Curriculum Committee
Meeting Agenda
Tuesday, November 13, 2014
3:00pm-4:30pm
Jackson Hall 14

Debi Gresham	Martha Joyce	David Farrington	Karen Carroll
Roger Kennedy	Ali Mageehon	Georgann Willis	Clara Smithey

Business to be reviewed by Curriculum Committee:
Approval of the following Curriculum Committee Minutes- November 4, 2014

New Courses:
To be presented by Ken Carloni:

- NR 201: Introduction to Natural Resources
- NR 205: Soil Science
- NR 221: Water Resource Science
- NR 228: Geographic Information Systems (GIS) for Natural Resources
- NR 240: Forest Ecosystems
- NR 241: Field Dendrology
- NR 295: Environmental Dispute Resolution

New Programs:
None

Program Revisions:
To be presented by Ian Fisher:

- Welding

To be presented by Penny Groth:

- Industrial Mechanics and Maintenance Technology Apprenticeship Certificate
- Industrial Mechanics and maintenance Technology Apprenticeship AAS
- Electrician Apprenticeship Technologies Certificate
- Electrician Apprenticeship Technologies AAS

To be presented by Martha Joyce:

- Executive Business Assistant AAS
- Office Assistant Program Certificate

To be presented by John Blakely:

- Auto Degree
- Auto Advanced Certificate
- Auto Basic Certificate

Course Revisions:
To be presented by Penny Groth:

- APR 140

- APR 141
- APR 142
- APR 143 (Part 1)

To be presented by Martha Joyce:

- OA 225 Document Processing

To be presented by John Blakely:

- AUT 100
- AUT 151
- AUT 155
- AUT 161
- AUT 168
- AUT 169
- AUT 170
- AUT 250
- AUT 259
- AUT 260
- AUT 263
- AUT 286
- AUT 289

To be presented by Bill Armstrong:

- BA 223 Accounting for Managers

ANY AND ALL Revisions to be sent to CCICFORMs Email by Friday for the next Instructional Council

Curriculum Committee
Meeting Minutes
Tuesday, November 4, 2014
3:00PM-4:30PM
JH14

X Debi Gresham	X Martha Joyce	x David Farrington	X Karen Carroll
X Roger Kennedy	X Ali Mageehon	x Georgann Willis	Clara Smithey

Business to be reviewed by Curriculum Committee:
Approval of the following Curriculum Committee Minutes- October 16, 2014 *Approved*

<u>New Courses:</u>
To be presented by Terrance Bradford:
- College Literacy

Tabled

To be presented by John Blakely:
- TTEN 100 Intro to Toyota
- TTEN 150 Suspension and Alignment
- TTEN 151 Engines
- TTEN 155 Brakes
- TTEN 168 Electricity I
- TTEN 169 Electricity II
- TTEN 259 Electronic Engine Controls I
- TTEN 260 Electronic Engine Controls II
- TTEN 261 Power Trains
- TTEN 263 Automatic Transmissions
- TTEN 286 Climate Control

Move all forward to IC with form corrected to reflect TTEN 286

To be presented by Cheryl Yoder:
- PE 185WJ Walk, Jog, and Run

Move forward to IC

<u>New Programs:</u>
To be presented by Ian Fisher:
- AAS Degree Welding

Move forward to IC with revision of SP105 moved into first year, and inclusion of course outlines

To be presented by John Blakely:
- AAS Degree Automotive Technology-T-TEN
- Basic Certificate Automotive Technology – T-TEN
- Advanced Certificate Automotive Technology – T-TEN

Move forward to IC

To be presented by John Blackwood:
- AS Degree – Computer Science

Move forward to IC with revision program name to stay consistent with state

<u>Program Revisions:</u>

To be presented by Roger Kennedy:

- AAS in Paramedicine

  Move forward to IC

To be presented by Clay Baumgartner:

- AS with Emphasis in Engineering

Will resubmit with corrected credit hours

- Pathways Certificate - Drafting

Tabled

- Pathways Certificate - Surveying

Move forward to IC

- AS – General Ed

Move forward to IC

<u>Course Revisions:</u>

To be presented by Roger Kennedy:

- EMS 151 EMT Basic A
- EMS 152 EMT Basic B
- EMS 251 Paramedic A
- EMS 252 Paramedic B
- EMS 253 Paramedic C
- EMS 254 Paramedic D
- EMS 261 Paramedic Clinical & Internship I
- EMS 262 Paramedic Clinical & Internship II
- EMS263 Paramedic Clinical & Internship III

  Move all EMS course revisions to IC

To be presented by Amy Fair:

- ENG 230
- ENG 288

Move forward to IC

To be presented by Terrance Bradford:

- ED 125 Foundations of Learning Assistance

Move forward to IC with addition of CIPS code

- HD 107 Practicing Success with Emotional Intelligence

Move forward to IC with correction of spelling on course revision form

To be presented by John Blackwood:

- CS 171 Computer Organization and Assembly Language

Move forward to IC

To be presented by Honora NiAodagain:

- INTL 211 International Exchange Program

Move forward to IC with addition of CIPS code, ACTI code, corrected lecture hours/clock hours

To be presented by Jennifer Lantrip*:*

- LIB 127 Library and Internet Research

Move forward to IC with addition of CIPS code

To be presented by Martha Joyce:

- BA 233 – Accounting

Move forward to IC

Next Curriculum Committee Meeting- November 13, 2014 Jackson Hall 14

UCC New Course Approval

Basic Information

Name of New Course: Soil Science
Contact: Karen. R. Carroll, M.S.
Contact Title: Associate Professor
Department: Science
Supervisor: Jason Aase
Program: Natural Resources

New Course Information

Date, Year, and Term of Proposed Implementation:
Course Title: Soil Science
Course Number: NR 205
Number of Credits: 4
Activity Code:
_X_100 - Lower Division Collegiate
__210 - CTE Preparatory
__211 - Stand-alone (Independent) CTE Preparatory
__220 - CTE Supplemental
__230 - CTE Apprenticeship
__310 - English as a Second Language
__320 - Adult Basic Education
__330 - General Education Development Test Preparation
__340 - Adult High School Diploma, High School Completion
__350 - Post-Secondary Remedial, Reading or Writing
__351 - Post-Secondary Remedial, Math
__352 - Post-Secondary Remedial, Electives
__360 - ACE – Unknown
__361 - ACE - Health and Fitness
__362 - ACE – Safety
__363 - ACE – Workforce
__510 - Non-Reimbursable – Unknown
__511 - Non-Reimbursable - Hobby and Recreation
__512 - Non-Reimbursable - Other/Administrative

Course Type

__Lecture (11 hrs/credit)
__Lab (30 hrs/credit)
__Lecture/Lab (20 hrs/credit)
_X_Other:

Number of Hours:
3 hrs. lecture, 3 hrs. lab/wk.; 66 hrs/term

Co- and Pre-Requisite Information
Please define any co- or pre-requisite information.

Co- and Pre-Requisite Enforcement
Please choose an enforcement option for the information listed above.
__Registration Enforced
__Instructor Enforced
__Combination or Other Enforcement

If you chose 'Combination or Other Enforcement' above, please describe.

Catalog Course Description
This course will provide information and experience in soil development, physical properties of soil, soil organisms, naming of soils, and how land management practices affect soil quality and sustainability.

Grading Option: A-F, audit

Load Factor: 5.1 ILCs

Award Information:
Please select all that apply.

_X_AA
_X_AS
_X_AAS
__Below 100-Level
_X_Elective
__Certificate
_X_AAOT

If you selected 'AAOT' above, please select the area of distribution below.
__Arts and Letters
__Mathematics
_X_Science or Computer Science
__Social Science
__Speech/Oral Communication
__Writing
__Cultural Literacy

CTE and Lower Division Collegiate Proposals Only

Approved by Advisory Committee?

This course and all others in the Natural Resources AS program will be approved by the Natural Resources Dept. in the College of Forestry at Oregon State University for articulation with their program.

Required Course Information

Associate of Science in Natural Resources, Landscape Monitoring option

New Course Justification

This is a stand alone course for students requiring a science course to complete their AA or AAOT degrees. In addition, this course will be part of the upcoming Natural Resources program and will be included in the requirements for an AS degree that will transfer directly to Oregon State University's Natural Resources program.

Course Impacts *(Select all that apply)*

_X_Instructional costs (staff, materials, equipment, or facilities) are required.
__Additional instructional costs (staff, materials, equipment, or facilities) are needed.
__Impact to other divisions in terms of classes and staffing
__Other

Course Impact Description

This course will be taught by a full-time Instructor and will require 3 ILCs of pay beyond the Science Dept.'s current personnel costs. This will be offset by hiring an adjunct instructor to teach one class from the full-time instructor's current load.

Replacement Course For: n/a

Additional Process Items

_X_ Course Outline - required
__ Start-Up Budget (if needed)
__Advisory Committee Minutes (if needed)

COURSE OUTCOMES:

Students who complete this course will be able to:

- Describe the components and processes of forest ecosystems at multiple scales.
- Explain the flow of energy and the cycling of nutrients in ecosystems, and discuss the factors that influence these processes.
- Explain the influence of climate, soils, topography, and disturbance agents on ecosystem structure and function.

- Explain the relationships between the processes of disturbance and forest succession, and discuss their effects on ecosystem structure and function including stand demographics, soils, water resources, wildlife habitat, carbon storage and biodiversity.
- Discriminate among those management practices that accumulate carbon, store water, produce sustainable products, and increase biodiversity from those that don't.
- Recognize effective solutions to ecological problems and communicate them clearly.

COURSE OUTLINE:

- Fundamental Ecosystem Concepts
- Structure and Function of Forest Ecosystems at Multiple Scales
- Climate, Soils, Topography and Ecoregions
- Coevolution of Populations and Communities
- Disturbance and Succession in Forest Ecosystems
- Energy, Productivity and Biomass
- Biogeochemical Cycles
- Landscape Ecology: Fragmentation, Connectivity, and Landscape Heterogeneity
- Ecosystem Services

UCC Course Outline

Course No:	NR 205
Course Credit:	4
Lecture Hrs/wk:	3
Lab Hrs/Wk:	3
Lecture/Lab Hrs/Wk:	
Practicum Hrs/Wk:	
Clock Hours:	66
Length of Course:	11 wks
Banner enforced Prerequisite:	
Instructor enforced Prerequisite:	
Co-Requisite:	
Load Factor:	5.1
Activity Code:	100
CIPS:	260101

Course Title: **Soil Science**
Developed By**:** Karen R. Carroll, M.S.
Development Date: 11/6/14
Revision Date:
Review Date:

COURSE DESCRIPTION:

This course will provide information and experience in soil development, physical properties of soil, soil organisms, naming of soils, and how land management practices affect soil quality and sustainability.

COURSE OUTCOMES:

Upon completion of NR 205, students will be able to:

- Describe the scientific method
- Determine soil texture
- Determine soil color, structure, and other physical properties
- Explain the factors controlling soil development and describe how each of these factors has contributed to a soil that exists today
- Explain the chemical processes that control the release of nutrients from the soil matrix, including the role of soil pH
- Explain controls on water availability and water movement in a soil profile

- Explain the roles of macrofauna, microfauna, and microflora in processing soil organic matter
- Evaluate how management practices of land affect soil quality and sustainability
- Explain where and how to find information about soils using the NRCS Web-Based Soil Survey
- Perform calculations involving soil physical properties, water content, and soil nutrient availability

REQUIRED TEXT/MATERIALS:

Elements of the Nature and Properties of Soils, 3rd Edition, by Brady and Weil; Prentice Hall, 2010

COURSE OUTLINE:

Week:

1. Scientific Method; Soils Around Us
2. Formation of Soils; Soil Classification
3. Physical Properties of Soil; Characteristics and Behaviors
4. Soil Water, Air, and Temperature
5. Soil Colloids
6. Acidity, Alkalinity, and Salinity
7. Soil Organisms and Organic Matter
8. Nutrient Cycles and Fertility
9. Soil Erosion and Pollution
10. Soil Management Practices
11. Final Examination

UCC New Course Approval

Basic Information

Name of New Course: Water Resource Science
Contact: Mick Davis, Ph.D.
Contact Title: Assoc. Professor
Department: Science
Supervisor: Jason Aase
Program: Natural Resources

New Course Information

Date, Year, and Term of Proposed Implementation: Spring, 2016
Course Title: Water Resource Science
Course Number: NR 221
Number of Credits: 4
Activity Code:
_X_100 - Lower Division Collegiate
__210 - CTE Preparatory
__211 - Stand-alone (Independent) CTE Preparatory
__220 - CTE Supplemental
__230 - CTE Apprenticeship
__310 - English as a Second Language
__320 - Adult Basic Education
__330 - General Education Development Test Preparation
__340 - Adult High School Diploma, High School Completion
__350 - Post-Secondary Remedial, Reading or Writing
__351 - Post-Secondary Remedial, Math
__352 - Post-Secondary Remedial, Electives
__360 - ACE – Unknown
__361 - ACE - Health and Fitness
__362 - ACE – Safety
__363 - ACE – Workforce
__510 - Non-Reimbursable – Unknown
__511 - Non-Reimbursable - Hobby and Recreation
__512 - Non-Reimbursable - Other/Administrative

Course Type

__Lecture (11 hrs/credit)
__Lab (30 hrs/credit)
__Lecture/Lab (20 hrs/credit)
_X_Other:

Number of Hours:
3 hrs. lecture, 3 hrs. lab/week; 66 clock hours/term

Co- and Pre-Requisite Information
MTH 111

Co- and Pre-Requisite Enforcement
Please choose an enforcement option for the information listed above.
_X_Registration Enforced
__Instructor Enforced
__Combination or Other Enforcement

Catalog Course Description
This course will cover the basic physics principles which determine the hydrological properties of natural water resources; the role these properties play in shaping the local ecology; and methods used to measure, monitor, and model these properties for the purposes of water resource management and restoration.

Grading Option: A-F, audit

Load Factor: 5.1 ILCs

Award Information:
__AA
_X_AS
_X_AAS
__Below 100-Level
__Elective
__Certificate
_X_AAOT

If you selected 'AAOT' above, please select the area of distribution below.
__Arts and Letters
__Mathematics
_X_Science or Computer Science
__Social Science
__Speech/Oral Communication
__Writing
__Cultural Literacy

<u>CTE and Lower Division Collegiate Proposals Only</u>

Approved by Advisory Committee?
This course and all others in the Natural Resources AS program will be approved by the Natural Resources Dept. in the College of Forestry at Oregon State University for articulation with their program.

Required Course Information
Associate of Science in Natural Resources, Landscape Monitoring option

New Course Justification
Required for Natural Resources AS degree.

Course Impacts *(Select all that apply)*
_X_Instructional costs (staff, materials, equipment, or facilities) are required.
__Additional instructional costs (staff, materials, equipment, or facilities) are needed.
__Impact to other divisions in terms of classes and staffing
__Other

Course Impact Description
This course will be taught by a full-time Instructor and will require 5.1 ILCs of pay beyond the Science Dept.'s current personnel costs. This will be offset by hiring an adjunct instructor to teach one class from the full-time instructor's current load.

Replacement Course For: n/a

Additional Process Items
_X_ Course Outline - required
__ Start-Up Budget (if needed)
__Advisory Committee Minutes (if needed)

COURSE OUTCOMES:
Upon successful completion of this course the successful student will have demonstrated the ability to

1) Describe, analyze, and apply the following concepts in order to solve problems, make predictions, acquire data, and analyze data.
    a. Graphs, diagrams, and equations for 1-D motion involving constant acceleration of particles and fluids.
    b. Forces and their effect on the motion of solid objects and fluids. Gravitation, normal, fluid drag, and friction forces.
    c. Momentum, conservation of momentum, the impulse momentum theorem and its application to fluid flow.
    d. Kinetic and potential energy, work, and conservation of energy in conservative and non-conservative systems, including flowing fluids.
    e. Hydrostatic properties of non-compressible fluids.
    f. Bernoulli's principle, viscosity, Reynold's number, turbulence
    g. Temperature, thermal energy, heat transfer mechanisms, Newton's Law of cooling and application of these to analysis of water resource temperature.
    h. The wave property of light, absorption coefficients, photon energies and the role these play in radiative thermal energy transfer to water.

2) Know, define, discuss, and use in problem solving the SI units, metric prefixes and physical constants related to concepts 1.a-1.h listed above.

3) Know, describe, and show proficiency in current standard methods for measurement and monitoring of the following water resource properties:
    a. GPS location measurement and reporting in UTM and Lat/Long coordinate systems.
    b. Stream width and depth profiles
    c. Average and surface stream flow velocity and flow velocity profiles
    d. Conductivity
    e. Turbidity
    f. Surface wind speed
    g. Surface incident light intensity
    h. Average stream temperature and stream temperature profiles.

4) Think critically, problem solve, and make predictions based on physical concepts in 1.a-1.h.

5) Clearly communicate predictions, data acquisition methods, and results of data analysis through written problem solutions, written answers in laboratory/field guides, formal laboratory/field reports, project reports, oral presentations, and classroom discussions.

6) Make use of laboratory and field equipment to properly and safely collect experimental data.

7) Make use of calculators and spreadsheet software in numeric problem solving and data analysis

8) Make use of basic algebra (100-level) in problems solving, experimental design, and data analysis.
9)
10) Make practical use of the scientific method in the laboratory and in the field.

11) Work effectively in a small group in the laboratory and in the field.

12) Apply the scientific method and outcomes 1-10, for the purpose of experimental design and execution.

<u>COURSE OUTCOMES:</u>

Week 1: Kinematics + Measurement and Uncertainty

I) Position and Position Measurement
    i. Euclidean Coordinate Systems
    ii. UTM Coordinate System
    iii. Lat/Long Coordinate System
    iv. Position as a vector
    v. Resolving position vector components
        1. DEMO: Multilateration

II) Velocity and Velocity Measurement
   i. Speed
   ii. Velocity
   iii. Resolving velocity vector components
   iv. Langrangian vs. Eulerian reference frames

III) Acceleration and Acceleration Measurement
   i. Acceleration as rate of change of velocity
   ii. Acceleration as a vector
   iii. 4 cases for the sign of the acceleration

IV) Lab 1: Position and Velocity Measurements (FIELD LAB)
   i. Measuring position with GPS
   ii. Determining uncertainty in position measurement
   iii. Calculating velocity from GPS position and time measurements
   iv. Estimating uncertainty in velocity calculation
   v. Calculating acceleration from position and time measurements
   vi. Formal Field Action Report

Week 2: Newton's Laws of Motion

I) Newton's 1st and 3rd Laws
   i. Inertia
   ii. Mass
   iii. Density
   iv. Fluid Density
   v. Force Pairs
      1. DEMOS: Hanging Mass + Accelerometer
      2. DEMO: Dueling Force Sensors

II) Newton's 2nd Law
   i. F=ma for single forces
   ii. Balanced and unbalanced forces
   iii. Vector addition of Forces
   iv. Newton's 2nd Law

III) The gravitational force
   i. Free fall acceleration due to gravity
   ii. Calculating the gravitational force
   iii. Mass vs. Weight
   iv. Calculating the Weight per Volume
      1. DEMO: Paper vs. book fall-time

IV) Lab 2: Determining Flow Velocity and Flow Volume (FIELD LAB)
   i. Measuring stream width and depth
   ii. Measuring stream depth profile

iii. Determining uncertainty in width and depth measurements
iv. Measuring average surface velocity
v. Measuring a flow velocity profile
vi. Flow velocity via salt or dye slugs
vii. Estimating uncertainty in velocity calculation
viii. Formal Field Action Report

Week 3: Hydrostatics

I) Forces and Motion Tutorial

II) Buoyant Force and Archimedes Principle
i. Conceptual derivation
ii. Relation to density
iii. Specific gravity definition and calculation

III) Pascal's Principle
i. Pressure
ii. Pressure in Confined, Incompressible Fluids
iii. Hydraulic Machines

IV) Lab 3: Archimedes' Principle
i. Determining material density 2-ways
ii. Determining material specific gravity 2-ways
iii. Understanding average density
iv. Calculating the buoyant force on floating log
v. Calculating the buyout force on an anchored log
vi. Calculating the buoyant force on a boulder

Week 4: Energy Conservation

I) Normal Force and Friction Force
i. Static Friction
ii. Kinetic Friction
iii. On inclined geometries
iv. Resolving force vector components
v. Frictional force for constant velocity flow

II) Energy
i. Kinetic Energy
ii. Gravitational Potential Energy
iii. Conservation of Mechanical Energy

iv. Flow acceleration and velocity in the absence of friction

III) Work

i. Work by Conservative forces
ii. Work-Energy Theorem
iii. Calculation of ping-pong ball speed
iv. Work by Non-conservative forces
v. Conservation of Total Energy
vi. Work due to friction
vii. Mechanical-Thermal Energy conversion by friction
1. DEMO: Ping Pong Ball Cannon

IV) Lab 4: Energy Dissipation in fluid flow

i. Tracer particles as a flow velocity measurement tool
ii. Video recording as a position + velocity measurement tool
iii. Verifying Manning's Formula
iv. Quantifying energy dissipation in fluid flow

Week 5: Hydrodynamics I

I) Bernoulli's Principle

i. As conservation of mechanical energy in disguise
ii. Applications to carburetors, wings, sails, atomizers
iii. Calculation of lift force on an anchored log
iv. Calculation of lift force on a boulder
1. DEMO: Hair Dryer + Ping-Pong ball

II) Impulse-Momentum

a. Momentum
b. Momentum conservation
c. Impulse-Momentum Theorem
d. Impulse-Momentum Theorem for analysis of erosion and erosion control

III) Drag Force

i. In air
ii. In Viscous fluids
iii. Reynolds number dependence
1. DEMO: V^2 dependence for coffee filters

IV) Lab 5: Drag force

i. Modeling drag force in air

ii. Measuring drag force in air
iii. Measuring drag force in water
iv. Determining velocity dependence of drag force in water
v. Calculating Drag force on a log
vi. Calculating Drag force on a boulder

Week 6: Hydrodynamics II

I) Viscosity and Reynold's Number
   i. As a general fluid property
   ii. Measuring viscosity
   iii. Viscous Flow
   iv. Reynold's Number
   v. Life at low Reynold's Number
   vi. Life at Medium Reynolds Number
   vii. Life at Large Reynolds Number
   viii. Turbulence

II) Guest Lecturer: Ken, Umpqua Watersheds and UCC biology professor
   i. Effects of flow velocity, woody habitat, temperature, turbidity, turbulence on stream ecology.

