ACADEMIC SENATE PROPOSAL TRACKING SHEET

(Document To Be Originated By Academic Senate Secretary On Canary Color Paper)

All proposals MUST have their originating college faculty body (Ex. Arts & Sciences, Education and Nursing; Technical Sciences) **approval and must be signed by the submitter and the college dean before being submitted to the Academic Senate Secretary.**

1. Submit all proposals (using the appropriate Academic Senate program/degree and/or course revision forms) to the Academic Senate Secretary.
2. The Academic Senate Secretary logs and numbers items and forwards them to the appropriate Academic Senate subcommittee(s): Teacher Education (if applicable), General Education (if applicable), or Curriculum.
3. The Academic Senate subcommittee(s) consider(s) the proposal. If approved, the proposal is forwarded to the next committee. If a committee disapproves the proposal, the originator may request that the item be forwarded to the next body for consideration. The committee will provide written rationale to the originator when a proposal is disapproved and the proposal is returned to the originator.
4. The Academic Senate considers the proposal and approves or disapproves. If approved, the proposal is forwarded to the Full Faculty for consideration. If the Academic Senate disapproves the proposal, the originator may request that the item be forwarded to the Full Faculty for consideration. The Academic Senate will provide written rationale to the originator when proposals are disapproved and the proposal is returned to the originator.
5. The Full Faculty considers Academic Senate approved proposals. If faculty approve, the proposal will then be forwarded to the Provost. The Provost approves or disapproves the proposal. If approved, the proposal is then forwarded to the Chancellor.
7. The Chancellor approves or disapproves the proposal.

Subcommittee and Academic Senate college representatives will notify their respective colleges' of the progress of submitted proposals or the proposal may be tracked via the web page --
http://www.msun.edu/admin/provost/asproposals.htm
Documentation and forms for the curriculum process is also available on the web page:
http://www.msun.edu/admin/provost/asforms.htm

*****(If a proposal is disapproved at any level, it is returned through the Academic Senate secretary to the Dean of the submitting college who then notifies the originator.)**

Proposal # 08-45 **Title:** Industrial Technology Endorsement
(proposal explanation, submitter and college dean signatures on attached program degree or course revision form)

	Date				
Received by ACAD Senate	3-25-09				
Forwarded to Teacher Ed Council	_____	Approved	_____	Disapproved	_____
		Signature			Date
Forwarded to Gen Ed Committee	_____	Approved	_____	Disapproved	_____
		Signature			Date
Returned to ACAD Senate	_____				
Forwarded to Curriculum Committee - Please review Course Description Format + Syntax.	3-31-09	Approved	V	Disapproved	_____
		Signature	Peterson		4/9/09 Date
Returned to ACAD Senate for Vote	4-10-09	Approved	X	Disapproved	_____
		Signature	Court		4-24-09 Date
Sent to Provost's office for Full Faculty vote	N/A				
Voted on at Full Faculty meeting	_____	Approved	_____	Disapproved	_____
		Signature			Date
* Forwarded to Provost for Approval/Disapproval	4-29-09	Approved	X	Disapproved	_____
		Signature			4/28/09 Date
Forwarded to Chancellor for Approval/Disapproval	_____	Approved	X	Disapproved	_____
		Signature			Date
Copies sent to originating college and registrar's office	_____				

Updated 09.29.05

* Needs to be discussed with OPI regarding program approval.

MONTANA STATE UNIVERSITY – NORTHERN
INDUSTRIAL TECHNOLOGY TEACHER EDUCATION-CARPENTRY

COURSE TITLE: Interior Finish Carpentry

CREDITS: 2

CONTACT HOURS: This class will use both lecture and lab hours.

PREREQUISITES: None

TEXT: National Center for Construction Education and Research (NCCER) Level 2

INSTRUCTOR:

COURSE DESCRIPTION: A basic knowledge of exterior finish carpentry. We will be using the following modules from NCCER Level 2 book: 27206-07, 27207-07, 27208-07, 27210-07, and 27211-07.

