course. See your Canvas class site for information. Online fee is $10.

**BIM 280 Advanced Microsoft Office 1- 4**

Lab Fee: $381.00

*Variable Credit Lab Fees are calculated at the highest rate*

This course is a continuation of BIM180 and introduces the advanced features and integration capabilities of Microsoft Office 2013. This course consists of five modules—Word, Excel, Access, PowerPoint. Students will complete a certified MOS exam at the end of each module. Prerequisite: BIM180 AND successful completion of BUS102—Business Mathematics, BBCC placement exam into MATH099 or higher, or successful completion of all MATH095 modules.

This is not an online course; it is a self-paced course. See your Canvas class site for information. The lab fee includes the testing fee for each credit registered.

**BIM 281 MS Office Integration 1**

Lab Fee: $9.00

This course is a continuation from BIM280 and introduces the advanced integration capabilities of MS Office 2013. Prerequisite: Successful completion of all BIM 280 modules.

This is not an online course; it is a self-paced course. See your Canvas class site for information.

**Chemistry**

**CHEM&105 Chemical Concepts 5**

This course is intended for non-science majors. The focus is on fundamental topics of chemistry such as; atoms and molecules, periodic table, organic chemistry, biochemistry, and radioactivity as they relate to current society. This class is intended to increase scientific literacy in non-science majors. This class can also provide some preparation for students with a limited chemistry background planning to continue on to CHEM& 121. Prerequisite: Passing grade in MATH 090/094 or placement in MATH 095/096. NS

**CHEM&121 Intro to Chemistry 5**

Lab Fee: $18.80

This course is designed for the allied health students. In addition, this class serves students wanting an introductory chemistry course prior to the full year CHEM& 161, 162, 163 sequence. Topics include basic chemical vocabulary, atomic structure,
stoichiometry, periodic behavior of elements and compounds, gases, liquids, solids, solutions, water and equilibria. The course includes 22 hours of laboratory. Laboratory exercises are designed to reinforce classroom learning as well as providing hands on experience with chemical reactions. Relevance of course material to current practices in chemistry is a fundamental focus. Prerequisite: Passing grade in Math 95/96 or placement in Math 98/99. A passing grade in High School Chemistry or completion of CHEM& 105 is recommended.

1967 01  MTWTh  09:15AM-10:05AM  1219  GROCE L
Lab  M  02:15PM-04:15PM  1216  GROCE L
1969 02  MTWTh  10:30AM-11:20AM  1218  GROCE L
Lab  T  02:15PM-04:15PM  1216  GROCE L

CHEM&131  Intro to Organic/Biochem      5

Lab Fee: $18.80

This course is designed for Allied Health transfer students and for students wanting an introductory organic chemistry course in preparation for a complete organic chemistry sequence at a baccalaureate institution. Topics include an introduction to alkanes, alkenes and alkynes, an exploration of common functional groups, and organic nomenclature. The course also explores the relationship of organic compounds such as carbohydrates, lipids, proteins, and enzymes with the human body. CHEM& 131 includes 25-30 hours of laboratory. Laboratory exercises are designed to reinforce classroom learning as well as providing hands on experience with chemical reactions. Prerequisite: A grade of 2.0 or above in CHEM& 121 or instructor permission. LS

1975 01  MTW  09:15AM-10:20AM  1218  PETERSON J
Lab  Th  08:00AM-10:20AM  1216  PETERSON J

CHEM&162  General Chem w/Lab II            5

Lab Fee: $18.80

The second in a three-quarter series examining the principles of General Chemistry with the primary emphasis on inorganic chemistry. Topics include: Chemical equilibrium, gas laws, molecular geometry, introduction to solution chemistry (acids and bases, precipitation reactions, redox chemistry), reaction rates and states of matter. Relevance of course material to current practices in chemistry is a fundamental focus. Prerequisite: Successful completion of CHEM& 161 or instructor's permission. (LS)(W)

1991 01  MTTh  11:45AM-12:50PM  1218  PETERSON J
Lab  W  11:45AM-02:45PM  1216  PETERSON J
1993 02  MTTh  01:00PM-02:05PM  1218  PETERSON J
Lab  W  03:00PM-06:00PM  1216  PETERSON J

College Success Skills

CSS  100  College Survival Skills         3
CSS 100 helps students become more effective learners and achieve their goals at Big Bend. National studies show that students who take courses like CSS 100 are more likely to stay in college and graduate than students who do not. CSS 100 teaches students skills that research has identified as essential to college success. CSS 100 adds to or builds on the skills students already have as students debate the purpose of college, practice reading and studying techniques, engage in critical thinking, and explore the many resources Big Bend offers to help them succeed.

CSS 102 Focus on Success 3

Lab Fee: $10.00

In this class, students will explore many of the non-academic factors that impact success in college. Increased awareness and practical application will be the logical outgrowth of work in the following areas: career and college course choices; relationships; diversity; values; stress management; substance abuse; sexual decisions; and diet and exercise. In addition, students will develop basic computer literacy as they explore the non-academic factors through a basic understanding of personal computers, word processing operations, email, and use of the internet.

CSS 104 Introduction to Computer Literacy 3

Lab Fee: $10.00

This course will provide the student with an introduction to computer operations, file management, e-mail, applications, the Internet, and BBCC technology. The course will provide an overview of skills a student should possess before taking an online class. The course is not intended to teach keyboarding or computer applications such as Microsoft Office.

CSS 105 Introduction to Healthcare Studies 3

Lab Fee: $10.00

This course provides the foundation for understanding the educational responsibilities of choosing a career in the healthcare field. Students will identify the scope of education and practice of various members of the healthcare profession in order to develop an educational and career plan. Additional key topics include test-taking preparation, critical thinking, leadership skills, communication styles,
ethical decision making, note-taking and study tactics, and accessing reference sources.

2065 01H  Th  10:30AM-11:30AM  1718 ELLIOTT A

Students need to have access to a reliable computer and Internet connection as this is a hybrid (online and face-to-face) course. Online fee is $10.

**Commercial Driver’s License**

**CDL 100 Commercial Driver's License (CDL) 17**

Lab Fee: $2918.44

This course provides classroom study, driving instruction and experience. The course prepares students for the CDL driving examination and entry level employment. Prerequisite: Completed Commercial Driver's License (CDL) Program Application with supporting documents.

2070 01  DAILY 07:30AM-04:00PM  1534 MILLER/GARZA

Start & end date: 01/20/15 to 02/27/15

For application contact Randy Miller at 793.2295, Guillermo Garza at 793.2221 or Julia Gamboa at 793.2045.

**Computer Science**

**CS 101 Intro to Computer Science 3**

Lab Fee: $10.00

An introduction to computer science concepts and the role of computers in society. Topics include the history of computing, computer hardware, operating systems, the Internet, database management, an overview of programming languages and logic, careers in computer technology, and the ethics of computing. This course is designed for Computer Science majors, and will emphasize principles and underlying computer technology concepts. Prerequisite: none. SE

2105 01H  M  03:30PM-04:20PM  1508 WANNER A

This is a hybrid class that incorporates traditional class time & a distance education component. Class meets each Monday and the remainder of the class is delivered online. Students must have access to a reliable internet connection. Online fee is $10.

**CS 115 Intro to Database Design & Management 5**

Lab Fee: $38.50

This course will examine the theory of database design and management, including how collections of data are organized, stored, and analyzed. Topics include the fundamentals of the relational model, Structured Query Language (SQL), data modeling, database design and administration, and web database processing. Introductory business and financial services applications will be used to illustrate course concepts through lectures and hands-on labs. Prerequisites: None

2135 01  MTWTh 02:15PM-03:20PM  1508 WANNER A
CS 142  Advanced Programming with Java  5
Lab Fee: $10.00
Advanced Java is a follow-up to the programming concepts introduced in the Java I course. This course explores Java's Distributed Applications features and covers inheritance, exceptions, graphical user interfaces, recursion, and data structures. Prerequisite: CS& 141. SE
2156 OL1  ARR  ARR  WANNER A
Online fee is $10.

CS 156  Cisco Networking:Introduction to Networks  5
Lab Fee: $38.50
Introduces the architecture, structure, functions, components, and models of the Internet and computer networks. The principles of IP addressing and fundamentals of Ethernet concepts, media, and operations are introduced. Students will be able to build simple LANs, perform basic configurations for routers and switches, and implement IP addressing schemes. This is the first of two courses comprising the Cisco CCENT certification and covers the technical knowledge and skills required to take the Cisco ICND1 exam. Prerequisite: CS 104 and CS 105
2160 21  TTh  05:00PM-08:00PM  1511  GUZMAN NOE

CS 158  Cisco Networking:Scaling Networks  5
Lab Fee: $38.50
Describes the architecture, components, and operations of routers and switches in a large and complex network. Students learn how to configure routers and switches for advanced functionality. By the end of this course, students will be able to configure and troubleshoot routers and switches and resolve common issues with OSPF, EIGRP, STP, and VTP in both IPv4 and IPv6 networks. Students will also develop the knowledge and skills needed to implement DHCP and DNS operations in a network. Prerequisite: CS 157
2162 21  TTh  05:00PM-08:00PM  1511  GUZMAN NOE

CS 161  Intro to Website Design and Publishing  5
Lab Fee: $38.50
This course covers the technical knowledge and skills needed to design and publish a web site. Students create web pages with the latest standards of XHTML, HTML5, and Cascading Style Sheets (CSS) with an emphasis on coding web pages that work in both current and future browsers. Topics include web design principles, website development, web authoring standards, configuring images and multimedia on web pages, and website publishing.
2167 21  MW  04:30PM-06:50PM  1511  STAFF
Class times & days may change depending on instructor availability.

CS 195  Internship: Work Based Learning  1- 4
Students will participate in a supervised internship with regional computer and information technology employers. Students are expected to develop a computer science career-based portfolio and employment resume. Prerequisite: Enrollment in Computer Science program, instructor permission, and concurrent enrollment in CS 197.