III) Guest Lecturer: Sydney, BLM Hydrologist and former UCC physics 201 student
   i. Woody debris habitat restoration case studies

IV) Lab 6: Small Scale simulation stream flow via Reynold's number matching
   i. Formal Laboratory Report

Week 7: Light and Energy

I) Hydrostatics/Hydrodynamics Tutorial

II) Properties of Light
   i. Wave-Particle duality
   ii. Electromagnetic spectrum
   iii. Energy in photons
   iv. Beer's Law
   v. Scattering and absorption coefficients
   vi. Direct and scattered light energy absorption by water
   vii. Effects of vegetation on incident light energy
      1. DEMO: Beers Law in chalky water

III) Turbidity
   i. Turbidity measurement
   ii. Effects of turbidity on absorption and scattering of light by water
   iii. Direct ecological effects of turbidity changes

IV) Lab 7: Beer's Law for vegetation and turbidity (FIELD LAB)
   i. Measuring incident light intensity
   ii. Determining absorption/scattering coefficients of vegetative covering
   iii. Measuring average stream turbidity and turbidity profiles
   iv. Formal Field Action Report

Week 8: Thermodynamics

I) Light Tutorial

II) Thermal Energy, Temperature
   i. Definitions
   ii. Measurement
   iii. Long term monitoring methods

III) Heat
   i. Heat as transfer of thermal energy driven by ΔT
   ii. Conduction
   iii. Radiation
   iv. Convection
   v. Calculating final temperature of fluid mixtures (calorimetry)
   vi. Calculating final stream temperature after mixing with hyporheic flow

IV) Lab 8: Thermodynamics
   i. Predicting the final temperature of fluid mixtures
   ii. Measuring the effects of particle concentration on radiative heating rate
   iii. Measuring the effects of stream bed color/material on radiative heating rate

Week 9: Convection

I) Phase Changes
   i. Sublimation-Deposition
   ii. Melting-Freezing
   iii. Evaporation-Condensation

iv. Latent heats
    1. DEMO: Can crushing

II) Ideal Gas Law
    i. Microscopic Picture
    ii. Non-ideal behavior
    iii. Vapor Pressure
    iv. Saturation Vapor Pressure
    v. Relative Humidity/Dewpoint

III) Convection
    i. Conduction-Convection
    ii. Evaporation-Convection
    iii. Bowen Ratio and limitations
    iv. Forced Convection

IV) Lab 9: Newton's Law of Cooling
    i. Newton's Law of cooling
    ii. Verifying applicability of Newton's Law of Cooling to hot/cold liquid
    iii. The effects of Natural vs. Forced Convection on exponential heating and cooling rates.
    iv. Begin work on final projects
        1. Woody debris habitat restoration modeling and small scale simulation.

        OR

        2. Measuring and modeling the relative effects of vegetation cover on the diurnal heating and cooling rates of water.

Week 10: Stream Temperature Dynamics

I) Heat Budget Models
    i. Advantages
    ii. Limitations
    iii. Applications
    iv. Work on final projects

II) Guest Lecturer: Timber Industry Representative??
    i. Finding a balance between industry and conservation
    ii. Continue final projects

III) Guest Lecturer: Jeremy Groom, Statistician, Oregon Department of Forestry??

i. Types of natural resource data and metrics
ii. Common data analysis methods
iii. Continue final projects

IV) Lab 10: Riparian climate/stream flow study site visitation with Maryanne Reiter, Weyerhaeuser (FIELD LAB)

i. Wind speed
ii. Light intensity
iii. Temperature
iv. Humidity
v. Flow volume

Week 11: Final Project Oral Reports

1. Woody debris habitat restoration modeling and small scale simulation.

OR

2. Measuring and modeling the relative effects of vegetation cover on the diurnal heating and cooling rates of water.

UCC Course Outline

Course No:	NR 221
Course Credit:	4
Lecture Hrs/wk:	3
Lab Hrs/Wk:	3
Lecture/Lab Hrs/Wk:	
Practicum Hrs/Wk:	
Clock Hours:	66
Length of Course	11 wks.
Banner enforced Prerequisite:	
Instructor enforced Prerequisite:	
Co-Requisite:	
Load Factor:	5.1 ILCs
Activity Code:	100
CIPS:	400801

Course Title: Water Resource Science
Developed By**:** Mick Davis, Ph.D.
Development Date: Nov. 2014
Revision Date:
Review Date:

COURSE DESCRIPTION:

This course examines natural resource-based conflicts on public and private lands, and presents strategies to resolve them. Analysis of root causes of environmental gridlock, including important values people hold towards the environment and development, and the tendency of groups and individuals to rely on traditional and well-understood methods for dispute resolution such as the courts and electoral and legislative processes. Course will focus on why disputants and the interested public find themselves increasingly frustrated by gridlock and dismayed at gridlock's effects on both environmental quality and local and regional economies, and how these frustrations are leading to the use of alternative resolution methods.

COURSE OUTCOMES:
Upon successful completion of this course the successful student will have demonstrated the ability to

1) Describe, analyze, and apply the following concepts in order to solve problems, make predictions, acquire data, and analyze data.
    a. Graphs, diagrams, and equations for 1-D motion involving constant acceleration of particles and fluids.
    b. Forces and their effect on the motion of solid objects and fluids. Gravitation, normal, fluid drag, and friction forces.
    c. Momentum, conservation of momentum, the impulse momentum theorem and its application to fluid flow.

   d. Kinetic and potential energy, work, and conservation of energy in conservative and non-conservative systems, including flowing fluids.
   e. Hydrostatic properties of non-compressible fluids.
   f. Bernoulli's principle, viscosity, Reynold's number, turbulence
   g. Temperature, thermal energy, heat transfer mechanisms, Newton's Law of cooling and application of these to analysis of water resource temperature.
   h. The wave property of light, absorption coefficients, photon energies and the role these play in radiative thermal energy transfer to water.

2) Know, define, discuss, and use in problem solving the SI units, metric prefixes and physical constants related to concepts 1.a-1.h listed above.

3) Know, describe, and show proficiency in current standard methods for measurement and monitoring of the following water resource properties:
   a. GPS location measurement and reporting in UTM and Lat/Long coordinate systems.
   b. Stream width and depth profiles
   c. Average and surface stream flow velocity and flow velocity profiles
   d. Conductivity
   e. Turbidity
   f. Surface wind speed
   g. Surface incident light intensity
   h. Average stream temperature and stream temperature profiles.

4) Think critically, problem solve, and make predictions based on physical concepts in 1.a-1.h.

5) Clearly communicate predictions, data acquisition methods, and results of data analysis through written problem solutions, written answers in laboratory/field guides, formal laboratory/field reports, project reports, oral presentations, and classroom discussions.

6) Make use of laboratory and field equipment to properly and safely collect experimental data.

7) Make use of calculators and spreadsheet software in numeric problem solving and data analysis

8) Make use of basic algebra (100-level) in problems solving, experimental design, and data analysis.
9)
10) Make practical use of the scientific method in the laboratory and in the field.

11) Work effectively in a small group in the laboratory and in the field.

12) Apply the scientific method and outcomes 1-10, for the purpose of experimental design and execution.

COURSE OUTLINE

Week 1: Kinematics + Measurement and Uncertainty

I) Position and Position Measurement
   i. Euclidean Coordinate Systems
   ii. UTM Coordinate System
   iii. Lat/Long Coordinate System
   iv. Position as a vector
   v. Resolving position vector components
      1. DEMO: Multilateration

II) Velocity and Velocity Measurement
   i. Speed
   ii. Velocity
   iii. Resolving velocity vector components
   iv. Langrangian vs. Eulerian reference frames

III) Acceleration and Acceleration Measurement
   i. Acceleration as rate of change of velocity
   ii. Acceleration as a vector
   iii. 4 cases for the sign of the acceleration

IV) Lab 1: Position and Velocity Measurements (FIELD LAB)
   i. Measuring position with GPS
   ii. Determining uncertainty in position measurement
   iii. Calculating velocity from GPS position and time measurements
   iv. Estimating uncertainty in velocity calculation
   v. Calculating acceleration from position and time measurements
   vi. Formal Field Action Report

Week 2: Newton's Laws of Motion

I) Newton's 1st and 3rd Laws
   i. Inertia
   ii. Mass
   iii. Density
   iv. Fluid Density
   v. Force Pairs
      1. DEMOS: Hanging Mass + Accelerometer
      2. DEMO: Dueling Force Sensors

II) Newton's 2nd Law

i. F=ma for single forces
ii. Balanced and unbalanced forces
iii. Vector addition of Forces
iv. Newton's 2nd Law

III) The gravitational force
i. Free fall acceleration due to gravity
ii. Calculating the gravitational force
iii. Mass vs. Weight
iv. Calculating the Weight per Volume
1. DEMO: Paper vs. book fall-time

IV) Lab 2: Determining Flow Velocity and Flow Volume (FIELD LAB)
i. Measuring stream width and depth
ii. Measuring stream depth profile
iii. Determining uncertainty in width and depth measurements
iv. Measuring average surface velocity
v. Measuring a flow velocity profile
vi. Flow velocity via salt or dye slugs
vii. Estimating uncertainty in velocity calculation
viii. Formal Field Action Report

Week 3: Hydrostatics

I) Forces and Motion Tutorial

II) Buoyant Force and Archimedes Principle
i. Conceptual derivation
ii. Relation to density
iii. Specific gravity definition and calculation

III) Pascal's Principle
i. Pressure
ii. Pressure in Confined, Incompressible Fluids
iii. Hydraulic Machines

IV) Lab 3: Archimedes' Principle
i. Determining material density 2-ways
ii. Determining material specific gravity 2-ways
iii. Understanding average density
iv. Calculating the buoyant force on floating log
v. Calculating the buyout force on an anchored log
vi. Calculating the buoyant force on a boulder

Week 4: Energy Conservation

I) Normal Force and Friction Force
   i. Static Friction
   ii. Kinetic Friction
   iii. On inclined geometries
   iv. Resolving force vector components
   v. Frictional force for constant velocity flow

II) Energy
   i. Kinetic Energy
   ii. Gravitational Potential Energy
   iii. Conservation of Mechanical Energy
   iv. Flow acceleration and velocity in the absence of friction

III) Work
   i. Work by Conservative forces
   ii. Work-Energy Theorem
   iii. Calculation of ping-pong ball speed
   iv. Work by Non-conservative forces
   v. Conservation of Total Energy
   vi. Work due to friction
   vii. Mechanical-Thermal Energy conversion by friction
      1. DEMO: Ping Pong Ball Cannon

IV) Lab 4: Energy Dissipation in fluid flow
   i. Tracer particles as a flow velocity measurement tool
   ii. Video recording as a position + velocity measurement tool
   iii. Verifying Manning's Formula
   iv. Quantifying energy dissipation in fluid flow

Week 5: Hydrodynamics I

I) Bernoulli's Principle
   i. As conservation of mechanical energy in disguise
   ii. Applications to carburetors, wings, sails, atomizers
   iii. Calculation of lift force on an anchored log
   iv. Calculation of lift force on a boulder
      1. DEMO: Hair Dryer + Ping-Pong ball

II) Impulse-Momentum
   a. Momentum
   b. Momentum conservation
   c. Impulse-Momentum Theorem
   d. Impulse-Momentum Theorem for analysis of erosion and erosion control

III) Drag Force
   i. In air
   ii. In Viscous fluids
   iii. Reynolds number dependence
      1. DEMO: V^2 dependence for coffee filters

IV) Lab 5: Drag force
   i. Modeling drag force in air
   ii. Measuring drag force in air
   iii. Measuring drag force in water
   iv. Determining velocity dependence of drag force in water
   v. Calculating Drag force on a log
   vi. Calculating Drag force on a boulder

Week 6: Hydrodynamics II

I) Viscosity and Reynold's Number
   i. As a general fluid property
   ii. Measuring viscosity
   iii. Viscous Flow
   iv. Reynold's Number
   v. Life at low Reynold's Number
   vi. Life at Medium Reynolds Number
   vii. Life at Large Reynolds Number
   viii. Turbulence

II) Guest Lecturer: Ken, Umpqua Watersheds and UCC biology professor
   i. Effects of flow velocity, woody habitat, temperature, turbidity, turbulence on stream ecology.

III) Guest Lecturer: Sydney, BLM Hydrologist and former UCC physics 201 student
   i. Woody debris habitat restoration case studies

IV) Lab 6: Small Scale simulation stream flow via Reynold's number matching
   i. Formal Laboratory Report

Week 7: Light and Energy

I) Hydrostatics/Hydrodynamics Tutorial

II) Properties of Light
   i. Wave-Particle duality
   ii. Electromagnetic spectrum
   iii. Energy in photons

iv. Beer's Law
v. Scattering and absorption coefficients
vi. Direct and scattered light energy absorption by water
vii. Effects of vegetation on incident light energy
    1. DEMO: Beers Law in chalky water

III) Turbidity
i. Turbidity measurement
ii. Effects of turbidity on absorption and scattering of light by water
iii. Direct ecological effects of turbidity changes

IV) Lab 7: Beer's Law for vegetation and turbidity (FIELD LAB)
i. Measuring incident light intensity
ii. Determining absorption/scattering coefficients of vegetative covering
iii. Measuring average stream turbidity and turbidity profiles
iv. Formal Field Action Report

Week 8: Thermodynamics

I) Light Tutorial

II) Thermal Energy, Temperature
i. Definitions
ii. Measurement
iii. Long term monitoring methods

III) Heat
i. Heat as transfer of thermal energy driven by ΔT
ii. Conduction
iii. Radiation
iv. Convection
v. Calculating final temperature of fluid mixtures (calorimetry)
vi. Calculating final stream temperature after mixing with hyporheic flow

IV) Lab 8: Thermodynamics
i. Predicting the final temperature of fluid mixtures
ii. Measuring the effects of particle concentration on radiative heating rate
iii. Measuring the effects of stream bed color/material on radiative heating rate

Week 9: Convection

I) Phase Changes

i. Sublimation-Deposition
ii. Melting-Freezing
iii. Evaporation-Condensation
iv. Latent heats
    1. DEMO: Can crushing

II) Ideal Gas Law
i. Microscopic Picture
ii. Non-ideal behavior
iii. Vapor Pressure
iv. Saturation Vapor Pressure
v. Relative Humidity/Dewpoint

III) Convection
i. Conduction-Convection
ii. Evaporation-Convection
iii. Bowen Ratio and limitations
iv. Forced Convection

IV) Lab 9: Newton's Law of Cooling
i. Newton's Law of cooling
ii. Verifying applicability of Newton's Law of Cooling to hot/cold liquid
iii. The effects of Natural vs. Forced Convection on exponential heating and cooling rates.
iv. Begin work on final projects
    1. Woody debris habitat restoration modeling and small scale simulation.

    OR

    2. Measuring and modeling the relative effects of vegetation cover on the diurnal heating and cooling rates of water.

Week 10: Stream Temperature Dynamics

I) Heat Budget Models
i. Advantages
ii. Limitations
iii. Applications
iv. Work on final projects

II) Guest Lecturer: Timber Industry Representative??
i. Finding a balance between industry and conservation
ii. Continue final projects

III) Guest Lecturer: Jeremy Groom, Statistician, Oregon Department of Forestry??
i. Types of natural resource data and metrics

ii. Common data analysis methods
iii. Continue final projects

IV) Lab 10: Riparian climate/stream flow study site visitation with Maryanne Reiter, Weyerhaeuser (FIELD LAB)
i. Wind speed
ii. Light intensity
iii. Temperature
iv. Humidity
v. Flow volume

Week 11: Final Project Oral Reports

1. Woody debris habitat restoration modeling and small scale simulation.

OR

2. Measuring and modeling the relative effects of vegetation cover on the diurnal heating and cooling rates of water.

UCC New Course Approval

Basic Information

Name of New Course: Geographic Information Systems (GIS) for Natural Resources
Contact: Bryan Benz, M.S.
Contact Title: Assistant Professor
Department: Science
Supervisor: Ken Carloni, Ph.D.
Program: Natural Resources

New Course Information

Date, Year, and Term of Proposed Implementation: 2015 Winter Term
Course Title: Geographic Information Systems (GIS) for Natural Resources
Course Number: NR 228
Number of Credits: 4
Activity Code:
_X_100 - Lower Division Collegiate
__210 - CTE Preparatory
__211 - Stand-alone (Independent) CTE Preparatory
__220 - CTE Supplemental
__230 - CTE Apprenticeship
__310 - English as a Second Language
__320 - Adult Basic Education
__330 - General Education Development Test Preparation
__340 - Adult High School Diploma, High School Completion
__350 - Post-Secondary Remedial, Reading or Writing
__351 - Post-Secondary Remedial, Math
__352 - Post-Secondary Remedial, Electives
__360 - ACE – Unknown
__361 - ACE - Health and Fitness
__362 - ACE – Safety
__363 - ACE – Workforce
__510 - Non-Reimbursable – Unknown
__511 - Non-Reimbursable - Hobby and Recreation
__512 - Non-Reimbursable - Other/Administrative

Course Type

__Lecture (11 hrs/credit)
__Lab (30 hrs/credit)
__Lecture/Lab (20 hrs/credit)
_X_Other:

Number of Hours: 3 hrs lecture and 3 hrs lab per week; 66 clock hrs/term

Co- and Pre-Requisite Information
CIS 120, GIS 143, or Instructor's consent.

Co- and Pre-Requisite Enforcement
_X_Registration Enforced
__Instructor Enforced
__Combination or Other Enforcement

Catalog Course Description – Students will learn the fundamentals of Geographic Information Systems (GIS) and functionality in Natural Resource applications with various ArcGIS tools. Emphasis will be placed on the three principle components of ArcGIS: ArcMap, ArcCatalog, and ArcToolbox. Experience will be provided by hands-on practical exercises using natural resource related field data in various formats including shapefiles, coverages, geodatabase feature class, and raster data. Students will create, manage, analyze, and display geo-referenced data and provide finished maps.

Grading Option: A-F, or audit

Load Factor: 5.1 ILCs

Award Information:
__AA
_X_AS
_X_AAS
__Below 100-Level
__Elective
__Certificate
_X_AAOT

If you selected 'AAOT' above, please select the area of distribution below.
__Arts and Letters
__Mathematics
_X_Science or Computer Science
__Social Science
__Speech/Oral Communication
__Writing
__Cultural Literacy

<u>CTE and Lower Division Collegiate Proposals Only</u>

Approved by Advisory Committee?

This course and all others in the Natural Resources AS program will be approved by the Natural Resources Dept. in the College of Forestry at Oregon State University for articulation with their program.

Required Course Information
Associate of Science in Natural Resources, Landscape Monitoring option

New Course Justification

Student Need for Course
Required for Natural Resources AS degree.

Course Impacts
_X_Instructional costs (staff, materials, equipment, or facilities) are required.
__Additional instructional costs (staff, materials, equipment, or facilities) are needed.
__Impact to other divisions in terms of classes and staffing
__Other

Course Impact Description
This course will be taught by an adjunct and will require 5.1 ILCs of pay beyond the Science Dept.'s current personnel costs. This course will also require an up-to-date ESRI site license for Arc software that may be shared with the Engineering Dept. for their GS 134 class.

Replacement Course For: n/a

Additional Process Items
_X_ Course Outline (see also OUTCOMES and OUTLINE below)
__ Start-Up Budget (n/a)
__Advisory Committee Minutes (n/a)

COURSE OUTCOMES:
Upon completion of the course the student will be able to:

- Describe and analytically discuss specific applications of GIS in the environmental sciences and in natural resource management.
- Use the various applications in GIS to organize data in ArcCatalog, convert and edit data using ArcToolbox, and analyze spatial data in ArcMap.
- Use field collected data in GIS to understand and solve environmental science and natural resource management problems.
- Use GIS to develop and explain a problem in the environmental science and natural resource management field.

COURSE OUTLINE:

- Introduction to GIS
- GIS basics
- GIS applications
- Internet mapping; Map basics and map quality
- Geospatial data; Metadata
- Analysis using GIS
- GPS data
- Aerial photography and related topics
- Integration of concepts; Extensions

UCC Course Outline

Course No:	NR 228
Course Credit:	4
Lecture Hrs/wk:	3
Lab Hrs/Wk:	3
Lecture/Lab Hrs/Wk:	
Practicum Hrs/Wk:	
Clock Hours: 66/term	
Length of Course:	11 wks.
Banner enforced Prerequisite:	CIS 120, GIS 134, or Instructor's consent.
Instructor enforced Prerequisite:	
Co-Requisite:	
Load Factor:	5.1 ILCs
Activity Code: 100	
CIPS: 260101	

Course Title: **Geographic Information Systems (GIS) for Natural Resources**
Developed By**:** Bryan Benz
Development Date: Nov. 2014
Revision Date:
Review Date:

COURSE DESCRIPTION:

Students will learn the fundamentals of Geographic Information Systems (GIS) and functionality in Natural Resource applications with various ArcGIS tools. Emphasis will be placed on the three principle components of ArcGIS: ArcMap, ArcCatalog, and ArcToolbox. Experience will be provided by hands-on practical exercises using natural resource related field data in various formats including shapefiles, coverages, geodatabase feature class, and raster data. Students will create, manage, analyze, and display geo-referenced data and provide finished maps.

COURSE OUTCOMES:

Upon completion of the course the student will be able to:

- Describe and analytically discuss specific applications of GIS in the environmental sciences and in natural resource management.
- Use the various applications in GIS to organize data in ArcCatalog, convert and edit data using ArcToolbox, and analyze spatial data in ArcMap.
- Use field collected data in GIS to understand and solve environmental science and natural resource management problems.
- Use GIS to develop and explain a problem in the environmental science and natural resource management field.