STUDENT PERFORMANCE OUTCOMES: Upon completion of this course, the students will be able to:

1. Work and use interior finish carpentry tools safely.
2. Respect tools at all times.
3. Install drywall properly.
4. Proper materials, tools, and methods used to finish and patch gypsum drywall.
5. Use of pneumatic tools needed for interior finishing.
6. Use of table and power miter saw.
7. Proper procedure for installing interior doors.
8. Proper procedure for installing door hardware.
9. Install doors and hardware.
10. Proper installation of window, door, floor, and ceiling trim.
11. Install all interior trim.
12. Proper procedure for installing cabinets.
13. Install cabinets.

STUDENT PERFORMANCE ASSESSMENT METHODS
Assessment will be on class attendance and class participation. Practical and written tests will be used for evaluation.

STUDENT SCHEDULE OF LEARNING ACTIVITIES

1. Day 1
    a. Learn the safe use of drywall tools and installation of drywall.
    b. Identify the different types of drywall and their uses.
    c. Learn to select the type and thickness of drywall required for specific installations.

d. Install drywall on walls and ceilings.
e. Clean up and pick up tools in area.
f. Reevaluate what was learned.

2. Day 2
    a. Review safety.
    b. Complete drywall installation.
    c. Learn the requirements for drywall finishing.
    d. Learn to use drywall taping tools safely.
    e. Finish drywall.
    f. Clean up and pick up tools in area.
    g. Reevaluate what was learned.

3. Day 3
    a. Review safety.
    b. Continue finishing drywall.
    c. Clean up and pick up tools in area.
    d. Reevaluate what was learned.

4. Day 4
    a. Review safety.
    b. Learn to install interior doors.
    c. Learn the process of installing door hardware.
    d. Install doors.
    e. Install hardware.
    f. Clean up and pick up tools in area.
    g. Reevaluate what was learned.

5. Day 5
    a. Review safety.
    b. Learn the process of installing cabinets and counter tops
    c. Install cabinets.
    d. Install counter tops.
    e. Clean up and pick up tools in area.
    f. Reevaluate what was learned.

COURSE FORM

Department:	Industrial & Engineering Technology
Program Area:	Metals
Date:	11/04/08
Course pref and no.:	METL 2xx
Course title:	Gas Arc Welding Processes for High School Teachers
Credits:	2 (sem)
Required by:	Welding Endorsement for high school teachers
Contact Hrs.	30 hrs

Catalog Course Description (include prerequisites):

Setup and operation of equipment and control of welding variables, types of power sources, and characteristics of operation, shielding gases, filler materials, quality assurance, and weld defects in gas metal arc welding, gas tungsten arc welding and flux cored arc welding. Prerequisite: high school welding teacher

Course Objectives:

The purpose of this course is to teach high school welding teachers basic theory for the safe operation of Gas Metal Arc, Flux Cored Arc, and Gas Tungsten Arc Welding processes.

To pass this course the student shall observe safe practices, pass written exams and satisfactorily weld assigned coupons

New and/or Additional Equipment Required:

New and/or Additional Library Resources Required:

Special Facility Needs Required: (laboratory space, specialized labs, rooms to facilitate large groups, computer labs):

COURSE FORM

Department:	Industrial & Engineering Technology
Program Area:	Metals Technology
Date:	11/03/08
Course pref and no.:	METL 2xx
Course title:	Welding Certification Procedures for Educators
Credits:	2 (sem)
Required by:	Welding Endorsement for high school teachers
Contact Hrs	30 hrs

Catalog Course Description (include prerequisites):

Procedures and development of manual skills necessary to teach certification level welds under a structural welding code. Prerequisites: . high school welding teacher

Course Objectives:

1. Identification of the limitations of all essential variables in a performance certification.
2. Selection and production of appropriate joint designs, coupon preparation, inspection parameters, and identification of the extent of student performance qualifications.
3. The educator will be able to relate the appropriate certification to their student's career goals.
4. Understanding the parameters of test longevity.
5. Understanding and performing under retest conditions.
6. Successful completion of selected weld performance certifications meeting AWS D1.1.