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**CS 197 Internship: Work Based Learning Seminar 1**

Students participating in internships share feedback and discussion to integrate work-based learning experiences with classroom instruction. Students are expected to submit weekly work journals and develop a computer science career-based portfolio and employment resume. Prerequisite: Concurrent enrollment in CS 195.

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**CS 205 Windows Server Admin 5**

Lab Fee: $38.50

This course focuses on Windows Server Administration. Topics include the communication, design and implementation of the Active Directory, DNS, Group Policy Objects, disaster recovery, configuring the web server, security, and working knowledge of Microsoft Exchange. Prerequisites: CS 110

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This class incorporates traditional class time and a distance education component. Students need to have access to a reliable internet connection.

**CS 207 Introduction to Security Administration 5**

Lab Fee: $38.50

This course builds on prior course work in computer hardware, operating systems, and networks. Students will acquire the specific skills required to implement basic security services on any type of computer network and be prepared to take the CompTIA Security+ exam. Prerequisite(s): CS 205

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**CS 262 Programming Dynamic Websites 5**

Lab Fee: $38.50

This course covers dynamic web programming to build interactive, database driven websites. Students gain experience using core open source technologies: PHP MySQL, JavaScript, and CSS, to add power and functionality to Web sites. A major emphasis of the course is using PHP and MySQL to build, manipulate, and create output from a database to a web page. Prerequisites: CS 115 and CS 161

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Class times & days may change depending on instructor availability.

**CS 295 Work Based Learning II 1-4**

Students will participate in an advanced internship with regional computer and information technology employers. Prerequisite(s): CS 195, CS 197, enrollment in
Computer Science program and completion of 45 or more program credits with a minimum 2.5 GPA, instructor permission, and concurrent enrollment in CS 297

Communications

**CMST 100  Human Communications  4**

This course will provide students with applied communication skills. Students will learn practical application of small group presentations, conflict resolution and increased confidence in personal communication skills. Exemplifying self-concept, perception, verbal and non-verbal attributes and attitudes experienced between family, friends, and employment relationships.

**CMST&102  Intro to Mass Media  5**

Lab Fee: $10.00

Provides an overview and survey of mass communications media, including history, organization, operation and control, theory, analysis, social functions, and new technology. Emphasis is on study of newspapers, radio, television, magazines, books, films, recording, and emerging mass media and their function and role in today's world. HU

**CMST&220  Public Speaking  5**

Provides an introduction to the fundamental process of speaking to the public. It is designed to help students develop skills in communication and to acquire an understanding of oral communication as a vital human relations factor in society. HU

**CJ& 101  Intro Criminal Justice  5**
This course provides an overview of crime and the criminal justice system including the historical development of the system and a discussion of sociological theory. The course examines the extent and character of crime by examining current and past philosophies that our society uses to deal with crime and criminals. Emphasis is placed on how the various systems interrelate and interact to attain the goal of an orderly and non-discriminatory delivery of crime related public services. SS

2205 21 TTh 06:30PM-08:50PM 1609 STAFF
2206 OL1 ARR ARR STAFF

For section OL1, all coursework for this class will be completed online. Students need to have access to a reliable Internet connection. Check your Big Bend email the week before classes for further course instructions. Online fee is $10.

CJ 210 Introduction to American Policing 5

This course is designed to provide a general examination of the role of police in American society. Contemporary concepts, upon which the police function is based, are discussed from both historical and traditional perspectives. This course identifies certain issues within the police organization that either supports or inhibits the ability to accomplish the societal mission. Prerequisite: CJ& 101 or Instructor Permission.SE

2226 01 MTWTh 10:30AM-11:35AM 1606 LEONARD R

Section 01 incorporates traditional class time and a distance education component. Students need to have access to a reliable internet connection. Check your Big Bend email the week before classes & attend the first day of scheduled class for further instructions.

Early Childhood Education

ECED&107 Health/Safety/Nutrition 5

Lab Fee: $10.00

Develop knowledge and skills to ensure good health, nutrition, and safety of children in group care and education programs. Recognize the signs of abuse and neglect, responsibilities for mandated reporting, and available community resources.

2273 21H M 06:00PM-08:00PM 1718 NIGHSWONGER

Students in ECED& 107 will be taught using the I-BEST model of instruction. Two faculty will be co-teaching the class. One faculty member focuses on professional technical skills while the other focuses on basic & study skills. Pre and post CASAS testing required. Students need to have access to a reliable computer and Internet connection as this is a hybrid (online and face-to-face) course. Check your Big Bend email the week before classes for log-in information and further course instructions.

ECED&120 Practicum-Nurturing Rel 2

Lab Fee: $12.00

This course will provide students an opportunity to apply best practice for engaging in nurturing relationships with children in an early learning setting. Focus on keeping children healthy and safe while promoting growth and development. Students will be required to observe children infancy to age eight in an educational setting.
for three hours per week throughout the quarter. Prerequisite: ECED& 105 and instructor permission.

2278 21H T 04:00PM-06:00PM 1718 NIGHSWONGER

Permission required. Contact Jenny Nighswonger at 793.2216. Students are required to pass a WSP background check, obtain liability insurance & provide results of a negative Tuberculin skin test prior to registering for this course. Students need to have access to a reliable computer and Internet connection as this is a hybrid (online and face-to-face) course. Check your Big Bend email the week before classes for log-in information and further course instructions.

**ECED&132 Infant/Toddlers Care 3**

Lab Fee: $10.00

Examine the unique developmental needs of infants and toddlers. Study the role of the caregiver, relationships with families, developmentally appropriate practices, nurturing environments for infants and toddlers, and culturally relevant care.

2282 OL1 ARR ARR MCLEAN M

Students need to have access to a reliable computer and Internet connection as this course is delivered all online. Check your Big Bend email the week before classes for log-in information and further course instructions. Online fee is $10.

**ECED&160 Curriculum Development 5**

Lab Fee: $10.00

Investigate learning theory, program planning, and tools for curriculum development promoting language, fine/gross motor, social-emotional, cognitive and creative skills and growth in young children (birth-age 8). Prerequisite: Concurrent enrollment in ECED& 190

2290 21H Th 04:00PM-06:30PM 1611 GILES A

Students need to have access to a reliable computer and Internet connection as this is a hybrid (online and face-to-face) course. Check your Big Bend email the week before classes for log-in information and further course instructions.

**ECED&190 Observation/Assessment 3**

Lab Fee: $10.00

Collect and record observation of and assessment data on young children in order to plan for and support the child, the family, the group and the community. Practice reflection techniques, summarizing conclusions and communicating findings

2304 21H Th 06:30PM-08:30PM 1611 GILES A

**Economics**

**ECON 200 Introduction to Economics 5**

Lab Fee: $10.00

Overview of the basic principles of the American economy to include supply and demand, money and banking, international trade, GDP, inflation, unemployment, and
analysis of the market system. Strongly recommend placement in MATH095 or higher and placement in ENGL 099 or higher. THIS IS NOT A SUBSTITUTE FOR ECON& 201 OR 202. SS

Section OL1: All course work for this class will be completed online through Canvas. Students need to have access to a reliable internet connection. Check your Big Bend email the week before classes for log-in information and further course instructions. Fee is $10

ECON&202  Macro Economics  5

Introduction to the principles of Macro Economics including unemployment, inflation, aggregate demand/supply, Classical and Keynesian Theories, fiscal and monetary policy, money and banking, and current economic problems. Strongly recommend placement in MATH095 or higher and placement in ENGL 099 or higher.

EDUC 106  Issues in Child Abuse  2

An overview of the dynamics and impact of abuse on the behavior and learning of children and adolescents. Includes the role of the educator in prevention and intervention, with an emphasis on strategies for working with children impacted by issues of abuse.

EDUC 132  Peer Mentoring  2

This course introduces students to the concepts and application of mentoring, tutoring, leadership, and team building to enhance their ability to competently and confidentially work with assigned mentees and classes.

EDUC 190  Classroom Experience  3

Lab Fee: $22.50

This course will provide students with the opportunity to gain practical, hands-on experience working with children infancy to age eight in a variety of educational settings and to reflect on the experiences. Students will be required to assist a classroom teacher for six hours per week throughout the quarter. Can be repeated up to nine credits. (Prior to registering for this course, students must be cleared through the National Sex Offender Registry system, provide results of a negative Tuberculin skin test within the last year and obtain WEA liability insurance. Upon placement, students must pass a background check with their hosting agency). Prerequisite: ECED& 120 or EDUC& 201 or instructor permission.

EDUC 202  Macro Economics  5

Introduction to the principles of Macro Economics including unemployment, inflation, aggregate demand/supply, Classical and Keynesian Theories, fiscal and monetary policy, money and banking, and current economic problems. Strongly recommend placement in MATH095 or higher and placement in ENGL 099 or higher.

EDUC 106  Issues in Child Abuse  2

An overview of the dynamics and impact of abuse on the behavior and learning of children and adolescents. Includes the role of the educator in prevention and intervention, with an emphasis on strategies for working with children impacted by issues of abuse.

EDUC 132  Peer Mentoring  2

This course introduces students to the concepts and application of mentoring, tutoring, leadership, and team building to enhance their ability to competently and confidentially work with assigned mentees and classes.

EDUC 190  Classroom Experience  3

Lab Fee: $22.50

This course will provide students with the opportunity to gain practical, hands-on experience working with children infancy to age eight in a variety of educational settings and to reflect on the experiences. Students will be required to assist a classroom teacher for six hours per week throughout the quarter. Can be repeated up to nine credits. (Prior to registering for this course, students must be cleared through the National Sex Offender Registry system, provide results of a negative Tuberculin skin test within the last year and obtain WEA liability insurance. Upon placement, students must pass a background check with their hosting agency). Prerequisite: ECED& 120 or EDUC& 201 or instructor permission.