COURSE OUTLINE:

- Introduction to GIS
- GIS basics
- GIS applications
- Internet mapping; Map basics and map quality
- Geospatial data; Metadata
- Analysis using GIS
- GPS data
- Aerial photography and related topics
- Integration of concepts; Extensions

UCC New Course Approval

Basic Information

Name of New Course: Forest Ecosystems
Contact: Ken Carloni, Ph.D.
Contact Title: Dept. Chair
Department: Science
Supervisor: Jason Aase
Program: Natural Resources

New Course Information

Date, Year, and Term of Proposed Implementation: Winter 2016
Course Title: Forest Ecosystems
Course Number: NR 240
Number of Credits: 3
Activity Code:
_X_100 - Lower Division Collegiate
__210 - CTE Preparatory
__211 - Stand-alone (Independent) CTE Preparatory
__220 - CTE Supplemental
__230 - CTE Apprenticeship
__310 - English as a Second Language
__320 - Adult Basic Education
__330 - General Education Development Test Preparation
__340 - Adult High School Diploma, High School Completion
__350 - Post-Secondary Remedial, Reading or Writing
__351 - Post-Secondary Remedial, Math
__352 - Post-Secondary Remedial, Electives
__360 - ACE – Unknown
__361 - ACE - Health and Fitness
__362 - ACE – Safety
__363 - ACE – Workforce
__510 - Non-Reimbursable – Unknown
__511 - Non-Reimbursable - Hobby and Recreation
__512 - Non-Reimbursable - Other/Administrative

Course Type

_X_Lecture (11 hrs/credit)
__Lab (30 hrs/credit)
__Lecture/Lab (20 hrs/credit)
__Other:

Number of Hours:
3 hrs. lecture/wk., 33 clock hours/term

Co- and Pre-Requisite Information
At least one prior class in Natural Resources or Biology

Co- and Pre-Requisite Enforcement
Please choose an enforcement option for the information listed above.
_X_Registration Enforced
__Instructor Enforced
__Combination or Other Enforcement

Catalog Course Description
Principles of ecosystem dynamics in forested communities, landscapes and bioregions. Coevolution of competition, predation and mutualism. Energy flow, nutrient cycles and feedback mechanisms. The effects of disturbance and succession on biodiversity and habitat stability through time.

Grading Option: A-F and audit

Load Factor: 3 ILCs

Award Information:
__AA
_X_AS
_X_AAS
__Below 100-Level
__Elective
__Certificate
_X_AAOT

If you selected 'AAOT' above, please select the area of distribution below.
__Arts and Letters
__Mathematics
_X_Science or Computer Science
__Social Science
__Speech/Oral Communication
__Writing
__Cultural Literacy

<u>CTE and Lower Division Collegiate Proposals Only</u>

Approved by Advisory Committee?
This course and all others in the Natural Resources AS program will be approved by the Natural Resources Dept. in the College of Forestry at Oregon State University for articulation with their program.

Required Course Information
Associate of Science in Natural Resources, Landscape Monitoring option

New Course Justification
Required for Natural Resources AS degree.

Course Impacts *(Select all that apply)*
_X_Instructional costs (staff, materials, equipment, or facilities) are required.
__Additional instructional costs (staff, materials, equipment, or facilities) are needed.
__Impact to other divisions in terms of classes and staffing
__Other

Course Impact Description
This course will be taught by a full-time Instructor and will require 3 ILCs of pay beyond the Science Dept.'s current personnel costs. This will be offset by hiring an adjunct instructor to teach one class from the full-time instructor's current load.

Replacement Course For: n/a

Additional Process Items
_X_ Course Outline - (see also below)
__ Start-Up Budget (if needed)
__Advisory Committee Minutes (if needed)

COURSE OUTCOMES:

Students who complete this course will be able to:

- Describe the components and processes of forest ecosystems at multiple scales.
- Explain the flow of energy and the cycling of nutrients in ecosystems, and discuss the factors that influence these processes.
- Explain the influence of climate, soils, topography, and disturbance agents on ecosystem structure and function.
- Explain the relationships between the processes of disturbance and forest succession, and discuss their effects on ecosystem structure and function including stand demographics, soils, water resources, wildlife habitat, carbon storage and biodiversity.
- Discriminate among those management practices that accumulate carbon, store water, produce sustainable products, and increase biodiversity from those that don't.
- Recognize effective solutions to ecological problems and communicate them clearly.

COURSE OUTLINE:

- Fundamental Ecosystem Concepts
- Structure and Function of Forest Ecosystems at Multiple Scales
- Climate, Soils, Topography and Ecoregions
- Coevolution of Populations and Communities
- Disturbance and Succession in Forest Ecosystems
- Energy, Productivity and Biomass
- Biogeochemical Cycles
- Landscape Ecology: Fragmentation, Connectivity, and Landscape Heterogeneity
- Ecosystem Services

UCC Course Outline

Course No:	NR 240
Course Credit:	3
Lecture Hrs/wk:	
Lab Hrs/Wk:	
Lecture/Lab Hrs/Wk:	
Practicum Hrs/Wk:	
Clock Hours:	33
Length of Course	11 wks.
Banner enforced Prerequisite:	Course in BI or NR
Instructor enforced Prerequisite:	
Co-Requisite:	
Load Factor:	3 ILCs
Activity Code:	100
CIPS:	260101

Course Title: **Forest Ecosystems**
Developed By**:** Ken Carloni, Ph.D.
Development Date: Nov. 2014
Revision Date:
Review Date:

COURSE DESCRIPTION:

Principles of ecosystem dynamics in forested communities, landscapes and bioregions. Coevolution of competition, predation and mutualism. Energy flow, nutrient cycles and feedback controls. The effects of disturbance and succession on biodiversity and habitat stability through time.

COURSE OUTCOMES:

Students who complete this course will be able to:

- Describe the components and processes of forest ecosystems at multiple scales.
- Explain the flow of energy and the cycling of nutrients in ecosystems, and discuss the factors that influence these processes.
- Explain the influence of climate, soils, topography, and disturbance agents on ecosystem structure and function.
- Explain the relationships between the processes of disturbance and forest succession, and discuss their effects on ecosystem structure and function including stand demographics, soils, water resources, wildlife habitat, carbon storage and biodiversity.
- Discriminate among those management practices that accumulate carbon, store water, produce sustainable products, and increase biodiversity from those that don't.
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COURSE OUTLINE:

- Fundamental Ecosystem Concepts
- Structure and Function of Forest Ecosystems at Multiple Scales
- Climate, Soils, Topography and Ecoregions
- Coevolution of Populations and Communities
- Disturbance and Succession in Forest Ecosystems
- Energy, Productivity and Biomass
- Biogeochemical Cycles
- Landscape Ecology: Fragmentation, Connectivity, and Landscape Heterogeneity
- Ecosystem Services

UCC New Course Approval

Basic Information

Name of New Course: Field Dendrology
Contact: Ken Carloni, Ph.D.
Contact Title: Assistant Professor
Department: Science
Supervisor: Ken Carloni, Ph.D.
Program: Natural Resources

New Course Information

Date, Year, and Term of Proposed Implementation: 2015 Fall Term
Course Title: Field Dendrology
Course Number: NR 241
Number of Credits: 4
Activity Code:
_X_100 - Lower Division Collegiate
__210 - CTE Preparatory
__211 - Stand-alone (Independent) CTE Preparatory
__220 - CTE Supplemental
__230 - CTE Apprenticeship
__310 - English as a Second Language
__320 - Adult Basic Education
__330 - General Education Development Test Preparation
__340 - Adult High School Diploma, High School Completion
__350 - Post-Secondary Remedial, Reading or Writing
__351 - Post-Secondary Remedial, Math
__352 - Post-Secondary Remedial, Electives
__360 - ACE – Unknown
__361 - ACE - Health and Fitness
__362 - ACE – Safety
__363 - ACE – Workforce
__510 - Non-Reimbursable – Unknown
__511 - Non-Reimbursable - Hobby and Recreation
__512 - Non-Reimbursable - Other/Administrative

Course Type

__Lecture (11 hrs/credit)
__Lab (30 hrs/credit)
__Lecture/Lab (20 hrs/credit)
_X_Other:

Number of Hours:
3 hrs. lecture, 3 hrs. lab/week; 66 clock hours/term

Co- and Pre-Requisite Information
Recommended: Course in Biology or Natural Resources

Co- and Pre-Requisite Enforcement
_X_Registration Enforced
__Instructor Enforced
__Combination or Other Enforcement

Catalog Course Description – Identification of the principal forest trees of North America, emphasizing trees and shrubs of the Pacific Northwest. Other topics include the ranges over which these species grow, their structure and function, important ecological characteristics, and principal uses. We will also survey forested biomes of the world. Field trips required on and off campus.

Grading Option: A-F, or audit

Load Factor: 5.1 ILCs

Award Information:
__AA
_X_AS
_X_AAS
__Below 100-Level
_X_Elective
__Certificate
_X_AAOT

If you selected 'AAOT' above, please select the area of distribution below.
__Arts and Letters
__Mathematics
_X_Science or Computer Science
__Social Science
__Speech/Oral Communication
__Writing
__Cultural Literacy

<u>CTE and Lower Division Collegiate Proposals Only</u>

Approved by Advisory Committee?
This course and all others in the Natural Resources AS program will be approved by the Natural Resources Dept. in the College of Forestry at Oregon State University for articulation with their program.

Required Course Information
Associate of Science in Natural Resources, Landscape Monitoring option

New Course Justification
Required for Natural Resources AS degree.

Course Impacts *(Select all that apply)*
_X_Instructional costs (staff, materials, equipment, or facilities) are required.
__Additional instructional costs (staff, materials, equipment, or facilities) are needed.
__Impact to other divisions in terms of classes and staffing
__Other

Course Impact Description
This course will be taught by an adjunct and will require 5.1 ILCs of pay beyond the Science Dept.'s current personnel costs. A lab fee is included to cover equipment and materials.

Replacement Course For: n/a

Additional Process Items
_X_ Course Outline - (see also below)
__ Start-Up Budget (if needed)
__Advisory Committee Minutes (if needed)

Course Outcomes
Students who successfully complete this course will be able to:

- Identify economically and culturally important native tree and shrub species found in Washington, Oregon and Northern California.
- Describe the habitats, ranges, and principle uses of these species.
- Explain the general anatomy and physiology of woody plant species.
- Identify key vegetation indicators of habitat types in Southwestern Oregon
- Describe the forested biomes of the world.

Course Outline

- Woody plant families and important genera
- Using dichotomous keys
- Structure and function of woody plants
- Ecological functions of woody plant species in their habitats
- Role of woody plant in forest succession
- Documenting trees and shrubs in the field
- Forested biomes of the world with emphasis on Northwestern bioregions

UCC Course Outline

Course No:	NR 241
Course Credit:	4
Lecture Hrs/wk:	3
Lab Hrs/Wk:	3
Lecture/Lab Hrs/Wk:	
Practicum Hrs/Wk:	
Clock Hours:	66
Length of Course:	11 wks.
Banner enforced Prerequisite:	
Instructor enforced Prerequisite:	
Co-Requisite:	
Load Factor:	5.1 ILCs
Activity Code:	100
CIPS:	260101

Course Title: **Field Dendrology**
Developed By**:** Ken Carloni, Ph.D. and Bryan Benz, M.S.
Development Date: Nov. 2014
Revision Date:
Review Date:

COURSE DESCRIPTION:

Identification of the principal forest trees of North America, emphasizing trees and shrubs of the Pacific Northwest. Other topics include the ranges over which these species grow, their structure and function, important ecological characteristics, and principal uses. We will also survey forested biomes of the world. Field trips required on and off campus.

COURSE OUTCOMES:

Students who successfully complete this course will be able to:

- Identify economically and culturally important native tree and shrub species found in Washington, Oregon and Northern California.
- Describe the habitats, ranges, and principle uses of these species.
- Explain the general anatomy and physiology of woody plant species.
- Identify key vegetation indicators of habitat types in Southwestern Oregon
- Describe the forested biomes of the world.

COURSE OUTLINE:

- Woody plant families and important genera
- Using dichotomous keys
- Structure and function of woody plants
- Ecological functions of woody plant species in their habitats
- Role of woody plant in forest succession
- Documenting trees and shrubs in the field
- Forested biomes of the world with emphasis on Northwestern bioregions

UCC New Course Approval

Basic Information

Name of New Course: Environmental Dispute Resolution
Contact: Ken Carloni
Contact Title: Dept. Chair
Department: Science
Supervisor: Jason Aase
Program: Natural Resources

New Course Information

Date, Year, and Term of Proposed Implementation:
Course Title: Environmental Dispute Resolution
Course Number: NR 295
Number of Credits: 2
Activity Code:
X_100 - Lower Division Collegiate
__210 - CTE Preparatory
__211 - Stand-alone (Independent) CTE Preparatory
__220 - CTE Supplemental
__230 - CTE Apprenticeship
__310 - English as a Second Language
__320 - Adult Basic Education
__330 - General Education Development Test Preparation
__340 - Adult High School Diploma, High School Completion
__350 - Post-Secondary Remedial, Reading or Writing
__351 - Post-Secondary Remedial, Math
__352 - Post-Secondary Remedial, Electives
__360 - ACE – Unknown
__361 - ACE - Health and Fitness
__362 - ACE – Safety
__363 - ACE – Workforce
__510 - Non-Reimbursable – Unknown
__511 - Non-Reimbursable - Hobby and Recreation
__512 - Non-Reimbursable - Other/Administrative

Course Type

_X_Lecture (11 hrs/credit)
__Lab (30 hrs/credit)
__Lecture/Lab (20 hrs/credit)
__Other:

Number of Hours: 22 clock hours

Co- and Pre-Requisite Information: None

Co- and Pre-Requisite Enforcement
Please choose an enforcement option for the information listed above.
_X_Registration Enforced
__Instructor Enforced
__Combination or Other Enforcement

Catalog Course Description – *see attached course outline*
This course examines natural resource-based conflicts on public and private lands, and presents strategies to resolve them. Analysis of root causes of environmental gridlock, including important values people hold towards the environment and development, and the tendency of groups and individuals to rely on traditional and well-understood methods for dispute resolution such as the courts and electoral and legislative processes. Course will focus on why disputants and the interested public find themselves increasingly frustrated by gridlock and dismayed at gridlock's effects on both environmental quality and local and regional economies, and how these frustrations are leading to the use of alternative resolution methods.

Grading Option: A-F, audit

Load Factor: 2 ILCs

Award Information:
__AA
_X_ AS
_X_AAS
__Below 100-Level
_X_Elective
__Certificate
_X_AAOT

If you selected 'AAOT' above, please select the area of distribution below.
__Arts and Letters
__Mathematics
_X_Science or Computer Science
(X) Social Science
__Speech/Oral Communication
__Writing
__Cultural Literacy

CTE and Lower Division Collegiate Proposals Only

This course and all others in the Natural Resources AS program will be approved by the Natural Resources Dept. in the College of Forestry at Oregon State University for articulation with their program.

Required Course Information

Associate of Science in Natural Resources, Landscape Monitoring option

New Course Justification

Required for Natural Resources AS

Course Impacts *(Select all that apply)*

_X_Instructional costs (staff, materials, equipment, or facilities) are required.
__Additional instructional costs (staff, materials, equipment, or facilities) are needed.
__Impact to other divisions in terms of classes and staffing
__Other

Course Impact Description

This course will be taught by an adjunct and will require 3 ILCs of pay beyond the Science Dept.'s current personnel costs.

Replacement Course For: n/a

Additional Process Items

_X_ Course Outline - required
__ Start-Up Budget (if needed)
__Advisory Committee Minutes (if needed)

UCC Course Outline

Course No:	NR 295
Course Credit:	2
Lecture Hrs/wk:	2
Lab Hrs/Wk:	
Lecture/Lab Hrs/Wk:	
Practicum Hrs/Wk:	
Clock Hours:	22
Length of Course	11 wks.
Banner enforced Prerequisite:	
Instructor enforced Prerequisite:	
Co-Requisite:	
Load Factor:	2 ILCs
Activity Code:	100
CIPS:	260101*

* This course may be cross-listed with Social Science.

Course Title: **Environmental Dispute Resolution**
Developed By**:** Jim Caplan
Development Date: Nov. 2014
Revision Date:
Review Date:

COURSE DESCRIPTION:

This course examines natural resource-based conflicts on public and private lands, and presents strategies to resolve them. Analysis of root causes of environmental gridlock, including important values people hold towards the environment and development, and the tendency of groups and individuals to rely on traditional and well-understood methods for dispute resolution such as the courts and electoral and legislative processes. Course will focus on why disputants and the interested public find themselves increasingly frustrated by gridlock and dismayed at gridlock's effects on both environmental quality and local and regional economies, and how these frustrations are leading to the use of alternative resolution methods.

COURSE OUTCOMES:

At the completion of this course, you will be able to:

- Understand the origins of the environmental movement in America and how resource development has evolved along with it
- Identify and understand common values people hold towards natural resources and their protection or development; and also understand how people fit into various values-sharing, stakeholder communities

- Understand common human responses to conflict and common approaches to dealing with them; and also see environment conflicts through the eyes of disputants, land managers, and caring onlookers
- Appreciate the value of traditional dispute-resolution strategies and methods while developing understanding of the benefits (and costs) of alternative means
- Understand how to design simple, effective strategies and carry out basic environmental dispute resolution actions

COURSE OUTLINE:

Week One: Introduce course, get to know everyone a little, review syllabus and instructional materials, develop understanding of definitions and interpretations, review and discuss the Reed et al environmental values, and make initial selection of research project

Exercise: "poker hand" win-lose versus win-win

Week Two: Review history of the environmentalism and the co-evolution of development in America, relate this history to the values we hear and experience today, and review and discuss our personal Meyers-Briggs and Thomas-Kilmann information

Exercises: "walking caucus" on fear/conflict responses—fight, flight, hunker down, deceive, placate—followed by "blaming" role play and group feedback

Week Three: First hour, discuss environmental conflict with an experienced panel (advocacy interest, legal, political, and agency representatives); second hour, discuss observations from panel discussion in terms of understandings reached in weeks one and two as well as strategy and tactics insights gleaned from the panel representatives

Week Four: Evaluate and discuss various ways of identifying disputants and stakeholders; apply understanding from weeks one through three to developing ideas about who to approach for dispute resolution, some possible ways to go about it, and what resources might exist and be needed to make things happen

Week Five: First hour, midterm test; second hour, discuss third-party dispute resolution approaches with an experienced panel (facilitator, mediator, negotiator)

Week Six: Review and discuss conventional dispute resolution strategies--strengths and weaknesses; initial exploration of alternative strategies

Exercise: "toxic waste" scenario

Week Seven: Further development of alternative strategies; introduction to basic techniques and methods with an emphasis on evaluating their strengths and weaknesses such as overall difficulty, time and dollar costs, and consistency with community values, among other factors

Week Eight: First hour, discuss community-based strategies with an experienced panel (watershed councils, agency collaboratives, community collaboratives); second hour, delve

deeper into techniques such as mediation, facilitation, collaboration, and interest-based bargaining

Week Nine: First group of research project presentations

Week Ten: Second group of research project presentations; course review
Week Eleven: Final test

UCC Program Revision

Please enter your information for the program revision you are proposing below. Your careful attention to the completion of all fields is appreciated. If you are unsure about how to enter something, please contact your Department Chair or Dean.

Basic Information

Name of Program Revision Contact: Ian Fisher

Contact Title: Welding Instructor

Department: Welding

Program Revision Information

Date, Year, and Term of Proposed Revision: Summer 2015

Program Title: One Year Certificate - Welding

Revision Type - *select all that apply*

__ Credits
__ Title
__ Summary
__ Outcomes
_x_ Curriculum
__ Suspension
__ Reactivate
__ Delete
__ Repackage for a new area of concentration or certificate within existing program.
__ Other: *(please describe)*

Revised Outcomes *(If needed)*

Revision Description and Justification

Please give as many details as possible about the revision, including justification for the change.
Change is needed to be consistent with new AAS in Welding; this revision is only to switch PSY101 to SP105

Program Impacts - select all that apply

__ Instructional costs (staff, materials, equipment, or facilities) required.
__ Additional instructional costs (staff, materials, equipment, or facilities) are needed.
__ Impact to other divisions in terms of classes and staffing
__ Other:

Please list changes to program course listing below.

CURRENT				PROPOSED		
Course #	**Course Title**	**Credits**		**Course #**	**Course Title**	**Credits**
PSY101	Psychology of Human Relations	3		SP105	Listening	3
WLD101	Welding Processes and Applications	4			SAME	
WLD111	Shielded Arc Metal Welding	4			SAME	
WLD131	Basic Metallurgy	3			SAME	
MTH052 or higher	Introduction to Algebra for the Trades	4			SAME	
WLD112	Shielded Arc Metal Welding: Mild Steel I	3			SAME	
WLD113	Shielded Arc Metal Welding: Mild Steel II	3			SAME	
WLD114	Shielded Arc Metal Welding Mild Steel III	3			SAME	
WLD140	Blueprint Reading and Sketching	3			SAME	
WR115	Introduction to Expository Writing	4			SAME	
WLD121	Gas Metal Arc Welding	3			SAME	
WLD122	Gas Metal Arc Welding – Pulse	3			SAME	
WLD141	Flux-Cored Arc Welding I (Gas Shielded)	3			SAME	
WLD142	Flux-Cored Arc Welding II (Self Shielded)	3			SAME	

WLD150	Gas Tungsten Arc Welding I	3			SAME	
					Total credits for Program	49

Additional Documentation

Please check additional forms or documentation you have submitted to Curriculum Committee.

__ **Curriculum Revision Form**
__ **Start-Up and First Year Budget**
__ **Other**:

Program Outcomes

Welding Department

Program Description

The welding program focuses on skills sets required to meet or exceed industry standards and the American Welding Society. Graduates will have basic knowledge and skills that are required to achieve entry-level positions as welders, welder operators, and fabricators. Basic tools and PPE for fabrication and welding are required, a list of tools are available from the welding instructors.

The Welding Department seeks to maximize the ability of its students to compete in the job market by offering relevant and up to date courses in welding technology. To achieve this goal, the department emphasizes current technology trends in both the welding shop and classroom environment. Welding courses are offered during the day and in the evening. In addition, courses are adapted to meet the diverse needs of the student, potential employers, and respond to changes and advancements in the welding industry.

The UCC Welding program is an Educational Institutional Member of the American Welding Society, and offers AWS - SENSE curriculum and certificates.