New and/or Additional Equipment Required:

New and/or Additional Library Resources Required:

Special Facility Needs Required: (laboratory space, specialized labs, rooms to facilitate large groups, computer labs):

weld lab

SEMESTER COURSE FORM

Department:	Industrial & Engineering Technology
Program Area:	Metals Technology
Date:	11/04/08
Course pref and no.:	METL 2xx
Course title:	Arc/Oxyfuel Welding & Cutting for Educators
Credits:	2 (sem)
Required by:	Welding endorsement for high school teachers
Contact Hrs	30 hrs

Catalog Course Description (include prerequisites):

An introductory course for high school welding teachers covering care and use of arc and oxyfuel welding equipment, regulators, torches, cylinders, power sources, electrodes, characteristics of operation, welding of steels and special applications. Introduction to techniques of welding mild steel. Mechanical properties of metals and types of joints are also covered.

Course Objectives:

To provide an introduction to gas welding and arc welding principles and practices.
To gain an understanding of the safe use and care of welding equipment.
To identify different metals and select the appropriate processes and procedures to weld them.

New and/or Additional Equipment Required:

New and/or Additional Library Resources Required:

Special Facility Needs Required: (laboratory space, specialized labs, rooms to facilitate large groups, computer labs):

COURSE REVISION FORM

NEW____ DROPPED____ MAJOR REVISION____ FOR INFORMATION ONLY ____

College COTS Program Area IT Endorsement Date 1/28/09

Submitter Signature Dean Gregory D. Kogl Date 3.31.09
Signature (indicates "college" level approval)

Please provide a brief explanation & rationale for the proposed revision(s):
To support an Industrial Technology Teaching endorsement, the course is developed as part of a six-credit concentration in the field of Drafting.

Please provide the following information:
College: College of Technical Sciences
Program Area: Design Drafting
Date: 1/28/2009
Course Prefix & No.: DRFT 2xx

Course Title: CAD\CAM I
Credits: 2

Required by: IT Teaching Endorsement

Selective in: None
Elective in: None
General Education: No

Lecture:
Lecture/Lab: XX
Gradable Lab:
Contact hours lecture/Lab: 40
Contact hours lab:

Current Catalog Description (include all prerequisites):
N/A

Proposed or New Catalog Description (include all prerequisites):
This is a course introducing the principles and application of CAD/CAM and CNC technology. Students will solve problems associated with coordinate geometry, using AutoCAD, master CAM and plasma CAM,.

Course Outcome Objectives:
Through the duration of this course each student will:
1. Understand the significance of CAD/CAM
2. Demonstrate the techniques necessary to produce a multi-view drawing using AutoCAD
3. Demonstrate an understanding of CAM software by creating a drawing, tool paths, NCI files and .NC files.
4. Demonstrate an understanding for the plasma cam software and produce a cut part.
5. Download a completed CNC file to a CNC milling machine and successfully create the part.

Additional instructional resources needed (including library materials, special equipment, and facilities). Please note: approval does not indicate support for new faculty or additional resources.

None required

COURSE REVISION FORM

NEW____ DROPPED____ MAJOR REVISION____ FOR INFORMATION ONLY____

College COTS Program Area IT Endorsement Date 1/28/09

Submitter_____ Dean_____ Date 3·31·09
Signature Signature (indicates "college" level approval)

Please provide a brief explanation & rationale for the proposed revision(s):
To support an Industrial Technology Teaching endorsement, the course is developed as part of a six-credit concentration in the field of Drafting.

Please provide the following information:
College: College of Technical Sciences
Program Area: Design Drafting
Date: 1/28/2009
Course Prefix & No.: DRFT 2xx

Course Title: CAD\CAM II
Credits: 2

Required by: IT Teaching Endorsement

Selective in: None
Elective in: None
General Education: No

Lecture:
Lecture/Lab: XX
Gradable Lab:
Contact hours lecture/Lab: 40
Contact hours lab:

Current Catalog Description (include all prerequisites):
N/A

Proposed or New Catalog Description (include all prerequisites):
This course is a continuation in the study of G and M codes from CAD/CAM I with emphasis on 3 dimensional CAD/CAM tool path definitions. Students will use 3 dimensional models to create sweep surfaces, ruled surfaces, projected surfaces, surface revolutions, and coons surfaces.

