Auto Body Technology
Program Level Outcomes

- Complete NATEF self-assessment and on-site program review.
- Qualify for NATEF program certification in all four collision repair and refinish areas.
- Update Autobody Repair Technology program curriculum in accordance with industry skill standards.
- Enhance student quality and quantity.
- Enhance student retention and completion rates.

Auto Body Technology
Degree & Certificate Level Outcomes

- Use body shop hand tools, common hand tools, and power tools.
- Explain vehicle structure and construction.
- Perform a collision damage analysis.
- Perform structural and non-structural repairs.
- Establish corrosion protection.
- Remove and install movable and stationary glass.
- Measure structural damage and how to use various types of pulling equipment to repair the damage.
- Operate paint spray equipment.
- Mix and apply automotive finishes incorporating waterborne paint products.
- Perform wheel alignment using electronic alignment equipment.
- Perform welding procedures and use equipment, GMAW & RSTSW to I-CAR standards.
- Demonstrate plastic repairs using modern adhesives.
- Demonstrate skills in estimating vehicle damage.

* Auto Body Technology Certificate Outcome

ABT 264, Unibody Rebuilding
Course Level Outcomes

- Mount and anchor a vehicle to a pulling system.
- Select and understand how to use various types of pulling equipment.
- Apply knowledge of electrical theory.
- Understand wiring diagrams and diagnostic flow charts.
- Inspect and/or repair wiring and connections.
- Inspect and/or repair switches, relays, bulbs, and sockets of all lighting equipment.
- Power window and seat systems.
- Identify programmable electrical systems, retrieve diagnostic trouble codes, record data, clear codes, and reprogram after disconnecting power.
- Structural analysis and damage repair A. Frame Inspection and Repair (NATEF TASK)
- Structural analysis and damage repair B. Unibody Inspection, Measurement, and Repair (NATEF TASK)
- Mechanical and electrical components A. Electrical (NATEF TASK)
Accounting Technology
Program Level Outcomes

- Program completers will demonstrate technical competency in core ability and related instruction curriculum components.
- Students who have declared a program major will complete that program of study.
- Student and employer satisfaction will reflect a high degree of self-esteem, self-confidence and the potential to grow within that job or business.
- Students completing the AAAS degree will become employed in a living wage job, with benefits.

Accounting Technology
Degree Level Outcomes

- Possess the skills needed to secure and maintain entry-level employment as accounting clerks, payroll clerks, full-charge bookkeepers, income tax preparers, and general ledger accountants.
- Accurately prepare payroll and related federal and state tax returns.
- Accurately prepare basic federal income tax returns.
- Possess proficiency using the 10-key calculator.
- Understand and practice professional work habits expected in the accounting field, including confidentiality and accounting ethics.
- Be able to correctly complete accounting processes according to Generally Accepted Accounting Principles, using manually and computerized accounting software, prepare financial statements, and create various entry-level managerial reports.
- Effectively read and interpret financial statements.
- Understand the basic legal issues pertaining to the accounting field.
- Acquire proficiency using computer software, including MS Word, MS Excel, MS Access, and computerized accounting software.
- Be able to research business and accounting information using printed materials, electronic media, and the Internet.
- Demonstrate the ability to communicate orally and in writing at a level necessary for successful employment in the accounting field.
- Demonstrate critical thinking skills needed to prioritize, anticipate and analyze problems, and to evaluate and implement solutions.
- Possess an understanding and practice of human relations, diversity, and teamwork skills related to the accounting field.

ACCT 204, Intermediate Accounting I
Course Level Outcomes

- Describe the conceptual framework underlying Financial Accounting.
- Record transaction and prepare Financial Statements.
- Perform present and future value calculations to value cash flows.
- Determine inventory quantities under different cash flow assumptions.
- Define assets, measure assets and expense them as they are consumed.

Bookkeeping Certificate
Certificate Level Outcomes

- Possess the skills needed to secure and maintain entry-level employment as accounting and payroll clerks.
- Accurately prepare payroll and related federal and state tax returns.
- Possess proficiency using the 10-key calculator.
- Understand and practice professional work habits expected in the accounting field, including confidentiality and accounting ethics.
- Be able to correctly complete the basic bookkeeping processes according to Generally Accepted Accounting Principles.
- Acquire proficiency using computer software, including MS Word, MS Excel, MS Access, and computerized accounting software.
- Demonstrate the ability to communicate orally and in writing at a level necessary for successful employment in the accounting field.
- Demonstrate critical thinking skills needed to prioritize, anticipate and analyze problems, and to evaluate and implement solutions.
- Possess an understanding and practice of human relations, diversity, and teamwork skills related to the accounting field.

ACCT 201, Principles of Accounting I
Course Level Outcomes

- Discuss the significance of the terms: asset, liability, capital, revenue, and expense.
- Prepare Journal entries to reflect the economic effects of financial transactions.
- Explain the posting process.
- Prepare general purpose Financial Statements.
- Describe Revenue and Expense recognition in relation to an Accounting period.
- Demonstrate a systems perspective in analyzing business events and transactions.
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Level</th>
<th>Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGRI 102</td>
<td>Farm Records and Analysis</td>
<td>Course</td>
<td>Describe the six major classes of nutrients required for all animals in terms of proximate analysis.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Demonstrate knowledge of accounting basics.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Identify the components of a record keeping system.</td>
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<tr>
<td></td>
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<td></td>
<td>Set up and summarize daily and annual records and prepare financial statements for financial analysis and credit applications.</td>
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<tr>
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<td></td>
<td>Recognize measurements and methods of business management analysis.</td>
</tr>
<tr>
<td>AGPR 111</td>
<td>Animal Nutrition &amp; Health</td>
<td>Course</td>
<td>Demonstrate appreciation that certain non-nutrient substances, toxic constituents of plants and food contaminants can influence animal response.</td>
</tr>
<tr>
<td></td>
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<tr>
<td>AGPR 215</td>
<td>Field Crop Production</td>
<td>Course</td>
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</tbody>
</table>
Automotive Repair Technology

Program Level Outcomes

- Maintain ASE standards through full implementation of related curriculum and student outcome measures.
- Improve marketability of students to employers as a result of successful completion of the total ASE program of instruction.
- Maintain and enhance the Walla Walla High School and other high school articulation arrangements.
- Expand student recruitment initiatives with local and outlying high schools.
- Secure automotive industry support for provision of equipment and training materials.

Degree and Certificate Level Outcomes

- Demonstrate principles, operation, diagnosis and service of gasoline engines.
- Demonstrate principles, operation, diagnosis and service of automatic transaxes and transmissions.
- Demonstrate principles, operation, diagnosis and service of manual drivetrain systems.
- Demonstrate principles, operation, diagnosis and service of suspension and steering systems.
- Demonstrate principles, operation, diagnosis and service of brake systems.
- Demonstrate principles, operation, diagnosis and service of electrical and electronic systems.
- Demonstrate principles, operation, diagnosis and service of engine performance systems.
- Demonstrate shop procedures and repair procedures with the correct tools and equipment in a safe environmentally friendly manner.
- Provide training to develop mathematical, oral and written communication skills to problem solve effectively in an automotive repair shop.