Program Outcomes

Safety practices

Discuss care, storage, and handling of cylinders
List the steps for set-up and shut-down
Explain the method of lighting and adjusting a torch
Explain two methods for leak checking
Describe personal safety procedures
Student will understand and practice personal safety
Use proper protective gear
Understand situation awareness
Maintain the proper attitude/safe state of mind
Students will understand and practice equipment (machine) safety
Describe the safety procedures required in the use of a welding machine and cutting systems
Describe electrical safety procedures
Recognize dangerous electrical connections
Student will understand aspects of the welding industry that effect the environment
Describe the effects of hazardous materials and welding exhaust emissions
Utilize correct procedures when working in or around containers or vessels

SMAW ~ Shielded Metal Arc Welding

Fundamentals of operation

Discuss the importance of the following terms: arc length, travel angle, work angle, travel speed, amperage, electrode classification, filler metal metallurgy etc.

Shielded Metal Arc Welding

Define Shielded Metal Arc Welding (SMAW)

Discuss history and development

List advantages, disadvantages, and uses

Fundamentals of Electricity

Define current, voltage, resistance and power

Define open circuit voltage and arc voltage

Explain the difference between alternating current and direct current

Discuss classification based on input, current type, and out put characteristics

Analyzes how duty cycle affects a power source

Explain how resistance will affect welding lead diameter and length

Explain direction of electron flow

Interpret chart to determine current type and amperage range for a given electrode

Arc Blow

Define edge effect and ground effect

List causes & cures for arc blow

Describe welding techniques to cope with arc blow

Mild steel electrodes

Define American Welding Society's classification system

Identify flux compositions

Explain electrode categories based on AWS "F" Group classification system

Explain the advantages and uses of electrodes in each category

Explain the significance of each part of AWS carbon and alloy steel covered electrode classification system

Explain the importance of matching alloyed electrodes to the base metal to be welded

OFW & OFC ~ Oxygen Fuel Welding & Cutting

Fundamentals of operation

Interpret oxygen fuel gas cutting chart to adjust pressures

Identify flame types

Describe correct torch to tip distance

Describe torch angle applications

Describe correct travel speed characteristics

Utilize chart for trouble shooting a cut

Gas Physics *(Oxygen and Acetylene)*

Explain pressure and volume changes

Describe properties of acetylene and oxygen

Define explosive limits

Describe properties of alternative fuel gases

Compare and contrast cylinder construction of acetylene and oxygen cylinders

OFW ~ Oxygen Fuel Welding

Understand theory of operation

Demonstrate how to set up, light, adjust, extinguish, and disassemble oxyfuel welding equipment safely

Define oxygen fuel welding process

Describe its uses

Know limitations

OFC ~ Oxygen Fuel Cutting

Understand theory of operation

Demonstrate how to set up, light, adjust, extinguish, and disassemble oxyfuel cutting equipment safely

Define oxygen fuel cutting process

Discuss exothermic reaction

Describe its uses

Know limitations

Explain why cutting process does not work for certain types of metals

GMAW ~ Gas Metal Arc Welding

Fundamentals of operation

Discuss the importance of the following terms: travel angle, work angle, travel speed, wire feed speed, amperage, electrode classification, filler metal metallurgy etc.

To build upon the skills learned in WLD 101, a continuing emphasis on the fundamentals and mechanics of welding with progressively more difficult lab exercises.

Demonstrate professional work ethics (Habits & Soft skills)

Understand and practice safe working habits in accordance with OSHA and AWS industry standards

Operate oxy-acetylene portable and track cutting systems in accordance with industry standards

Have a basic understanding of SMAW, advantages & disadvantages, operating characteristics, and uses.

Know and practice all five common weld joints

Weld common joints with the E7018 electrode to code quality standards in the flat, horizontal, vertical, and overhead positions

Complete fillet welds in a round

Construct air tight vessels

Knowledge of DT and NDT methods

Understanding of CJP and Keyhole welding and their relationship

Construct Bend Specimens in accordance with AWS standards

Practical Metallurgy

Understand the reasons for studying Metallurgy and it's applications in welding

Utilize and experience practical lab situations pertaining to Metallurgy

Understand Metallurgical & Chemical Terminology: (See list below)

Have a basic understanding of materials (both Ferrous & Nonferrous) and their properties

Understand Crystal Structure and atomic structure of materials

Understand failure & Deformation of metal

Understand Phase changes as it relates to Steel, atomic structure, characteristics, etc.

To build upon the skills learned in previous welding classes with a continuing emphasis on the fundamentals and mechanics of welding

Demonstrate professional work habits (Ethics & Soft skills)

Operate oxy-acetylene portable and track cutting systems in accordance with industry standards

Have a basic understanding of SMAW, advantages & disadvantages, operating characteristics, and uses.

Know and practice all five common weld joints (Butt, Corner, Tee, Lap, & Edge joints) Weld common joints with the E7018 electrode to code quality standards in the flat, horizontal, vertical, and overhead positions

Weld common joints with the E6011 electrode to code quality standards in the flat, horizontal positions (both whip and stringer methods will be discussed, demonstrated and practiced)

Interpret drawing and symbols to accurately layout a project; prepare and assemble to specified tolerances; and weld joints in accordance to AWS D1.1.

Continued practice in Oxy fuel cutting and Scarfing (OFC)

Air Carbon Arc Cutting (ACAC) and other methods of weldment repairs will be discussed, demonstrated and practiced

To build upon the skills learned in previous welding classes with a continuing emphasis on the fundamentals and mechanics of welding

Demonstrate professional work habits (Ethics & Soft skills)

Electrode manipulation All Positions (e.g. weave patters why, when to, and how)

Bend Test Specimens All Positions

Welding of Pipe & Plate (1G, 2G and 3G)

Horizontal rolled 1G

2G Pipe Vertical & fixed, welder moves around

3G Vertical groove welds in plate

Operate oxy-acetylene portable and track cutting systems in accordance with industry standards

Have a basic understanding of SMAW, advantages & disadvantages, operating characteristics, and uses.

Know and practice all five common weld joints (Butt, Corner, Tee, Lap, & Edge joints)

Weld common joints with the E7018 electrode to code quality standards in the flat, horizontal, vertical, and overhead positions

Weld common joints with the E6011 electrode to code quality standards in the flat, horizontal positions (both whip and stringer methods will be discussed, demonstrated and practiced)

Interpret drawing and symbols to accurately layout a project; prepare and assemble to specified tolerances; and weld joints in accordance to AWS D1.1.

Continued practice in Oxy fuel cutting and Scarfing (OFC)

Air Carbon Arc Cutting (ACAC) and other methods of weldment repairs will be discussed, demonstrated and practiced

Demonstrate professional work habits (Ethics & Soft skills)

Electrode manipulation All Positions (e.g. weave patters why, when to, and how)

Bend Test Specimens All Positions

Welding of plate and pipe (5G, 6G & 6GR)

5G pipe positioned horizontally and fixed welder changes position to complete the weld

6G & 6GR welds on pipe (6G 45° Inclined, 6GR 45° Inclined with a restriction ring)

Tack welding & Fabrication Fit-up according to WPS (written instruction)

Situational Weld test on Vessels and Bend specimens

Operate oxy-acetylene portable and track cutting systems in accordance with industry standards

Have a basic understanding of SMAW, advantages & disadvantages, operating characteristics, and uses.

Know and practice all five common weld joints (Butt, Corner, Tee, Lap, & Edge joints)

Weld common joints with the E7018 electrode to code quality standards in the flat, horizontal, vertical, and over head positions

Weld common joints with the E6011 electrode to code quality standards in the flat, horizontal positions (both whip and stringer methods will be discussed, demonstrated and practiced)

Interpret drawing and symbols to accurately layout a project; prepare and assemble to specified tolerances; and weld joints in accordance to AWS D1.1.

Continued practice in Oxy fuel cutting and Scarfing (OFC)

Air Carbon Arc Cutting (ACAC) and other methods of weldment repairs will be discussed, demonstrated and practiced

Know the basic lines involved in the construction of a blueprint

Sketch a three-view orthographic drawing from a pictorial view

Identify different views on a blueprint

Interpret notes and symbols on a blueprint

Understand, implement, and convert different scales and units of measurement (standard& metric)

Know and interpret weld symbols and dimensions

Construct a “List of Materials” from a given blueprint

Know the purpose of a “Title Block”

Demonstrate professional work habits (Ethics & Soft skills)

Interpret drawings and symbols to accurately layout a project; prepare and assemble to specified tolerances; all weld symbols are accordance to AWS standards.

To build upon the skills learned in previous welding classes with a continuing emphasis on the fundamentals and mechanics of welding

Demonstrate professional work habits (Ethics & Soft skills)

Bend Test Specimens All Positions

Tack welding & Fabrication Fit-up according to WPS (written instruction)

Situational Weld test on Vessels and Bend specimens

Know and practice all five common weld joints (Butt, Corner, Tee, Lap, & Edge joints)

Weld common joints with GMAW to code quality standards in the flat, horizontal, vertical, and overhead positions

Interpret drawing and symbols to accurately layout a project; prepare and assemble to specified tolerances; and weld joints in accordance to AWS D1.1.

Continued practice in Oxy fuel cutting and Scarfing (OFC)

GMAW ~ Gas Metal Arc Welding

Fundamentals of operation

Discuss the importance of the following terms: travel angle, work angle, travel speed, wire feed speed, amperage, electrode classification, filler metal metallurgy etc.

Gas Metal Arc Welding

Define Gas Metal Arc Welding (GMAW)

Discuss history and development

List advantages, disadvantages, and uses

Discuss Transfer modes (Short-circuit, Spray, Globular)

Shielding Gas Fundamentals

List advantages, disadvantages, and uses

Discuss history and development

Understand effect on welding process

Fundamentals of Electricity

Define current, voltage, resistance and power

Define open circuit voltage and arc voltage

Explain the difference between alternating current and direct current

Explain how resistance will affect welding lead diameter and length

Explain direction of electron flow

Interpret chart to determine current type and amperage range for a given work piece

PAC ~ Plasma Arc Cutting

PAC ~ Plasma Arc Cutting

Understand theory of operation

Demonstrate how to set up, adjust, extinguish, and disassemble and reassemble consumables for plasma cutting equipment safely

Define Plasma cutting process

Describe its uses

Know limitations

GTAW ~ Gas Tungsten Arc Welding

OFC ~ Oxygen Fuel Cutting

Understand theory of operation

Demonstrate how to set up, adjust, and disassemble and reassemble consumables and GTAW equipment safely

Define Gas Tungsten Arc Welding process

Describe its uses

Know limitations

Fundamentals of Electricity

Define current, voltage, resistance and power

Define open circuit voltage and arc voltage

Explain the difference between alternating current and direct current

Explain direction of electron flow

To build upon the skills learned in previous welding classes with a continuing emphasis on the fundamentals and mechanics of welding

Demonstrate professional work habits (Ethics & Soft skills)

Bend Test Specimens All Positions

Tack welding & Fabrication Fit-up according to WPS (written instruction)

Situational Weld test on Vessels and Bend specimens

Know and practice all five common weld joints (Butt, Corner, Tee, Lap, & Edge joints)

Weld common joints with GMAW to code quality standards in the flat, horizontal, vertical, and overhead positions

Interpret drawings and symbols to accurately layout a project; prepare and assemble to specified tolerances; and weld joints in accordance to AWS D1.1.

Continued practice in Oxy fuel cutting and Scarfing (OFC)

GMAW-P ~ Gas Metal Arc Welding - Pulse

Fundamentals of operation

Discuss the importance of the following terms: travel angle, work angle, travel speed, wire feed speed, amperage, electrode classification, filler metal metallurgy etc.

Gas Metal Arc Welding - Pulse

Define Gas Metal Arc Welding – Pulse (GMAW-P)

Discuss history and development

List advantages, disadvantages, and uses

Discuss Transfer modes (Short-circuit, Globular and Transition phase)

Understanding of Filler metal selection and wire classification

Wire melting and GMAW deposition rates

Weld metal preparation

Out of position welding techniques and practices

Fundamentals of Electricity

Define current, voltage, resistance and power

Define open circuit voltage and arc voltage

Explain the difference between alternating current and direct current

Explain how resistance will affect welding lead diameter and length

Explain direction of electron flow

Interpret chart to determine current type and amperage range for a given work piece

GTAW ~ Gas Tungsten Arc Welding

GTAW ~General

Understand theory of operation

Demonstrate how to set up, adjust, and disassemble and reassemble consumables and GTAW equipment safely

Define Gas Tungsten Arc Welding process

Describe its uses

Know limitations

Fundamentals of Electricity

Define current, voltage, resistance and power

Define open circuit voltage and arc voltage

Explain the difference between alternating current and direct current

Explain direction of electron flow

To build upon the skills learned in previous welding classes with a continuing emphasis on the fundamentals and mechanics of welding

Demonstrate professional work habits (Ethics & Soft skills)

Bend Test Specimens All Positions

Tack welding & Fabrication Fit-up according to WPS (written instruction)

Situational Weld test on Vessels and Bend specimens

Know and practice all five common weld joints (Butt, Corner, Tee, Lap, & Edge joints)

Weld common joints with FCAW to code quality standards in the flat, horizontal, vertical, and overhead positions

Interpret drawings and symbols to accurately layout a project; prepare and assemble to specified tolerances; and weld joints in accordance to AWS D1.1.

Continued practice in Oxy fuel cutting and Scarfing (OFC)

Flux-Cored Arc Welding – (Gas Shielded)

Fundamentals of operation

Discuss the importance of the following terms: travel angle, work angle, travel speed, wire feed speed, amperage, electrode classification, filler metal metallurgy etc.

Flux Cored Arc Welding – (Gas Shielded)

Define Flux Cored Arc Welding – (FCAW)

Discuss history and development

List advantages, disadvantages, and uses

Understanding of Filler metal selection and wire classification

Wire melting and FCAW deposition rates

Weld metal preparation

Out of position welding techniques and practices

List shielding gasses, properties & function

Fundamentals of Electricity

Define current, voltage, resistance and power

Define open circuit voltage and arc voltage

Explain how resistance will affect welding lead diameter and length

Interpret chart to determine current type and amperage range for a given work piece

To build upon the skills learned in previous welding classes with a continuing emphasis on the fundamentals and mechanics of welding

Demonstrate professional work habits (Ethics & Soft skills)

Bend Test Specimens All Positions

Tack welding & Fabrication Fit-up according to WPS (written instruction)

Situational Weld test on Vessels and Bend specimens

Know and practice all five common weld joints (Butt, Corner, Tee, Lap, & Edge joints)

Weld common joints with GMAW to code quality standards in the flat, horizontal, vertical, and overhead positions

Interpret drawings and symbols to accurately layout a project; prepare and assemble to specified tolerances; and weld joints in accordance to AWS D1.1.

Continued practice in Oxy fuel cutting and Scarfing (OFC)

UCC Program Revision

Please enter your information for the program revision you are proposing below. Your careful attention to the completion of all fields is appreciated. If you are unsure about how to enter something, please contact your Department Chair or Dean.

Basic Information

Name of Program Revision Contact: Martha Joyce

Contact Title: Chair & Instructor

Department: Business

Program Revision Information

Date, Year, and Term of Proposed Revision: Summer 2015

Program Title: Executive Business Assistant AAS

Revision Type - *select all that apply*

__ Credits
__ Title
__ Summary
__ Outcomes
_x_ Curriculum
__ Suspension
__ Reactivate
__ Delete
__ Repackage for a new area of concentration or certificate within existing program.
__ Other: *(please describe)*

Revised Outcomes *(If needed)*

Revision Description and Justification

Please give as many details as possible about the revision, including justification for the change.
As per the 2014 Office Administration Advisory Committee Meeting, revisions noted will lead to better ability to create timely and relevant pathways certificates. Changes noted on this revision include: (1) Changing the title of OA225 from Machine Transcription I to Document Processing to better reflect the end products being produced by students in this class; (2) Removing OA201 Word Processing Applications due to some redundancy with CIS125W and replacing it with BA253 Social Media Marketing to give students a new and current skill often desired in office settings.

Program Impacts - select all that apply

__ Instructional costs (staff, materials, equipment, or facilities) required.
__ Additional instructional costs (staff, materials, equipment, or facilities) are needed.
__ Impact to other divisions in terms of classes and staffing
_x_ Other: No extra costs.

Please list changes to program course listing below.

CURRENT				PROPOSED		
Course #	**Course Title**	**Credits**		**Course #**	**Course Title**	**Credits**
BA180	Business Mathematics I	3		same	same	same
CIS120	Introduction to Computer Information Systems	4		same	same	same
OA115	Administrative Office Professional	3		Same	Same	Same
OA116	Records Management	2		Same	Same	Same
OA131	Ten-Key Calculator	1		Same	Same	Same
WR121	English Composition: Intro to Argument	4		Same	Same	Same
BA116	Principles of Financial Services	4		Same	Same	Same
CIS125S	Computer Applications – Spreadsheets	3		Same	Same	Same
OA124 A	Keyboarding Skill Enhancement	3		Same	Same	Same
OA128	Editing for Business	3		Same	Same	Same
PSY101 or SP105 or SP218 or SP219	Psy of Human Relations or Listening Or Interpersonal Communications or Small Group Discussion	3		Same	Same	Same
BA101	Introduction to Business	4		Same	Same	Same
BA165	Customer Service	3		Same	Same	Same
CIS125 W	Computer Applications – Word Processing	3		Same	Same	Same

OA123	Formatting	4		Same	Same	Same
BA151	Practical Accounting I	4		Same	Same	Same
CIS125 E	Computer Applications – Email	2		Same	Same	Same
CIS125 R	Computer Applications – Presentation Software	2		Same	Same	Same
CWE16 1	CWE Seminar I	1		Same	Same	Same
OA201	Word Processing Applications	3		BA253	Social Media Marketing	3
OA280 A	CWE: Administrative Assistant/Office Assistant	3		Same	Same	Same
BA152	Practical Accounting II	3		Same	Same	Same
OA260	Principles of Office Management	3		Same	Same	same
BA226	Business Law	4		Same	Same	Same
OA225	Machine Transcription I	3		OA225	Document Processing	3
OA245	Office Administration	1		Same	Same	Same
BA218	Personal Finance	3		Same	Same	Same
CIS125 D	Computer Applications – Database	3		Same	Same	Same
OA250	General Office Procedures	3		Same	Same	Same
OA280 A	CWE: Administrative Assistant/Office Assistant	3		Same	Same	Same
BA214	Business Communications	3		Same	Same	Same

					Total credits for Program	91

Additional Documentation

Please check additional forms or documentation you have submitted to Curriculum Committee.

__ **Curriculum Revision Form**
__ **Start-Up and First Year Budget**
__ **Other**:

UCC Program Revision

Please enter your information for the program revision you are proposing below. Your careful attention to the completion of all fields is appreciated. If you are unsure about how to enter something, please contact your Department Chair or Dean.

Basic Information

Name of Program Revision Contact: Martha Joyce

Contact Title: Chair & Instructor

Department: Business

Program Revision Information

Date, Year, and Term of Proposed Revision: Summer 2015

Program Title: Office Assistant, One-Year Certificate

Revision Type - *select all that apply*

__ Credits
__ Title
__ Summary
__ Outcomes
_x_ Curriculum
__ Suspension
__ Reactivate
__ Delete
__ Repackage for a new area of concentration or certificate within existing program.
__ Other: *(please describe)*

Revised Outcomes *(If needed)*

Revision Description and Justification

Please give as many details as possible about the revision, including justification for the change.
We need to change the Approved Electives list as follows: (1) Remove OA201 Word Processing Applications as it is being eliminated in the EBA AAS which is closely associated with the Office Assistant program; (2) Adding these approved electives so that students can more seamlessly move into the EBA if desired: BA101 Introduction to Business 4 cr., BA116 Principles of Financial Services 4 cr., BA253 Social Media Marketing 3 cr., and BA214 Business Communications 3 cr.

Program Impacts - select all that apply

__ Instructional costs (staff, materials, equipment, or facilities) required.
__ Additional instructional costs (staff, materials, equipment, or facilities) are needed.
__ Impact to other divisions in terms of classes and staffing
_x_ Other: No impact

Please list changes to program course listing below.

CURRENT				PROPOSED		
Course #	**Course Title**	**Credits**		**Course #**	**Course Title**	**Credits**
CIS120	Intro to CIS	4		Same	Same	Same
OA131	Ten-Key Calculators	1		Same	Same	Same
OA115	Administrative Office Professional	3		Same	Same	Same
OA128	Editing for Business	3		Same	Same	same
PSY101 Or SP105 Or SP218 Or SP219	Psy of Human Relations Or Listening Or Interpersonal Communication or Small Group Discussion	3		Same	Same	same
BA151	Practical Accounting I	4		Same	Same	Same
OA116	Records Management	2		Same	Same	Same
WR115	Intro to Expository Writing (or higher)	4		Same	Same	Same
BA180	Business Mathematics I	3		Same	Same	Same
OA124 A	Keyboarding Skill Enhancement	3		Same	Same	Same
BA165	Customer Service	3		Same	Same	Same
OA123	Formatting	4		Same	Same	Same
CWE16 1	CWE Seminar I	1		Same	Same	Same
OA250	General Office Procedures	3		Same	Same	Same
	Elective if needed to reach 45 credits	4			Elective: Choose from approved elective list	same

	APPROVED ELECTIVE LIST					
BA152	Practical Accounting II	4		Same	Same	same
CIS140 W	Introduction to Windows	2		Same	Same	Same
OA280 A	CWE: Administrative Assistant/Office Assistant	1-4		Same	Same	Same
OA201	Word Processing Applications	3		BA101 BA116 BA253 BA214	Introduction to Business Prin. of Financial Services Social Media Marketing Business Communications	4 4 3 3
					Total credits for Program	45

Additional Documentation

Please check additional forms or documentation you have submitted to Curriculum Committee.

__ **Curriculum Revision Form**
__ **Start-Up and First Year Budget**
__ **Other**:

UCC Program Revision

Please enter your information for the program revision you are proposing below. Your careful attention to the completion of all fields is appreciated. If you are unsure about how to enter something, please contact your Department Chair or Dean.