Course Outcome Objectives:
Through the duration of this course each student will:

1. Understand the significance of CAD/CAM generated data bases.
2. Demonstrate the techniques necessary to produce a multi-view drawing using AutoCAD and MasterCAM
3. Demonstrate an understanding of CAM software by creating a drawing, tool paths, NCI files and .NC files.
4. Understand the significance of sending a .DXF file from a CAD package to a CAM package.
5. Download a completed CNC file to a CNC milling machine and successfully create the part.

Additional instructional resources needed (including library materials, special equipment, and facilities). Please note: approval does not indicate support for new faculty or additional resources.

None required

MONTANA STATE UNIVERSITY – NORTHERN
INDUSTRIAL TECHNOLOGY TEACHER EDUCATION-CARPERTRY

COURSE TITLE: Exterior Finish Carpentry

CREDITS: 2

CONTACT HOURS: This class will use both lecture and lab hours

PREREQUISITES: None

TEXT: National Center for Construction Education and Research (NCCER) Level 2

INSTRUCTOR:

COURSE DESCRIPTION: A basic knowledge of exterior finish carpentry. We will be using the following modules from NCCER Level 2 book: 27202-07, 27203-07, and 27204-07.

STUDENT PERFORMANCE OUTCOMES: Upon completion of this course, the students will be able to:

1. Work and use exterior finish carpentry tools safely.
2. Respect tools at all times.
3. Install roofing properly.
4. Use of pneumatic tools needed for exterior finishing.
5. Use of table and power miter saw.
6. Install thermal and moisture protection properly.
7. Know the different type of siding, roofing fascia and soffit materials.
8. Install the different sidings properly.
9. Install the different fascias and soffits properly.

STUDENT PERFORMANCE ASSESSMENT METHODS
Assessment will be on class attendance and class participation. Practical and written tests will be used for evaluation.

STUDENT SCHEDULE OF LEARNING ACTIVITIES

1. Day 1
    a. Identify the material and methods used in roofing.
    b. Learn to do a material list for roofing material.
    c. Will be instructed in tool and installation safety required for roofing.
    d. Install fiberglass shingles on roofs.
    e. Demonstrate tool usage.
    f. Learn the methods of installing roofing on hips, crickets, and valleys.
    g. Installation of wood, metal and other selected roofing materials.
    h. Clean up and pick up tools in area

i. Reevaluate what was learned.

2. Day 2
    a. Review safety.
    b. Complete roofing installation.
    c. Learn the requirements for insulation.
    d. Learn the characteristics of various types of insulation material.
    e. Learn to calculate the amount of insulation need for a structure.
    f. Install insulation materials.
    g. Learn the requirements for moisture control and ventilation.
    h. Install vapor barriers.
    i. Learn the methods of waterproofing, and air infiltration control.
    j. Install building wrap.
    k. Clean up and pick up tools in area.
    l. Reevaluate what was learned.

3. Day 3
    a. Review safety.
    b. Learn the process of windows and exterior door installation.
    c. Install windows and exterior doors.
    d. Learn the process of installing fascia and soffits.
    e. Learn how to estimate the amount of fascia and soffits material need for a job.
    f. Install fascia and soffits.
    g. Clean up and pick up tools in area.
    h. Reevaluate what was learned.

4. Day 4
    a. Review safety.
    b. Complete the installation of fascia and soffits.
    c. Learn the process of installing siding.
    d. Learn to estimate the amount of siding needed for a job.
    e. Install siding.
    f. Clean up and pick up tools in area.
    g. Reevaluate what was learned.

5. Day 5
    a. Review safety.
    b. Complete siding installation and any unfinished jobs.
    c. Clean up and pick up tools in area.
    d. Reevaluate what was learned.

COURSE REVISION FORM

NEW____ DROPPED____ MAJOR REVISION____ FOR INFORMATION ONLY____

College COTS Program Area IT Endorsement Date 1/28/09

Submitter _____ Dean _____ Date 3·31·09
Signature Signature (indicates "college" level approval)

Please provide a brief explanation & rationale for the proposed revision(s):
To support an Industrial Technology Teaching endorsement, the course is developed as part of a six-credit concentration in the field of Drafting.