EDUC 202  Macro Economics  5

Introduction to the principles of Macro Economics including unemployment, inflation, aggregate demand/supply, Classical and Keynesian Theories, fiscal and monetary policy, money and banking, and current economic problems. Strongly recommend placement in MATH095 or higher and placement in ENGL 099 or higher.
have access to a reliable computer and Internet connection as this is a hybrid (online and face-to-face) course. Check your Big Bend email the week before classes for log-in information and further course instructions.

2415 22H M 04:00PM-06:00PM 1718 NIGHSWONGER

Permission required. Contact Jenny Nighswonger at 793.2216. Students are required to pass a WSP background check, obtain liability insurance & provide results of a negative Tuberculin skin test prior to registering for this course. Students need to have access to a reliable computer and Internet connection as this is a hybrid (online and face-to-face) course. Check your Big Bend email the week before classes for log-in information and further course instructions.

2416 23H M 04:00PM-06:00PM 1718 NIGHSWONGER

Permission required. Contact Jenny Nighswonger at 793.2216. Students are required to pass a WSP background check, obtain liability insurance & provide results of a negative Tuberculin skin test prior to registering for this course. Students need to have access to a reliable computer and Internet connection as this is a hybrid (online and face-to-face) course. Check your Big Bend email the week before classes for log-in information and further course instructions.

Engineering

ENGR 110 Introduction to Science and Engineering 3

Lab Fee: $10.00

Students in this course will investigate careers in science and engineering, and will research the educational pathways to those careers. In addition, students will learn techniques for becoming a successful student in science and engineering majors. (Formerly EGR 111)

2455 01H TTh 11:45AM-12:50PM 1203 SAUCEDA J

ENGR&214 Statics 5

Lab Fee: $10.00

Statics is the study of objects which are either at rest or moving with constant velocity. Students in this course will learn to apply mathematics and physical science to the analysis of the forces and moments acting on these objects, developing engineering problem-solving skills in the process. Topics studied will include the following: vector notation and operations; equilibrium of particles and rigid bodies; moments of forces; couples; trusses and frames; shear and moment diagrams; applications of friction; center of gravity, centroids, and moments of inertia. Prerequisite: MATH& 151, PHYS& 221 with grades of 2.0 or higher. Corequisite: MATH& 152

2462 OL1 ARR ARR STAFF

Online fee is $10.

ENGR 265 3-D Parametric Modeling 5

Lab Fee: $10.00
This course uses the computer to draft parametric models in three dimensions. This course covers file management methods, rapid prototyping, and 2D drawing development techniques. Prerequisite: Instructor Permission.

2485 21H MW 06:00PM-08:00PM 1203 UTTER M

Students need to have access to a reliable computer and Internet connection as this is a hybrid (online and face-to-face) course. Online fee is $10.

**English**

**ENGL 065  Spelling Improvement  2**

Lab Fee:  $7.60

With a self-paced approach, the student will practice commonly misspelled words that account for 97% of spelling errors by a combination of the whole-word method and learning the rules and exceptions of the English spelling system.

2502 01 MTWTh 08:00AM-09:05AM 1817 SHUTTL' TH K
2503 02 MTWTh 11:45AM-12:50PM 1817 SHUTTL' TH K
2504 03 MTWTh 02:15PM-03:20PM 1817 SHUTTL' TH K

**ENGL 087  Reading Improvement  3**

Lab Fee:  $11.40

Reading improvement for adults with emphasis on increasing and improving vocabulary and comprehension to college level. Prerequisite: English placement exam.

2508 01 MTWTh 08:00AM-09:05AM 1817 SHUTTL' TH K
2509 02 MTWTh 11:45AM-12:50PM 1817 SHUTTL' TH K
2510 03 MTWTh 02:15PM-03:20PM 1817 SHUTTL' TH K

**ENGL 093  Basic Writing  3**

Lab Fee:  $11.40

This class is designed for adult students who have little or no experience writing beyond elementary school. During the class, students will choose a topic and develop the main idea and its support thus gaining practice in proofreading, punctuation and using correct grammar to develop paragraphs. Prerequisite: placement exam.

2512 01 MTWTh 08:00AM-09:05AM 1817 SHUTTL' TH K
2513 02 MTWTh 11:45AM-12:50PM 1817 SHUTTL' TH K
2514 03 MTWTh 02:15PM-03:20PM 1817 SHUTTL' TH K

**ENGL 095  Writing Improvement  3**

Lab Fee:  $11.40

Through individual writing experiences and the practice of assigned exercises, the student will develop a procedure for writing and revising papers using word
processing. Students may submit papers written during the quarter to portfolio assessment of preparedness for ENGL 101. Prerequisite: ENGL 093 or placement.

ENGL 098  Basic English Skills  5
Lab Fee: $19.00

English 98 covers techniques for improving basic writing skills at the sentence and paragraph level and introduces the skills needed for essay writing. Students will also work on improving reading comprehension, enriching vocabulary, and refining computer skills. Prerequisite: English Placement Test

ENGL 099  English Skills (Pre-101)  5
Lab Fee: $19.00

English 99 provides students a solid preparation for college reading and writing using word processing. Students write personal and academic essays and prepare a writing portfolio at the end of the quarter. The course includes the study of sentence sense and mechanics, grammar, punctuation, paragraph and essay structure as well as activities that improve reading and vocabulary. Prerequisite: Successful completion of English 98 or direct placement through the English Placement Test.

ENGL 101  English Composition I  5
Lab Fee: $19.00

This composition course provides instruction in academic written communication by having students compose formal essays, with the goal of teaching students to communicate effectively and engage with issues and ideas. Prerequisite: placement exam or passing grade in ENGL 099.
ENGL&102  Composition II  5

Lab Fee:  $19.00

This advanced composition course provides instruction in academic writing through literary analysis and increases students' exposure to literature. Prerequisite: Passing score in ENGL&101

ENGL 109  Applied Technical Writing  3

Lab Fee:  $23.10

The course will prepare technical/vocational students as well as other students for successful careers in their respective fields by developing skills in written communications commonly used in the workplace. Students will focus on reading, interpreting, planning, organizing, composing, and word processing technical writing as applied in business and industry. Perquisite: ENGL 098 or placement in ENGL 099.
Lab Fee: $19.00

This advanced writing course focuses on critical thought and composition within academic/professional communities. Published works regarding current affairs, pressing social matters and/or political issues will be critically read and then written about in a way that meets the expectations of an academic/professional community. Students will write a variety of papers, the last of which will be a researched argument. Prerequisite: ENGL& 101.HU (Specified Elective*if not used as part of the English composition requirement)

ENGL 211  Creative Writing: Fiction  5

In this course students will develop the basic techniques that writers use to create imaginative and effective fiction, and use the writer's workshop as a method for improving their work. Although this class focuses on writing short stories, it can be useful for those interested in all forms of narrative writing, including novels, screenplays, and creative nonfiction. Prerequisite: ENGL&101 or instructor permission.HU

ENGL 216  Film Study  3

This class aims to create an appreciation of the art of film by examining a series of films that explore a single theme. On an introductory level, we will examine some of the tools in the filmmakers' arsenal and consider how they relate to the film's central ideas. Exposure to a variety of films-ranging from independent and foreign to big studio blockbusters, and everything in between-is also at the core of this class. Because the theme and the films for this class change each quarter, students are allowed to take it twice for credit.

ENGL 234  Science Fiction  5

Lab Fee: $10.00

This course provides instruction in the genre of science fiction as a literary type and will provide instruction in analysis of short stories, novels, and films from within the genre of science fiction. The course will range from the beginnings of science fiction through the present. Emphasis is placed on developing a definition of science fiction that helps to identify it as a unique literary type that is comprehensive enough in its concerns to be considered a legitimate and valuable type of literature. (Formerly ENG 234) HU

ENGL&245  American Literature II  5
An introduction to American Literature from 1860 to the 1960's. Explore the religious views, politics, and ideologies of late nineteenth century to the late twentieth century of America through its literature. This course studies American authors, poets, and playwrights beginning with realism through naturalism, continuing with the political themes of early twentieth century, through the writers of the Great Depression, post World-War II, up to the 1960's.

2624  01   MTWTh 10:30AM-11:35AM  1607   CARPENTER  J

Environmental Science

ENVS&100   Survey of Environmental Science     5

An introduction to the fundamental principles of environmental science, topics of study include: environmental, science, and information literacy, human population growth, environmental economics, ecosystems, population and community ecology, biodiversity, evolution and extinction, forests and grasslands, marine ecosystems, fisheries and aquaculture, freshwater resources and water pollution, solid waste, agriculture, coal and petroleum, air pollution and climate change, nuclear power, alternative energy sources, biofuels, urbanization, and sustainable communities. NS

2670  01   MTWTh 01:00PM-02:05PM  1910   WHITNEY  M
2672  OL1   ARR     ARR     COBB   S

Section OL1: Students submit assignments, participate in discussion forums, and view recorded lectures online; exams are taken at arranged times on campus. Online fee is $10.

First Aid

FAD  150   Industrial First Aid and C.P.R. Plus Bloodborne     2

Lab Fee:   $9.00

An Industrial First Aid course and Bloodborne Pathogen course designed to meet the Department of Labor and Industry, OSHA and WISHA requirements. Intended for supervisory personnel, employees, pre-nursing, Pre-Emergency Medical Technicians, and those interested in having first aid and C.P.R. training. This course is recognized in the U.S. and several foreign countries by federal and state agencies and company employers.