Basic Information

Name of Program Revision Contact: John Blakely

Contact Title: Department Chair

Department: Automotive

Program Revision Information

Date, Year, and Term of Proposed Revision: Summer term 2015

Program Title: Automotive

Revision Type - *select all that apply*

X_ Credits
__ Title
__ Summary
X_ Outcomes
X Curriculum
__ Suspension
__ Reactivate
__ Delete
__ Repackage for a new area of concentration or certificate within existing program.
__ Other: *(please describe)*

Revised Outcomes *(If needed)*

Updated to meet current NATEF requirements

Revision Description and Justification

Please give as many details as possible about the revision, including justification for the change.

UCC's automotive program ran with T-TEN courses infused into the general program. With the requirement of the T-TEN program running stand alone the general program no longer will have T-TEN (Toyota) curriculum infused.

Program Impacts - select all that apply

__ Instructional costs (staff, materials, equipment, or facilities) required.
__ Additional instructional costs (staff, materials, equipment, or facilities) are needed.
__ Impact to other divisions in terms of classes and staffing
__ Other:

Please list changes to program course listing below.

CURRENT				PROPOSED		
Course #	**Course Title**	**Credits**		**Course #**	**Course Title**	**Credits**
AUT100	Orientation to Automotive Technology	1		AUT100	Orientation to Automotive Technology	1
AUT168	Auto Electricity I	5		AUT168	Auto Electricity I	5
AUT169	Auto Electricity II	5		AUT169	Auto Electricity II	5
AUT170	Auto Electricity III	4		AUT170	Auto Electricity III	5
AUT155	Automotive Brakes	6		AUT155	Automotive Brakes	6
AUT151	Internal Combustion Engines	6		AUT151	Internal Combustion Engines	6
AUT161	Power Trains	4		AUT161	Power Trains	5
AUT259	Electronic Engine Controls I	5		AUT259	Electronic Engine Controls I	5
AUT260	Electronic Engine Controls II	5		AUT260	Electronic Engine Controls II	5
AUT289	Electronic Engine Controls III	4		AUT289	Electronic Engine Controls III	5
AUT263	Automatic Transmissions	6		AUT263	Automatic Transmissions	6
AUT286	Climate Control Systems	5		AUT286	Climate Control Systems	5
AUT250	Suspension and Alignment	5		AUT250	Suspension and Alignment	5
	Math 52 or higher	4			Math 52 or higher	4
	Writing 115 or higher	3			Writing 115 or higher	3
	HPE295 or HE252	3			HPE295 or HE252	3
	CIS120 or CIS125A	3			CIS100 Intro to Windows and PCs	3
	Wld101	4			Wld101	4

	PSY101	3			PSY101	3
	Electives 100 level or higher	11			Electives 100 level or higher	8
	Total credits	92				
					Total credits for Program	92

Additional Documentation

Please check additional forms or documentation you have submitted to Curriculum Committee.

__ **Curriculum Revision Form**
__ **Start-Up and First Year Budget**
X_ **Other**: Course revision and outlines

UCC Program Revision

Please enter your information for the program revision you are proposing below. Your careful attention to the completion of all fields is appreciated. If you are unsure about how to enter something, please contact your Department Chair or Dean.

Basic Information

Name of Program Revision Contact: John Blakely

Contact Title: Department Chair

Department: Automotive

Program Revision Information

Date, Year, and Term of Proposed Revision: Summer term 2015

Program Title: Automotive Basic Technician Career Pathways Certificate

Revision Type - *select all that apply*

X_ Credits
__ Title
__ Summary
X_ Outcomes
X_ Curriculum
__ Suspension
__ Reactivate
__ Delete
__ Repackage for a new area of concentration or certificate within existing program.
__ Other: *(please describe)*

Revised Outcomes *(If needed)*

Revision Description and Justification

Please give as many details as possible about the revision, including justification for the change.

UCC's automotive program ran with T-TEN courses infused into the general program. With the requirement of the T-TEN program running stand alone the general program no longer will have T-TEN (Toyota) curriculum infused.

Program Impacts - select all that apply

__ Instructional costs (staff, materials, equipment, or facilities) required.

__ Additional instructional costs (staff, materials, equipment, or facilities) are needed.

__ Impact to other divisions in terms of classes and staffing

__ Other:

Please list changes to program course listing below.

CURRENT				PROPOSED		
Course #	**Course Title**	**Credits**		**Course #**	**Course Title**	**Credits**
AUT151	Internal Combustion Engines	6		AUT100	Orientation to Automotive Technology	1
AUT155	Automotive Brakes	6		AUT151	Internal Combustion Engines	6
AUT161	Power Trains	4		AUT155	Automotive Brakes	6
AUT168	Automotive Electricity I	5		AUT161	Power Trains	5
AUT169	Automotive Electricity II	5		AUT168	Automotive Electricity I	5
AUT170	Automotive Electricity III	4		AUT169	Automotive Electricity II	5
				AUT170	Automotive Electricity III	5

					Total credits for Program	33

Additional Documentation

Please check additional forms or documentation you have submitted to Curriculum Committee.

__ **Curriculum Revision Form**
__ **Start-Up and First Year Budget**
__ **Other**:

UCC Program Revision

Please enter your information for the program revision you are proposing below. Your careful attention to the completion of all fields is appreciated. If you are unsure about how to enter something, please contact your Department Chair or Dean.

Basic Information

Name of Program Revision Contact: John Blakely

Contact Title: Department Chair

Department: Automotive

Program Revision Information

Date, Year, and Term of Proposed Revision: Summer 2015

Program Title: Automotive Advanced Technician Career Pathways Certificate

Revision Type - *select all that apply*

X_ Credits
__ Title
__ Summary
X_ Outcomes
X_ Curriculum
__ Suspension
__ Reactivate
__ Delete
__ Repackage for a new area of concentration or certificate within existing program.
__ Other: *(please describe)*

Revised Outcomes *(If needed)*

Revision Description and Justification

Please give as many details as possible about the revision, including justification for the change.

UCC's automotive program ran with T-TEN courses infused into the general program. With the requirement of the T-TEN program running stand alone the general program no longer will have T-TEN (Toyota) curriculum infused.

Program Impacts - select all that apply

__ Instructional costs (staff, materials, equipment, or facilities) required.

__ Additional instructional costs (staff, materials, equipment, or facilities) are needed.

__ Impact to other divisions in terms of classes and staffing

__ Other:

Please list changes to program course listing below.

CURRENT				PROPOSED		
Course #	**Course Title**	**Credits**		**Course #**	**Course Title**	**Credits**
AUT250	Suspension and Alignment	5		AUT250	Suspension and Alignment	5
AUT259	Electronic Engine Controls I	5		AUT259	Electronic Engine Controls I(	5
AUT260	Electronic Engine Controls II	5		AUT260	Electronic Engine Controls II	5
AUT263	Automatic Transmissions	6		AUT263	Automatic Transmissions	6
AUT286	Climate Control Systems	5		AUT286	Climate Control Systems	5
AUT289	Electronic Engine Controls III	4		AUT289	Electronic Engine Controls III	5

					Total credits for Program	31

Additional Documentation

Please check additional forms or documentation you have submitted to Curriculum Committee.

__ **Curriculum Revision Form**
__ **Start-Up and First Year Budget**
__ **Other**:

UCC Course Revision

Basic Information

Name of Course Revision Contact: Martha Joyce
Date: November 10, 2014
Contact Title: Chair & Instructor
Department: Business
Course Number: OA225
Course Title: Current: Machine Transcription I; Proposed: Document Processing

Course Revision Information

Type of change

_x_ Revision
__ Reactivation
__ Deletion

Date, Year, and Term of Proposed Revision: Summer 2015

Parent Program: Executive Business Assistant AAS

Course Revision Description and Justification

Please give as many details as possible about the revision, including justification for the change.
The new title was approved at the 2014 Office Administration Advisory Committee Meeting. It better reflects the end products that students are producing in the class and begins to move the emphasis away from "transcription" which is becoming outdated. Added an additional outcome to reflect a skill in accurate scribing.

Course Revision Impacts - *select all that apply*

__ Instructional costs (staff, materials, equipment, or facilities) required.
__ Additional instructional costs (staff, materials, equipment, or facilities) are needed.
__ Impact to other divisions in terms of classes and staffing
__ Other:

Description of Impact

If your revision will have one of the impacts listed above, please describe...

List current information and proposed changes

	CURRENT			PROPOSED *if no changes put "same"*
Course number	OA225		Course number	Same
Course title	Machine Transcription I		Course title	Document Processing
Credits	3		Credits	Same
Lecture Hrs/Wk	2		Lecture Hrs/Wk	same
Lec/Lab Hrs/Wk			Lec/Lab Hrs/Wk	
Lab/Hrs/Wk	3		Lab/Hrs/Wk	same
Practicum			Practicum	
Banner/Instr. Prerequisites	Banner-enforced: OA128 & OA123 or instructor approval; Instructor-enforced: keyboard 40 wpm or instructor approval		Banner/Instr. Prerequisites	same
Co-requisites			Co-requisites	
Length (Weeks)	11		Length (Weeks)	same
Terms Offered	W		Terms Offered	S
Grading Option	A-F		Grading Option	Same
Load Factor	4.1		Load Factor	Same

Additional Documentation

Please check additional forms or documentation you have submitted to Curriculum Committee.

_x_ Course Outline - required

__ Other:

UCC Course Outline

Course No:	OA225
Course Credit:	3
Lecture Hrs/wk:	2
Lab Hrs/Wk:	3
Lecture/Lab Hrs/Wk:	
Practicum Hrs/Wk:	
Clock Hours:	55
Length of Course	11 wks.
Banner enforced Prerequisite:	OA128 & OA 123 or instructor approval
Instructor enforced Prerequisite:	Keyboard speed 40 wpm or instructor approval
Co-Requisite:	
Load Factor:	4.1
Activity Code:	210 CTE Preparatory
CIPS:	520408

Course Title: Document Processing
Developed By**:** Edna Wilmeth
Development Date: unknown
Revision Date: November 2014
Review Date:

COURSE DESCRIPTION: Covers the preparation of business documents from pre-recorded dictation using a transcription equipment and word processing software. Reviews pre-transcription skills for spelling, word usage, grammar, and punctuation, which are essential for successful completion of the course. Also introduces students to practical skills in taking accurate notes digitally.

COURSE OUTCOMES: At course completion, students should be able to:

- Operate transcription equipment.
- Review and apply correct rules of punctuation.
- Type continuously while transcribing.
- Produce a mailable copy with the first typing.
- Use reference materials effectively.
- Use well-organized transcription techniques.
- Take accurate notes digitally.

UCC Course Revision

Basic Information

Name of Course Revision Contact: John Blakely
Date: 11/10/14
Contact Title: Department Chair
Department: Automotive
Course Number: AUT100
Course Title: Orientation to Automotive Technology

Course Revision Information

Type of change

X Revision
__ Reactivation
_ Deletion

Date, Year, and Term of Proposed Revision: Summer Term 2015

Parent Program: Automotive

Course Revision Description and Justification

Please give as many details as possible about the revision, including justification for the change.
UCC's automotive program ran with T-TEN courses infused into the general program. With the requirement of the T-TEN program running stand alone the general program no longer will have T-TEN (Toyota) curriculum infused.

Course Revision Impacts - *select all that apply*

__ Instructional costs (staff, materials, equipment, or facilities) required.
__ Additional instructional costs (staff, materials, equipment, or facilities) are needed.
__ Impact to other divisions in terms of classes and staffing
__ Other:

Description of Impact

If your revision will have one of the impacts listed above, please describe...

List current information and proposed changes

	CURRENT			**PROPOSED** *if no changes put "same"*
Course number	AUT100		Course number	same
Course title	Orientation to Automotive Technology		Course title	same
Credits	1		Credits	same
Lecture Hrs/Wk	1		Lecture Hrs/Wk	same
Lec/Lab Hrs/Wk			Lec/Lab Hrs/Wk	
Lab/Hrs/Wk			Lab/Hrs/Wk	
Practicum			Practicum	
Banner/Instr. Prerequisites			Banner/Instr. Prerequisites	
Co-requisites			Co-requisites	
Length (Weeks)	1		Length (Weeks)	Term
Terms Offered	FWS		Terms Offered	Summer, Fall
Grading Option	P/F		Grading Option	same
Load Factor	1		Load Factor	same

Additional Documentation

Please check additional forms or documentation you have submitted to Curriculum Committee.

X_ Course Outline - required

__ Other:

UCC Course Outline

Course No: AUT100
Course Credit: 1
Lecture Hrs/wk: 1
Lab Hrs/Wk:
Lecture/Lab Hrs/Wk:
Practicum Hrs/Wk:
Clock Hours: 11
Length of Course: Term
Banner enforced Prerequisite:
Instructor enforced Prerequisite:
Co-Requisite:
Load Factor: 1ILC
Activity Code: 210 CTE Preparatory
CIPS: 470604

Course Title: Orientation to Automotive Technology
Developed By**:** John Blakely
Development Date: 1/11/2013
Revision Date: 11/10/2014
Review Date:

COURSE DESCRIPTION: Orientation to Automotive Technology is required for all students entering the Automotive Program. Students will be accepted into the program based on successful completion of the application process. User name and passwords will be issued needed for automotive classes. Shop and environmental safety course will be assigned to be completed before students are able to work in the auto shop lab.

COURSE OUTCOMES: At the end of the course the successful student will:

1. Have completed application for user name and password for Snap-on training.
2. Be able to log on to and navigate CDX.
3. Be able to log on to ShopKey.
4. Be able to log on to and navigate SP2.

UCC Course Revision

Basic Information

Name of Course Revision Contact: John Blakely
Date: 11/10/14
Contact Title: Department Chair
Department: Automotive
Course Number: AUT151
Course Title: Internal Combustion Engines

Course Revision Information

Type of change

X_ Revision
__ Reactivation
__ Deletion

Date, Year, and Term of Proposed Revision: Summer Term 2015

Parent Program: Automotive

Course Revision Description and Justification

Please give as many details as possible about the revision, including justification for the change.
UCC's automotive program ran with T-TEN courses infused into the general program. With the requirement of the T-TEN program running stand alone the general program no longer will have T-TEN (Toyota) curriculum infused.

Course Revision Impacts - *select all that apply*

__ Instructional costs (staff, materials, equipment, or facilities) required.
__ Additional instructional costs (staff, materials, equipment, or facilities) are needed.
__ Impact to other divisions in terms of classes and staffing
__ Other:

Description of Impact

If your revision will have one of the impacts listed above, please describe...

List current information and proposed changes

	CURRENT			**PROPOSED** *if no changes put "same"*
Course number	AUT151		Course number	same
Course title	Internal Combustion Engines		Course title	same
Credits	6		Credits	same
Lecture Hrs/Wk	3		Lecture Hrs/Wk	4
Lec/Lab Hrs/Wk			Lec/Lab Hrs/Wk	
Lab/Hrs/Wk	9		Lab/Hrs/Wk	7
Practicum			Practicum	
Banner/Instr. Prerequisites	AUT100		Banner/Instr. Prerequisites	AUT171
Co-requisites			Co-requisites	
Length (Weeks)	6		Length (Weeks)	Term
Terms Offered	F, Sp		Terms Offered	Sp
Grading Option	A-F		Grading Option	same
Load Factor	9.3 ILC		Load Factor	8.9 ILC

Additional Documentation

Please check additional forms or documentation you have submitted to Curriculum Committee.

X_ Course Outline - required

__ Other:

UCC Course Outline

Course No: AUT151
Course Credit: 6
Lecture Hrs/wk: 4
Lab Hrs/Wk: 7
Lecture/Lab Hrs/Wk:
Practicum Hrs/Wk:
Clock Hours: 120
Length of Course: Term
Banner enforced Prerequisite:
Instructor enforced Prerequisite: AUT170
Co-Requisite:
Load Factor: 8.9 ILC
Activity Code: 210 CTE Preparatory
CIPS: 470604

Course Title: Internal Combustion Engines
Developed By**:** John Blakely
Development Date:
Revision Date: 11/05/2014
Review Date:

COURSE DESCRIPTION: The operating principles and function of each of the major parts of the reciprocating piston internal combustion engine are presented and discussed. Service, overhaul, and troubleshooting techniques as they relate to each component are also covered.

COURSE OUTCOMES: At the end of the course, the successful student will be able to:

1. Correctly identify the major parts of the internal combustion, reciprocating piston engine.
2. Correctly identify the common hand tools utilized in an engine overhaul.
3. Identify the basic operating principles of the internal combustion engine.
4. Disassemble, measure, and correctly re-assemble an automotive engine.
5. Use the electronic repair manuals to find engine mechanical specifications and repair procedures.

UCC Course Revision

Basic Information

Name of Course Revision Contact: John Blakely
Date: 11/10/14
Contact Title: Department Chair
Department: Automotive
Course Number: AUT155
Course Title: Automotive Brakes

Course Revision Information

Type of change

X_ Revision
__ Reactivation
__ Deletion

Date, Year, and Term of Proposed Revision: Summer Term 2015

Parent Program: Automotive

Course Revision Description and Justification

Please give as many details as possible about the revision, including justification for the change.
UCC's automotive program ran with T-TEN courses infused into the general program. With the requirement of the T-TEN program running stand alone the general program no longer will have T-TEN (Toyota) curriculum infused.

Course Revision Impacts - *select all that apply*

__ Instructional costs (staff, materials, equipment, or facilities) required.
__ Additional instructional costs (staff, materials, equipment, or facilities) are needed.
__ Impact to other divisions in terms of classes and staffing
__ Other:

Description of Impact

If your revision will have one of the impacts listed above, please describe...

List current information and proposed changes

	CURRENT			**PROPOSED** *if no changes put "same"*
Course number	AUT155		Course number	same
Course title	Automotive Brakes		Course title	same
Credits	6		Credits	same
Lecture Hrs/Wk	3		Lecture Hrs/Wk	4
Lec/Lab Hrs/Wk			Lec/Lab Hrs/Wk	
Lab/Hrs/Wk	9		Lab/Hrs/Wk	7
Practicum			Practicum	
Banner/Instr. Prerequisites	AUT170		Banner/Instr. Prerequisites	same
Co-requisites			Co-requisites	
Length (Weeks)	6		Length (Weeks)	Term
Terms Offered	W, Sp		Terms Offered	W
Grading Option	A-F		Grading Option	same
Load Factor	9.3 ILC		Load Factor	8.9 ILC

Additional Documentation

Please check additional forms or documentation you have submitted to Curriculum Committee.

X_ Course Outline - required

__ Other:

UCC Course Outline

Course No: AUT155
Course Credit: 6
Lecture Hrs/wk: 4
Lab Hrs/Wk: 7
Lecture/Lab Hrs/Wk:
Practicum Hrs/Wk:
Clock Hours: 120
Length of Course: Term
Banner enforced Prerequisite:
Instructor enforced Prerequisite: AUT170
Co-Requisite:
Load Factor: 8.9 ILC
Activity Code: 210 CTE Preparatory
CIPS: 470604

Course Title: Automotive Brakes
Developed By**:** John Blakely
Development Date:
Revision Date: 11/05/2014
Review Date:

COURSE DESCRIPTION: A course designed to teach students the principles of automotive brakes. Basic concepts and terminology, fundamental principles, diagnosis and overhaul techniques are an integral part of this course. Special emphasis is placed on the study, diagnosis and repair of braking systems found on late model, domestic and import vehicles. The student should acquire knowledge of brake systems and trouble-shooting procedures for disc and drum brakes. Students will be taught to properly use industry standard equipment to service disk and drum brake components and systems to manufacture standards. Computer controlled systems integrated into the automotive brake system will be studied.

COURSE OUTCOMES: Upon course completion the successful student will know and be able to:

1. State the basic principles of brakes.
2. Identify the major types of automotive brakes.
3. Identify, diagnose and correct common automotive brake malfunctions.
4. Identify the major types of power brake systems.
5. State the operating principles of the power brake system.
6. State the basic operating principles of an anti-lock braking system.
7. Disassemble, inspect, and repair drum and disc brake systems.
8. Inspect, diagnose and repair an anti-lock braking system.
9. Diagnose and interpret the results of a computer controlled brake system fault.

UCC Course Revision

Basic Information

Name of Course Revision Contact: John Blakely
Date: 11/10/14
Contact Title: Department Chair
Department: Automotive
Course Number: AUT161
Course Title: Power Trains

Course Revision Information

Type of change

X_ Revision
__ Reactivation
__ Deletion

Date, Year, and Term of Proposed Revision: Summer Term 2015

Parent Program: Automotive

Course Revision Description and Justification

Please give as many details as possible about the revision, including justification for the change.
UCC's automotive program ran with T-TEN courses infused into the general program. With the requirement of the T-TEN program running stand alone the general program no longer will have T-TEN (Toyota) curriculum infused.

Course Revision Impacts - *select all that apply*

__ Instructional costs (staff, materials, equipment, or facilities) required.
__ Additional instructional costs (staff, materials, equipment, or facilities) are needed.
__ Impact to other divisions in terms of classes and staffing
__ Other:

Description of Impact

If your revision will have one of the impacts listed above, please describe...

List current information and proposed changes

	CURRENT			PROPOSED *if no changes put "same"*
Course number	AUT161		Course number	same
Course title	Power Trains		Course title	same
Credits	4		Credits	5
Lecture Hrs/Wk	2.25		Lecture Hrs/Wk	3
Lec/Lab Hrs/Wk			Lec/Lab Hrs/Wk	
Lab/Hrs/Wk	6.75		Lab/Hrs/Wk	6
Practicum			Practicum	
Banner/Instr. Prerequisites	AUT100		Banner/Instr. Prerequisites	AUT170
Co-requisites			Co-requisites	
Length (Weeks)	4		Length (Weeks)	Term
Terms Offered	F, Sp		Terms Offered	Sp
Grading Option	A-F		Grading Option	same
Load Factor	7.0		Load Factor	7.2 ILC

Additional Documentation

Please check additional forms or documentation you have submitted to Curriculum Committee.