Please provide the following information:
College: College of Technical Sciences
Program Area: Design Drafting
Date: 1/28/2009
Course Prefix & No.: DRFT 2xx

Course Title: Intro to CAD for Educators
Credits: 2

Required by: IT Teaching Endorsement

Selective in: None
Elective in: None
General Education: No

Lecture:
Lecture/Lab: XX
Gradable Lab:
Contact hours lecture/Lab: 40
Contact hours lab:

Current Catalog Description (include all prerequisites):
N/A

Proposed or New Catalog Description (include all prerequisites):
The student will gain knowledge and skills needed to produce drawings and understand basic drafting theory. It is the intent of the course to provide educators with competencies that will allow them to use a CAD system to create and print drawing files. Drafting standards, visualization techniques, CAD command structure, text, dimensions, and plotting will be covered.

Course Outcome Objectives:
Through the duration of the course the student will:

1. demonstrate an understanding of the concepts, techniques, and nomenclature associated with PC-based CAD;
2. gain an understanding of the menu structure, commands and sub-commands used in a PC-based CAD system;
3. Identify various types of projections
4. Explain why sketching skills and visualization skills are important
5. Apply basic commands to draw & edit an object to scale in multiview format
6. Save a drawing & copy it to disk
7. Print a drawing to scale
8. Create and use a template drawing with layer & other basic drawing settings
9. Apply standard techniques to properly dimension an object
10. Demonstrate an understanding of blocks & attributes

Additional instructional resources needed (including library materials, special equipment, and facilities). Please note: approval does not indicate support for new faculty or additional resources.

None required

Updated 09/29/05

MONTANA STATE UNIVERSITY – NORTHERN
CARPENTRY 1 TEACHER EDUCATION

COURSE TITLE: House Framing

CREDITS: 2

CONTACT HOURS: There will be both lecture and lab hours.

TEXT: National Center for Construction Education and Research (NCCER) Level 1

PREREQUISITES: None

INSTRUCTOR:

COURSE DESCRIPTION: A basic knowledge in Western Platform Framing. We will be using information from NCCER Modules 27102-06, 27103-06, 27104-06, 27105-06, 27106-06, and 27107-06. We will use the NCCER curriculum for the course but will not complete all the performance requirements. This course will be approximately 1/3 classroom and 2/3 lab activities which are relevant to the above NCCER Modules.

STUDENT PERFORMANCE OUTCOMES: Upon completion of this course, the students will be able to:

1. Work and use framing construction tools safely.
2. Respect tools at all times.
3. Use of pneumatic tools.
4. Use of table and power miter saw.
5. Introduction to types of framing materials.
6. Reading Floor and Elevations Plans.
7. Introduction of structural materials.
8. Various types of floor and wall structures.
9. Energy efficient framing.
10. Installation of floor decking.
11. Roof Framing

STUDENT PERFORMANCE ASSESSMENT METHODS
Assessment will be on class attendance and class participation. Written and practical tests will be used for evaluation.

STUDENT SCHEDULE OF LEARNING ACTIVITIES

1. Day one
    a. Introduction to building materials, fasteners, and adhesives.
    b. Introduction to types of hand and power tools used for rough construction.

c. Safety of work areas, product handling, and tool usage.
d. Demonstrate tool usage.
e. Student exploration of tool usage.

2. Day 2
    a. Describe the types of drawings usually included in a set of plans and list the information found on each type.
    b. Identify the different types of lines used on construction drawings.
    c. Identify selected architectural symbols commonly used to represent materials on plans.
    d. Identify selected abbreviations commonly used on plans.
    e. Read and interpret plans, elevations, schedules, sections, and details contained in basic construction drawings.
    f. State the purpose of written specifications.
    g. Identify and describe the parts of a specification.
    h. Students will make a takeoff list of materials for a set of drawings.

3. Day 3
    a. Identify the different types of framing systems.
    b. Layout and construct a floor assembly.
    c. Use floor load and span data, select the proper joist size.
    d. Demonstrate the ability to:
        i. Layout and construct a floor assembly.
        ii. Install bridging.
        iii. Install joists for a cantilever floor.
        iv. Install a subfloor.
    e. Clean up and put tools together.
    f. Reevaluate what was learned.

4. Day 4
    a. Identify components of a wall and ceiling layout.
    b. Lay out, assemble, erect and brace exterior walls.
    c. Cut and install ceiling joists on a wood frame building.
    d. Estimate the materials required to frame walls and ceilings.
    e. Clean up and put tools together.
    f. Reevaluate what was learned.

5. Day 5
    a. Understand the terms associated with roof framing.
    b. Learn the roof framing members used in a gable and hip roofs.
    c. Learn to calculate the length of a rafter.
    d. Learn types of trusses used in roof framing.
    e. Use a framing square and speed square in laying out a roof.
    f. Frame and sheath a roof system.
    g. Estimate the materials used in framing and sheathing a roof.

Updated

PROGRAM/DEGREE REVISION FORM

NEW_XX_ DROPPED_____ MAJOR REVISION_____ FOR INFORMATION ONLY_____

College_COTS___________ Program Area_Industrial Technology - Teaching___ Date_11/26/08_

Submitter_[signature]___________ Dean_Gregory D. Kegel___ Date_4-24-09_

Signature — Signature (indicates "college" level approval)

Please provide a brief explanation & rationale for the proposed revision(s).

The College of Technical Sciences has been asked to create a teaching endorsement targeted to allow currently licensed teachers in the K-12 system to become endorsed in Industrial Technology. This Endorsement consists of 18 credits focused to provide a background in three IT concentrations, as well as 3 credits of 'Methods' instruction.

Please provide in the space below a "before and after" picture of the program with the changes in the program noted. Attach appropriate Course Revision Forms. Please indicate changes by shading the appropriate cells.

PROPOSAL TITLE_Industrial Technology Endorsement_____________

Current Program listed in previous Catalog

Course Prefix	#	Course Title	Credits
		Total	

Proposed Program for 09/10 Catalog

Course Prefix	#	Course Title	Gen-Ed Credits	Degree Credits
VOED	350/550	Principles of IT Education		3
METL	3xx/5xx	Arc/Oxyfuel Welding & Cutting		2
METL	3xx/5xx	Gas Arc Welding Processes		2
METL	3xx/5xx	**Welding Certification Procedures**		2
VOED	360/560	Analysis & Prep Lab Managemetn		3
CARP	3xx/5xx	House Framing		2
CARP	3xx/5xx	Interior Finish Carpentry		2
CARP	3xx/5xx	Exterior Finish Carpentry		2
VOED	370/570	Methods of Teaching IT		3
DRFT	3xx/5xx	Intro to CAD		2
DRFT	3xx/5xx	CAD/CAM I		2
DRFT	3xx/5xx	CAD/CAM II		2
		Total		27

Additional instructional resources needed (including library materials, special equipment, and facilities). Please note: approval does not indicate support for new faculty or additional resources.

None needed. Existing facilities are adequate.

PROGRAM/DEGREE REVISION FORM

NEW_XX_ DROPPED_____ MAJOR REVISION _____ FOR INFORMATION ONLY_____

College COTS **Program Area** Industrial Technology - Teaching **Date** 11/26/08

Submitter [signature] **Dean** [signature] **Date** 3·31·09

Signature — Signature (indicates "college" level approval)

Please provide a brief explanation & rationale for the proposed revision(s).

The College of Technical Sciences has been asked to create a teaching endorsement targeted to allow currently licensed teachers in the K-12 system to become endorsed in Industrial Technology. This Endorsement consists of 18 credits focused to provide a background in three IT concentrations, as well as 3 credits of 'Methods' instruction.

Please provide in the space below a "before and after" picture of the program with the changes in the program noted. Attach appropriate Course Revision Forms. Please indicate changes by shading the appropriate cells.

PROPOSAL TITLE Industrial Technology Endorsement

Current Program listed in ~~05-06~~ Catalog

Course Prefix	#	Course Title	Credits
		Total	

Proposed Program for ~~06-07~~ Catalog 09-10

Course Prefix	#	Course Title	Gen-Ed Credits	Degree Credits
EDUC	5xx	Phase I Methods – Safety		1
METL	2xx	Arc/Oxyfuel Welding & Cutting		**2**
METL	2xx	Gas Arc Welding Processes		2
METL	2xx	**Welding Certification Procedures**		**2**
EDUC	5xx	Phase 2 – Methods: Management		1
CARP	2xx	House Framing		2
CARP	2xx	Interior Finish Carpentry		2
CARP	2xx	Exterior Finish Carpentry		2
EDUC	5xx	Phase 3 – Classroom Management		1
DRFT	2xx	Intro to CAD		2
DRFT	2xx	CAD/CAM I		2
DRFT	2xx	CAD/CAM II		2
		Total		**21**

Additional instructional resources needed (including library materials, special equipment, and facilities). Please note: approval does not indicate support for new faculty or additional resources.

None needed. Existing facilities are adequate.

INDUSTRIAL TECHNOLOGY METHODS

Credit Course Syllabus

COURSE RUBRIC AND TITLE: Industrial Technology Methods

INSTRUCTOR:

OFFICE HOURS:

TEXT (S) : Hand-outs

GRADED: Presentations, papers, and tests

COURSE DESCRIPTION: Students will learn the following:

a. How to layout an Industrial Lab according to technical areas being taught.
b. What equipment is needed for each specific technical area of study?
c. How to put together a demonstration on each piece of equipment.
d. Presentations on safety of Industrial Technology equipment.
e. Writing curriculum for the development of Industrial Technology Program.
f. To develop pathways for Industrial Technology Programs.
g. How to maintain and repair equipment used in the Industrial Technology Program.

COURSE CONTENT GOALS AND OBJECTIVES:

Upon completion of this course, the students will be able to:

1. **Use tools and work safely within an Industrial Technology Program.**
2. **Know what equipment is necessary for an Industrial Technology Program.**
3. **Know how to layout an Industrial Technology lab and classrooms.**
4. **Requirements of proper equipment installation for an Industrial Technology Program.**
5. **Proper maintenance and repair of equipment used in an Industrial Technology Program.**
6. **How to write an Industrial Technology curriculum.**
7. **How to create pathways for an Industrial Technology Program.**
8. **Know how and where to order equipment, books, and material needed in Industrial Technology Programs.**
9. **How to put together and deliver instruction in the Industrial Technology Program.**
10. **How in incorporate industry into an Industrial Technology program.**
11. **How to create an evaluation process that is valid and creates a good learning environment.**

COURSE SCHEDULE:

Starting January 21 through May 16

Schedule will be set up by Months due to the need of flexibility.

Month 1

1. Safety of tools and equipment.
2. Safety in the work place.
3. OSCA
4. Creating a safe lab environment.
5. Developing units on safety.

Month 2

1. Industrial Technology lab design.
2. Classroom layout for Industrial Technology.
3. Equipment layout.
4. Creating a learning environment in a lab setting.

Month 3

1. Introduction of equipment and tool repair.
2. Each student will give a demonstration on equipment maintenance and repair with handouts, power point and hands-on activities.

Month 4

1. Industrial Technology curriculum development.
2. Designing career pathways for Industrial Technology
3. Designing evaluation processes for Industrial Technology.

COURSE POLICES: (Students with a documented disability are requested to make an appointment with the instructor prior to class to discuss necessary accommodations for learning.)
Learning requires the investment of time and effort.
Be present for class and participate in class.
Submit work on time.
Treat other with respect.

ACCOMODATIONS: If you have a documented disability and require accommodations, please make an appointment with the instructor as soon as possible to discuss your needs.

ASSIGNMENTS: Each month a new set of assignments will be assigned.

GRADING: Students will be evaluated on each month's set of assignments. Points will be set for required learning activities.

Lourdes N. Munoz-Fox

From: Larry Strizich
Sent: Wednesday, March 25, 2009 10:19 AM
To: Lourdes N. Munoz-Fox
Subject: IT Endorsement

The IT Endorsement has been approved by COTS vote – please move it forward.

Larry Strizich, PE
Professor of Computer and Electronics Engineering Technology
Chair of the College of Technical Sciences
Brockmann Center 210H
(406)265-3724, Strizich@msun.edu
techsci.msun.edu/strizich