2680  01   F    09:00AM-05:00PM  1702   BENKO  A
Books are required. Class meets 1/9, 1/16, 1/23

2681  02W  Sa    09:00AM-05:00PM  1702   BENKO  A
Books are required. Class meets 1/10, 1/17, 1/24

2682  03   F    09:00AM-05:00PM  1702   BENKO  A
Books are required. Class meets 1/30, 2/6, 2/13

2683  04   F    09:00AM-05:00PM  1702   BENKO  A
Books are required. Class meets 2/20, 2/27, 3/6

French
FRCH&121  French I  5

Beginning French language and culture taught using a communicative approach. Through the use of drama and themes, this course focuses on listening, speaking, reading and writing skills and the culture of the French-speaking world. HU

2700 01  MTWTh 08:00AM-09:05AM  1604  MCCARTHY J

FRCH&122  French II  5

Beginning French language and culture taught using a communicative approach. Through the use of drama and themes, this course focuses on listening, speaking, reading and writing skills and the culture of the French-speaking world. Prerequisite: FRCH& 121 HU

2705 01  MTWTh 08:00AM-09:05AM  1604  MCCARTHY J

FRCH&123  French III  5

Beginning French language and culture taught using a communicative approach. Through the use of drama and themes, this course focuses on listening, speaking, reading and writing skills and the culture of the French-speaking world. Prerequisite: FRCH& 122 HU

2710 01  MTWTh 08:00AM-09:05AM  1604  MCCARTHY J

Geology

GEOL&101  Intro Physical Geology  5

Lab Fee:  $28.80

Introduction to geology for majors and non-majors; physical applications of geology. Topics include minerals, rock types plate tectonics and deformation, rock and mineral formation, dynamic processes within the earth and the resulting structures and rock types, geologic time, earthquakes and volcanoes, erosion by wind, water and glaciers, and subsequent re-building. Labs will deal with identification of common rocks and minerals, the reading and interpretation of topographic, contour and stratigraphic maps and an over view of the local land form. Prerequisite: MATH095 or instructor permission. LS

2771  21H  TTh  05:30PM-08:00PM  1252  NOEL M

Students need to have access to a reliable computer and Internet connection as this is a hybrid (online and face-to-face) course. Online fee is $10.

Health Education

HED  121  The Human Body and Disease I  5

Lab Fee:  $10.00

The first course of a three-part course sequence examining body structure, function and disease. This includes an introduction to the organization of the body, mechanism of disease, and discussion of the anatomy and physiology of skeletal system, muscular system, and the integumentary system. Common diagnostic tests/treatments, pharmacological agents, and possible prognoses for common disease processes are included. There is no lab component.
HED 122  The Human Body and Disease II   5

Lab Fee: $10.00

The second of a three-part course sequence examining body structure, function and disease. This includes the analysis and discussion of the nervous system, endocrine system, the senses, cardiovascular system, and respiratory system. Common diagnostic tests/treatments, pharmacological agents, and possible prognoses for common disease processes are included. There is no lab component. Prerequisite: Completion of HED 121 with a minimum grade of 2.0.

HED 150 Medical Terminology I   3

Lab Fee: $10.00

This is the first of a two part course to prepare students to correctly use medical vocabulary. Prerequisite: None

HED 151 Medical Terminology II   3

This is the second of a two part course to prepare students to correctly use medical vocabulary. Prerequisite: HED 150

History

HIST&117 Western Civilization II   5

From early modern Europe to the Napoleonic wars in the 19th century, this course examines Western Civilization in transition: the Renaissance and Reformation; commercial expansion into the Americas, Africa, and Asia; absolutism, science, the Enlightenment, and the French Revolution. SS

HIST&136 US History 1   5

Lab Fee: $10.00

From the Reformation in Europe to the end of the Civil War, this course includes colonization, the introduction of slavery, the Revolutionary and Early National Period, the development of political parties, nationalism and sectionalism, and the Civil War. Prerequisites: Placement in ENGL& 101 or completion of ENGL 099. SS
Section OL1: All course work for this class will be completed online through Canvas. Students need to have access to a reliable internet connection. Check your Big Bend email the week before classes for further course instructions. Fee is $10

Section OL2: All course work for this class will be completed online through Canvas. Students need to have access to a reliable internet connection. Check your Big Bend email the week before classes for further course instructions. Fee is $10

HIST&137  US History 2   5

From the end of the Civil War to present day, this course examines Reconstruction, the Gilded Age, America's rise to a world power, World War I, the triumph of Modernism, the Depression and New Deal, World War II, the Cold War, the turbulent 1960s, disillusioned '70s and the Reagan Revolution. More recent events are examined as ongoing and current events. Prerequisites: Placement in ENGL& 101 or completion of ENGL 099. Prior completion of HIST& 136: United States History I, is not required in order to take this class. SS

Section 01 incorporates traditional class time and a distance education component. Students need to have access to a reliable internet connection. Check your Big Bend email the week before classes & attend the first day of scheduled class for further instructions.

HIST 210  The Tudors   5

Meet the Tudors-history's most famous royal family and soap opera. Beloved by Hollywood, Henry VIII and his children (Edward VI, Mary I, and Elizabeth I) did more than behead spouses and burn heretics. Together they changed the face of the Western World by shepherding the transition from the Middle Ages to the modern world-sometimes willingly too! Exploring the political and religious reformation in England and the nature of the personalities at play, this course seeks to the open sixteenth century England and see the great dynasty as it was seen through the eyes of those who lived in terror of it, as well as through the more scholarly-but no less fascinated-eyes of modern historians. SS

Section 01 incorporates traditional class time and a distance education component. Students need to have access to a reliable internet connection. Check your Big Bend email the week before classes & attend the first day of scheduled class for further instructions.

HIST 250  Ancient Greece   5

A survey course of Greek history, beginning with the first identifiably Greek peoples of the Bronze Age and continuing down through the Dark Ages, the Classical period in Greece, the rise of Macedonia and Alexander the Great and the Hellenistic Age. In
addition to the historical developments, we will look at Greek myth and religion, art, philosophy, science and other aspects of Greek culture. SS

2990  01  MTWTh 09:15AM-10:20AM  1608  WAITES W

Industrial Systems

ISTA 105  Basic Electricity--DC Circuit Analysis  5

Lab Fee:  $38.50

Fundamentals of DC electricity as applied to series, parallel, and series-parallel circuits. Use of test equipment and troubleshooting simple circuits. Co-requisite/Prerequisite: MAP 103 or instructor permission.

3052  01  MW  12:30PM-03:30PM  3607  AYERS J

ISTA 106  Basic Electricity--AC Circuit Analysis  5

Lab Fee:  $38.50

Teaches alternating current theory, waveform quantities and characteristics, including network analysis with reactive components. Proper use of test equipment and troubleshooting simple circuits. Prerequisite: IST 105-Basic Electricity-DC; MAP 103-Technical Mathematics; or Instructor Permission

3058  01  TTh  12:30PM-03:30PM  3607  AYERS J

ISTA 112  National Electric Code III  2

Washington State electrical laws (WAC Codes 296-46, RCW 19.28) and National Electrical Code (NFPA 70) are applied to the working electrician. Prerequisite: IST 111 or instructor permission.

3084  01  MW  02:30PM-03:20PM  3606  AUTRY B

ISTA 120  Introduction Preventive/Predictive Maintenance  3

Lab Fee:  $23.10

Theory and practice of preventive and predictive maintenance concepts. Performing routine preventative maintenance and scheduling predictive maintenance outages. Prerequisite: IST 102-Technical Drawing Interpretation, MAP 103 Applied Mathematics, or instructor permission.

3096  01  TTh  10:20AM-12:00PM  3500  AUTRY B

3098  02  MW  12:30PM-02:10PM  3606  AUTRY B

ISTA 136  Introduction to Industrial Boiler Technology  5

Lab Fee:  $38.50

This course involves the fundamental principles of steam generation, boiler designs, components, operation, water treatment, safety procedures and related steam generation equipment. Prerequisite: IST 107 or instructor permission.

3108  01  MW  09:00AM-12:00PM  3500  AUTRY B
IST 141  Intro to Mechanized Irrigation Applications I  5

Lab Fee:  $38.50

This class will introduce the history and development of mechanized irrigation. It will distinguish the basic irrigation systems: pivot, swing arm corner, and lateral move systems. Course work will examine the various propulsion systems, electrical/electronic/digital logic controls and irrigation hydraulic principles. It will focus on technical service and operation aspects in a "real-life" lab environment under actual conditions. Prerequisites: IST 101 and IST 102. (Formerly IST 140)

3112 01  MW  09:00AM-12:15PM  3602  BESHERSE L

IST 170  Introduction to Instrumentation  5

Lab Fee:  $38.50

Fundamentals of process control as it applies to process variables, measurement dynamics, & automatic corrective measures in the industrial environment. Prerequisite: IST 107- Industrial Electricity I or instructor permission.

3120 01  TTh  09:00AM-12:00PM  3606  AYERS J

IST 180  Machining I  5

Lab Fee:  $38.50

Layout and fabrication techniques with the use of semi-precision and precision measurement tools. Introduction to Drill Press, Engine Lathe and Vertical Mill operations. Prerequisite(s): MAP 103-Applied Mathematics and IST 102- Technical Drawing Interpretation or instructor permission.

3126 21  TTh  05:00PM-08:00PM  3500  AUTRY B

IST 182  Machining II  5

Lab Fee:  $38.50

Fundamentals of machining processes on lathes and vertical mills. Precision measurement with micrometers, vernier calipers, and dial indicators. Prerequisite: IST 180- Machining I or instructor permission.

3132 21  TTh  05:00PM-08:00PM  3500  AUTRY B

IST 184  Machining Skill Enhancement  4

Lab Fee:  $30.80

Extra "hands on" time and instruction to supplement the students machining skill level using fundamental machining processes on lathes, vertical milling machines and other machine shop equipment. Prerequisite: IST 182-Machining II or instructor permission.

3138 21  TTh  05:00PM-08:00PM  3500  AUTRY B

IST 207  Industrial Electricity II  5

Lab Fee:  $38.50
Electrical theory and function as it applies to various control schemes with a practical understanding of the logic and safety considerations required for efficient control of "stand alone" machinery and or a complex system. Prerequisite: IST 107 or instructor permission.