X_ Course Outline - required

__ Other:

UCC Course Outline

Course No: AUT161
Course Credit: 5
Lecture Hrs/wk: 3
Lab Hrs/Wk: 6
Lecture/Lab Hrs/Wk:
Practicum Hrs/Wk:
Clock Hours: 96
Length of Course: Term
Banner enforced Prerequisite:
Instructor enforced Prerequisite: AUT170
Co-Requisite:
Load Factor: 7.2ILC
Activity Code: 210 CTE Preparatory
CIPS: 470604

Course Title: Power Trains
Developed By**:** John Blakely
Development Date:
Revision Date:11/05/2014
Review Date:

COURSE DESCRIPTION: Power Trains details the theory, operation, diagnosis and service of modern drive train components. This includes information on the latest clutches, manual transmissions and transaxles, solid and independent rear axle assemblies, drive shafts, drive axles, U-joints and CV joints. Basic drive train components such as gears, bearings and seals are identified and explained. This course also includes detailed explanations of the operation of electronically controlled systems. Scan tool use and code retrieval to aid in diagnosis are also covered.

COURSE OUTCOMES: Upon course completion the successful student will know and be able to:

1. List the basic functions of a drive train including gears, chains, bearings and seals
2. List and follow safe work procedures, and proper tool usage.
3. Understand the theory, operation, diagnosis and service of a clutch assembly
4. Understand the theory, operation, diagnosis and service of manual transmissions/axles
5. Understand the theory, operation, diagnosis and service of FWD & RWD drive shafts.
6. Understand the theory, operation, diagnosis and service of rear axle assemblies.
7. Understand the theory, operation, diagnosis and service of 4WD assemblies/components.
8. Explain and Identify noise, vibration and harshness.

UCC Course Revision

Basic Information

Name of Course Revision Contact: John Blakely
Date: 11/10/14
Contact Title: Department Chair
Department: Automotive
Course Number: AUT168
Course Title: Auto Electricity I

Course Revision Information

Type of change

X_ Revision
__ Reactivation
__ Deletion

Date, Year, and Term of Proposed Revision: Summer Term 2015

Parent Program: Automotive

Course Revision Description and Justification

Please give as many details as possible about the revision, including justification for the change.
UCC's automotive program ran with T-TEN courses infused into the general program. With the requirement of the T-TEN program running stand alone the general program no longer will have T-TEN (Toyota) curriculum infused.

Course Revision Impacts - *select all that apply*

__ Instructional costs (staff, materials, equipment, or facilities) required.
__ Additional instructional costs (staff, materials, equipment, or facilities) are needed.
__ Impact to other divisions in terms of classes and staffing
__ Other:

Description of Impact

If your revision will have one of the impacts listed above, please describe...

List current information and proposed changes

	CURRENT			**PROPOSED** *if no changes put "same"*
Course number	AUT168		Course number	same
Course title	Auto Electricity I		Course title	same
Credits	5		Credits	same
Lecture Hrs/Wk	2.625		Lecture Hrs/Wk	3
Lec/Lab Hrs/Wk			Lec/Lab Hrs/Wk	
Lab/Hrs/Wk	7.875		Lab/Hrs/Wk	7
Practicum			Practicum	
Banner/Instr. Prerequisites	AUT100		Banner/Instr. Prerequisites	same
Co-requisites			Co-requisites	
Length (Weeks)	5		Length (Weeks)	Term
Terms Offered	F, W		Terms Offered	F
Grading Option	A-F		Grading Option	same
Load Factor	8.2		Load Factor	7.9 ILC

Additional Documentation

Please check additional forms or documentation you have submitted to Curriculum Committee.

X_ Course Outline - required

__ Other:

UCC Course Outline

Course No: AUT168
Course Credit: 5
Lecture Hrs/wk: 3
Lab Hrs/Wk: 7
Lecture/Lab Hrs/Wk:
Practicum Hrs/Wk:
Clock Hours: 105
Length of Course: Term
Banner enforced Prerequisite:
Instructor enforced Prerequisite: AUT100
Co-Requisite:
Load Factor: 7.9 ILC
Activity Code: 210 CTE Preparatory
CIPS: 47064

Course Title: Auto Electricity I
Developed By**:** John Blakely
Development Date:
Revision Date: 11/05/2014
Review Date:

COURSE DESCRIPTION: This is the first of three courses focusing on electrical and electronic systems for automotive students. Electrical theory, circuits, and devices such as batteries, starters, alternators and test meters will be covered. All concepts discussed in the classroom will be reinforced in lab. The integration of applied mathematics, chemistry, physics, and other scientific concepts is a large portion of this course. Practical skills established include: component identification, wiring techniques, test equipment usage, safety practices, and appropriate work habits.

COURSE OUTCOMES: Upon course completion the successful student will know and be able to:

1. Identify common electrical components by name, symbol and physical description.
2. State the relationship between voltage, amperage and resistance (ohms).
3. Demonstrate the correct usage of both digital and analog meters.
4. State the difference between the current flow and electron flow theories.
5. Identify series, parallel and series-parallel circuits.
6. State the operating principles and ratings of different types of batteries.
7. Explain the basic principles of both direct (DC) and alternating (AC) current.
8. State the operating characteristics of diodes and transistors (both NPN and PNP).
9. Have had the opportunity to design, operate, and troubleshoot electrical circuits.
10. Demonstrate the ability to work safely and as a productive member of a team.

UCC Course Revision

Basic Information

Name of Course Revision Contact: John Blakely
Date: 11/10/14
Contact Title: Department Chair
Department: Automotive
Course Number: AUT169
Course Title: Auto Electricity II

Course Revision Information

Type of change

X_ Revision
__ Reactivation
__ Deletion

Date, Year, and Term of Proposed Revision: Summer Term 2015

Parent Program: Automotive

Course Revision Description and Justification

Please give as many details as possible about the revision, including justification for the change.
UCC's automotive program ran with T-TEN courses infused into the general program. With the requirement of the T-TEN program running stand alone the general program no longer will have T-TEN (Toyota) curriculum infused.

Course Revision Impacts - *select all that apply*

__ Instructional costs (staff, materials, equipment, or facilities) required.
__ Additional instructional costs (staff, materials, equipment, or facilities) are needed.
__ Impact to other divisions in terms of classes and staffing
__ Other:

Description of Impact

If your revision will have one of the impacts listed above, please describe...

List current information and proposed changes

	CURRENT			**PROPOSED** *if no changes put "same"*
Course number	AUT169		Course number	same
Course title	Auto Electricity II		Course title	same
Credits	5		Credits	5
Lecture Hrs/Wk	2.625		Lecture Hrs/Wk	3
Lec/Lab Hrs/Wk			Lec/Lab Hrs/Wk	
Lab/Hrs/Wk	7.875		Lab/Hrs/Wk	7
Practicum			Practicum	
Banner/Instr. Prerequisites	AUT168		Banner/Instr. Prerequisites	same
Co-requisites			Co-requisites	
Length (Weeks)	5		Length (Weeks)	Term
Terms Offered	F, W		Terms Offered	F
Grading Option	A-F		Grading Option	same
Load Factor	8.2		Load Factor	7.9 ILC

Additional Documentation

Please check additional forms or documentation you have submitted to Curriculum Committee.

X_ Course Outline - required

__ Other:

UCC Course Outline

Course No: AUT169
Course Credit: 5
Lecture Hrs/wk: 3
Lab Hrs/Wk: 7
Lecture/Lab Hrs/Wk:
Practicum Hrs/Wk:
Clock Hours: 105
Length of Course: Term
Banner enforced Prerequisite:
Instructor enforced Prerequisite: AUT168
Co-Requisite:
Load Factor: 7.9 ILC
Activity Code: 210 CTE Preparatory
CIPS: 470604

Course Title: Auto Electricity II
Developed By**:** John Blakely
Development Date:
Revision Date: 11/05/2014
Review Date:

COURSE DESCRIPTION: In part one of this sequence the topic of study was centered on basic electrical principles. The identification of different types of circuits and how they work, including the application of Ohm's law to demonstrate the relationship between current, voltage and resistance was also covered. A continuance of the battery and starting systems will carry over briefly as a review and will be discussed when the topics applied to the concepts at hand. In this course we will take those concepts one-step further and apply them directly to the work that you'll do anytime you diagnose an electrical problem. Drawing from your prior learning in part one of this sequence, you will apply that knowledge in detail toward the diagnosis of electrical systems utilizing all resources available.

COURSE OUTCOMES: Upon course completion the successful student will know and be able to:

1. Demonstrate to their instructor they can apply the principles and basic electrical concepts learned in Automotive Electricity I to the automobile's electrical systems.
2. Demonstrate to their instructor the use of the Toyota Electrical Wiring Diagram (EWD) Manual, and apply its use to the diagnostics process on a bugged lab vehicle.
3. Demonstrate proper diagnostic techniques to include tracing current flow using an EWD as well as on a live vehicle and properly report their results.
4. Demonstrate to their instructor through extensive hands-on worksheets their ability to properly use digital multimeters, voltmeters, ammeters, ohmmeters, and different automotive scan tools to diagnose bugged lab vehicles and properly interpret the results.

5. Diagnose the five basic types of electrical circuit problems including: open circuits, shorts and parasitic draws, high resistance and electrical feedback problems and properly record the results.
6. Demonstrated the ability to work safely and as a productive member of a team.

UCC Course Revision

Basic Information

Name of Course Revision Contact: John Blakely
Date: 11/10/14
Contact Title: Department Chair
Department: Automotive
Course Number: AUT170
Course Title: Auto Electricity III

Course Revision Information

Type of change

X_ Revision
__ Reactivation
__ Deletion

Date, Year, and Term of Proposed Revision: Summer Term 2015

Parent Program: Automotive

Course Revision Description and Justification

Please give as many details as possible about the revision, including justification for the change.
UCC's automotive program ran with T-TEN courses infused into the general program. With the requirement of the T-TEN program running stand alone the general program no longer will have T-TEN (Toyota) curriculum infused.

Course Revision Impacts - *select all that apply*

__ Instructional costs (staff, materials, equipment, or facilities) required.
__ Additional instructional costs (staff, materials, equipment, or facilities) are needed.
__ Impact to other divisions in terms of classes and staffing
__ Other:

Description of Impact

If your revision will have one of the impacts listed above, please describe...

List current information and proposed changes

	CURRENT			**PROPOSED** *if no changes put "same"*
Course number	AUT170		Course number	same
Course title	Auto Electricity III		Course title	same
Credits	4		Credits	5
Lecture Hrs/Wk	2.25		Lecture Hrs/Wk	3
Lec/Lab Hrs/Wk			Lec/Lab Hrs/Wk	
Lab/Hrs/Wk	6.75		Lab/Hrs/Wk	6
Practicum			Practicum	
Banner/Instr. Prerequisites	AUT169		Banner/Instr. Prerequisites	same
Co-requisites			Co-requisites	
Length (Weeks)	4		Length (Weeks)	Term
Terms Offered	W		Terms Offered	same
Grading Option	A-F		Grading Option	same
Load Factor	7		Load Factor	7.2 ILC

Additional Documentation

Please check additional forms or documentation you have submitted to Curriculum Committee.

X_ Course Outline - required

__ Other:

UCC Course Outline

Course No: AUT170
Course Credit: 5
Lecture Hrs/wk: 3
Lab Hrs/Wk: 6
Lecture/Lab Hrs/Wk:
Practicum Hrs/Wk:
Clock Hours: 96
Length of Course: Term
Banner enforced Prerequisite:
Instructor enforced Prerequisite: AUT169
Co-Requisite:
Load Factor: 7.2 ILC
Activity Code: 210 CTE Preparatory
CIPS: 470604

Course Title: Auto Electricity III
Developed By**:** John Blakely
Development Date:
Revision Date: 11/05/2014
Review Date:

COURSE DESCRIPTION: This is the final course covering the basics concepts, components and diagnosis of automotive electrical circuits. In the previous course the use of Electrical Wiring Diagrams (EWD's), component location, vehicle testing and the six step diagnostic process were covered. Building upon the previous topics this course presents the construction, operation, diagnosis & service of advanced electronic circuits, control units, and network communication protocols. Features of the Electronic Control Unit (ECU) to be covered include: memory, customization, initialization, and their effect on circuit diagnosis. This section also introduces the fundamentals of multiplexing, computer signals, waveforms, oscilloscopes, and advanced DVOM usage. Communication protocols that will be covered include: BEAN, LIN, CAN, and AVC-LAN as well as the diagnostic processes for locating shorts or opens in various multiplexed circuits.

COURSE OUTCOMES:

1) Instructional Unit 1: Network Diagnostics
   a) Learning outcome: body electrical network diagnosis with multiplex
   b) Learning outcome: signal and component testing

2) Instructional Unit 2: Accessory Diagnosis
   a) Learning outcome: instrumentation service, repair and diagnosis
   b) Learning outcome: advanced lighting service, repair and diagnosis
   c) Learning outcome: cruise control system service, repair and diagnosis
   d) Learning outcome: supplemental restraint system service, repair and diagnosis

3) Instructional Unit 3: Wireless Accessory Operation and Diagnosis
   a) Learning outcome: body electrical system construction, function, service, repair and diagnosis

4) Instructional Unit 4: Hybrid General Service
   a) Learning outcome: on hybrid vehicles, the technician will be able to safely service, maintain and effectively diagnose the non-hybrid systems that are related to maintenance operations

UCC Course Revision

Basic Information

Name of Course Revision Contact: John Blakely
Date: 11/10/14
Contact Title: Department Chair
Department: Automotive
Course Number: AUT250
Course Title: Suspension and Alignment

Course Revision Information

Type of change

X_ Revision
__ Reactivation
__ Deletion

Date, Year, and Term of Proposed Revision: Summer Term 2015

Parent Program: Automotive

Course Revision Description and Justification

Please give as many details as possible about the revision, including justification for the change.
UCC's automotive program ran with T-TEN courses infused into the general program. With the requirement of the T-TEN program running stand alone the general program no longer will have T-TEN (Toyota) curriculum infused.

Course Revision Impacts - *select all that apply*

__ Instructional costs (staff, materials, equipment, or facilities) required.
__ Additional instructional costs (staff, materials, equipment, or facilities) are needed.
__ Impact to other divisions in terms of classes and staffing
__ Other:

Description of Impact

If your revision will have one of the impacts listed above, please describe...

List current information and proposed changes

	CURRENT			**PROPOSED** *if no changes put "same"*
Course number	AUT250		Course number	same
Course title	Suspension and Alignment		Course title	same
Credits	5		Credits	same
Lecture Hrs/Wk	2.625		Lecture Hrs/Wk	3
Lec/Lab Hrs/Wk			Lec/Lab Hrs/Wk	
Lab/Hrs/Wk	7.875		Lab/Hrs/Wk	7
Practicum			Practicum	
Banner/Instr. Prerequisites	AUT170		Banner/Instr. Prerequisites	same
Co-requisites			Co-requisites	
Length (Weeks)	5		Length (Weeks)	Term
Terms Offered	W, sp		Terms Offered	Sp
Grading Option	A-F		Grading Option	same
Load Factor	8.2		Load Factor	7.9 ILC

Additional Documentation

Please check additional forms or documentation you have submitted to Curriculum Committee.

X_ Course Outline - required

__ Other:

UCC Course Outline

Course No: AUT250
Course Credit: 5
Lecture Hrs/wk: 3
Lab Hrs/Wk: 7
Lecture/Lab Hrs/Wk:
Practicum Hrs/Wk:
Clock Hours: 105
Length of Course: Term
Banner enforced Prerequisite:
Instructor enforced Prerequisite: AUT170
Co-Requisite:
Load Factor: 7.9 ILC
Activity Code: 210 CTE Preparatory
CIPS: 470604

Course Title: Suspension and Alignment
Developed By**:** John E Blakely
Development Date:
Revision Date: 11/09/2014
Review Date:

COURSE DESCRIPTION: A study of automotive suspension systems including history and development. Fundamentals of front and rear suspension, steering geometry, diagnosing suspension and steering problems, and overhaul techniques are covered in this course. Rebuilding and repair of the different types of front and rear suspensions including strut types are practiced. This course provides a detailed study of wheel balancing including radial force variation, Computer controls for steering and suspension systems including inputs, logic, and actuators, and four wheel alignment. Wheel alignment factors and procedures, Steering and Handling concerns and diagnostics are also covered in detail.

COURSE OUTCOMES: Upon course completion the successful student will know and be able to:

1. Describe the development of the modern suspension system.
2. Identify the different types of automotive and light duty truck suspension systems.
3. Identify the basic parts of an automotive suspension system.
4. State the factors affecting vehicle wheel alignment.
5. Use the correct terminology related to suspension systems and wheel alignment procedures.
6. Identify the different types of wheel alignment problems and the correct solutions.
7. Identify the major types of suspension systems.

8. Properly complete a pre-alignment inspection and determine components that are out of manufactures specifications.
9. Correctly set all of the adjustable alignment angles to manufacture specifications.
10. Demonstrate the proper method to balance a tire and wheel assembly including radial force, static and dynamic.
11. Correctly disassemble, inspect, repair, and assemble a tire and wheel assembly.
12. State the operation of a power steering unit as used on a modern automobile.
13. Inspect, diagnose, and reset common types of tire pressure monitoring systems.

UCC Course Revision

Basic Information

Name of Course Revision Contact: John Blakely
Date: 11/10/14
Contact Title: Department Chair
Department: Automotive
Course Number: AUT259
Course Title: Electronic Engine Controls I

Course Revision Information

Type of change

X_ Revision
__ Reactivation
__ Deletion

Date, Year, and Term of Proposed Revision: Summer Term 2015

Parent Program: Automotive

Course Revision Description and Justification

Please give as many details as possible about the revision, including justification for the change.
UCC's automotive program ran with T-TEN courses infused into the general program. With the requirement of the T-TEN program running stand alone the general program no longer will have T-TEN (Toyota) curriculum infused.

Course Revision Impacts - *select all that apply*

__ Instructional costs (staff, materials, equipment, or facilities) required.
__ Additional instructional costs (staff, materials, equipment, or facilities) are needed.
__ Impact to other divisions in terms of classes and staffing
__ Other:

Description of Impact

If your revision will have one of the impacts listed above, please describe...

List current information and proposed changes

	CURRENT			PROPOSED *if no changes put "same"*
Course number	AUT259		Course number	same
Course title	Electronic Engine Controls I		Course title	same
Credits	5		Credits	same
Lecture Hrs/Wk	2.625		Lecture Hrs/Wk	3
Lec/Lab Hrs/Wk			Lec/Lab Hrs/Wk	
Lab/Hrs/Wk	7.875		Lab/Hrs/Wk	7
Practicum			Practicum	
Banner/Instr. Prerequisites	AUT151, AUT169		Banner/Instr. Prerequisites	AUT170, AUT151
Co-requisites			Co-requisites	
Length (Weeks)	5		Length (Weeks)	Term
Terms Offered	F		Terms Offered	F
Grading Option	A-F		Grading Option	same
Load Factor	8.2		Load Factor	7.9 ILC

Additional Documentation

Please check additional forms or documentation you have submitted to Curriculum Committee.

X_ Course Outline - required

__ Other:

UCC Course Outline

Course No: AUT259
Course Credit: 5
Lecture Hrs/wk: 3
Lab Hrs/Wk: 7
Lecture/Lab Hrs/Wk:
Practicum Hrs/Wk:
Clock Hours: 105
Length of Course: Term
Banner enforced Prerequisite:
Instructor enforced Prerequisite: AUT170, AUT151
Co-Requisite:
Load Factor: 7.9 ILC
Activity Code: 210 CTE Preparatory
CIPS: 470604

Course Title: Electronic Engine Controls I
Developed By**:** John E Blakely
Development Date:
Revision Date: 11/09/2014
Review Date:

COURSE DESCRIPTION: Electronic Engine Controls I is the first course of a three part engine performance series. The series is designed to provide the training to meet the requirements of NATEF for ASE certification area A8. The course will consist of three instructional units; Engine operation and control fundamentals, Input sensors, and Electronic ignition systems. Approximately one fourth of the class will be classroom and three fourths will consist of lecture/lab activities.

COURSE OUTCOMES:

Instructional Unit 1: Basic Engine Operation
Learning outcome: Service, repair, and diagnosis of base engine concerns.

Instructional Unit 2: Engine Controls Basics
Learning outcome: Service, repair and diagnosis of Input sensors

Instructional Unit 3: Air Induction Systems
Learning outcome: Service, repair, and diagnosis of air induction system components

Instructional Unit 4: Ignition Systems
Learning Outcome: Service, repair, and diagnosis of electronic ignition systems.

UCC Course Revision

Basic Information

Name of Course Revision Contact: John Blakely
Date: 11/10/14
Contact Title: Department Chair
Department: Automotive
Course Number: AUT260
Course Title: Electronic Engine Controls II

Course Revision Information

Type of change

X_ Revision
__ Reactivation
__ Deletion

Date, Year, and Term of Proposed Revision: Summer Term 2015

Parent Program: Automotive

Course Revision Description and Justification

Please give as many details as possible about the revision, including justification for the change.
UCC's automotive program ran with T-TEN courses infused into the general program. With the requirement of the T-TEN program running stand alone the general program no longer will have T-TEN (Toyota) curriculum infused.

Course Revision Impacts - *select all that apply*

__ Instructional costs (staff, materials, equipment, or facilities) required.
__ Additional instructional costs (staff, materials, equipment, or facilities) are needed.
__ Impact to other divisions in terms of classes and staffing
__ Other:

Description of Impact

If your revision will have one of the impacts listed above, please describe...

List current information and proposed changes

	CURRENT			**PROPOSED** *if no changes put "same"*
Course number	AUT260		Course number	same
Course title	Electronic Engine Controls II		Course title	same
Credits	5		Credits	same
Lecture Hrs/Wk	2.625		Lecture Hrs/Wk	3
Lec/Lab Hrs/Wk			Lec/Lab Hrs/Wk	
Lab/Hrs/Wk	7.875		Lab/Hrs/Wk	7
Practicum			Practicum	
Banner/Instr. Prerequisites	AUT259		Banner/Instr. Prerequisites	same
Co-requisites			Co-requisites	
Length (Weeks)	5		Length (Weeks)	Term
Terms Offered	F		Terms Offered	same
Grading Option	A-F		Grading Option	same
Load Factor	8.2		Load Factor	7.9 ILC

Additional Documentation

Please check additional forms or documentation you have submitted to Curriculum Committee.