* Automotive Repair Technology Certificate Outcome

AMM 210, Engine Rebuild

Course Level Outcomes

- Diagnose, remove and reinstall general engines.
- Diagnose and repair cylinder head and valve training.
- Diagnose and repair engine block assembly.
- Diagnose and repair lubrication and cooling systems.
- Adjust, remove and replace engine related services.
Business Administration

Program Level Outcomes

- Program completers will demonstrate technical competency in core ability and related instruction curriculum components.
- Students who have declared a program major will complete that program of study.
- Student and employer satisfaction will reflect a high degree of self-esteem, self-confidence, and the potential to grow within that job or business.
- Students completing the AAAS degree will become employed in a living wage job, with benefits.

Business and Management

Degree Level Outcomes

- Demonstrate analytical and critical-thinking skills with direct application to business environments.
- Performs basic computations and approaches practical problems by choosing appropriately from a variety of mathematical techniques.
- Develop and implement appropriate marketing strategies.
- Apply concepts, methods, processes and functions of management to business operations.
- Demonstrate the ability to communicate clearly and concisely in personal and business communication.
- Demonstrate sound management decisions based upon planning and examination of appropriate alternatives.
- Demonstrate an understanding of budgeting and inventory control systems.
- Apply retail concepts as they relate to apparel and non-apparel merchandise.
- Understand buying and promotion techniques necessary for proper retail management.
- Establish and maintain effective working relationships in multicultural settings.
- Applies Technology to Task & Understands overall intent and proper procedures for setup and operation.
- Problem Solving — recognizes problems and devises and implements plan of action.
- Creative Thinking — generates new ideas.
- Participates as a Member of a Team & contributes to group effort.
- Serves Clients/Customers & works to satisfy customers’ expectations.

* Business and Management Certificate Outcome

BUS 187, Principles of Selling

Course Level Outcomes

- Define the sales process.
- Be able to construct a SELL Sequence.
- Explain the differences within FAB.
- Explain AIDA and how this technique is used.
- Explain and demonstrate the different types of sales presentations.
Carpentry
Program Level Outcomes
• Provide students with marketable technical and interpersonal skills in the trade, resulting in career placement.
• Provide training in environmental and workplace safety that meets appropriate industry standards.
• Educate and graduate students who possess the knowledge and skills necessary to be successful in the construction industry.
• Continue to keep the Carpentry curriculum current with industry practices and standards based on input from the advisory committee.
• Provide students with the opportunity to complete a state-of-the-art home with all the latest Green Building standards and International Building Codes met.

Carpentry
Degree Level Outcomes
• Demonstrate a safe work environment.
• Operate hand and power tools/equipment used in carpentry.
• Follow plans, specifications and codes used in carpentry.
• Demonstrate wall and ceiling framing.
• Perform wall and ceiling layout and estimates.
• Apply exterior finishes and windows.
• Install interior trim.
• Install doors.
• Layout and install floor systems.
• Perform tile prep work.
• Layout and install tile.
• Set trusses and construct roofing systems.
• Install insulation and hang drywall.
• Develop concrete form and layout.
• Demonstrate concrete pouring and stemwalls.
• Apply paint to both the interior and exterior.
• Demonstrate green building practices.
• Communicate effectively using construction language.
• Demonstrate the ability to problem solve.

Carpentry Certificate Outcome

CARP 284, Advanced Work in Layout
Course Level Outcomes
• Explain safety regulations.
• Prepare preconstruction details.
• Accomplish site preparation.
• Estimate rough framing requirements.
• Estimate building materials needed for site.
• Identify different concrete types and their importance in the industry.
• Identify different types of fasteners and the way each are used.

Updated: 02.16.11
Commercial Truck Driving
Program Level Outcomes

- Implement competency-based education, skill standards, and program certification.
- Create and maintain a marketing plan related to student recruitment.
- Update facilities with consideration for function and appearance.
- Maintain up-to-date curriculum that meets or exceeds the Washington State requirement for a Class A drivers license.

Truck Driver Training Certificate
Certificate Level Outcomes

- Pass the required Commercial Driver's license knowledge, combination, and air brake tests at the DMV.
- Pass pre-trip inspection, skills test, driving test and obtain Commercial Driver's license.
- Perform a vehicle inspection in an accurate systematic sequence to ensure safety of operation.
- Demonstrate ability to plan trips and routes including managing loads and weight distribution to ensure safety of operation.
- Communicate effectively with peers, customers and supervisors.
- Complete appropriate paper work correctly.
- Problem-solve road and traffic conditions to ensure safety of operation.

Advanced Truck Driver Training Certificate
Certificate Level Outcomes

- Pass the required Commercial Driver's license knowledge, combination, and air brake tests at the DMV.
- Pass pre-trip inspection, skills test, driving test and obtain Commercial Driver's License.
- Perform a vehicle inspection in an accurate systematic sequence to ensure safety of operation.
- Demonstrate ability to plan trips and routes including managing loads and weight distribution to ensure safety of operation.
- Communicate effectively with peers, customers and supervisors.
- Complete appropriate paper work correctly.

TRK 110, Truck Driver Training
Course Level Outcomes

- Demonstrate CDL written test knowledge on general knowledge, combination vehicles, doubles and triples, tankers, and hazardous materials.
- Demonstrate and identify log- book procedures.
- Demonstrate map reading knowledge.
- Inspect and identify cab controls and gauges, power train, brake, steering, and various engines and components.
- Demonstrate work ethic appropriate to this industry.

TRK 191, Cooperative Work Experience
Course Level Outcomes

- Refine safe driving techniques.
- Refine proper procedures for left and right hand turns.
- Refine proper shifting, braking, and mirror use.
- Refine proper procedures for pre-trip and post-trip inspections.
- Refine safe and proper procedure for coupling and uncoupling.
- Refine safe backing procedures.
Civil Engineering Technology

Program Level Outcomes
- Provide a sound knowledge of the fundamental principles of civil engineering technology so that they may either enter the work force or continue their education in engineering.
- Develop critical thinking and problem solving skills that can be applied to a wide range of problems, both technical and non-technical.
- Provide the skills necessary for the practice of civil engineering technology.
- Provide a well-balanced educational experience that will foster communication skills, appreciation of social values, and an understanding of the social implications of technology.
- Remain technically current and responsive to the changing needs of society.

Civil Engineering Technology

Degree Level Outcomes
- Appropriate mastery of the knowledge, techniques, skills and modern tools of their disciplines.
- Ability to apply current knowledge and adapt to emerging applications of mathematics, science, engineering and technology.
- Ability to conduct, analyze and interpret experiments, and apply experimental results to improve processes.
- Ability to apply creativity in the design of systems, components, or processes appropriate to program educational objectives.
- Ability to function effectively on teams.
- Ability to identify, analyze and solve technical problems.
- Ability to communicate effectively.
- Recognize the need for, and ability to engage in lifelong learning.
- Ability to understand professional, ethical and social responsibilities.
- A respect for diversity and knowledge of contemporary professional, societal and global issues.
- A commitment to quality, timeliness and continuous improvement.
- Utilize graphic techniques to produce engineering documents.
- Conduct standardized field and laboratory testing on civil engineering materials.
- Utilize modern surveying methods for land measurement and/or construction layout.
- Determine forces and stresses in elementary structural systems.
- Estimate material quantities for technical projects.
- Employ productivity software to solve technical problems.