IST 223  Electronics III (Industrial)  5
Lab Fee:  $38.50

Instruction and training in troubleshooting, testing and repairing industrial control devices. Electrical motor drives, instrumentation, and programmable controllers will be covered. Prerequisite: IST 222-Electronics II or instructor permission.

IST 224  Electronic Communication I  5
Lab Fee:  $38.50

Provides instruction covering the basic concepts of electronic communication equipment and systems. Emphasis is on radio frequency and other high speed data applications that are being applied in new configurations within the industrial community. Prerequisite: IST 222-Electronics II or instructor permission.

IST 250  Programmable Logic Controllers II  5
Lab Fee:  $38.50

Programmable logic controller principles, hardware and operation, with emphasis on ladder logic, instruction, maintenance and troubleshooting. Prerequisite: IST 150 or instructor permission.

Math

MATH 080  Basic Mathematics  5

Review and instruction in whole numbers, decimals, and fractions. Learn strategies to deal with math anxiety and test taking. Prerequisite: Direct placement through the Math Placement Test or instructor permission.

MATH 094  Prealgebra  5
Lab Fee:  $19.00

This course includes the study of basic arithmetic and algebraic topics including operations with integers, fractions, and percents; algebraic expressions; formulas; and simple linear equations. Prerequisite: Math 080 or placement. (Formerly MPC 090, MATH 090)
Course will be taught in the computer lab using the inverted instruction model, watching videos and completing homework assignments on the computer. These are NOT online sections, although it is suggested you have Internet access outside of class.

3249 CL2  MTWTh 09:15AM-10:20AM  1215 ABED S

Course will be taught in the computer lab using the inverted instruction model, watching videos and completing homework assignments on the computer. These are NOT online sections, although it is suggested you have Internet access outside of class.

3250 CL3  MTWTh 10:30AM-11:35AM  1215 STAFF

Course will be taught in the computer lab using the inverted instruction model, watching videos and completing homework assignments on the computer. These are NOT online sections, although it is suggested you have Internet access outside of class.

3251 CL4  MTWTh 11:45AM-12:50PM  1215 KNEPP D

Course will be taught in the computer lab using the inverted instruction model, watching videos and completing homework assignments on the computer. These are NOT online sections, although it is suggested you have Internet access outside of class.

3252 CL5  MTWTh 01:00PM-02:05PM  1215 STAFF

Course will be taught in the computer lab using the inverted instruction model, watching videos and completing homework assignments on the computer. These are NOT online sections, although it is suggested you have Internet access outside of class.

3253 CL6  MTWTh 02:15PM-03:20PM  1215 STAFF

Course will be taught in the computer lab using the inverted instruction model, watching videos and completing homework assignments on the computer. These are NOT online sections, although it is suggested you have Internet access outside of class.

3255 CLN  MW 06:00PM-08:30PM  1215 STAFF

Course will be taught in the computer lab using the inverted instruction model, watching videos and completing homework assignments on the computer. These are NOT online sections, although it is suggested you have Internet access outside of class.

**MATH 096  Elementary Algebra I**  5

Lab Fee:  $19.00

This course includes the study of basic algebraic operations and concepts, and the structure and use of algebra. This includes measurement and the metric system, solving and graphing linear equations, and working with polynomials. Prerequisite(s): one of the following: BBCC math placement exam or successful completion of at least four units in MATH 094 or Successful completion of MPC/MATH 090 (will start after Proficiency Exam #1)
Course will be taught in the computer lab using the inverted instruction model, watching videos and completing homework assignments on the computer. These are NOT online sections, although it is suggested you have Internet access outside of class.

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MATH 097 Elementary Algebra II 5

Lab Fee: $19.00

This course includes the study of basic and intermediate algebraic operations and concepts, and the structure and use of algebra. This includes factoring algebraic expressions, working with rational expressions, systems of equations and applications. PREREQUISITE(S): one of the following: BBCC math placement exam or successful completion of at least five units in MATH 096 or successful completion of MPC/MATH 095 (will start after Proficiency Exam #2)

Course will be taught in the computer lab using the inverted instruction model, watching videos and completing homework assignments on the computer. These are NOT online sections, although it is suggested you have Internet access outside of class.
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Course will be taught in the computer lab using the inverted instruction model, watching videos and completing homework assignments on the computer. These are NOT online sections, although it is suggested you have Internet access outside of class.

MATH 098 Intermediate Algebra

Lab Fee: $19.00

This course includes the study of intermediate algebraic operations and concepts, and the structure and use of algebra. This includes solving, graphing, and solving applications of linear equations and systems of equations; simplifying, factoring, and solving quadratic functions, introduction to functions and models; and exponential and logarithmic functions along with applications. Prerequisite: Math 094 or placement (Formerly Math 095, 096)
Course will be taught in the computer lab using the inverted instruction model, watching videos and completing homework assignments on the computer. These are NOT online sections, although it is suggested you have Internet access outside of class.

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Section OL1: Students view class lectures and submit assignments online; exams are taken on campus. Online fee is $10.

**MATH 099 Intermediate Algebra** 5

Lab Fee: $10.00

This course is designed to prepare students for precalculus and finite math. It includes the study of inequalities, applications of systems, rational expressions, functions, radicals, rational exponents, radical equations, complex numbers, quadratic equations and their application. Prerequisite: Math 098 or placement. (Formerly Math 098)

Section OL1: Students view class lectures and submit assignments online; exams are taken on campus. Online fee is $10.

**MATH&107 Math in Society** 5

Lab Fee: $19.00

This course will introduce the non-math/science major to mathematical applications in a variety of disciplines. Prerequisite: Appropriate scores in the BBCC Mathematics Assessment or successful completion of MATH 099.MS/SQR
MATH&141  Precalculus I   5
Lab Fee:  $19.00
This course will present the following concepts: college level algebra, introduction to functions and graphing, the graphs and properties of polynomial, rational, radical, exponential and logarithmic functions. Prerequisites: MATH 098 or MATH 099

MATH&142  Precalculus II   5
Lab Fee:  $19.00
In preparation for calculus this is a comprehensive study of trigonometry, circular functions, right triangle trigonometry, analytical trigonometry. Sequences, series and induction are also covered. Prerequisite: MATH &141 MS/SQR

MATH&146  Introduction to Statistics   5
Lab Fee:  $19.00
This course is an introduction to descriptive statistics, probability and its applications, statistical inference and hypothesis testing, predictive statistics and linear regression. Prerequisite: Appropriate scores in the BBCC Mathematics Assessment or successful completion of MATH 098 OR 099. MS/SQR

MATH 147  Finite Mathematics   5
Lab Fee:  $19.00
This course introduces the student to applications of linear functions in business; applications of matrices to systems of equations, linear programming and optimization, game theory, Markov chains, Leontiff input/output models, etc; introduction to probability and decision analysis. Prerequisite: Appropriate scores in the BBCC Mathematics Assessment or successful completion of MATH 099 or MATH 093.MS/SQR
This course will expand on the applications and techniques of differentiation learned in the first quarter and give a depth study of integration including the fundamental methods of integrating elementary algebraic and transcendental functions. It will include the applications of the calculus to transcendental functions, analytical geometry and other relevant topics. Prerequisite: MATH& 151 or instructor permission.

Lab Fee: $19.00

3355  01  MTWTh 10:30AM-11:35AM  1219  LANE S
MATH&163  Calculus 3   5

This course will expand on the applications and techniques of differentiation learned in the first and second quarters. It will introduce the student to the calculus of sequences and series and the use of the MacLauren and Taylor series to approximate functions. It will introduce the student to the calculus of curvilinear functions and the concept of the vector and vector functions. It will also introduce the concept of a partial derivative and the maximization of functions given in more than one independent variable. Prerequisite: MATH& 152 or instructor permission.

Lab Fee: $19.00

3360  01  MTWTh 10:30AM-11:35AM  1202  ABED S
MATH 230  Differential Equations   5

This course will introduce the student to the solution elementary differential equations and standard applications of differential equations in science. It will include the solution of first order linear differential equations with applications to exponential growth and decay problems, mixture problems, orthogonal trajectories, etc., solutions to second order differential equations with applications to harmonic motion, and the LaPlace transform. Prerequisite(s): MATH& 163 or instructor permission.

Lab Fee: $19.00

3370  01I  DAILY 08:00AM-09:00AM  1812  STAFF
Math (Applied)

MAP  100  Applied Mathematics (AMT)   2

This course will cover aircraft technical mathematics and is designed for the Aviation Maintenance Technology student. It will cover the fundamental mathematical principles required for the successful completion of the Aviation Maintenance Technology program. This course is FAA approved under 14 CFR Part 147. Prerequisite: Successful completion of MATH 080 or BBCC Math placement score into MATH 090 or above. Must be enrolled in the Aviation Maintenance Technology program.

3386  01  ARR  ARR  3200  DANNENBERG K
MAP  103  Applied Mathematics (MMT/IST)   5

This class provides review and instruction in whole numbers, decimals, fractions, measurement, ratio, proportion, percents, introduction to algebra, and introduction to geometry. This basic instruction and review is followed by vocational program specific mathematics instruction. Students will study mathematics for
electricity/electronics. The emphasis is on providing a solid mathematics base to facilitate assimilation of more complex mathematics as well as providing course work in relevant work-specific problems and situations. Collaborative learning is encouraged and built into the course to give students practice in a key skill used in the workplace. Prerequisite: successful completion of MATH 080 or BBCC Math placement score of MATH 090 or above.

3400 21 MW 06:00PM-08:20PM 3602 MATERN S

MAP 108 Applied Mathematics (MA) 3

This class provides review and instruction in whole numbers, fractions, ratios, decimals, proportions, percents, measurement and metrics, word problems (fractions, decimals, percentages) tables and graphs as they relate to employment as a Medical Assistant. Prerequisite: Successful completion of MATH 080 or BBCC Math Assessment placement into Math 090 or above.

3416 01 MTW 11:45AM-12:35PM 1721 STAFF

Medical Assistant

MA 112 Clinical Procedures II 4

Lab Fee: $30.00

This course builds on and advances the skills learned in Clinical Procedures I. It explores in detail the topics of patient history, patient interviews and documentation, asepsis, infection and disease control, basic physical exams, principles of medical equipment use, emergencies and first aid, and principles of universal precautions for blood and bodily fluids. Prerequisite: MA 111

3551 01 F 08:00AM-05:00PM 1722 OHS K

Music

MUSC&105 Music Appreciation 5

Music Appreciation is a course designed for students who have not had formal study in music or who wish to supplement performance experience with formal study in structure and history. Emphasis is placed on repeated listening experiences to acquire a thorough knowledge of selected works of music literature. HU

3605 01 MTWTh 09:15AM-10:20AM 1134 PATTERSON P

MUSC 115 Group Piano I 2

This course presents the basic concepts and skills to develop performing proficiency at the piano. Musical activities and projects will build growth in technical skills such as major and minor scale patterns; musical skills such as sight reading and improvisation; theoretical concepts such as notation, rhythm patterns, melodic shapes and forms; and creative skills such as completing melodic phrases and inventing melodic variations. Repertoire will reflect the development of increasingly advanced solo and ensemble pieces. HP

3630 01 MW 11:45AM-12:50PM 1134 PATTERSON P

Additional required hours are set by arrangement. Contact Pat Patterson at 793.2140 for more information.
MUSC 116  Group Piano II    2
Group piano instruction for beginners and intermediates. Developmental musicianship. Prerequisite: MUSC 115 or instructor approval. HP
3634 01 MW 02:15PM-03:20PM 1134 PATTERSON P
Additional required hours are set by arrangement. Contact Pat Patterson at 793.2140 for more information.

MUSC 117  Group Piano III    2
Group piano instruction for beginners and intermediates. Developmental musicianship. Prerequisite: MUSC 116 or instructor approval. HP
3638 01 MW 02:15PM-03:20PM 1134 PATTERSON P
Additional required hours are set by arrangement. Contact Pat Patterson at 793.2140 for more information.

MUSC 124  Orchestra I    1
A community and college orchestra that plays a variety of musical works for both string and full orchestra. One to two performances are given quarterly. Prerequisite: Performance ability on an orchestral instrument. HP
3650 21 M 06:00PM-08:00PM 1134 PATTERSON P

MUSC 134  Beginning Group Guitar    2
This course provides a group approach to progressive instruction, for beginning, advanced beginning and intermediate level guitarists. This course may be repeated for credit up to three times. HP
3670 01 TTh 02:15PM-03:20PM 1134 PATTERSON P
Additional required hours are set by arrangement. Contact Pat Patterson at 793.2140 for more information.

MUSC 170  History of Jazz    5
A survey course for non-majors and music majors covering the history of the origin of the American music Jazz and it's stylistic development up through the 1990's. The various periods of pre-jazz and jazz are related to social, political and economic forces during the nineteenth and twentieth centuries. Included are the sources of African-American musical forms such as spirituals, work songs, ragtime and blues. Recommended as a humanities elective, as part of African-American cultural history education or as general music education. HU
3720 01 MTWTh 10:30AM-11:35AM 1134 PATTERSON P

MUSC 215  Group Piano IV    2
Group piano instruction for intermediates and advanced students. Prerequisite: MUSC 117 or instructor approval. HP
3730 01 MW 02:15PM-03:20PM 1134 PATTERSON P
Additional required hours are set by arrangement. Contact Pat Patterson at 793.2140 for more information.

**MUSC 216  Group Piano V  2**

Group piano instruction for intermediates and advanced students. Prerequisite: MUSC 215 or instructor approval. HP

3734 01  MW  02:15PM-03:20PM  1134  PATTERSON P

Additional required hours are set by arrangement. Contact Pat Patterson at 793.2140 for more information.

**MUSC 217  Group Piano VI  2**

Group piano instruction for intermediates and advanced students. Prerequisite: MUSC 216 or instructor approval. HP

3736 01  MW  02:15PM-03:20PM  1134  PATTERSON P

**Nursing**

**NUR 100  Nursing Assistant  9**

Lab Fee: $209.41

This course prepares students to take the Nursing Assistant examination as outlined by Federal and State guidelines. Training will include classroom, skills lab, and clinical experience. Prerequisites: Read, write, speak and understand English at the level necessary for performing duties of the nursing assistant. (Placement in English 99 or above)

3800 01  MW  01:00PM-05:00PM  1721  ERWIN K

****  F  06:00AM-05:00PM  ERWIN K

The NAC lab fee includes: malpractice and liability insurance, drug testing, CPR certification, and registration for one state NAC test.

**NUR 103  HIV/AIDS Education  1**

Lab Fee: $10.00

An HIV/AIDS education course designed to meet the Washington State mandatory requirements for health care and childcare providers. Successful completion includes HIV/AIDS education certification.

3808 01H  ARR  ARR  ELLIOTT A

Class orientation and assignments are accessed online via Canvas. Mandatory in class final on February 27 at 10:30 a.m. in room 1802. Online fee is $10.

**NUR 120  Beginning Nursing Concepts I  6**

Focus is on nursing theory as it relates to the adult patient with commonly occurring health conditions, and includes an introduction to the care of the patient in the
perioperative and maternal/newborn setting. Professional roles and progression are incorporated in this course. Prerequisite: BIOL& 260, with a 2.0 G.P.A. or above.

NUR 121 Beginning Nursing Practicum I 4
Lab Fee: $2.50

Practical application in the clinical setting of nursing theory and skills taught in previous nursing courses and introduced in NUR 120 and NUR 136. Practicum focuses on nursing care to a variety of patients in the medical/surgical, perioperative, and maternal newborn setting. Prerequisite: BIOL&260, with a 2.0 G.P.A. or above.

3830 01 ARR ARR 1718 BROOKS J

NUR 136 Nursing Skills Laboratory 1
Lab Fee: $98.80

This course provides for the practice of nursing skills in a controlled setting in order to gain proficiency for delivery of nursing care in the clinical setting (NUR 121). The content is based on theoretical nursing knowledge taught in NUR 120. Prerequisite: BIOL& 260 with a 2.0 G.P.A. or above.

3856 01 ARR ARR 1731 BROOKS J

Two hours arranged per week. Graded on a pass/fail basis.

NUR 220 Advanced Nursing Concepts II 5

This course continues to focus on expansion of theoretical nursing knowledge related to complex disease states. Delegation and leadership concepts are incorporated in this course. Prerequisite: PSYC& 200, with a minimum 2.0 G.P.A. or above.

3916 01 ARR ARR 1722 GONZALEZ-ALL

NUR 221 Advanced Nursing Practicum II 5
Lab Fee: $2.50

Clinical focus is on application of principles and skills taught in previous nursing courses and introduced in NUR 220 and NUR 236. Practicum focuses on advanced nursing care to less stable patients in a variety of settings throughout the lifespan. Prerequisite: PSYC& 200 with a minimum 2.0 G.P.A.

3920 01 ARR ARR GONZALEZ-ALL
3921 02 ARR ARR ELLISTON J

NUR 236 Nursing Skills Laboratory 1
Lab Fee: $98.80
This course provides for the practice of nursing skills in a controlled setting in order to gain proficiency for delivery of patient care in the clinical setting (NUR 221). The content is based on theoretical nursing knowledge taught in NUR 220 and previous courses. Prerequisite: PSYC& 200, with a 2.0 G.P.A. or above.

Two hours arranged per week. Graded on a pass/fail basis.

**Nutrition**

**NUTR&101  Nutrition  5**

An introductory course providing the most up-to-date, accurate and scientifically sound nutrition information focusing on how nutrition and lifestyle choices influence health and disease. Prerequisite: Completion of ENGL 099 or placement in ENGL& 101. NS

**Section OL1:** Students view class lectures, submit assignments, and take exams online. Online fee is $10.

**Philosophy**

**PHIL&101  Intro to Philosophy  5**

This course is an introduction to philosophy for students who have no previous background in the subject. The course presents a broad overview of philosophical topics of interest and importance such as the nature of knowledge and the contents of reality. HU

**PHIL&120  Symbolic Logic  5**

This course is a study of the methods and principles used to distinguish correct from incorrect reasoning. Students are expected to prove their understanding of formal deductive symbolic logic by completing logic proofs in categorical, propositional, and predicate logic. HU/SQR

Prerequisites: Math 098 or above

**PHIL 210  Ethics  5**

Lab Fee: $10.00

A study of the principal ethical theories and their application to individual and social morality. HU
Physical Education

PEH 090  Recreational Gym  0

Community Ed Fee:  $28.90

This activity permits the use of BBCC Gym facilities during available hours by individuals who are not students registered at BBCC. Must be 18 years of age to enroll in recreational gym. Community service class.

PEH 100  Lifetime Wellness  3

Lifetime Wellness is designed to promote the student's understanding of their physical, emotional, and social health needs, and to develop strategies to meet these needs and improve overall health and well-being.

Lab Fee:  $3.80

Conditioning is designed to introduce the student to the basic principles and training methods for body conditioning so they can establish an exercise program to enhance overall wellbeing. May be repeated for up to three (3) credits.
Lab Fee: $3.80

Circuit weight training is designed to introduce the student to the basic principles and training methods for weight training so to establish a program to enhance build and maintain muscular strength and endurance. May be repeated for up to three (3) credits. AC

4365 01 ARR ARR 2012 DE HOOG M
4366 02 ARR ARR 2012 WILKS P

PEH 132 Fitness 1

Lab Fee: $3.80

An overall conditioning program with emphasis on developing strength, endurance, flexibility, and cardiovascular conditioning that lead to the development of a fitness attitude. May be repeated for up to three (3) credits. AC

4372 01 MW 11:45AM-12:35PM 2013 MOFFITT R

PEH 155 Body Toning 1

Lab Fee: $3.80

This course involves special exercise and calisthenics which enhance total fitness, figure improvement, body toning, weight control, and posture. Students will use balance/fitness balls and light to medium dumbbells to improve overall core strength and balance of the body. May be repeated for up to three (3) credits. AC

4390 01 MW 11:45AM-12:35PM 2015 NIELSEN C
4391 02 TTh 11:45AM-12:35PM 2015 NIELSEN C
4393 03 MW 10:30AM-11:20AM 2015 NIELSEN C
4394 26 ARR ARR GRAHAM M

Section 26 will be taught at Jazzercise, 824 W 3rd Ave, Moses Lake. Students enrolling in this section will pay Jazzercise for sessions. Contact Mary Graham at 765.4581 for enrollment information. AC

PEH 158 Racquetball 1

Lab Fee: $3.80

Racquetball is designed to introduce the student to the knowledge and basic skills of badminton and to develop those skills to a level that enables the student to participate in the sport at a beginning level. May be repeated for up to three (3) credits. AC

4396 01 MW 10:30AM-11:20AM 2013 DE HOOG M

Physics

PHYS&110 Physics for Non-Science Majors with Lab 5

Lab Fee: $18.80
This course is a general survey course for the non-science major. The course helps develop an awareness of the physical concepts which govern our everyday experiences. Topics will include most of the following, depending on class preparation and interest: describing motion, Newton's laws of motion and gravitation, energy and conservation laws, states of matter and its behavior, thermodynamics, waves, electricity and magnetism, optics, atomic and nuclear physics, special relativity. Conceptual reasoning is stressed, and mathematics is kept to the level of elementary algebra. Laboratories emphasize concepts learned in lecture, and graphing and data handling techniques are learned. This course is offered primarily to meet the Associate in Arts and Science laboratory science requirement. Prerequisites: MATH 095, 096, or placement into a higher level mathematics course.

4452 01  MTWTh 01:00PM-01:50PM 1217 HAMM J
Lab W 02:00PM-04:00PM 1217 HAMM J

PHYS&115  General Physics II with Lab  5

Lab Fee: $18.80
The second course in a three-quarter algebra-based sequence. A balance of conceptual understanding and problem-solving ability is emphasized; laboratory and lecture are integrated in the sequence. In this second quarter the topics studied will include fluids, oscillations, waves and sound, thermodynamics, geometric and physical optics. Biological applications of physics will be studied whenever possible. Prerequisites: Completion of PHYS& 114 with 2.0 or higher.

4455 01  MTWTh 10:30AM-11:20AM 1217 HAMM J
Lab T 02:30PM-04:30PM 1217 HAMM J

PHYS&222  Engineering Physics II w/Lab  5

Lab Fee: $18.80
The second in a three-quarter calculus-based sequence in introductory physics intended for students majoring in science or engineering. Course content includes thermodynamics, waves, and optics. Prerequisite: Successful completion of Engineering Physics I (PHYS& 221)

4466 01  MTWTh 09:15AM-10:05AM 1217 HAMM J
Lab M 02:30PM-04:30PM 1217 HAMM J

Psychology

PSYC&100  General Psychology  5

A broad survey course designed to study human behavior with reference to biology, learning, motivation, emotion, perception, intelligence, human development, mental processes, personality, abnormal behavior, and research. SS

4552 01  MTWTh 08:00AM-09:05AM 1601 STAFF
4553 02H  MW 02:15PM-03:20PM 1601 HOLLIWAY D

Section 02H incorporates traditional class time and a distance education component. Students need to have access to a reliable internet connection. Check your Big Bend
email the week before classes for further instructions. Instructor permission required. Fee: $10

4554 OL1 ARR ARR LEONARD R

Section OL1: All course work for this class will be completed online through Canvas. Students need to have access to a reliable internet connection. Check your Big Bend email the week before classes for further course instructions. Fee is $10

4555 OL2 ARR ARR LEONARD R

Section OL2: All course work for this class will be completed online through Canvas. Students need to have access to a reliable internet connection. Check your Big Bend email the week before classes for further course instructions. Fee is $10

**PSYC&200**  Lifespan Psychology  5

Lab Fee:  $10.00

This course examines the physical, intellectual, emotional, and social growth and development that occurs throughout the human lifespan. Prerequisite: PSYC& 100. SS

4576 01H TTh 10:35AM-12:35PM 1611 HOLLWAY D

Section 01H incorporates traditional class time and a distance education component. Students need to have access to a reliable internet connection. Check your Big Bend email the week before classes for further instructions. Instructor permission required. Fee: $10

**PSYC 225**  Psychology & The Legal System  5

This course is a survey of the major topics represented in the field of psychology and law. This course focuses on how psychological research (across sub-disciplines such as clinical, social, cognitive, and community psychology) can contribute to a better understanding of issues related to law or legal process, how the legal system can be informed by the results of psychological research, and how psychological research can be more reactive to legal issues. Prerequisite/corequisite: PSYC& 100 or CJ& 101. SS

4598 01 MTWTh 01:00PM-02:05PM 1611 LEONARD R

Section 01 incorporates traditional class time and a distance education component. Students need to have access to a reliable internet connection. Check your Big Bend email the week before classes & attend the first day of scheduled class for further instructions.

**Religious Studies**

**REL  201**  World Religions  5

Lab Fee:  $10.00

A survey of the origin, development and present beliefs and practices of the world’s major religions: Hinduism, Buddhism, Confucianism, Taoism, Judaism, Christianity and Islam. HU

4606 OL1 ARR ARR KNEPP D

Online fee is $10.
Sociology

SOC& 101 Intro to Sociology  5

Sociology is the scientific study of human groups and their social systems. Sociologists study how groups are organized and structured, their character and interaction, how groups change, and their impact on individuals. The course focuses on applying the "sociological imagination" which in turn helps students understand and appreciate different societies and cultures both contemporary and historical. Prerequisites: There are no prerequisites. Strongly recommended placement in MATH 095 or higher and placement in English 099 or higher. SS

4640  01H    MW  10:30AM-12:30PM  1611  HOLLWAY D

Section 01H incorporates traditional class time and a distance education component. Students need to have access to a reliable internet connection. Check your Big Bend email the week before classes for further instructions. Instructor permission required. Fee: $10

4643  OL1    ARR  ARR  HOLLWAY D

All course work for this class will be completed online through Canvas. Students need to have access to a reliable internet connection. Check your Big Bend email the week before classes for log-in information and further course instructions. Online fee is $10.

4644  OL2    ARR  ARR  TATE-LIBBY J

All course work for this class will be completed online through Canvas. Students need to have access to a reliable internet connection. Check your Big Bend email the week before classes for log-in information and further course instructions. Online fee is $10.

Spanish

SPAN&121 Spanish I  5

Lab Fee:  $10.50

Beginning Spanish language and culture taught using a communicative approach. Through the use of drama and themes, this course focuses on listening, speaking, reading and writing skills and the culture of the Spanish-speaking world. HU

4702  01    MTWTh 01:00PM-02:05PM  1604  LEAVITT A

4704  26    MW  06:00PM-08:30PM  MCLAUCHLAN N

Section 26 meets at Skillsource, 309 E. 5th Avenue, Moses Lake.

SPAN&122 Spanish II  5

Lab Fee:  $10.50

Beginning Spanish language and culture taught using a communicative approach. Through the use of drama and themes, this course focuses on listening, speaking, reading and writing skills and the culture of the Spanish-speaking world. Prerequisite: SPAN& 121. HU
Section 26 meets at Skillsource, 309 E. 5th Avenue, Moses Lake.

**SPAN&123**  
**Spanish III**  
5  
Lab Fee: $10.50  
Beginning Spanish language and culture taught using a communicative approach. Through the use of drama and themes, this course focuses on listening, speaking, reading and writing skills and the culture of the Spanish-speaking world. Prerequisite: SPAN& 122. HU

Welding

**WLD 101**  
**Oxy-Acetylene Welding For Auto Technicians**  
2  
Lab Fee: $21.00  
Fundamentals of oxy-acetylene welding and cutting. Lessons include carbon-steel welding and brazing, aluminum and cast-iron welding and cast-iron welding and oxy-acetylene, plasma arc cutting. Practical knowledge of safety in the use and handling of equipment and compressed gases will be stressed throughout the quarter. Prerequisite: enrollment in Automotive Technology.

**WLD 102**  
**Arc/Gmaw Welding For Auto Technicians**  
2  
Lab Fee: $21.00  
This course covers the fundamentals of the GMAW semi-automatic process for welding carbon steel, stainless steel and aluminum. Using these materials, the student will learn to run stringer beads, butt, lap and 'T' joints, in all positions with various modes of metal deposition and using different gasses. Prerequisite: enrollment in Automotive Technology.

**WLD 103**  
**Beginning AMT Welding**  
2  
Lab Fee: $21.00  
Fundamentals of oxy-acetylene welding with carbon steel and aluminum, as well as brazing and braze welding with carbon steel; soldering with stainless steel and carbon steel; Gas Tungsten Arc Welding (GTAW) with aluminum, stainless steel, and carbon steel. This course is FAA approved under 14 CFR Part 147. Prerequisite: Enrollment in AMT 151 or AMT 152.
Start & end date: 01/05/15 to 01/22/15

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Start & end date: 01/16/15 to 02/13/15

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**WLD 110  Welding Theory I  5**

General introduction to industrial welding and cutting. Safety rules of oxy-fuel, electric welding processes, principles, and electrodes.

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**WLD 111  Welding Process I  3- 6**

Lab Fee: $63.00

*Variable Credit Lab Fees are calculated at the highest rate*

An introduction to the Shielded Metal Arc Welding process. Students will perform beads, fillets and Plate tests in all position with E6010 and E7018 Electrodes. Students must complete all 6 credits of WLD 111 prior to enrolling in WLD 121.

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**WLD 112  Thermal Cutting and Welding  3**

Lab Fee: $31.50

Various techniques of steel cutting with oxy-fuel, air carbon arc, plasma arc processes and oxy-acetylene welding and brazing with various metals.

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**WLD 120  Welding Theory II  5**


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**WLD 121  Welding Process II  3- 6**
Lab Fee: $63.00

*Variable Credit Lab Fees are calculated at the highest rate*

An introduction to welding open root joints. Students use E6010 to complete open root corner joints out of position and open root plate tests out of position. Students must complete all 6 credits of WLD 121 prior to enrolling in WLD 131.
Prerequisite: 6 credits of WLD 111.

4880 01 MTWTh 12:30PM-03:00PM 3403 MCDANIEL S
4882 02W Sa 08:00AM-02:30PM 3403 GILBERT C
4884 21 MW 06:35PM-09:35PM 3403 GILBERT C
4886 22 TTh 06:35PM-09:35PM 3403 GILBERT C

WLD 122 Gas Metal Arc Welding I 3

Lab Fee: $31.50
Students will learn to apply the Gas Metal Arc Welding (MIG) process on steel in all positions using the short circuit transfer mode and the spray transfer mode in the flat and horizontal positions. Prerequisite: WLD 112.

4896 01 MTWTh 10:25AM-11:45AM 3403 MCDANIEL S
4898 02 ARR 12:30PM-03:00PM 3403 MCDANIEL S
4900 03W Sa 08:00AM-02:30PM 3401 GILBERT C
4902 21 MW 06:35PM-09:35PM 3403 GILBERT C
4904 22 TTh 06:35PM-09:35PM 3403 GILBERT C

WLD 131 Welding Process III 3-6

Lab Fee: $63.00

*Variable Credit Lab Fees are calculated at the highest rate*

Using E-7018 electrodes, weld corner joints, bevel plates in all positions and ASME and WABO performance certification tests. These three credit courses may be repeated for credit up to six credits. Prerequisite: 6 credits of WLD 121

4920 01 MTWTh 12:30PM-03:00PM 3403 MCDANIEL S
4922 02W Sa 08:00AM-02:30PM 3403 GILBERT C
4924 21 MW 06:35PM-09:35PM 3403 GILBERT C
4926 22 TTh 06:35PM-09:35PM 3403 GILBERT C

WLD 132 Gas Tungsten Arc Welding I (TIG) 3

Lab Fee: $31.50
Students will learn to apply the Gas Tungsten Arc Welding (TIG) process on steel and aluminum. short circuit transfer mode. Prerequisite: WLD 122
WLD 152  Welding Layout I  3
Lab Fee:  $31.50

Specialized welding drafting techniques: intersections and developments; patterns for geometric shapes used in cardboard, sheet metal, and structural shapes; fabrication and model construction. Prerequisite: MAP 101 or instructor's permission

WLD 190  Skill Improvement  1- 6
Lab Fee:  $63.00

*Variable Credit Lab Fees are calculated at the highest rate*

Extra welding time and instruction to enhance student's welding skills and/or update their qualification for testing. This is an open enrollment course offered throughout each quarter. May be repeated for credit; graded on pass-fail basis. Prerequisite: instructor approval.

WLD 206  Welding Codes and Standards  4
Lab Fee:  $42.00

Upon successful completion of the course the student will be able to follow codes to interpret their workmanship. Use procedure qualifications and performance qualifications. Use DT and NDT methods to inspect the student's own weldments. Use visual inspection of welded structures. Prerequisite: WLD 205 or instructor's permission

WLD 212  Gas Metal Arc Welding II  3
Lab Fee:  $31.50

Students will learn to apply both types of Flux core arc welding process on steel and perform Gas Metal Arc Welding on aluminum and stainless steel. Prerequisite: WLD 132
<table>
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**WLD 241 Structural Weld Process I**  
Lab Fee: $63.00

This course focuses on student learning of structural connection mockups applying the Shielded Metal Arc and Flux Cored Arc Welding processes. Prerequisite: WLD 131 or instructor approval.

<table>
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**WLD 242 Structural Welding I**  
Lab Fee: $31.50

An introductory course focusing on fabrication of structural weldments utilizing shielded metal arc welding and flux cored arc welding on structural connections. Prerequisite: WLD 212

<table>
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**WLD 243 Structural Weld Process II**  
Lab Fee: $63.00

A structural welding course focusing on student application of Shielded Metal and Flux Cored Arc Welding processes on large outdoor structural weldments in accordance with drawings. Prerequisite: WLD 241 or instructor approval.

<table>
<thead>
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<th>CRN</th>
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**WLD 244 Submerged Arc Welding**  
3
This course focuses on student learning of submerged arc welding process which entails an arc that takes place beneath a bed of granular flux. This is a high deposition industrial orientated welding process that is used to manufacture light to heavy weldments. Prerequisite: WLD 242 or instructor permission.

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WLD 245 Structural Weld Process III 6

A structural welding course focusing on student application of Shielded Metal and Flux Cored Arc Welding processes on large outdoor structural weldments in accordance with drawings. Prerequisite: WLD 241 or instructor approval.

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WLD 261 Production Weld Process I 6

An introductory course focusing on student learning of production welding techniques by applying the Gas Metal Arc, Flux Cored Arc, and Gas Tungsten Arc Welding processes. Prerequisite: WLD 131 or instructor approval.

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WLD 262 Production Welding I 3

This course focuses on student learning of production welding within a shop setting. Prerequisite: WLD 212 or instructor permission.

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WLD 263 Production Weld Process II  6

Lab Fee: $63.00

An intermediate course that focuses on student learning of production welding techniques by applying the Gas Metal Arc, Flux Cored Arc, and Gas Tungsten Arc Welding processes on large parts in accordance with drawings. Prerequisite: WLD 261 or instructor approval.

WLD 264 Advanced Weld Process  3

Lab Fee: $31.50

An advanced course focusing on student learning of welding processes such as pulsed gas metal arc, pulsed gas tungsten arc, and welding on advanced materials i.e., titanium and inconel. Prerequisite: WLD 262 or instructors permission.

WLD 265 Production Weld Process III  6

Lab Fee: $63.00

An advanced production welding course focusing on application of Gas Metal Arc, Flux Cored Arc, and Gas Tungsten Arc Welding processes on small parts in accordance with drawings. Parts will be welded in student manufactured fixtures. Prerequisite: WLD 263 or instructor approval.

WLD 281 Pipe Welding I  3- 6

Lab Fee: $63.00

*Variable Credit Lab Fees are calculated at the highest rate*
Students will be introduced to pipe welding 1G, 2G, 5G, and 6G positions using E-6010 electrodes with schedule 60, 80, 100, 120 and various size pipes. These three credit courses may be repeated for credit up to six credits. Prerequisite: WLD 131

WLD 282  Gas Tungsten Arc Welding II (TIG)  3

Lab Fee: $31.50

This course introduces students to carbon steel pipe welding in the 1G, 2G, 5G, and 6G positions using cup walk methods with 1/8" electrodes on various sizes of pipes. Prerequisite: WLD 212 or instructor's permission.

WLD 283  Pipe Welding II  3- 6

Lab Fee: $63.00

*Variable Credit Lab Fees are calculated at the highest rate*

Students will enhance carbon steel pipe welding in 1G, 2G, 5G, and 6G positions using E-6010 and E-7018 electrodes with schedule 60, 80, 100 and 120 pipes and various other sizes of pipes. These three credit courses may be repeated for credit up to six credits. Prerequisite: WLD 281

WLD 284  Gas Tungsten Arc Welding (TIG) III  3

Lab Fee: $31.50

Students will gain advanced skills on carbon steel pipe in the 2G, 5G, 6G positions, carbon steel pipe with stainless steel rods, and stainless steel pipe in the 2G, 5G, and 6G positions. Prerequisite: WLD 282 or instructor's permission.
5183 21  MW  06:35PM-09:35PM  3403  GILBERT C
5184 22  TTh  06:35PM-09:35PM  3403  GILBERT C

WLD 285  Pipe Welding III  3- 6

Lab Fee:  $63.00
*Variable Credit Lab Fees are calculated at the highest rate*

This course focuses on pipe welding 1G, 2G, 5G, and 6G positions using E-6010 and E-7018 rods and a combination of G.T.A.W and S.M.A.W. process with schedule 40, 60, 80, 100, 120 and various other sizes of pipes. Prerequisite: WLD 283

5190 01  MTWTh 12:30PM-03:00PM  3403  MCDANIEL S
5192 02W  Sa  08:00AM-02:30PM  3403  GILBERT C
5193 21  MW  06:35PM-09:35PM  3403  GILBERT C
5194 22  TTh  06:35PM-09:35PM  3403  GILBERT C

WLD 290  Skill Improvement II  1- 6

Lab Fee:  $63.00
*Variable Credit Lab Fees are calculated at the highest rate*

Extra welding time and instruction to enhance student's welding skills and/or update their qualification for testing. This is an open enrollment course offered throughout each quarter. May be repeated for credit; graded on pass-fail basis. Prerequisite: instructor approval.

5200 01  MTWTh 10:25AM-11:45AM  3403  MCDANIEL S
5202 02  MTWTh 12:30PM-03:00PM  3403  MCDANIEL S
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5208 22  TTh  06:35PM-09:35PM  3403  GILBERT C

WLD 295  Work Based Learning  1- 6

A supervised work experience in the welding technology field to enhance the application of classroom instruction and skills and/or area of specialization approved by the program instructor. May be repeated up to twelve (12) credits. Prerequisite(s): Instructor approval and concurrent enrollment in WLD 297.

5210 01  ARR  ARR  3400  MCDANIEL S

WLD 297  Work Based Learning Seminar  1

Feedback and discussion to integrate and relate Work Based Learning and classroom based instruction. Work ethic, leadership, safety and occupational health, environmental issues, and other student generated topics are examined. May be repeated up to six (6) credits. Co-requisite: WLD 295.
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