X_ Course Outline - required

__ Other:

Course No: AUT260
Course Credit: 5
Lecture Hrs/wk: 3
Lab Hrs/Wk: 7
Lecture/Lab Hrs/Wk:
Practicum Hrs/Wk:
Clock Hours: 105
Length of Course: Term
Banner enforced Prerequisite:
Instructor enforced Prerequisite: AUT259
Co-Requisite:
Load Factor: 7.9 ILC
Activity Code: 210 CTE Preparatory
CIPS: 470604

Course Title: Electronic Engine Controls II
Developed By**:** John E Blakely
Development Date:
Revision Date: 11/09/2014
Review Date:

COURSE DESCRIPTION: Electronic Engine Controls II is the second course of a three part engine performance series. The series is designed to provide the training to meet the requirements of NATEF for ASE certification area A8. The course will consist of four instructional units; Fuel Systems, Other ECU Outputs, No Start Diagnosis, and OBD II Systems and Misfire. Approximately one fourth of the class will be classroom and three fourths will consist of lecture/lab activities.

COURSE OUTCOMES:

Instructional Unit 5: Fuel Systems
Learning Outcome: Service, repair and diagnosis of fuel injection system components

Instructional Unit 6: Fuel Trim
Learning Outcome: Diagnosis of fuel trim concerns

Instructional Unit 7: No Start Diagnosis
Learning outcome: Diagnosis of engine crank and no start concerns.

Instructional Unit 8: OBDII Systems and Misfire
Learning outcome: Testing and diagnosis of OBDII systems

UCC Course Revision

Basic Information

Name of Course Revision Contact: John Blakely
Date: 11/10/14
Contact Title: Department Chair
Department: Automotive
Course Number: AUT263
Course Title: Automatic Transmissions

Course Revision Information

Type of change

X_ Revision
__ Reactivation
__ Deletion

Date, Year, and Term of Proposed Revision: Summer Term 2015

Parent Program: Automotive

Course Revision Description and Justification

Please give as many details as possible about the revision, including justification for the change.
UCC's automotive program ran with T-TEN courses infused into the general program. With the requirement of the T-TEN program running stand alone the general program no longer will have T-TEN (Toyota) curriculum infused.

Course Revision Impacts - *select all that apply*

__ Instructional costs (staff, materials, equipment, or facilities) required.
__ Additional instructional costs (staff, materials, equipment, or facilities) are needed.
__ Impact to other divisions in terms of classes and staffing
__ Other:

Description of Impact

If your revision will have one of the impacts listed above, please describe...

List current information and proposed changes

	CURRENT			PROPOSED *if no changes put "same"*
Course number	AUT263		Course number	same
Course title	Automatic Transmissions		Course title	same
Credits	6		Credits	same
Lecture Hrs/Wk	3		Lecture Hrs/Wk	4
Lec/Lab Hrs/Wk			Lec/Lab Hrs/Wk	
Lab/Hrs/Wk	9		Lab/Hrs/Wk	7
Practicum			Practicum	
Banner/Instr. Prerequisites	AUT289		Banner/Instr. Prerequisites	AUT289
Co-requisites			Co-requisites	
Length (Weeks)	6		Length (Weeks)	Term
Terms Offered	W		Terms Offered	same
Grading Option	A-F		Grading Option	same
Load Factor	9.3		Load Factor	8.9 ILC

Additional Documentation

Please check additional forms or documentation you have submitted to Curriculum Committee.

X_ Course Outline - required

__ Other:

UCC Course Outline

Course No: AUT263
Course Credit: 6
Lecture Hrs/wk: 4
Lab Hrs/Wk: 7
Lecture/Lab Hrs/Wk:
Practicum Hrs/Wk:
Clock Hours: 120
Length of Course: Term
Banner enforced Prerequisite:
Instructor enforced Prerequisite: AUT289
Co-Requisite:
Load Factor: 8.9 ILC
Activity Code: 210 CTE Preparatory
CIPS: 470604

Course Title: Automatic Transmissions
Developed By**:** John E Blakely
Development Date:
Revision Date: 11/09/2014
Review Date:

COURSE DESCRIPTION: Instruction in automatic transmissions, including principles of operation, trouble-shooting and overhaul procedures. Instruction includes hydraulically-operated transmissions, transaxles, and torque converters common to the automotive field.

COURSE OUTCOMES: After completing this course, the successful student will be able to:

1. Identify and understand the operation of the major parts of an automatic transmission and transaxle.
2. Service the automatic transmissions and transaxles in the vast majority of the domestic and import passenger vehicles.
3. Troubleshoot and diagnose automatic transmission and transaxle related problems as to malfunctioning system such as mechanical or control.
4. Correctly complete minor repairs on automatic transmissions and transaxles.
5. Remove and replace the automatic transmission or transaxle in the vast majority of passenger vehicles.

UCC Course Revision

Basic Information

Name of Course Revision Contact: John Blakely
Date: 11/10/14
Contact Title: Department Chair
Department: Automotive
Course Number: AUT286
Course Title: Climate Control Systems

Course Revision Information

Type of change

X_ Revision
__ Reactivation
__ Deletion

Date, Year, and Term of Proposed Revision: Summer Term 2015

Parent Program: Automotive

Course Revision Description and Justification

Please give as many details as possible about the revision, including justification for the change.
UCC's automotive program ran with T-TEN courses infused into the general program. With the requirement of the T-TEN program running stand alone the general program no longer will have T-TEN (Toyota) curriculum infused.

Course Revision Impacts - *select all that apply*

__ Instructional costs (staff, materials, equipment, or facilities) required.
__ Additional instructional costs (staff, materials, equipment, or facilities) are needed.
__ Impact to other divisions in terms of classes and staffing
__ Other:

Description of Impact

If your revision will have one of the impacts listed above, please describe...

List current information and proposed changes

	CURRENT			**PROPOSED** *if no changes put "same"*
Course number	AUT286		Course number	same
Course title	Climate Control Systems		Course title	same
Credits	5		Credits	same
Lecture Hrs/Wk	2.625		Lecture Hrs/Wk	3
Lec/Lab Hrs/Wk			Lec/Lab Hrs/Wk	
Lab/Hrs/Wk	7.875		Lab/Hrs/Wk	7
Practicum			Practicum	
Banner/Instr. Prerequisites	AUT289		Banner/Instr. Prerequisites	same
Co-requisites			Co-requisites	
Length (Weeks)	5		Length (Weeks)	Term
Terms Offered	Sp		Terms Offered	same
Grading Option	A-F		Grading Option	same
Load Factor	8.2		Load Factor	7.9 ILC

Additional Documentation

Please check additional forms or documentation you have submitted to Curriculum Committee.

X_ Course Outline - required

__ Other:

UCC Course Outline

Course No: AUT286
Course Credit: 5
Lecture Hrs/wk: 3
Lab Hrs/Wk: 7
Lecture/Lab Hrs/Wk:
Practicum Hrs/Wk:
Clock Hours: 105
Length of Course: Term
Banner enforced Prerequisite:
Instructor enforced Prerequisite: AUT289
Co-Requisite:
Load Factor: 7.9 ILC
Activity Code: 210 CTE Preparatory
CIPS: 470604

Course Title: Climate Control Systems
Developed By**:** John Blakely
Development Date:
Revision Date: 11/09/2014
Review Date:

COURSE DESCRIPTION: This course covers the automotive heating, ventilation, and air conditioning systems and the engine cooling system. Lecture sessions are devoted to the purpose, operational theory, and diagnostic processes common to each of the above areas. Lab sessions are provided to develop student skills in servicing, trouble-shooting, and repairing each component within the specific system. Students will work on both components and live vehicles as part of the learning process.

COURSE OUTCOMES: After completing this course, the successful student will be able to:

1. Identify the type of air conditioning system/application on all vehicles.
2. Properly operate industry standard recovery and recycling equipment.
3. Correctly name all climate control system components and explain their operation
4. Properly service an air conditioning system.
5. Remove and reinstall various climate control system components.
6. Properly diagnose basic climate control faults.
7. Identify the safety precautions required when working with hazardous materials related to mobile HVAC systems.

UCC Course Revision

Basic Information

Name of Course Revision Contact: John Blakely
Date: 11/10/14
Contact Title: Department Chair
Department: Automotive
Course Number: AUT289
Course Title: Electronic Engine Controls III

Course Revision Information

Type of change

X_ Revision
__ Reactivation
__ Deletion

Date, Year, and Term of Proposed Revision: Summer Term 2015

Parent Program: Automotive

Course Revision Description and Justification

Please give as many details as possible about the revision, including justification for the change.
UCC's automotive program ran with T-TEN courses infused into the general program. With the requirement of the T-TEN program running stand alone the general program no longer will have T-TEN (Toyota) curriculum infused.

Course Revision Impacts - *select all that apply*

__ Instructional costs (staff, materials, equipment, or facilities) required.
__ Additional instructional costs (staff, materials, equipment, or facilities) are needed.
__ Impact to other divisions in terms of classes and staffing
__ Other:

Description of Impact

If your revision will have one of the impacts listed above, please describe...

List current information and proposed changes

	CURRENT			**PROPOSED** *if no changes put "same"*
Course number	AUT289		Course number	same
Course title	Electronic Engine Controls III		Course title	same
Credits	4		Credits	5
Lecture Hrs/Wk	2.25		Lecture Hrs/Wk	3
Lec/Lab Hrs/Wk			Lec/Lab Hrs/Wk	
Lab/Hrs/Wk	6.75		Lab/Hrs/Wk	6
Practicum			Practicum	
Banner/Instr. Prerequisites	AUT260		Banner/Instr. Prerequisites	same
Co-requisites			Co-requisites	
Length (Weeks)	4		Length (Weeks)	Term
Terms Offered	W		Terms Offered	same
Grading Option	A-F		Grading Option	same
Load Factor	7		Load Factor	7.2 ILC

Additional Documentation

Please check additional forms or documentation you have submitted to Curriculum Committee.

X_ Course Outline - required

__ Other:

UCC Course Outline

Course No: AUT289
Course Credit: 5
Lecture Hrs/wk: 3
Lab Hrs/Wk: 6
Lecture/Lab Hrs/Wk:
Practicum Hrs/Wk:
Clock Hours: 96
Length of Course: Term
Banner enforced Prerequisite:
Instructor enforced Prerequisite: AUT260
Co-Requisite:
Load Factor: 7.2 ILC
Activity Code: 210 CTE Preparatory
CIPS: 470604

Course Title: Electronic Engine Controls III
Developed By**:** John Blakely
Development Date:
Revision Date: 11/09/2014
Review Date:

COURSE DESCRIPTION: Electronic Engine Controls III is the third course of a three part engine performance series. The series is designed to provide the training to meet the requirements of NATEF for ASE certification area A8.The course will consist of one Snap-on level two certification and three instructional units; Fuel Injection System Diagnosis, EVAP Emission Systems, and Other Emission Systems. Approximately one fourth of the class will be classroom and three fourths will consist of lecture/lab activities.

COURSE OUTCOMES:

Instructional Unit 9: Engine Control System Diagnosis
Learning outcome: Service, inspection, and diagnosis of engine control systems.

Instructional Unit 10: Emissions Systems

1. Learning outcome: Service, repair, and diagnosis of EVAP systems
2. Learning outcome: Service, repair and diagnosis of catalytic convertors
3. Learning outcome: Service, repair, and diagnosis of secondary AIR systems
4. Learning outcome: Service, repair, and diagnosis of PCV systems
5. Learning outcome: Service, repair, and diagnosis of EGR systems

UCC Course Revision

Basic Information

Name of Course Revision Contact: Bill Armstrong
Date: 11/7/2014
Contact Title: Instructor
Department: Business
Course Number: BA233
Course Title: Accounting for Managers

Course Revision Information

Type of change

_X_ Revision
__ Reactivation
__ Deletion

Date, Year, and Term of Proposed Revision: Summer 2015

Parent Program: Retail Management Certificate, Entrepreneurship Certificate

Course Revision Description and Justification

Please give as many details as possible about the revision, including justification for the change.
Minor revisions to outcomes and course description. With revisions class will better meet WAFC (Western Association of Food Chains) requirements for Retail Management degree. WAFC is the advisory body for the program.

Course Revision Impacts - *select all that apply*

__ Instructional costs (staff, materials, equipment, or facilities) required.
__ Additional instructional costs (staff, materials, equipment, or facilities) are needed.
__ Impact to other divisions in terms of classes and staffing
__ Other:

Description of Impact

If your revision will have one of the impacts listed above, please describe...

List current information and proposed changes

	CURRENT			**PROPOSED** *if no changes put "same"*
Course number	BA233		Course number	same
Course title	Accounting for Managers		Course title	same
Credits	4		Credits	same
Lecture Hrs/Wk	4		Lecture Hrs/Wk	same
Lec/Lab Hrs/Wk	0		Lec/Lab Hrs/Wk	same
Lab/Hrs/Wk	0		Lab/Hrs/Wk	same
Practicum	0		Practicum	same
Banner/Instr. Prerequisites	n/a		Banner/Instr. Prerequisites	same
Co-requisites	n/a		Co-requisites	same
Length (Weeks)	11		Length (Weeks)	11
Terms Offered	W, SU		Terms Offered	W, SU
Grading Option	A-F		Grading Option	same
Load Factor	4.0		Load Factor	same

Additional Documentation

Please check additional forms or documentation you have submitted to Curriculum Committee.

_x_ Course Outline - required

__ Other:

UCC Course Outline

Course No: BA233
Course Credit:4
Lecture Hrs/wk:4
Lab Hrs/Wk:0
Lecture/Lab Hrs/Wk:0
Practicum Hrs/Wk:0
Clock Hours:44
Length of Course11 Weeks
Banner enforced Prerequisite:
Instructor enforced Prerequisite:
Co-Requisite:
Load Factor:4.0
Activity Code:210 CTE Preparatory
CIPS:520302

Course Title: Accounting for Managers
Developed By**: Bill Armstrong**
Development Date: 11/5/2014
Revision Date:
Review Date:

COURSE DESCRIPTION:

This course is designed to provide the non-financial manager with an understanding of accounting and the manner in which it can be used to make financial decisions. Topics covered include: basic financial accounting terminology and concepts; preparation of financial statements; financial analysis; business math basics including calculating interest, payments, discounts, markup, pricing, and gross and net margin; payroll and payroll tax basics; accrual versus cash accounting; internal controls; basic managerial accounting terminology and concepts; operational budgeting; pro-forma financial statements; relevant cost analysis; cost behavior; cost-volume-profit analysis; ROI performance measures; and Excel spreadsheet preparation. 4 lecture hrs/wk.

COURSE OUTCOMES:

Upon successful completion of the course, each student will:

- Recognize and interpret generally accepted accounting principles and accounting terminology
- Identify relationships between assets, liabilities, and owners' equity
- Recognize double-entry accounting, employ T-accounts, and prepare basic journal entries
- Prepare basic financial statements, such as the income statement, balance sheet, and statement of cash flows
- Apply basic math skills for calculating interest, payments, discounts and markups
- Complete payroll and payroll taxes

- Design and create Excel spreadsheets that apply accounting concepts
- Evaluate the financial performance of organizations using financial tools such as ratio analysis, breakeven analysis, target profit, and relevant cost analysis
- Prepare and evaluate basic budgets and assemble pro-forma financial statements
- Create and evaluate flexible budgets
- Evaluate return on investment performance measures

UCC Course Revision

Basic Information

Name of Course Revision Contact: Penny Groth
Date: 11/10/14
Contact Title: Apprenticeship Coordinator
Department: Apprenticeship
Course Number: APR 140
Course Title: Beginning Welding for Apprentices

Course Revision Information

Type of change

X_ Revision
__ Reactivation
__ Deletion

Date, Year, and Term of Proposed Revision: Fall 2015 and beyond

Parent Program:

Course Revision Description and Justification

Please give as many details as possible about the revision, including justification for the change.
This class is currently listed as 3 lab hours per week which equates to 1 credit. Proposed revision implements 1 hour lecture and 2 hours lecture/lab per week which equates to 2 credits. This revision is being proposed because 1 hour lecture and 2 hours lecture/lab is the format in which the class is currently being delivered. This revision is an accurate reflection of the true class format.

Course Revision Impacts - *select all that apply*

_ Instructional costs (staff, materials, equipment, or facilities) required.
X_ Additional instructional costs (staff, materials, equipment, or facilities) are needed.
__ Impact to other divisions in terms of classes and staffing
__ Other:

Description of Impact

If your revision will have one of the impacts listed above, please describe...
Cost for instructor with revision will be 2.4 ILCs as opposed to the current 2.1 ILCs.

List current information and proposed changes

	CURRENT			**PROPOSED** *if no changes put "same"*
Course number	APR 140		Course number	same
Course title	Beginning Welding for Apprentices		Course title	same
Credits	1		Credits	2
Lecture Hrs/Wk	0		Lecture Hrs/Wk	1
Lec/Lab Hrs/Wk	0		Lec/Lab Hrs/Wk	2
Lab/Hrs/Wk	3		Lab/Hrs/Wk	0
Practicum			Practicum	
Banner/Instr. Prerequisites	none		Banner/Instr. Prerequisites	same
Co-requisites	none		Co-requisites	same
Length (Weeks)	11		Length (Weeks)	same
Terms Offered	not listed		Terms Offered	same
Grading Option			Grading Option	
Load Factor	2.1		Load Factor	2.4

Additional Documentation

Please check additional forms or documentation you have submitted to Curriculum Committee.

X_ Course Outline - required

__ Other:

Course No.:	**APR 140**
Credit Hours:	2
Lecture Hours:	1
Lecture/Lab Hours:	2
Lab Hours:	0
Clock Hours:	33
Length of Course:	11 weeks
Prerequisite:	None

Course Title: **Beginning Welding for Apprentices**
Developed By: Ian Fisher
Date: September 2013
Revision Date: November 2014

COURSE DESCRIPTION:

This course covers welding processes, safety, equipment, and essential variables of operation. This is an outcome-based course utilizing a lab in which students demonstrate and build their skill level.

LEARNER OUTCOMES:

The student will be evaluated on his/her ability to demonstrate the development of course competencies.

- Students will demonstrate and be tested on machine, hazardous materials and electrical safety practices.
- Students will demonstrate fundamentals of operation for SMAW (Shielded Metal Arc Welding) in the flat and horizontal positions.
- Students will demonstrate fundamentals of operation for OFW & OFC (Oxygen Fuel Cutting).
- Student will also have the opportunity to work with GMAW (Gas Metal Arc Welding) and GTAW (Gas Tungsten Arc Welding) processes.

REQUIRED TEXT:

Textbook

1. Welding Principles and Practices (4th edition), Edward R. Bohnart, Mc Graw Hill (Required)
2. Workbook For Use With Welding Principles and Practices (4th edition), Edward R. Bohnart, Mc Graw Hill (Also Required)

MATERIALS AND SUPPLIES:

Students are required to purchase and bring safety goggles to all lab sessions; work will not be permitted without the proper safety equipment. A Lab coat and welding gloves should also be purchased for the new welding student; specific materials for these will be discussed the first class meeting. Other safety equipment, such as welding hood, chipping hammer, etc. will be supplied for student use. Lockers are also available for student use.

COURSE OUTLINE

Week 1	Introduction to Beginning Welding & Module 2: Safety and Health of Welders
Week 2	Module 1: General Introduction to Welding; Occupational Orientation;
	Assessment of welding skill levels and process related areas of industry discussions. Discussions and labs will be based upon employer/sponsor needs and welder ability; Labs will be designed to challenge the welding and strengthen abilities.
Week 3	Module 4: Shielded metal Arc Welding (SMAW) Units and Key Indicators all class will include Drawing and Welding Symbol Interpretation
Week 4	Preforms safety inspections of SMAW equipment and accessories.
Week 5	Sets up and operation of SMAW on carbon steel
Week 6	Fillet welds all positions Shielded Metal Arc Welding (SMAW)
Week 7	Groove welds all positions Shielded Metal Arc Welding (SMAW)
Week 8	Intro to Gas Metal Arc Welding (GMAW-S, GMAW- Spray Transfer)
Week 9	Manual Oxy-fuel Cutting (OFC)
Week 10	Manual Plasma Arc Cutting (PAC) &
Week 11	Final Exam
	Will cover the chapter topics listed above, as well as, topics covered in the labs

UCC Course Revision

Basic Information

Name of Course Revision Contact: Penny Groth
Date: 11/10/14
Contact Title: Apprenticeship Coordinator
Department: Apprenticeship
Course Number: APR 141
Course Title: Intermediate Welding for Apprentices

Course Revision Information

Type of change

X_ Revision
__ Reactivation
__ Deletion

Date, Year, and Term of Proposed Revision: Fall 2015 and beyond

Parent Program:

Course Revision Description and Justification

Please give as many details as possible about the revision, including justification for the change.
This class is currently listed as 3 lab hours per week which equates to 1 credit. Proposed revision implements 1 hour lecture and 2 hours lecture/lab per week which equates to 2 credits. This revision is being proposed because 1 hour lecture and 2 hours lecture/lab is the format in which the class is currently being delivered. This revision is an accurate reflection of the true class format.

Course Revision Impacts - *select all that apply*

_ Instructional costs (staff, materials, equipment, or facilities) required.
X_ Additional instructional costs (staff, materials, equipment, or facilities) are needed.
__ Impact to other divisions in terms of classes and staffing
__ Other:

Description of Impact

If your revision will have one of the impacts listed above, please describe...
Cost for instructor with revision will be 2.4 ILCs as opposed to the current 2.1 ILCs.

List current information and proposed changes

	CURRENT			**PROPOSED** *if no changes put "same"*
Course number	APR 141		Course number	same
Course title	Intermediate Welding for Apprentices		Course title	same
Credits	1		Credits	2
Lecture Hrs/Wk	0		Lecture Hrs/Wk	1
Lec/Lab Hrs/Wk	0		Lec/Lab Hrs/Wk	2
Lab/Hrs/Wk	3		Lab/Hrs/Wk	0
Practicum			Practicum	
Banner/Instr. Prerequisites	APR 140		Banner/Instr. Prerequisites	same
Co-requisites	none		Co-requisites	same
Length (Weeks)	11		Length (Weeks)	same
Terms Offered	not listed		Terms Offered	same
Grading Option			Grading Option	
Load Factor	2.1		Load Factor	2.4

Additional Documentation

Please check additional forms or documentation you have submitted to Curriculum Committee.