Surveying Certificate

Certificate Level Outcomes
- Solve problems using Autocad.
- Make dimension drawings using ANSI standards.
- Use GPS receivers.
- Set up and use transit, theodolites and levels.
- Calculate pipe sizes for storm systems.
- Use CPM and P.E.R.T. scheduling and planning techniques.
- Design a PCC pavement and an ACP pavement.
- Perform traffic studies and submit reports.

CET 103, Engineering Concepts & Problems

Course Level Outcomes
- Knowledge of different fields of engineering.
- Knowledge of engineering ethics.
- Set up problems using engineering formats and problem solving techniques.
- Understanding of professional registration for engineers and surveyors.
- Understanding of the difference between vertical and horizontal construction.
- Understanding of the SI and gravitational system of measurements and units.
- Knowledge of GPS survey equipment.

CET 202, Construction Inspection

Course Level Outcomes
- Knowledge of construction quality control practices and procedures.
- Knowledge of concrete sampling procedures.
- Knowledge of contract specifications.
- Present technical written reports.
- Knowledge of asphalt and concrete plant operations.
- Knowledge of WSDOT testing methods and procedures.
Cosmetology
Program Level Outcomes

- To market, recruit, and retain students in programs within the division.
- Certify programs using industry skill standards.

Cosmetology
Degree Level Outcomes

- Apply cosmetology theory and technical skills, at entry level standards in a professional manner.
- Demonstrate trouble shooting and problem solving in various cosmetology work-related situations.
- Apply effective listening and speaking skills to educate cosmetology clients on individual beauty requirements.
- Show professionalism and sensitivity towards others.
- Practice safe and sanitary procedures in compliance with state regulations.
- Demonstrate efficient time management skills when working in cosmetology salons.
- Demonstrate marketing strategies to cosmetology customers.

COSM 111, Principles and Procedures of Cosmetology I
Course Level Outcomes

- Classify/discuss safety/sanitation measures for protection of patron and cosmetologist for each service to be rendered.
- Identify and explain implement use for all services involved in basic cosmetology.
- Classify types/kinds of basic haircuts/hairstyles.
- Describe kinds of permanent waving techniques that are necessary to give a permanent wave.
- Demonstrate thinking/problem-solving skills with each client service.
- Use communication/interpersonal skills with client.
- Identify different services given in the salon.
- Demonstrate correct math skills when mixing product according to manufacturers’ directions.
- Demonstrate respect for others’ well-being.
Computer Science
Program Level Outcomes

- Graduates successfully completing the program are employable in their degree area, at a living wage job with benefits.
- Program completers are encouraged to pursue bachelor level programs in computer science.
- Program maintains advanced certificate, degree and endorsements that are current with latest industry standards.

* Denotes Certificate Outcome

Networking
Degree Level Outcomes
- Demonstrate the ability to critically and logically think and organize to solve computer science related problems and processes as they relate to networking in industry.
- Demonstrate the ability to communicate effectively in oral and written form.
- Demonstrate the ability to work effectively in a team setting.
- Demonstrate knowledge of software and hardware related to networking requirements and certifications in industry.
- Demonstrate knowledge and application of ethical and privacy issues relating to the computer science field.
- Demonstrate knowledge and application of customer service skills.

Digital Design
Degree Level Outcomes
- Demonstrate the ability to critically and logically think and organize to solve computer science related problems and processes as they relate to design in industry.
- Demonstrate the ability to communicate effectively in oral and written form.
- Demonstrate the ability to work effectively in a team setting.
- Demonstrate knowledge of software and hardware related to digital design applications.
- Demonstrate knowledge and application of ethical and privacy issues relating to the computer science field.
- Demonstrate knowledge and application of customer service skills.

Software Design
Degree Level Outcomes
- Demonstrate the ability to critically and logically think and organize to solve computer science related problems and processes as they relate to software design.
- Demonstrate the ability to communicate effectively in oral and written form.
- Demonstrate the ability to work effectively in a team setting.
- Demonstrate knowledge of software and hardware related to software design requirements and certifications.
- Demonstrate knowledge and application of ethical and privacy issues relating to the computer science field.
- Demonstrate knowledge and application of customer service skills.

CS 276, Windows Server
Course Level Outcomes
- Demonstrate knowledge of the Windows Server Operating System.
- Plan and install Windows Server.
- Manage User and Group Accounts.
- Manage Clients and Servers.
- View and monitor a NT Server.
- Manage Disk and File Systems.
- Manage Print Services.
- Configure Internet, Intranet, and Remote Access.
- Demonstrate knowledge of contingency planning and recovering from Server Failure.

CS 223, Computer Layout & Design (Photoshop)
Course Level Outcomes
- Knowledge of popular image manipulation software.
- Knowledge digital fundamentals and digital images.
- Use basic photo-editing techniques using filters and plugins.
- Make color corrections and to retouch.
- Create raster graphics.
- Knowledge of basic tools of Raster photo-editing programs.

CS 245, Advanced Database Development
Course Level Outcomes
- Demonstrate knowledge of the fundamentals of Microsoft Access 2000.
- Demonstrate knowledge of practical examples of the computer as a useful tool.
- Create, query, and maintain databases suitable for coursework, professional purposes, and personal use.
- Pursue independent study.
- Demonstrate knowledge of the Expert level skill set for the Microsoft Office User Specialist Exam.
Culinary Arts
Program Level Outcomes

- Prepare graduates to enter the food service and hospitality industry with the knowledge and skills necessary to be successful.
- Provide opportunities and support for professional lifelong learning in the hospitality industry through the seminars and conferences.
- Collaborate with local industry partners to strengthen our community.

Culinary Arts
Degree Level Outcomes

- Perform the essential principles of a professional work ethic in the field of Culinary Arts.
- Maintain a useful and positive attitude while working as part of a team.
- Demonstrate knowledge of advanced cooking methods and their applications.
- Articulate an understanding of food ingredients, supplies and cost considerations within a commercial foodservice operation.
- Operate and maintain kitchen equipment.
- Demonstrate proficiency in the use of hand tools and knives.
- Articulate an understanding of both nutritional value and sustainability in food selection.
- Demonstrate a professional level of safety, sanitation and organization in the workplace.
- Communicate effectively.
- Think logically and critically.
- Evaluate and process quantitative and symbolic data.
- Accept the time sensitive nature of all things culinary.
- Articulate the role of food in its relationship to personal identity and the understanding of others in a multicultural world.

**Culinary Arts Certificate Outcome**

CUL 215, Food & Beverage Management
Course Level Outcomes

- Describe the organization of Food and Beverage Operations
- Explain Food Purchasing, Receiving and storing
- Explain internal cost controls and financial management
- Discuss the concepts of productivity and quality management.
- Describe marketing related to food and beverage operations.
- Develop a knowledge of the decision making process.
**Diesel Technology**  
**Program Level Outcomes**
- Understand the construction, function, and general service of all major equipment components.
- Diagnose mechanical malfunctions and performance problems.
- Make decisions as to disposition of worn parts (i.e., "usable as is", "should be reconditioned or replaced", etc.).
- Operate precision diagnostic and repair equipment.
- Read and interpret repair manuals.
- Understand the importance of good public relations with customers, employer, and fellow employees.
- Understand basic shop operation.
- Be cognizant of overhead and labor cost in relationship to profit.
- Understand apprenticeship and how it functions.
- Be informed on methods of seeking employment.

**DieSEL Equipment Mechanics**  
**Degree Level Outcomes**
Perform each of the following on Diesel Engines, Drive Trains, Brakes, Suspension and Steering, Electrical/Electronic Systems, Heating, Ventilation, Air Conditioning, Preventative Maintenance Inspection, and Hydraulics:
- Trouble shooting skills
- Specific repair skills
- Diagnostic skills
- Knowledge of systems and components

* Diesel Technology Certificate Outcome

**DT 280, Brakes and Air Systems**  
**Course Level Outcomes**
- Describe the brake system theory
- Use appropriate brake system terminology
- Identify foundation brakes
- Describe various air systems
- Describe various air brake systems
- Describe hydraulic brake systems
- Troubleshoot brake systems
Education
Program Level Outcomes

- Implement competency-based education, skill standards, and certification in program curricula.
- Provide and maintain a model learning environment.

Early Childhood Education
Degree Level Outcomes

- Demonstrate competency in instructing and caring for children in early learning settings to include cognitive, physical, and social emotional development of the child.
- Plan and implement developmentally appropriate curriculum in the early learning setting.
- Demonstrate appropriate professional and ethical behavior in early learning settings.
- Demonstrate knowledge of strategies to promote, facilitate and extend learning for all children.
- Understand child development and how to facilitate learning.
- Demonstrate ability to communicate effectively with adults and children.

* Denotes Certificate Outcome

Education Paraprofessional
Degree Level Outcomes

- Demonstrate competency in assisting in instruction of students in a school setting to include cognitive, physical and social emotional development of the child.
- Assist in implementation of school curriculum.
- Demonstrate appropriate professional and ethical behavior in school setting.
- Demonstrate knowledge of strategies to promote, facilitate and extend learning for all students.
- Understand child development and how to facilitate learning.
- Demonstrate ability to communicate effectively with adults and children.

ECE 101, Introduction to Early Childhood Education
Course Level Outcomes

- Identify the history of early childhood education, including events, people and theories, and its influence on teaching and schools today
- Identify the meaning and relevance of philosophy and its importance to early childhood education
- Demonstrate the role of early childhood educator, including ethical responsibilities and professional development
- Identify the many different types of programs for young children
- Explain the principles of developmentally appropriate practice
- Compare and contrast differing perspectives on child development
- Identify characteristics of children at different ages and stages of development

ED 261, Current Issues and Trends in Education
Course Level Outcomes

- List, with 80% accuracy, the historical events, people, and theories that have influenced the current education practices.
- Describe and compare the various education program philosophies.
- Express philosophy of education.
- Identify and analyze, with 80% accuracy, the various issues that cause current dilemmas in education paraprofessionals.
- Predict trends that impact and influence the direction of education.
- Explain strategies to stay current as a professional and advocate in school settings.
- Begin to implement the information learned in promoting developmentally appropriate education for all students.
- Knowledge of the importance of paraeducator's role in society as a productive and caring professional in schools.
### Energy Systems Technology

#### Program Level Outcomes
- Develop marketable technical and interpersonal skills in the trade, resulting in career placement.
- Acquire appropriate licenses, certificates, and degrees upon exiting Walla Walla Community College.
- Provide relevant training through hands-on and field experience to prepare the students for industry.
- Develop analytical thinking and problem-solving abilities through instructional labs, projects, and testing.
- Provide training in environmental and workplace safety that meets appropriate industry standards.

* Denotes Certificate Outcome

#### Degree Level Outcomes

<table>
<thead>
<tr>
<th>Program Level</th>
<th>Course Level</th>
<th>Specific Level</th>
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<tbody>
<tr>
<td>Energy Systems Technology-Electrical</td>
<td>EST 249. Power Generation and Distribution</td>
<td>Course Level Outcomes</td>
</tr>
<tr>
<td>Degree Level</td>
<td>Course Level</td>
<td>Specific Level</td>
</tr>
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<td>Degree Level</td>
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</tr>
<tr>
<td>Wind Energy Technology</td>
<td>EST 165, Crane Rigging &amp; Material Handling</td>
<td>Course Level Outcomes</td>
</tr>
<tr>
<td>Degree Level</td>
<td>Course Level</td>
<td>Specific Level</td>
</tr>
<tr>
<td>Wind Energy Technology</td>
<td>Course Level Outcomes</td>
<td></td>
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</tbody>
</table>
- Ensure a safe work environment and meet safety standards.
- Troubleshoot and repair wind turbines.
- Maintain wind turbines (reliability and optimization).
- Maintain tools, equipment, and inventory.
- Interact and communicate with coworkers, suppliers, customers, and contractors.
- Adhere to policies and standards.
- Conduct training and participate in continuous learning.

<table>
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<tbody>
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<td>EST 249. Power Generation and Distribution</td>
<td>Course Level Outcomes</td>
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</tbody>
</table>
- Describe various types of electrical generation and state the advantages and disadvantages of each.
- List the elements and functions of a basic transmission system.
- List the voltage range common to power distribution systems.
- State the advantages and disadvantages of overhead and underground distribution systems.
- Identify three functions of substations.
- Identify typical substation components.
- Discuss the purpose and design of a ground grid.

<table>
<thead>
<tr>
<th>Course Level</th>
<th>Specific Level</th>
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<tr>
<td>EST 264. Heating Systems and Heat Pumps</td>
<td>Course Level Outcomes</td>
</tr>
</tbody>
</table>
- Draw schematic diagram of electric heater system.
- Troubleshoot and state corrections of an electric furnace.
- Describe the operation of an air-to-air heat pump.
- Analyze and adjust a water to air heat pump.
- Trace the electrical circuits of a variety of heating systems.
- Troubleshoot, analyze, and discuss corrective measure for a variety of heating systems.
- Adjust the manifold pressure on a gas furnace.
- Explain proper venting for fossil fuel systems.
- Discuss oil fired system components and adjustments.
- Describe a hydronic system operation and maintenance procedure.

<table>
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<tr>
<th>Course Level</th>
<th>Specific Level</th>
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<tr>
<td>EST 165, Crane Rigging &amp; Material Handling</td>
<td>Course Level Outcomes</td>
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- Demonstrate safety in rigging labs.
- Demonstrate proper use of tools.
- Demonstrate how to find the center of gravity for various objects.
- Describe proper use of hooks and eyebolts.
- Describe and demonstrate the proper use of BLOCK AND TACKLE, MANUAL HOISTS, and POWER-OPERATED HOISTS.
- Describe and demonstrate how to inspect a hoist.
- Describe and demonstrate the proper use of SLINGS, CHAINS, SPREADER BEAMS, WIRE AND FIBER ROPE.
- Describe and demonstrate how to tie seven knots and give a rigging application of each.
Enology & Viticulture

**Program Level Outcomes**

Enology and Viticulture

**Degree Level Outcomes**

- Plan and equip a new vineyard, propagate grape vines, and provide post-planting care.
- Maintain the vineyard from the point of dormancy through the harvest.
- Recognize symptoms of vine disease and insect infestation as well as identify potential remedies.
- Produce an assortment of wine styles.
- Perform basic wine sensory evaluations.
- Clean winery and wine equipment.
- Monitor red and white wine fermentation.
- Chemically analyze wine.
- Perform post-fermentation cellar operations.
- Blend and age wines.
- Bottle and label wines.

* Viticulture Science Certificate Outcome
** Fermentation Science Certificate Outcome

**Course Level Outcomes**

EV 107, Winemaking for Viticulture

- Identify the fall harvest vineyard operations
- Demonstrate understanding of how a vineyard is prepared for the winter
- Demonstrate the propagation of grape vine cuttings
- Develop understanding of the grape cultivars winemaking practices employed in the various wine producing regions of the world
Farrier Science
Program Level Outcomes

- Implement competency-based education, skill standards, and program certification.
- Create and maintain a marketing plan related to student recruitment.
- Update facilities with consideration for function and appearance.

Farrier Science
Degree Level Outcomes

- Competently do a basic horseshoeing job.
- Apply basic remedial shoes.
- Trim a horse's hooves.
- Make and apply therapeutic shoes.
- Apply handmade shoes with clips.

*Farrier Science Certificate Outcome

FRR 195, Intermediate Shoeing
Course Level Outcomes

- Recognize limb deviations and way-of-going faults.
- Apply basic remedial shoes.
- Knowledge of industry applications (racing, hunters/jumpers, rodeo horses, show horses, draft horses, and endurance horses).
**John Deere**
*Program Level Outcomes*
- Implement competency-based education, skill standards, and program certification.
- Create and maintain a marketing plan related to student recruitment.
- Update facilities with consideration for function and appearance.

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**John Deere Technology**
*Degree Level Outcomes*
- Use Service Advisor electronic parts and technical manuals.
- Perform basic engine diagnostic procedure and tune up.
- Diagnose electrical problems.
- Diagnose and safely repair air conditioning systems.
- Repair and adjust John Deere fuel systems.
- Rebuild John Deere gas and diesel engines.
- Make proper ballasting adjustments to a tractor depending on type of implement and field.
- Repair various hydraulic components by using a technical manual.
- Disassemble, assemble, and test all types of John Deere agricultural power train components.
- Build, repair, and diagnose circuits in each application.
- Troubleshoot row crop planters, grain drill planters, and monitoring systems.
- Adjust various types of harvesting equipment for maximum productivity.
- Repair various hydraulic controlled transmissions, hydraulic valves, and controllers.

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**John Deere Dealership Management**
*Degree Level Outcomes*
- Use Service Advisor electronic parts and technical manuals.
- Perform basic engine diagnostic procedures and tune up.
- Make proper ballasting adjustments to a tractor depending on type of implement, field conditions, and customer needs.
- Set up and summarize daily and annual records and prepare financial statements for financial analysis and credit applications.
- Show knowledge of field crop culture, production management, pest management, diseases, marketing and use of agronomic crops important to the economy of the Pacific Northwest.
- Identify and apply management tools used to measure business performance.
- Use Microsoft Office software.
- Explain proper maintenance procedures on hydraulic systems.
- Prepare and orally deliver a sales presentation to a prospect which includes appropriate techniques for opening, presenting product, handling objections and closing.
- Troubleshoot row crop planters, grain drill planters, and monitoring systems.
- Adjust various types of harvesting equipment for maximum productivity.

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**JD 125, John Deere Diesel & Gas Fuel Systems**
*Course Level Outcomes*
- Repair and adjust John Deere fuel systems.
- Knowledge of fuel delivery system components, disassembly, and reassembly.
- Disassemble and reassemble an engine using recommended procedures.
- Describe the theory of operation of an internal combustion engine.
- Utilize a dynamometer to measure engine performance and diagnostic testing procedures.
- Describe the theory of operation of various types of fuel systems.
- Perform diagnostic and repair procedures on various fuel systems.
- Knowledge of the legal limitations with respect to repairing fuel systems.

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**JDAS 205, John Deere Hydraulics**
*Course Level Outcomes*
- Knowledge of the basic theory of operation of the hydraulic systems used on John Deere equipment.
- Knowledge of testing and diagnosing hydraulic system problems.
- Explain proper maintenance procedures on hydraulic systems.
Medical Assisting
Program Level Outcomes

- To prepare WWCC Medical Assisting program graduates as competent entry level medical assistants having the knowledge base necessary for success in credentialing examinations and professional practice.
- To ensure that WWCC Medical Assisting program graduates are capable of performing the psychomotor skills expected of an entry level medical assistant in all the basic competencies of the profession.
- WWCC Medical Assisting program graduates will model professional behaviors which are exemplar of the high standards required by industry, their profession, and the larger community of healthcare providers, ensuring success as entry level medical assistants.

Medical Assisting Certificate Level Outcomes

- Demonstrate characteristics of a patient advocate professional while serving as part of a team approach in the health care system. (affective)
- Recognize and respond effectively to verbal, nonverbal, and written communication in classroom, laboratory, and clinical settings. (cognitive)
- Properly perform patient education within the scope of practice and as directed by the physician in health maintenance, disease prevention, and compliance with the patients’ treatment plan. (cognitive)
- Demonstrate proper application of the principles of aseptic
- Demonstrate ability to perform CLIA-waived laboratory tests, obtaining and analyzing appropriate specimens and reporting results within the scope of practice and as directed by the physician. (psychomotor)
- Display the ability to obtain, evaluate, and record patient history while employing critical thinking skills. (cognitive)
- Perform administrative functions including bookkeeping and financial procedures related to insurance reimbursement. (cognitive)
- Properly assist with patient examinations, procedures, and treatments within the scope of practice and as directed by the physician. (psychomotor)
- Render patient service with full respect for the dignity of their clients. (affective)
- Demonstrate understanding of the legal implications associated with confidentiality issues regarding patients and medical records. (cognitive)

MEDA 114, Therapeutic Relationships
Course Level Outcomes

- Describe the communication cycle.
- Discuss the concept of active listening.
- Utilize understanding of the theories of Maslow and Erikson to increase effective communication.
- Understand common roadblocks to therapeutic communication.
- Describe the effects of loss, death, and grief.
- Demonstrate appropriate telephone communication.
- Understand communication ethics.
- Demonstrate interview techniques.
Nursing
Program Level Outcomes

- Seventy percent (70%) or more of student who enter the program will earn at least one award, either PN or AND, within four years of admission.
- Graduates will achieve a pass rate on the NCLEX examination at or above the national mean pass rate for first time takers.
- Ninety percent (90%) of the Nursing graduates will be employed in nursing and/or enrolled in a bachelor's degree program six months after graduation.
- Graduates will rate overall program satisfaction ≥ 2.5 on a 1-4 point scale.
- All graduates will meet the WWCC Competencies for the Associate Degree in Nursing which are Critical Thinking, Caring, and Professional Behaviors.

Associate Degree Nursing
Degree Level Outcomes

- Demonstrate critical thinking in the use of the nursing process.
- Demonstrate use of management/leadership principles in the delivery of client care.
- Perform interventions in a safe and effective manner.
- Use therapeutic communication.
- Demonstrate professional behaviors.

Practical Nursing
Degree Level Outcomes

- Demonstrate critical thinking in the use of the nursing process.
- Demonstrate use of management/leadership principles in the delivery of client care.
- Perform interventions in a safe and effective manner.
- Use therapeutic communication.
- Demonstrate professional behaviors.

NURS 200 Advanced Nursing Concepts I
Course Level Outcomes

- Demonstrate critical thinking in the use of the nursing process.
- Demonstrate use of management/leadership principles in the delivery of client/patient care.
- Perform interventions in a safe and effective manner.
- Use therapeutic communication.
- Demonstrate professional behaviors.

NURS 100, Fundamentals of Nursing
Course Level Outcomes

- Demonstrate critical thinking in the use of the nursing process.
- Demonstrate use of management/leadership principles in the delivery of client/patient care.
- Perform interventions in a safe and effective manner.
- Use therapeutic communication.
- Demonstrate professional behaviors.
Office Technology
Program Level Outcomes

- Program graduates will demonstrate technical competency in core ability and related instruction curriculum components.
- Students who have declared a program major will complete that program of study.
- Student and employer satisfaction will reflect a high degree of self-esteem, self-confidence, and the potential to grow within that job or business.
- Students completing the AAAS degree will become employed in a living wage job, with benefits.

Office Assistant Certificate
Certificate Level Outcomes
- Demonstrate technical knowledge to perform general office skills proficiently.
- Demonstrate an ability to use appropriate software to complete business related tasks and requirements.
- Perform duties related to specialty content of study as an office assistant.
- Project ethical work habits to model professional behavior in the workplace.
- Develop critical-thinking and problem-solving abilities.
- Function effectively as a team member by applying positive interpersonal interactions.

Medical Billing & Coding Certificate
Certificate Level Outcomes
- Demonstrate technical knowledge to perform general office skills proficiently.
- Demonstrate an ability to use appropriate software to complete business related tasks and requirements.
- Perform duties related to specialty content of study as a medical billing and coding specialist.
- Project ethical work habits to model professional behavior in the workplace.
- Develop critical-thinking and problem-solving abilities.
- Function effectively as a team member by applying positive interpersonal interactions.

Medical Transcription Certificate
Certificate Level Outcomes
- Demonstrate technical knowledge to perform general office skills proficiently.
- Demonstrate an ability to use appropriate software to complete business related tasks and requirements.
- Perform duties related to specialty content of study as a medical transcriptionist.
- Project ethical work habits to model professional behavior in the workplace.
- Develop critical-thinking and problem-solving abilities.
- Function effectively as a team member by applying positive interpersonal interactions.

OT 127: Word Processing
Applications
Course Level Outcomes
- Ability to produce a variety of business documents using basic and advanced features of computer software applications.
- Ability to acquire and use editing skills in the preparation and revision of business documents.
- Ability to complete projects independently using critical thinking skills and the transfer of previously learned concepts and applications.

OT 234: Medical Coding
Course Level Outcomes
- Ability to apply correct rules of medical coding to medical reports.
- Ability to interpret information contained in guidelines/indexes.
- Ability to use modifiers utilized in medical coding.
- Ability to identify the levels of Evaluation and Management services.
- Ability to apply correct medicine guidelines when coding services.
- Demonstrate use of coding conventions when applying codes.
- Ability to assign to highest level of specificity and proper sequence codes.

OT 115: Specialized Transcription
Course Level Outcomes
- Demonstrate ability to apply correct punctuation, grammar, and word usage to executive, legal, and medical documents.
- Demonstrate ability to apply correct formats to medical documents.
- Demonstrate ability to apply listening and analytical skills to accurately transcribe dictation.
Office Technology
Program Level Outcomes

- Program graduates will demonstrate technical competency in core ability and related instruction curriculum components.
- Students who have declared a program major will complete that program of study.
- Student and employer satisfaction will reflect a high degree of self-esteem, self-confidence, and the potential to grow within that job or business.
- Students completing the AAAS degree will become employed in a living wage job, with benefits.

Administrative Office Professional
Degree Level Outcomes
Demonstrate technical knowledge to perform general office skills proficiently.
Demonstrate an ability to use appropriate software to complete business related tasks and requirements.
Perform duties related to specialty content of study—administrative office emphasis.
Project ethical work habits to model professional behavior in the workplace.
Develop critical-thinking and problem-solving abilities.
Function effectively as a team member by applying positive interpersonal interactions.

Financial Administrative Assistant
Degree Level Outcomes
- Demonstrate technical knowledge to perform general office skills proficiently.
- Demonstrate an ability to use appropriate software to complete business related tasks and requirements.
- Perform duties related to specialty content of study—financial emphasis.
- Project ethical work habits to model professional behavior in the workplace.
- Develop critical-thinking and problem-solving abilities.
- Function effectively as a team member by applying positive interpersonal interactions.

Medical Administrative Assistant
Degree Level Outcomes
- Demonstrate technical knowledge to perform general office skills proficiently.
- Demonstrate an ability to use appropriate software to complete business related tasks and requirements.
- Perform duties related to specialty content of study—medical emphasis.
- Project ethical work habits to model professional behavior in the workplace.
- Develop critical-thinking and problem-solving abilities.
- Function effectively as a team member by applying positive interpersonal interactions.

Legal Administrative Assistant
Degree Level Outcomes
- Demonstrate technical knowledge to perform general office skills proficiently.
- Demonstrate an ability to use appropriate software to complete business related tasks and requirements.
- Perform duties related to specialty content of study—legal emphasis.
- Project ethical work habits to model professional behavior in the workplace.
- Develop critical-thinking and problem-solving abilities.
- Function effectively as a team member by applying positive interpersonal interactions.

OT 127. Word Processing
Applications
Course Level Outcomes
- Ability to produce a variety of business documents using basic and advanced features of computer software applications.
- Ability to acquire and use editing skills in the preparation and revision of business documents.
- Ability to complete projects independently using critical thinking skills and the transfer of previously learned concepts and applications.

OT 122. Records Management
Course Level Outcomes
- Understanding of the records management cycle from creation to disposition.
- Create structure for the following manual filing systems: Alphabetical Filing, Consecutive Numeric Filing, Subject Filing, and Geographic Filing.
- Correctly index, code, sort, and file typical correspondence and forms most frequently found in offices in the systems listed above.
- Understand the procedures for operation and control of automated storage systems.
- Design, manage and maintain basic database files.

OT 231. Medical Office Procedures
Course Level Outcomes
- Utilize Medisoft to record patient encounter transactions and payments.
- Utilize Medisoft to create insurance claims, produce patient statements, and print reports.
- Demonstrate ability to apply payments to patient ledgers and answer patient questions regarding the balance of their account.
- Demonstrate ability to extract or update information in Medisoft database.

OT 228. Legal Document Processing I
Course Level Outcomes
- Key legal documents and correspondence in correct format.
- Key a variety of legal documents.
- Spell, pronounce, define legal terms.
- Key legal documents with required legal language and clauses.
- Increase speed and accuracy by 10 words per minute.
Professional Golf Management
Program Level Outcomes
- Develop marketable technical and interpersonal skills in the trade, resulting in career placement.
- Acquire appropriate licenses, certificates, and degrees upon exiting Walla Walla Community College.
- Provide relevant training through hands-on and field experience to prepare the students for industry.
- Develop analytical thinking and problem-solving abilities through instructional labs, projects, and testing.
- Provide training in environmental and workplace safety that meets appropriate industry standards.

Professional Golf Management
Degree Level Outcomes
- Perform tasks essential to golf shop operations.
- Develop organization and maintenance plans for golf car fleets.
- Demonstrate abilities in tournament administration.
- Promote golf lessons and develop instructional programs.
- Exhibit skills in practice facility management.
- Identify basic principles of a food and beverage department.
- Interpret and apply the rules of golf.
- Manage key areas of golf merchandising concerns.
- Work closely with golf course maintenance staff.
- Understand fundamental practices in general management.

* Professional Golf Management
Certificate Outcome

PGM 211, Corrective Golf Lessons
Course Level Outcomes
- Identify the key steps in the fundamentally correct golf swing
- Isolate the body movements and club angles that hinder improvement
- Discover the corridors of success through which a golf club passes
- Perform diagnostics on player equipment and physical fitness
- Prescribe game improvement plans that suit each individual lesson
- Conduct group lessons in series and use video while conducting a lesson
- Incorporate video software analysis into a training program
- Value the characteristics of leading golf instructors
Spanish Medical Interpreter
Program Level Outcomes
- To ensure Spanish Medical Interpreter Program graduates have the knowledge base necessary for employment as a Medical Interpreter.
- To prepare Spanish Medical Interpreter Program graduates for successful completion of certification examinations.
- To enable regional healthcare and social service agencies to provide Medical Interpreter services to their clients through employment of Spanish Medical Interpreter Program graduates.

Spanish Medical Interpreter
Certificate Level Outcomes
Cognitive:
- Demonstrate a global understanding of culture difference and its application to healthcare settings.
- Learn Spanish and English medical terminology related to major body systems, common prefixes, suffixes, and word roots.
- Develop knowledge of written interpretation methodology.
- Develop knowledge of oral interpretation methodology.
- Understand the role of the interpreter and elements of communication related to interpreting.
- Demonstrate understanding of business concepts, business plans, and entrepreneurship used in the interpreting industry.

Psychomotor:
- Perform the role of the Medical Interpreter in accordance with the national standards of practice in a lab or clinical setting.
- Demonstrate ability to perform the manual skill components of effective BLS/CPR according to AHA standards.
- Demonstrate effective use of technological devices for interpreting.

Affective:
- Develop awareness of transcultural issues in healthcare settings.
- Understand and abide by the ethics involved in all interpretation situations.
- Demonstrate professional behavior and communication in all interpretation situations.

HO 181, Fundamentals of Medical Interpreting I
Course Level Outcomes
- Identify the purpose of healthcare interpreters
- Define the primary roles of the interpreter to identify the spheres of power for each member of the triad: healthcare provider, patient, interpreter
- Identify the elements of communication related to interpreting.
- Effectively use a variety of interpreting skills and techniques
- Understand and abide by the ethics involved in all interpretation situations.
- Demonstrate understanding of business concepts used in the interpreting industry
Outdoor Power Equipment
Program Level Outcomes

- Implement competency-based education and skill standards.
- Provide students with marketable, technical and interpersonal skills in the trade resulting in career placement.
- Prepare students in acquiring appropriate licenses, certifications and degrees upon exiting Walla Walla Community College.
- Provide relevant training through hands-on and field experience to prepare the students for living wage jobs.
- Develop analytical thinking and problem-solving abilities through instructional labs, projects and testing.
- Provide training in environmental and workplace safety that meets appropriate industry standards.
- Develop partnerships and/or relationships with manufacturers and distributors to provide a place to upgrade professional technicians along with updated skill standards.

Turf Equipment Service Technician
Degree Level Outcomes

- *Paint and protect equipment using appropriate equipment, materials, and techniques.
- *Explain the theory and diagnosis of electrical systems, testing, and rebuilding.
- *Disassemble, diagnose, and repair transmissions, differentials, and drive axles.
- Operate and observe engine operation and perform necessary repairs and adjustments.
- Adjust, sharpen, grind, and rebuild reel and rotary mowing units.
- *Demonstrate proper safety, handling, usage, and disposal of common chemicals used in the shop.
- *Demonstrate the ability to find and use reference material in multiple forms such as CD, internet, and operator's and technical manuals.
- Display a working knowledge of how internal combustion gas and diesel engines function, their components, and service requirements.
- *Recognize and accurately identify the effects of abrasive damage, operator error, and other failures that lead to machine failure.
- *Explain to customers the cause of failure, alternatives, and ways to prevent this type of damage from occurring in the future.

TST 155, Basic 2-Stroke Engine Principles
Course Level Outcomes

- Ability to use a reference material.
- Explain basic two cycle engine theory.
- Demonstrate a working knowledge of how two cycle engines function, different types, their components, and service requirements.
- Disassemble and repair a two cycle engine, identifying and analyzing damage to pistons, crankshaft, and other internal parts.
- Recognize and accurately identify the effects of abrasive damage and other failures that lead to engine failure.
- Describe an Internal two cycle Engine Parts failure analysis.

* Outdoor Power Equipment
Certificate Outcome

Updated 2.17.11
Turf Management
Program Level Outcomes

- To provide a variety of courses in order to prepare students for careers in turf management.
- To provide students with a variety of courses that allow them to transfer to WSU four-year Turf Management Program with academic skills needed to succeed in upper division work.
- Provide relevant training through hands-on and field experience to prepare the students for industry.
- To encourage students to explore and develop critical thinking and creative thinking.
- To help students develop and perfect communication skills.
- To assist students in understanding, and using the concepts of each course.
- To develop increased environmental awareness and appreciation.
- To help students develop and perfect the most efficient use of natural resources.

Turf Management
Degree Level Outcomes

- Operate and maintain a variety of mower units, top dressers, aeration units, trimmers, and miscellaneous turf equipment.
- Calibrate a variety of sprayers.
- Demonstrate proper watering techniques and the ability to assess plant water use, knowledge of the nutritional needs of plants, fertilizer selection, and use.
- Perform various functions related to the care and maintenance of golf courses, including material and equipment selection.
- Demonstrate knowledge of turf grass cultivars and seed selection.
- Demonstrate knowledge of construction methods used for decks, patios and walkways.
- Demonstrate knowledge of tree pruning and tree removal principles and the ability to prune.
- Demonstrate knowledge of safety and first aid of pesticides and proper pesticide handling.

TURF 221, Landscape Maintenance & Construction
Course Level Outcomes

- List the steps used to determine cost itemization.
- Describe the differences between as builds and original design drawings.
- Lay sod and demonstrate knowledge of sod laying principles.
- Summarize the various aspects of landscape design.
- Describe the steps used in seed bed preparation.
- Describe the steps used in fence construction.
- Explain different construction methods used for decks, patios and walkways.
- Demonstrate tree pruning and tree removal principles and the ability to prune.
- Describe the different aspects of shrub selection and planting.
- Describe the use of edging materials.
**Welding Technology**

**Program Level Outcomes**
- Assure the Welding program is in full compliance with AWS/WABO standards and the needs of the metals welding industry.
- Upgrade welding curriculum in terms of relevance to employer technical needs in the region with assistance from the advisory committee.
- Enhance student enrollment, retention, and completion rates.
- Fully institutionalize aluminum and stainless steel welding certificate programs.
- Train students to be employed at the entry level by possessing knowledge, attitudes, skills, and habits required to perform welding procedures that involve routine, predictable, repetitive, and procedural tasks.

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**Welding Technology**

**Degree Level Outcomes**
- Identify major requirements to safely operate equipment to produce cuts, gouges, grinds and weldments.
- Demonstrate set-up, operation and shut down operations using welding and cutting equipment.
- Demonstrate welding, brazing and cutting techniques using fuel gas and electric arc processes.
- Demonstrate knowledge and experience with weldment testing using industry accepted standards and practices.
- Demonstrate welding experience using stainless steel and aluminum alloys.
- Demonstrate welding mild steel, stainless steel and aluminum alloys using semi-automatic equipment/procedures.
- Perform welding visual inspection procedure to determine compliance with appropriate codes and standards.

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**WELD 254, Shielded Metal Arc - Pipe**

**Course Level Outcomes**
- Identify the major certification agencies, requirements and procedures, and demonstrate ability to select the proper test for a given welding setting.
- Define testing mechanics, physical properties, inspection criteria, and demonstrate these to welder skill requirements and test preparation standards.
- Demonstrate welding, section, prepare, and test metal sections for both tensile and bend testing.
- Complete certificate testing and welding procedure specification forms.
Water Management
Program Level Outcomes

- Provide the irrigation and water resources technology industries with highly trained, fully employable, skilled technicians.
- Develop relationships and/or partnerships with existing irrigation and water resources organizations and institutions in the continuing education of industry practitioners.
- Provide industry work experience during the educational process, giving students exposure to the actual application of irrigation principles and practices.
- Provide campus labs, classrooms, equipment and general facilities utilizing cutting edge technologies and practices.
- Provide highly trained instructors who have significant field experiences as successful practitioners in this industry.

* Denotes Certificate Outcome

Watershed Ecology
Degree Level Outcomes

- Identify watersheds processes of capture, storage and release of water throughout a geographic area.
- Identify selected trees, shrubs, forbs and grasses native to the Pacific Northwest.
- Identify species and habitat needs of common northwest terrestrial and aquatic species.
- Collect samples, complete field surveys, analyze, and report data.
- Collect, recognize and identify aquatic organisms from invertebrate insects to fish species, relating what is found to the habitat and aquatic ecosystem conditions.
- Set up monitoring plans and schedules to collect, measure, analyze watershed data.
- Identify restoration practices used to improve riparian and aquatic habitats and water quality.
- Have knowledge and understanding of Federal and State laws that pertain to water and a working knowledge of water rights laws.
- Operate a hand compass, staff compass, transit, level, global positioning systems (GPS), and electronic instruments in determining slopes, turning angles, running traverses, locating ownership boundaries, and determining locations.
- Utilize maps and aerial photographs in the management of natural resources, including the use of geographic information systems (GIS).
- Apply basic knowledge in soils to the management of natural resources.
- Demonstrate interpersonal skills needed for successful job performance.
- Explain the relationship between soil, water and plants.

Degree Level

Irrigation Technology
Degree Level Outcomes

- Distinguish between types of irrigation equipment and their applications.
- Install properly designed lawn systems.
- Identify mechanical components of valves, center pivots and pumps.
- Generate IRRICAD and Eagle Point designs.
- Design basic drip systems.
- Analyze irrigation pumps and controls in relation to a complete irrigation system.
- Perform soil moisture measurements and water scheduling.
- Assess and design fish screens.
- Develop an understanding of water related cultural perspectives, views and opinions.
- Understand watershed processes and how they relate to the natural environment.
- Gain insight into western water law and policies which affect the use and non-use of water.
- Develop an awareness and understanding of fundamental elements of leadership, interpersonal communication, teamwork and collaborative problem solving.

Water Resources Technology
Degree Level Outcomes

- Distinguish between types of irrigation equipment and their applications.
- Install properly designed lawn systems.
- Identify mechanical components of valves, center pivots and pumps.
- Demonstrate competence with computer aided drafting software.
- Design basic drip systems.
- Analyze irrigation pumps and controls in relation to a complete irrigation system.
- Perform soil moisture measurements and water scheduling.
- Assess and design fish screens.
- Develop an understanding of water related cultural perspectives, views and opinions.
- Understand watershed processes and how they relate to the natural environment.
- Gain insight into western water law and policies which affect the use and non-use of water.
- Develop an awareness and understanding of fundamental elements of leadership, interpersonal communication, teamwork and collaborative problem solving.

WMMGT 141, Irrigation Troubleshooting
Course Level Outcomes

- Identify electrical components of irrigation systems and explain their functions.
- Identify mechanical components of valves, center pivots and pumps.
- Apply some general repair and maintenance of irrigation equipment.
- Organize data collected through experimentation in report form.
- Analyze agricultural sprinkler system.
- Recognize installation procedures for sprinkler systems.

WMMGT 139, Watershed Management
Course Level Outcomes

- Describe what constitutes a watershed.
- Explain how watersheds function.
- Describe how climatic conditions affect watershed functions.
- Identify restoration needs within a watershed.
- Develop protection and restoration plans.

NR 239, Watershed Processes and Restoration
Course Level Outcomes

- Develop an understanding of watershed characterization, function and terminology.
- Explain the components and subsequent relationships that exist between characteristics of watersheds.
- Identify, characterize and inventory aquatic habitat and associated biota.
- Identification of limiting factors and restoration strategies for rectifying deficiencies.
- Explain the role of watershed assessment data in resource management decision making.