X_ Course Outline - required

__ Other:

UMPQUA COMMUNITY COLLEGE
Roseburg, Oregon

Course No.:	APR141
Credit Hours:	2
Lecture Hours:	1
Lecture/Lab Hours:	2
Lab Hours:	0
Clock Hours:	33
Length of Course:	11 weeks
Prerequisite:	APR140

Course Title: **Intermediate Welding For Apprentices**
Developed By: Ian Fisher
Date: September 2013
Revision / Review Date: November 2014

COURSE DESCRIPTION:
This is an intermediate theory and practice course, which reinforces safe operations and applications of oxyacetylene welding, torch cutting, plasma cutting, brazing, and shielded metal arc welding. Practice will consist of methods of joining steel in the flat and horizontal positions using oxyacetylene, and shielded metal arc. Related information concerning the basic principles joint design and metallurgy will be integrated into the practice sessions. Destructive testing will be provided.

COURSE OUTCOMES:

- Safely operate in a welding shop.
- Recognize and set up oxyacetylene torch system welding and brazing to industry standards
- Recognize and set up oxyacetylene torch system for cutting operations
- Demonstrate the ability to light a torch system, adjust it to proper flame, and shut down procedures
- Weld a joint system without the use of filler rod (gage materials)
- Weld a joint system with filler rod (up to 1/8 inch)
- Braze a joint system (up to 1/8 inch)
- Make a perpendicular cut in steel plate using the cutting torch
- Identify common electrodes and describe their proper use in industry
- Weld single pass beads on a flat plate meeting size, and conformity for industry standards (1/4 inch to 3/8 inch fillet welds)

REQUIRED TEXT:

Textbook

1. Welding Principles and Practices (4th edition), Edward R. Bohnart, Mc Graw Hill (Required)
2. Workbook For Use With Welding Principles and Practices (4th edition), Edward R. Bohnart, Mc Graw Hill (Also Required)

REQUIRED MATERIALS:

1. Safety Glasses Clear
2. Safety Cutting Glasses (Dark)
3. Leather Gloves
4. Leather Boots or Leather Shoes
5. Long Sleeve tight cotton blend shirts
6. Tight cotton blend pants, no-holes or fraying
7. Welding Hood
8. Welding Hammer
9. Wire Brush
10. Soap Stone
11. Pliers or Needle Nose w/cutting edge

COURSE OUTLINE

Week 1	Review Safety and Health of Welders all class will include Drawing and Welding Symbol Interpretation
Week 2	Assessment of welding skill levels and process related areas of industry discussions. Discussions and labs will be based upon employer/sponsor needs and welder ability; Labs will be designed to challenge the welding and strengthen abilities.
Week 3	Gas Metal Arc Welding (GMAW Short Circuit Transfer)
Week 4	Fillet welds all positions GMAW (GMAW Short Circuit Transfer)
Week 5	Groove welds all positions GMAW (GMAW Short Circuit Transfer)
Week 6	Gas Metal Arc Welding (GMAW Spray Transfer)
Week 7	Fillet welds all positions GMAW (GMAW Spray Transfer)
Week 8	Groove welds all positions GMAW (GMAW Spray Transfer)
Week 9	Manual Oxy-fuel Cutting (OFC) & Manual Air Carbon Arc Cutting (ACAC)
Week 10	Manual Plasma Arc Cutting (PAC) & Manual Air Carbon Arc Cutting (ACAC)
Week 11	Final Exam will cover the topics listed above, as well as, topics covered in the labs

UCC Course Revision

Basic Information

Name of Course Revision Contact: Penny Groth
Date: 11/10/14
Contact Title: Apprenticeship Coordinator
Department: Apprenticeship
Course Number: APR 142
Course Title: Advanced Welding for Apprentices

Course Revision Information

Type of change

X_ Revision
__ Reactivation
__ Deletion

Date, Year, and Term of Proposed Revision: Fall 2015 and beyond

Parent Program:

Course Revision Description and Justification

Please give as many details as possible about the revision, including justification for the change.
This class is currently listed as 3 lab hours per week which equates to 1 credit. Proposed revision implements 1 hour lecture and 2 hours lecture/lab per week which equates to 2 credits. This revision is being proposed because 1 hour lecture and 2 hours lecture/lab is the format in which the class is currently being delivered. This revision is an accurate reflection of the true class format.

Course Revision Impacts - *select all that apply*

_ Instructional costs (staff, materials, equipment, or facilities) required.
X_ Additional instructional costs (staff, materials, equipment, or facilities) are needed.
__ Impact to other divisions in terms of classes and staffing
__ Other:

Description of Impact

If your revision will have one of the impacts listed above, please describe...
Cost for instructor with revision will be 2.4 ILCs as opposed to the current 2.1 ILCs.

List current information and proposed changes

	CURRENT			**PROPOSED** *if no changes put "same"*
Course number	APR 142		Course number	same
Course title	Advanced Welding for Apprentices		Course title	same
Credits	1		Credits	2
Lecture Hrs/Wk	0		Lecture Hrs/Wk	1
Lec/Lab Hrs/Wk	0		Lec/Lab Hrs/Wk	2
Lab/Hrs/Wk	3		Lab/Hrs/Wk	0
Practicum			Practicum	
Banner/Instr. Prerequisites	APR 141		Banner/Instr. Prerequisites	same
Co-requisites	none		Co-requisites	same
Length (Weeks)	11		Length (Weeks)	same
Terms Offered	not listed		Terms Offered	same
Grading Option			Grading Option	
Load Factor	2.1		Load Factor	2.4

Additional Documentation

Please check additional forms or documentation you have submitted to Curriculum Committee.

X_ Course Outline - required

__ Other:

UMPQUA COMMUNITY COLLEGE
Roseburg, Oregon

Course No.:	APR142
Credit Hours:	2
Lecture Hours:	1
Lecture/Lab Hours:	2
Lab Hours:	0
Clock Hours:	33
Length of Course:	11 weeks
Prerequisite:	APR141

Course Title: **Advanced Welding For Apprentices**
Developed By: Ian Fisher
Date: September 2013
Revision / Review Date: November 2014

COURSE DESCRIPTION:
This is an intermediate theory and practice course, which reinforces safe operations and applications of oxyacetylene welding, torch cutting, plasma cutting, brazing, and shielded metal arc welding. Practice will consist of methods of joining steel in the flat and horizontal positions using oxyacetylene, and shielded metal arc. Related information concerning the basic principles joint design and metallurgy will be integrated into the practice sessions. Destructive testing will be provided.

COURSE OUTCOMES:

- Safely operate in a welding shop.
- Recognize and set up oxyacetylene torch system welding and brazing to industry standards
- Recognize and set up oxyacetylene torch system for cutting operations
- Demonstrate the ability to light a torch system, adjust it to proper flame, and shut down procedures
- Weld a joint system without the use of filler rod (gage materials)
- Weld a joint system with filler rod (up to 1/8 inch)
- Braze a joint system (up to 1/8 inch)
- Make a perpendicular cut in steel plate using the cutting torch
- Identify common electrodes and describe their proper use in industry
- Weld single pass beads on a flat plate meeting size, and conformity for industry standards (1/4 inch to 3/8 inch fillet welds)

REQUIRED TEXT:

Textbook

1. Welding Principles and Practices (4th edition), Edward R. Bohnart, Mc Graw Hill (Required)
2. Workbook For Use With Welding Principles and Practices (4th edition), Edward R. Bohnart, Mc Graw Hill (Also Required)

REQUIRED MATERIALS:

1. Safety Glasses Clear
2. Safety Cutting Glasses (Dark)
3. Leather Gloves
4. Leather Boots or Leather Shoes
5. Long Sleeve tight cotton blend shirts
6. Tight cotton blend pants, no-holes or fraying
7. Welding Hood
8. Welding Hammer
9. Wire Brush
10. Soap Stone
11. Pliers or Needle Nose w/cutting edge

COURSE OUTLINE

Week 1	Review Safety and Health of Welders all class will include Drawing and Welding Symbol Interpretation
Week 2	Assessment of welding skill levels and process related areas of industry discussions. Discussions and labs will be based upon employer/sponsor needs and welder ability; Labs will be designed to challenge the welding and strengthen abilities.
Week 3	Shielded Metal Arc Welding (SMAW) Review and continued practice. All position work; multiple electrodes are discussed in theory and practice, their usages, as well as, different joint configurations
Week 4	Gas Metal Arc Welding (GMAW -All Transfer Modes) Review and continued practice. All position work; multiple electrodes are discussed in theory and practice, their usages, as well as, different joint configurations
Week 5	Flux-Cored Arc Welding (FCAW-Gas Shielded)
Week 6	Flux-Cored Arc Welding (FCAW-Self Shielded)
Week 7	Fillet welds all positions (FCAW-Gas Shielded & FCAW-Self Shielded)
Week 8	Groove welds all positions (FCAW-Gas Shielded & FCAW-Self Shielded)
Week 9	Review and continued practice of Manual Oxy-fuel Cutting (OFC) & Manual Air Carbon Arc Cutting (ACAC)
Week 10	Review and continued practice of Manual Plasma Arc Cutting (PAC) & Manual Air Carbon Arc Cutting (ACAC)
Week 11	Final Exam will cover the topics listed above, as well as, topics covered in the labs

UCC Course Revision

Basic Information

Name of Course Revision Contact: Penny Groth
Date: 11/10/14
Contact Title: Apprenticeship Coordinator
Department: Apprenticeship
Course Number: APR 143
Course Title: Pipe Welding

Course Revision Information

Type of change

X_ Revision
__ Reactivation
__ Deletion

Date, Year, and Term of Proposed Revision: Fall 2015 and beyond

Parent Program:

Course Revision Description and Justification

Please give as many details as possible about the revision, including justification for the change.
This class is currently listed as 3 lab hours per week which equates to 1 credit. Proposed revision implements 1 hour lecture and 2 hours lecture/lab per week which equates to 2 credits. This revision is being proposed because 1 hour lecture and 2 hours lecture/lab is the format in which the class is currently being delivered. This revision is an accurate reflection of the true class format.

Course Revision Impacts - *select all that apply*

_ Instructional costs (staff, materials, equipment, or facilities) required.
X_ Additional instructional costs (staff, materials, equipment, or facilities) are needed.
__ Impact to other divisions in terms of classes and staffing
__ Other:

Description of Impact

If your revision will have one of the impacts listed above, please describe...
Cost for instructor with revision will be 2.4 ILCs as opposed to the current 2.1 ILCs.

List current information and proposed changes

	CURRENT			**PROPOSED** *if no changes put "same"*
Course number	APR 143		Course number	same
Course title	Pipe Welding		Course title	same
Credits	1		Credits	2
Lecture Hrs/Wk	0		Lecture Hrs/Wk	1
Lec/Lab Hrs/Wk	0		Lec/Lab Hrs/Wk	2
Lab/Hrs/Wk	3		Lab/Hrs/Wk	0
Practicum			Practicum	
Banner/Instr. Prerequisites	APR 142		Banner/Instr. Prerequisites	same
Co-requisites	none		Co-requisites	same
Length (Weeks)	11		Length (Weeks)	same
Terms Offered	not listed		Terms Offered	same
Grading Option			Grading Option	
Load Factor	2.1		Load Factor	2.4

Additional Documentation

Please check additional forms or documentation you have submitted to Curriculum Committee.

X_ Course Outline - required

__ Other:

UMPQUA COMMUNITY COLLEGE
Roseburg, Oregon

Course No.:	**APR 143**
Credit Hours:	2
Lecture Hours:	1
Lecture/Lab Hours:	2
Lab Hours:	0
Clock Hours:	33
Length of Course:	11 weeks
Prerequisite:	None

Course Title:	**Pipe Welding**
Developed By:	Ian Fisher
Date:	September 2013
Revision Date:	November 2014

COURSE DESCRIPTION:
This course covers multiple welding processes for pipe welding applications. Safety, equipment, and essential variables of operation with emphasizes of the fundamentals and mechanics of Pipe welding. This is an outcome-based course utilizing a lab in which students demonstrate and build their skill level. Registration Enforced Prerequisite: APR 141; 3 lab hrs/wk.

LEARNER OUTCOMES:
Upon completion of this course, the student should be able to:

- Students will demonstrate and be tested on machine, hazardous materials and electrical safety practices.
- Students will demonstrate fundamentals of operation for successful skill of joining pipe per ASME Section IX
- Students will demonstrate fundamentals of operation for joining pipe in the 2G position per ASME Section IX Welding Code using industry standards
- Student will also have the opportunity to work with GMAW (Gas Metal Arc Welding) and GTAW (Gas Tungsten Arc Welding) processes.
- The student will be assessed on their ability to demonstrate the development of course outcomes. The methods of assessment may include one or more of the following: oral or written examinations, quizzes, observations and visual inspection techniques, welding test, safe work habits and task performances related to industry standards

REQUIRED TEXT:

Textbook

1. Welding Principles and Practices (4th edition), Edward R. Bohnart, Mc Graw Hill (Required)
2. Workbook For Use With Welding Principles and Practices (4th edition), Edward R. Bohnart, Mc Graw Hill (Also Required)

MATERIALS AND SUPPLIES:

Students are required to purchase and bring safety goggles to all lab sessions; no work is permitted without the proper safety equipment. An approved welding lab coat and welding gloves should also be purchased for the new welding student; specific materials for these will be discussed the first class meeting. Other safety equipment, such as welding hood, chipping hammer, etc. is the responsibility of the students as per industry standards. Also, Tillman Welding Gloves (Rebco., leather) (*Til 25BL),* Small Scratch SS Brush (quantity = 4) *(Rad 64000449),*and EWG (Purple) 3/32" Tungsten Electrodes (quantity = 2) *(Rad 64002248),* will be required for this course.

COURSE OUTLINE

Week 1	Introduction to Pipe Welding and ASME Section IX, industry standards
Week 2	General Introduction to welding relationships in the field of pipe welding; occupational orientation; assessment of welding skill levels and process related areas of industry discussions. Discussions and labs will be based upon employer/sponsor needs and welder ability; Labs will be designed to challenge the welding and strengthen abilities.
Week 3	Review Safety and Health of Welders all class will include Drawing and Welding Symbol Interpretation. Review and continued practice of Manual Oxy-fuel Cutting (OFC), Manual Plasma Arc Cutting (PAC), & Manual Air Carbon Arc Cutting (ACAC)
Week 4	Shielded Metal Arc Welding (SMAW) All positions, multiple electrode usage, open root joint configurations, as well as, backing bar, back welded, and backing bar are discussed in theory and practice.
Week 5	Gas Metal Arc Welding (GMAW) All positions, multiple electrode usage, open root joint configurations, as well as, backing bar, back welded, and backing bar are discussed in theory and practice.
Week 6	Flux-Cored Arc Welding (FCAW-Gas Shielded & FCAW-Self Shielded) All positions, multiple electrode usage, open root joint configurations, as well as, backing bar, back welded, and backing bar are discussed in theory and practice.
Week 7	Gas Tungsten Arc Welding (GTAW) Carbon
Week 8	Gas Tungsten Arc Welding (GTAW) Aluminum
Week 9	Gas Tungsten Arc Welding (GTAW) Stainless
Week 10	Gas Tungsten Arc Welding (GTAW) All positions, multiple electrode usage, open root joint configurations, as well as, backing bar, back welded, and backing bar are discussed in theory and practice.
Week 11	Final Exam will cover the chapter topics listed above, as well as, topics covered in the labs

UCC Program Revision

Please enter your information for the program revision you are proposing below. Your careful attention to the completion of all fields is appreciated. If you are unsure about how to enter something, please contact your Department Chair or Dean.

Basic Information

Name of Program Revision Contact: Penny Groth

Contact Title: Apprenticeship Coordinator

Department: Apprenticeship

Program Revision Information

Date, Year, and Term of Proposed Revision: Fall 2015 and beyond

Program Title: Electrician Apprenticeship Technologies AAS

Revision Type - *select all that apply*

X_ Credits
__ Title
__ Summary
__ Outcomes
__ Curriculum
__ Suspension
__ Reactivate
__ Delete
__ Repackage for a new area of concentration or certificate within existing program.
__ Other: *(please describe)*

Revised Outcomes *(If needed)*

Revision Description and Justification

Please give as many details as possible about the revision, including justification for the change.
Welding 140, 141, 142 & 143 are being revised from 1 to 2 credits. As a result of electives being part of the curriculum for this program, total credits will remain at 92.

Program Impacts - select all that apply

__ Instructional costs (staff, materials, equipment, or facilities) required.
X_ Additional instructional costs (staff, materials, equipment, or facilities) are needed.
__ Impact to other divisions in terms of classes and staffing
__ Other:

Please list changes to program course listing below.

CURRENT				PROPOSED		
Course #	**Course Title**	**Credits**		**Course #**	**Course Title**	**Credits**
APR140	Beginning Welding for Apprentices	1		APR140	Beginning Welding for Apprentices	2

					Total credits for Program	

Additional Documentation

Please check additional forms or documentation you have submitted to Curriculum Committee.

__ **Curriculum Revision Form**
__ **Start-Up and First Year Budget**
__ **Other**:

UCC Program Revision

Please enter your information for the program revision you are proposing below. Your careful attention to the completion of all fields is appreciated. If you are unsure about how to enter something, please contact your Department Chair or Dean.

Basic Information

Name of Program Revision Contact: Penny Groth

Contact Title: Apprenticeship Coordinator

Department: Apprenticeship

Program Revision Information

Date, Year, and Term of Proposed Revision: Fall 2015 and beyond

Program Title: Electrician Apprenticeship Technologies Certificate

Revision Type - *select all that apply*

X_ Credits
__ Title
__ Summary
__ Outcomes
__ Curriculum
__ Suspension
__ Reactivate
__ Delete
__ Repackage for a new area of concentration or certificate within existing program.
__ Other: *(please describe)*

Revised Outcomes *(If needed)*

Revision Description and Justification

Please give as many details as possible about the revision, including justification for the change.
Welding 140, 141, 142 & 143 are being revised from 1 to 2 credits. As a result of electives being part of the curriculum for this program, total credits will remain at 64.

Program Impacts - select all that apply

__ Instructional costs (staff, materials, equipment, or facilities) required.
X_ Additional instructional costs (staff, materials, equipment, or facilities) are needed.
__ Impact to other divisions in terms of classes and staffing
__ Other:

Please list changes to program course listing below.

CURRENT				PROPOSED		
Course #	**Course Title**	**Credits**		**Course #**	**Course Title**	**Credits**
APR140	Beginning Welding for Apprentices	1		APR140	Beginning Welding for Apprentices	2

					Total credits for Program	

Additional Documentation

Please check additional forms or documentation you have submitted to Curriculum Committee.

__ **Curriculum Revision Form**
__ **Start-Up and First Year Budget**
__ **Other**:

UCC Program Revision

Please enter your information for the program revision you are proposing below. Your careful attention to the completion of all fields is appreciated. If you are unsure about how to enter something, please contact your Department Chair or Dean.

Basic Information

Name of Program Revision Contact: Penny Groth

Contact Title: Apprenticeship Coordinator

Department: Apprenticeship

Program Revision Information

Date, Year, and Term of Proposed Revision: Fall 2015 and beyond

Program Title: Industrial Mechanics and Maintenance Technology Certificate

Revision Type - *select all that apply*

X_ Credits
__ Title
__ Summary
__ Outcomes
__ Curriculum
__ Suspension
__ Reactivate
__ Delete
__ Repackage for a new area of concentration or certificate within existing program.
__ Other: *(please describe)*

Revised Outcomes *(If needed)*

Revision Description and Justification

Please give as many details as possible about the revision, including justification for the change.
Welding 140, 141, 142 & 143 are being revised from 1 to 2 credits. This will increase total credits for this program to 51.

Program Impacts - select all that apply

__ Instructional costs (staff, materials, equipment, or facilities) required.
X_ Additional instructional costs (staff, materials, equipment, or facilities) are needed.
__ Impact to other divisions in terms of classes and staffing
__ Other:

Please list changes to program course listing below.

CURRENT				PROPOSED		
Course #	**Course Title**	**Credits**		**Course #**	**Course Title**	**Credits**
APR140	Beginning Welding for Apprentices	1		APR140	Beginning Welding for Apprentices	2
APR141	Intermediate Welding for Apprentices	1		APR141	Intermediate Welding for Apprentices	2

					Total credits for Program	

Additional Documentation

Please check additional forms or documentation you have submitted to Curriculum Committee.

__ **Curriculum Revision Form**

__ **Start-Up and First Year Budget**

__ **Other**:

UCC Program Revision

Please enter your information for the program revision you are proposing below. Your careful attention to the completion of all fields is appreciated. If you are unsure about how to enter something, please contact your Department Chair or Dean.

Basic Information

Name of Program Revision Contact: Penny Groth

Contact Title: Apprenticeship Coordinator

Department: Apprenticeship

Program Revision Information

Date, Year, and Term of Proposed Revision: Fall 2015 and beyond

Program Title: Industrial Mechanics and Maintenance Technology Certificate

Revision Type - *select all that apply*

X_ Credits
__ Title
__ Summary
__ Outcomes
__ Curriculum
__ Suspension
__ Reactivate
__ Delete
__ Repackage for a new area of concentration or certificate within existing program.
__ Other: *(please describe)*

Revised Outcomes *(If needed)*

Revision Description and Justification

Please give as many details as possible about the revision, including justification for the change.
Welding 140, 141, 142 & 143 are being revised from 1 to 2 credits. This will increase total credits for this program to 93.

Program Impacts - select all that apply

__ Instructional costs (staff, materials, equipment, or facilities) required.
X_ Additional instructional costs (staff, materials, equipment, or facilities) are needed.
__ Impact to other divisions in terms of classes and staffing
__ Other:

Please list changes to program course listing below.

CURRENT				PROPOSED		
Course #	**Course Title**	**Credits**		**Course #**	**Course Title**	**Credits**
APR140	Beginning Welding for Apprentices	1		APR140	Beginning Welding for Apprentices	2
APR141	Intermediate Welding for Apprentices	1		APR141	Intermediate Welding for Apprentices	2

					Total credits for Program	

Additional Documentation

Please check additional forms or documentation you have submitted to Curriculum Committee.

__ **Curriculum Revision Form**

__ **Start-Up and First Year Budget**

__ **Other**: