ABET
Self-Study Report

for the

Design Engineering Technology Program

at

Weber State University

Ogden, Utah

October 21, 2014

CONFIDENTIAL

The information supplied in this Self-Study Report is for the confidential use of ABET and its authorized agents, and will not be disclosed without authorization of the institution concerned, except for summary data not identifiable to a specific institution.

Program Self-Study Report
for
ETAC of ABET
Accreditation or Reaccreditation

BACKGROUND INFORMATION

A. Contact Information – Primary Pre-visit Contact

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B. Program History

The Drafting Program began in 1959 as a technician program offered by Weber State College. In 1962 the program was changed to an Industrial Drafting program and in 1970 was called Engineering Graphics and was offered as an AAS degree. The name was changed to Engineering/Computer Aided Graphics and Design Technology in 1978. The AAS degree was modified and called Design Graphics Technology in 1985 and continued until 2001. A new BS degree was developed along with modifications to the AAS degree in 2001 and was called Computer & Design Graphics Technology (CDGT). Just prior to the First ABET visit in 2005 the program name was changed to Design Graphics Engineering Technology (DGET) because the name CDGT had caused a lot of confusion with the Computer Science and Art Graphics Design programs. The program name was changed to Design Engineering Technology (DET) officially for the 2012-2013 academic year.

C. Options

At the present time the DET program does not have any options or emphases.

D. Program Delivery Modes

DET classes are delivered in face-to-face, hybrid, and online modes. Face-to-face and hybrid modes are traditionally offered during the day. Some courses also utilize web enhanced material (CANVAS) to make notes, and provide files,

assignments, grades, and make student-instructor interaction available to students online. These courses are referred to as web-enhanced courses.

E. Program Locations

All program courses are offered at the Weber State University main campus, with limited course offerings available at multiple local high schools through either Early College programs or concurrent enrollment courses.

F. Public Disclosure

Information regarding Program Education Objectives (PEOs), Student Outcomes (SOs), annual student enrollment and graduation data are available through the department of Institutional Research located on the main campus of Weber State University.

G. Deficiencies, Weaknesses or Concerns from Previous Evaluation(s) and the Actions Taken to Address Them

Program Weaknesses

1. Criterion: Criterion 5 states "Baccalaureate programs must consist of a minimum of 124 semester hours…" Evidence indicates that students are required to complete 121 to 123 crdit hours for the baccalaureate degree in Design Graphics Engineering Technology. The program must demonstrate that it is requiring its graduates to have completed a minimum of 124 semester hours of credit.

Due Process Response: The program responded that several changes to the program curriculum have been initiated, and the curriculum now requires 124 semester hours of credit. A summary of the changes and minutes of the appropriate faculty senate meetings approving the changes were provided. The current on-line course catalog has been revised to show the total number of credit hours as 124.

Status after Due Process: This weakness has been resolved.

Program Concerns

1. Criterion: Criterion 4 states, "The results of theses evaluations of program educational objectives and program outcomes must be used to effect continuous improvement of the program through a documented plan." Although a significant amount of evidence was provided to indicate that data are being collected and analyzed for continuous improvement, it is not clear what benchmarks of performance are being used to signal a need to improve the program. In the absence of a baseline metric for determining adequate progress, it will be difficult to systematically and consistently determine when a change to the program is required. Therefore, this finding remains a Concern until the program demonstrates that results from evaluations of program educational objectives and

program outcomes are being used to effect continuous improvement of the program through a documented plan.

Due Process Response:

Changes have been made to the assessment of program education objectives and program outcomes. Alumni and employer surveys will be sent out each summer and will target program educational objectives. Benchmarks for satisfactory performance have been established. Review will be performed by the department and the Advisory Committee. Program outcomes will be assessed through the SME certification exam, a student exit survey, and selected student wok that includes the senior project. Benchmarks have been established and the responsible parties have been identified. Program education objectives are still linked to program outcomes so that any issues that arise can be more easily targeted and investigated. The assessment table was updated to reflect these changes, and a copy of the table was included in the due process response.

Status after Due Process: This finding remains a Concern until the program demonstrates that results from evaluations of program educational objectives and program outcomes are being used to effect continuous improvement of the program.

2. Criterion: Criterion 3 states, "Each program must demonstrate that graduates have: [j] a respect for diversity and acknowledge of contemporary professional, societal, and global issues…" There was no documented evidence to indicate that Design Graphics Engineering Technology students were provided instruction regarding global issues. Without an exposure to global issues, students may be limited in their abilities to function effectively in today's global society. This finding remains a concern until the program demonstrates that graduates have respect for diversity and knowledge of contemporary professional, societal, and global issues.

Due Process Response: The program responded that students must now select a Social Science and/or Diversity course from one of three possible choices. The due process response included a revised list of required course for the degree and also included minutes of the appropriate faculty senate meetings approving the change. This new requirement is also reflected in the current on-line web course catalog.

Status after Due Process: This finding remains a Concern until the program demonstrates that graduates have a respect for diversity and knowledge of contemporary professional, societal, and global issues.

Observations for Improvement

1. It appears that graduations for some students in this program may be delayed because of scheduling conflicts between non-core courses. It is suggested that the program try to minimize such conflicts.

2. All senior projects require PowerPoint presentations, but they do not require written project reports. It is suggested that the program faculty require students to produce written technical reports for senior projects.

GENERAL CRITERIA

CRITERION 1. STUDENTS

For the sections below, attach any written policies that apply.

A. Student Admissions

Weber State is an open enrollment institution and there are no specific requirements for admission into the engineering technology programs. Students are admitted to the university on the basis of an admission number that is determined by their high school GPA and their ACT or SAT score. Those who exceed the minimum admission index and have at least 17 on the English and a 23 on the mathematics sections of the ACT (or their equivalents on the SAT) are allowed to take the freshman math and English courses.

Students who do not achieve these scores are required to take the required Accuplacer tests to determine which developmental courses they will need to begin with. These students are then required to complete developmental English or mathematics courses before they complete 60 credit hours. Until they have completed their developmental courses, they are not allowed to take upper division courses. Once they have completed the required developmental courses with a grade of C or above and have made satisfactory progress in their other courses, they are automatically allowed to take upper division courses.

B. Evaluating Student Performance

General University policy states “Students must earn a cumulative GPA of at least 2.00 for all WSU work. No more than 20 credit hours of "D" grades may be applied toward graduation. A college or department may reject any or all "D" grade work toward major or minor requirements.” The program requires a “C” or better in all required courses for the major. Any deviation from this policy is done in consultation with the department chair. Grades are assigned using the University grading scale.

C. Transfer Students and Transfer Courses

In compliance with the Higher Education Act, Weber State University only accepts transfer credit from regionally accredited colleges and universities. Students transferring to WSU with an Associate of Arts or an Associate of Science degree earned at any institution within the Utah System of Higher Education (USHE) will be considered as having met the WSU general education requirements. Students transferring from a college or university within the USHE after having met that

institution's general education requirements and, upon certification of the registrar at that institution, will be considered as having satisfied the WSU general education requirements.

Upon acceptance to the University, transfer students are required to provide official transcripts that are initially evaluated by the admissions office. There are common general education course numbers for math, science and English courses across all USHE schools in the state. Articulation agreements are available for all of the accredited schools within the state for other courses. For consistency purposes, Program Coordinators handle all transfer student evaluations regarding program requirements. Any substitutions or acceptance of transfer credit is noted using the Cattracks Degree Evaluation and Planning Tool.

D. Advising and Career Guidance

Each faculty is required to maintain a minimum of 5 office hours per week for student consultation and advising. Students are strongly urged to meet with their advisor once a year to ensure they are on track towards graduation. Advising records are kept for each student in the major and are maintained using the Cattracks Degree Evaluation and Planning Tool. The College has an advisor that handles all questions on General Education requirements.

The University maintains a Career Services department. Furthermore, a full time representative from Career Services is assigned to the College. This person is available for one-on-one consultation with students and is also available to visit classes to talk about resume writing and senior files. Job opportunities are posted on a website entitled CareerConnect. Students are also notified about job postings through email.

E. Work in Lieu of Courses

Students may complete internships applicable to cooperative work experience course work. Students may use this course to meet program requirements for one upper division technical elective, equivalent to an alternative three credit hour upper division course.

F. Graduation Requirements

Students have the responsibility to apply for graduation. Graduation requirements are governed by catalog requirements in conjunction with the Cattracks Degree Evaluation and Planning Tool.

G. Transcripts of Recent Graduates

Transcripts for recent graduates will be made available upon request.

CRITERION 2. PROGRAM EDUCATIONAL OBJECTIVES

A. Mission Statement

College of Applied Science and Technology

The vision of the College of Applied Science and Technology (COAST) is to be Utah's leader in technology and technology-related programs through service to our students and the businesses and industries in our region. Our mission is to serve the citizens of northern Utah and the state of Utah by:

- Preparing students for employment upon graduation and ensuring that they are productive, accountable and responsible individuals able to function effectively in today's workplace.
- Engaging in scholarly activities that expand the technological education our students receive and provide a service to business and industry.
- Utilizing the college's resources and faculty expertise to benefit students, business, industry, education, government and society in general.

Design Engineering Technology (Engineering Technology Department) - Mission Statement

To provide students in the disciplines of Design Engineering Technology, Electronics Engineering Technology, Manufacturing Engineering Technology, and Mechanical Engineering Technology with an education that emphasizes a solid theoretical background supplemented by practical experiences. This education enables students to acquire career-specific competencies and leadership skills, prepare for advanced education in their chosen fields of study and lifelong learning. Emphasis is given to the importance of students becoming and remaining competent in their chosen career, the need for continual improvement and application of new technologies, and the need to become active contributing members of society with an understanding of professional and ethical responsibilities. To advance knowledge in the respective disciplines through scholarly activities including instructional improvement, applied research and transfer of technology. To serve the students of the College of Applied Science and Technology and the University in addition to the business and industrial communities of Utah and the Intermountain region.

B. Program Educational Objectives

Graduates will demonstrate the ability to create mechanical and architectural designs using a variety of computer aided design tools. (related to outcomes a, b, d).

Graduates will demonstrate their knowledge using oral, written, and graphical communications and have a desire for lifelong learning, keeping current within the

discipline and be responsible citizens able to contribute as active members of society. (reference outcomes c, d, f, g, k)

Graduates will have the abilities and skills to work in a variety of different industries and businesses including manufacturing, mechanical, electrical, architectural, and government. (reference outcomes e, g)

Graduates will demonstrate a commitment to quality, ethics, service and continuous improvement in personal and professional situations (reference outcomes h, i, j, k).

C. Consistency of the Program Educational Objectives with the Mission of the Institution

The Educational Objectives were derived directly from and relate directly to the Mission of the College of Applied Science and Technology. Meeting the objectives stated above will ensure that students are, "productive, accountable and responsible individuals able to function effectively in today's workplace." Meeting the objectives stated will require that faculty engage in "scholarly activities that expand the technological education our students receive and provide a service to business and industry." Enabling students to meet the objectives above will be effectively "utilizing the college's resources and faculty expertise to benefit students, business, industry, education, government and society in general.

D. Program Constituencies

The DET program supports the manufacturing and architectural industries in Utah where there are over 1150 firms with more than 10 employees. Most of our graduates are employed in northern Utah, which includes primarily Weber County, Salt Lake County and Davis County. Together these three counties comprise about 90% of the manufacturing in Utah. Important local firms include the following:

Advanced Drainage Sys.
Associated Food Stores
ATK
Autoliv*
Barnes Aerospace Ogden Division
Boeing
Cerrowire
Chromalox
CT Film
ELKAY West
DCA
DFG
England/Corsair
Fieldcrest Cabinets
Fresenius
Futura
Great Salt Lake Mineral
GSC Casting
Honeywell
Intouch Machining
Iomega
JBT Incorporated
Jetway Systems/FMC
Kimberly-Clark
L3 Communication*
Layton City
Lifetime Products
Naptech
National Standard
Northrop Grumman
Orbit
Parker Hannifin

Petersen, Inc.
Precision Plating
Promold
Richards Sheetmetal
Skydandee Mfg.
Smith's Frozen Dairy Plant
Syro
Tech Steel
Wavel Huber Wood Prod.
Wells Cargo
Westec*
Western Coating
Western Zirconium
Williams International
W.R. White Company
Zero Enclosures

*Current members of the Industrial Advisory Committee

This diversity prevents us from focusing narrowly on any single aspect of design or manufacturing design, as we try to involve a significant cross section of these stakeholders on our advisory committee.

E. Process for Review of the Program Educational Objectives

Program Educational Objectives are generated by department faculty and reviewed by the Program Advisory Committee. Only after approval by the Program Advisory Committee are they formalized. They are then reviewed regularly and modified as needed.

The achievement of these educational objectives is measured directly through employer and graduate surveys and indirectly through the Program Outcomes and their related continuous improvement measures. Each Program Educational Objective is supported by several of the ABET "a" through "k" outcome criteria.

CRITERION 3. STUDENT OUTCOMES

A. Process for the Establishment and Revision of the Student Outcomes

Program Student Outcomes were originally based on ABET "a" thorough "k" outcomes, and have been modified slightly to include program specific information where beneficial. The Outcomes are linked to the Program Educational Objectives in our continuous improvement plan, and reviewed annually by the Program's Advisory Committee as part of the continuous improvement plan.

B. Student Outcomes

Program Student Outcomes

a) Demonstrate appropriate mastery of knowledge, skills and modern tools in the discipline, including technologies of materials, manufacturing processes,

tooling, automation, production operations, maintenance, quality, industrial organization and management, and statistics.

This outcome is documented through:

Surveys (employer & student)
Senior Project Evaluations
Select student work

b) Apply current knowledge of managing engineering and technology, including technologies of materials, manufacturing processes, tooling, automation, production operations, maintenance, quality, industrial organization and management, and statistics

This outcome is documented through

Surveys (employer & student)
Senior Project Evaluations
Select student work

c) Conduct, analyze and interpret experiments and apply experimental results to improve processes.

This outcome is documented through

Senior Project Evaluations
Select student work
Surveys (employer & student)

d) Apply creativity to design of systems, components and processes.

This outcome is documented through

Senior Project Evaluations
Select student work
Surveys (employer & student)

e) Function effectively on teams.

This outcome is documented through

Senior Project Evaluations
Select student work
Surveys (employer & student)

f) Students will demonstrate creativity in designing solutions to problems through analysis and experimentation leading to modification of systems, components and processes

This outcome is documented through

Surveys (employer & student)
Senior Project Evaluations
Select student work

g) Communicate effectively

This outcome is documented through

Senior Project Evaluations

Select student work
Surveys (employer & student)

h) Recognize the need for and possess the ability to pursue lifelong learning.
This outcome is documented through
Senior Project Evaluations
Surveys (employer &student)
Select student work

i) Understand professional, ethical and social responsibilities.
This outcome is documented through
Senior Project Evaluations
Select student work
Surveys (employer & student)

j) Respect diversity and recognize professional, societal and global issues.
This outcome is documented through
Senior Project Evaluations
Fulfilling Diversity credit at Weber State University
Surveys (employer &student)

k) Have a commitment to quality, timeliness and continuous improvement.
This outcome is documented through
Senior Project Evaluations
Surveys (employer & student)

C. Relationship of Student Outcomes to Program Educational Objectives

Graduates will demonstrate the ability to create mechanical and architectural designs using a variety of computer aided design tools. (related to outcomes a, b, d).

Graduates will demonstrate their knowledge using oral, written, and graphical communications and have a desire for lifelong learning, keeping current within the discipline and be responsible citizens able to contribute as active members of society. (reference outcomes c, d, f, g, k)

Graduates will have the abilities and skills to work in a variety of different industries and businesses including manufacturing, mechanical, electrical, architectural, and government. (reference outcomes e, g)

Graduates will demonstrate a commitment to quality, ethics, service and continuous improvement in personal and professional situations (reference outcomes h, i, j, k).

By directly linking the Educational Objectives to measurable outcomes, we are able to monitor our performance and continuously improve. Please refer to the continuous improvement binder for details on measurements and current assessments.

CRITERION 4. CONTINUOUS IMPROVEMENT

The following tables and matrices indicate the measures used to assess the Program Educational Objectives in an ongoing manner. The process is documented in the Continuous Improvement plan and reviewed each year by the Advisory Committee.

A. Student Outcomes

Ed. Obj.	Program Student Outcomes	Assessment or Key Indicator	Required Actions	Responsible Party	Freq. of Assessment
1	a. Demonstrate appropriate mastery of knowledge, skills and modern tools in the discipline, including technologies of materials, manufacturing processes, tooling, automation, production operations, maintenance, quality, industrial organization and management, and statistics.	1. Course Exams 2. Surveys (employer and student) 3. Senior Project Evaluations 4. Select student work	1) Generate baseline 2) Continue surveys and summaries. 3) Assemble evidence of student work 4) Assemble evidence of student work	1. Faculty & Program Coordinator 2. Sec./DC 3. Faculty 4. Faculty	1. Semester 2. Annual 3. Annual 4. Annual

	b. Apply current knowledge of managing engineering and technology, including technologies of materials, manufacturing processes, tooling, automation, production operations, maintenance, quality, industrial organization and management, and statistics	1. Surveys (employer and student) 2. Senior Project Evaluations 3. Select student work	1) Continue surveys and summaries. 2) Assemble evidence of student work 3) Assemble evidence of student work	1. Sec./DC 2. Faculty 3. Faculty	1. Annual 2. Annual 3. Annual
Ed. Obj.	**Program Student Outcomes**	**Assessment or Key Indicator**	**Required Actions**	**Responsible Party**	**Freq. of Assessment**
2	c. Conduct, analyze and interpret experiments and apply experimental results to improve processes.	1. Senior Project Evaluations 2. Surveys 3. Select student work	1. Assemble evidence of student work & evaluation rubric 2. Continue surveys 3. Assemble evidence of student work	1. Faculty/ DC 2. Sec./DC 3. Faculty/ DC	1. Bi-annual 2. Annual 3. Bi-annual
1	d. Apply creativity to design of systems, components and processes.	1. Senior Project Evaluations 2. Surveys 3. Select student work	1. Assemble evidence of student work & evaluation rubric 2. Continue surveys 3. Assemble evidence of student work	1. Faculty/DC 2. Sec./DC 3. Faculty/DC	1. Bi-annual 2. Annual 3. Bi-annual
3	e. Function effectively on teams	1. Senior Project Evaluations	1. Assemble evidence of student work &	1. Faculty/DC	1. Bi-annual

		2. Surveys 3. Select student work	evaluation rubrics 2. Continue surveys 3. Assemble evidence of student work	2. Sec./DC 3. Faculty	2. Annual 3. Annually
2	f. Students will demonstrate creativity in designing solutions to problems through analysis and experimentation leading to modification of systems, components and processes	1. Design Courses 2. Surveys 3. Senior Project Evaluations 4. Select student work	1. Generate baseline 2. Continue surveys and summaries 3. Assemble evidence of student work 4. Assemble evidence of student work	1. Faculty 2. Sec./DC 3. Faculty 4. Faculty	1. Semester 2. Annual 3. Annual 4. Annual
2 & 3	g. Communicate effectively	1. Senior Project evaluations 2. Surveys 3. Select student work assessed by Professor	1. Assemble evidence of student work & evaluation rubric 2. Continue surveys 3. Assemble evidence of student work	1. Faculty/DC 2. Sec./DC 3. Faculty	1. Bi-annual 2. Annual 3. Annual
Ed. Obj.	**Program Student Outcomes**	**Assessment or Key Indicator**	**Required Actions**	**Responsible Party**	**Freq. of Assessment**
4	h. Recognize the need for and possess the ability to pursue lifelong learning.	1. Senior Project Evaluations 2. Surveys	1. Assemble evidence of student work & evaluation rubric 2. Continue surveys	1. Faculty/DC 2. Sec./DC	1. Bi-annual 2. Annual
	i. Understand professional, ethical and social responsibilities.	1. Senior Project Evaluations 2. Surveys	1. Assemble evidence of student work & evaluation rubric 2. Continue surveys	1. Faculty/DC 2. Sec./DC	1. Bi-annual 2. Annual

		3. Select student work assessed by Professor	3. Assemble evidence of student work	3. Faculty	3. Annual
	j. Respect diversity and recognize professional, societal and global issues.	1. Senior Project Evaluations 2. Surveys 3. Select student work assessed by Professor	1. Assemble evidence of student work & evaluation rubric 2. Continue surveys 3. Assemble evidence of student work	1. Faculty/DC 2. Sec./DC 3. Faculty	1. Bi-annual 2. Annual 3. Annual
	k. Have a commitment to quality, timeliness and continuous improvement.	1. Senior Project Evaluations 2. Surveys	1. Assemble evidence of student work & evaluation rubric 2. Continue surveys	1. Faculty/DC 2. Sec./DC	1. Bi-annual 2. Annual

Several examples of the actual assessment results are presented below.

Summary of Student Learning Outcomes & Continuous Improvement - Closed Loop Action Form

Architecture Related Course | **Instructor** J. Farner | **Assessment Date** __ 2012-2013 _X_2014-2015 __2016-2017 Other _____

Course	Course Objectives (As found on course syllabus)	Related ABET Student Learning Outcomes	Course Assessment Method & Metrics	Course Assessment and Continuous Improvement							
				Student Learning Outcomes			Continuous Improvement				
				Standard	Results	Acceptable? Y/N	Source of idea or requirement for action (see codes below)	Improvement actions that will be incorporated as a result of feedback	Who	When	Status
DET 1040	Construct a scaled physical cross section of a residential rambler style home with a basement	A	Rubric	80% of the class will score 75% or higher	TBD	TBD	CIEQ	Develop lab and Grading Rubric	Farner	Fall 2015	In progress
DET 1040	Using AutoCAD to document the design of a residential home (Floor Plans & Elevations)	B	Rubric	80% of the class will score 75% or higher	85% scoring 80% or higher	Y	B	Revise current Grading Rubric and Supporting Checks along the way	Farner	Spring 2015	Completed
DET 1040	Pass the American Institute of Building Designers Business Administration Exam	A	Exam	80% of the class will score 75% or higher	TBD	TBD	SO	Include the AIBD Business Administration Exam as one of the Exams in the Course	Farner	Spring 2015	In progress
DET 1040	Pass the American Institute of Building Designers Architectural History Exam	A	Exam	80% of the class will score 75% or higher	TBD	TBD	SO	Include the AIBD Arch History Exam as one of the Exams in the Course	Farner	Spring 2015	In progress
DET 1350	Design and Document a home for a specific set of design criteria or client using Revit	D	Rubric	80% of the class will score 75% or higher	85% scoring 80% or higher	Y	F	Revise current Grading Rubric and Add checkpoints along the way for each section (Structural, Electrical/ HVAC, Site, Architectural)	Farner	Fall 2015	Completed
DET 1350	Pass the American Institute of Building Designers Materials Exam	A	Exam	80% of the class will score 75% or higher	TBD	TBD	SO	Include the AIBD Materials Exam as one of the Exams in the Course	Farner	Spring 2015	In progress
DET 1350	Pass the American Institute of Building Designers Building Systems Exam	A	Exam	80% of the class will score 75% or higher	TBD	TBD	SO	Include the AIBD Building Systems Exam as one of the Exams in the Course	Farner	Spring 2016	In progress
DET 2000	Pass the American Institute of Building Designers Building Codes Exam	A	Exam	80% of the class will score 75% or higher	TBD	TBD	SO	Include the AIBD Building Codes Exam as one of the Exams in the Course	Farner	Spring 2015	In progress
DET 2000	Pass the American Institute of Building Designers Specifications Exam	A	Exam	80% of the class will score 75% or higher	TBD	TBD	SO	Include the AIBD Building Codes Exam as one of the Exams in the Course	Farner	Spring 2015	In progress
DET 2000	Using Revit to document the design of a commercial building (Floor Plans & Elevations)	A	Rubric	80% of the class will score 75% or higher	85% scoring 80% or higher	Y	F	Revise current Grading Rubric and Supporting Checks along the way	Farner	Spring 2015	Completed
DET 2850	Pass the American Institute of Building Designers Structural Design Exam Parts A & B	A	Exam	80% of the class will score 75% or higher	TBD	TBD	SO	Include the AIBD Structural Design Exam as one of the Exams in the Course	Farner	Spring 2015	In progress
DET 2850	Analyze and size structural members in residential and commercial buildings	F	Exam	80% of the class will score 75% or higher	TBD	TBD	SO	Develop Application Exams for Wood/ Concrete and Steel Elements	Farner	Spring 2015	In progress
DET 3000	Pass the USGBC LEED GA Exam	B	Exam	80% of the class will score 75% or higher	TBD	TBD	IAB	Offer the LEED GA exam on campus and as the final in the class	Farner	Spring 2015	In progress
DET 3000	Pass the Autodesk Building Performance Analyst Certification	B	Exam	80% of the class will score 75% or higher	TBD	TBD	B	Incorporate the BPA certificate into the course	Farner	Spring 2015	In progress
DET 4950	Pass the Autodesk Revit User & Professional Certification	B	Exam	80% of the class will score 75% or higher	TBD	TBD	IAB	Offer the Autodesk Certified Revit User & Professional exam on campus and as the final in the class	Farner	Spring 2015	In progress
DET 4950	Coordinate clash, schedule, and quantity estimates using a BIM model	B	Rubric	80% of the class will score 75% or higher	TBD	TBD	F	Incorporate ABC competition packets as mini projects in the class	Farner	Spring 2015	In progress

B Benchmarking Activities | CIEQ Course evaluation | GS Graduate Exit Survey | IAB Industrial Advisory Board
SO Outcomes Metric | AS Alumni / Industry Survey | F Faculty Review

Summary of Student Learning Outcomes & Continuous Improvement - Closed Loop Action Form

Course	DET 1160		Instructor	M. Usui		Assessment Date __ 2012-2013 _X_2014-2015 __2016-2017 Other _____				
Course Objectives (As found on course syllabus)	Related ABET Student Learning Outcomes	Course Assessment Method & Metrics	Course Assessment and Continuous Improvement							
			Student Learning Outcomes			Continuous Improvement				
			Standard	Results	Acceptable? Y/N	Source of Idea or requirement for action (see codes below)	Improvement actions that will be incorporated as a result of feedback	Who	When	Status
(ABET Outcome a) Demonstrate appropriate mastery of knowledge, skills and modern tools in the discipline, including technologies of materials, manufacturing processes, tooling, automation, production operations, maintenance, quality, industrial organization and management, and statistics	ABET Outcomes a, d	Exam grades	80% of the class will score 75% or higher	96% of the class scored 75% or higher	Y	F	Monitor course content for alignment with industrial requirements and standards	Usui	Fall 2014	tbd
(ABET Outcome c) Conduct, analyze and interpret experiments and apply experimental results to improve processes										
(ABET outcome f) Identify, analyze and solve technical problems										

B Benchmarking Activities	CIEQ Course evaluation	GS Graduate Exit Survey	IAB Industrial Advisory Board
SO Outcomes Metric	SME SME Exam	AS Alumni / Industry Survey	F Faculty Review

Summary of Student Learning Outcomes & Continuous Improvement - Closed Loop Action Form

Architecture Related Course | **Instructor** J. Farner | **Assessment Date** __ 2012-2013 _X_2014-2015 __2016-2017 Other _____

Course Assessment and Continuous Improvement

Course	Course Objectives (As found on course syllabus)	Related AIBT Student Learning Outcomes	Course Assessment Method & Metrics	Student Learning Outcomes			Continuous Improvement				
				Standard	Results	Acceptable? Y/N	Source of Idea or requirement for action (see codes below)	Improvement actions that will be incorporated as a result of feedback	Who	When	Status
DET 1040	Construct a scaled physical cross section of a residential rambler style home with a basement	A	Rubric	80% of the class will score 75% or higher	TBD	TBD	CIEQ	Develop lab and Grading Rubric	Farner	Fall 2015	In progress
DET 2040	Using AutoCAD to document the design of a residential home (Floor Plans & Elevations)	B	Rubric	80% of the class will score 75% or higher	85% scoring 80% or higher	Y	S	Revise current Grading Rubric and Supporting Checks along the way	Farner	Spring 2015	Completed
DET 3040	Pass the American Institute of Building Designers Business Administration Exam	A	Exam	80% of the class will score 75% or higher	TBD	TBD	SO	Include the AIBD Business Administration Exam as one of the Exams in the Course	Farner	Spring 2015	In progress
DET 3040	Pass the American Institute of Building Designers Architectural History Exam	A	Exam	80% of the class will score 75% or higher	TBD	TBD	SO	Include the AIBD Arch History Exam as one of the Exams in the Course	Farner	Spring 2015	In progress
DET 1240	Design and Document a home for a specific set of design criteria or client using Revit	D	Rubric	80% of the class will score 75% or higher	85% scoring 80% or higher	Y	F	Revise current Grading Rubric and Add checkpoints along the way for each section (Structural, Electrical/ HVAC, Site, Architectural)	Farner	Fall 2015	Completed
DET 1350	Pass the American Institute of Building Designers Materials Exam	A	Exam	80% of the class will score 75% or higher	TBD	TBD	SO	Include the AIBD Materials Exam as one of the Exams in the Course	Farner	Spring 2015	In progress
DET 1360	Pass the American Institute of Building Designers Building Systems Exam	A	Exam	80% of the class will score 75% or higher	TBD	TBD	SO	Include the AIBD Building Systems Exam as one of the Exams in the Course	Farner	Spring 2015	In progress
DET 2000	Pass the American Institute of Building Designers Building Codes Exam	A	Exam	80% of the class will score 75% or higher	TBD	TBD	SO	Include the AIBD Building Codes Exam as one of the Exams in the Course	Farner	Spring 2015	In progress
DET 2000	Pass the American Institute of Building Designers Specifications Exam	A	Exam	80% of the class will score 75% or higher	TBD	TBD	SO	Include the AIBD Building Codes Exam as one of the Exams in the Course	Farner	Spring 2015	In progress
DET 2000	Using Revit to document the design of a commercial building (Floor Plans & Elevations)	A	Rubric	80% of the class will score 75% or higher	85% scoring 80% or higher	Y	F	Revise current Grading Rubric and Supporting Checks along the way	Farner	Spring 2015	Completed
DET 3050	Pass the American Institute of Building Designers Structural Design Exam Parts A & B	A	Exam	80% of the class will score 75% or higher	TBD	TBD	SO	Include the AIBD Structural Design Exam as one of the Exams in the Course	Farner	Spring 2015	In progress
DET 3052	Analyze and size structural members in residential and commercial buildings	F	Exam	80% of the class will score 75% or higher	TBD	TBD	SO	Develop Application Exams for Wood/ Concrete and Steel Elements	Farner	Spring 2015	In progress
DET 3000	Pass the USGBC LEED GA Exam	B	Exam	80% of the class will score 75% or higher	TBD	TBD	IAB	Offer the LEED GA exam on campus and as the final in the class	Farner	Spring 2015	In progress
DET 3000	Pass the Autodesk Building Performance Analyst Certification	B	Exam	80% of the class will score 75% or higher	TBD	TBD	B	Incorporate the BPA certificate into the course	Farner	Spring 2015	In progress
DET 4000	Pass the Autodesk Revit User & Professional Certification	B	Exam	80% of the class will score 75% or higher	TBD	TBD	IAB	Offer the Autodesk Certified Revit User & Professional exam on campus and as the final in the class	Farner	Spring 2015	In progress
DET 4050	Coordinate clash, schedule, and quantity estimates using a BIM model	B	Rubric	80% of the class will score 75% or higher	TBD	TBD	F	Incorporate ASC competition packets as mini projects in the class	Farner	Spring 2015	In progress

B Benchmarking Activities
SO Outcomes Metric
CIEQ Course evaluation
GS Graduate Exit Survey
AS Alumni / Industry Survey
IAB Industrial Advisory Board
F Faculty Review

Summary of Student Learning Outcomes & Continuous Improvement - Closed Loop Action Form

Architecture Related Course | **Instructor** J. Farmer | **Assessment Date** __ 2012-2013 _X_2014-2015 __2016-2017 Other _____

Course	Course Objectives (As found on course syllabus)	Related ABET Student Learning Outcomes	Course Assessment Method & Metrics	Course Assessment and Continuous Improvement							
				Student Learning Outcomes			Continuous Improvement				
				Standard	Results	Acceptable? Y/N	Source of Idea or requirement for action (see codes below)	Improvement actions that will be incorporated as a result of feedback	Who	When	Status
DET 1040	Construct a scaled physical cross section of a residential rambler style home with a basement	A	Rubric	80% of the class will score 75% or higher	TBD	TBD	CEQ	Develop lab and Grading Rubric	Farmer	Fall 2015	In progress
DET 1040	Using AutoCAD to document the design of a residential home (Floor Plans & Elevations)	B	Rubric	80% of the class will score 75% or higher	85% scoring 80% or higher	Y	B	Revise current Grading Rubric and Supporting Checks along the way	Farmer	Spring 2015	Completed
DET 1040	Pass the American Institute of Building Designers Business Administration Exam	A	Exam	80% of the class will score 75% or higher	TBD	TBD	SO	Include the AIBD Business Administration Exam as one of the Exams in the Course	Farmer	Spring 2015	In progress
DET 1040	Pass the American Institute of Building Designers Architectural History Exam	A	Exam	80% of the class will score 75% or higher	TBD	TBD	SO	Include the AIBD Arch History Exam as one of the Exams in the Course	Farmer	Spring 2015	In progress
DET 1050	Design and Document a home for a specific set of design criteria or client using Revit	D	Rubric	80% of the class will score 75% or higher	85% scoring 80% or higher	Y	F	Revise current Grading Rubric and Add checkpoints along the way for each section (Structural, Elect/Ind/ HVAC, Site, Architectural)	Farmer	Fall 2015	Completed
DET 1050	Pass the American Institute of Building Designers Materials Exam	A	Exam	80% of the class will score 75% or higher	TBD	TBD	SO	Include the AIBD Materials Exam as one of the Exams in the Course	Farmer	Spring 2015	In progress
DET 1050	Pass the American Institute of Building Designers Building Systems Exam	A	Exam	80% of the class will score 75% or higher	TBD	TBD	SO	Include the AIBD Building Systems Exam as one of the Exams in the Course	Farmer	Spring 2016	In progress
[illegible]	Pass the American Institute of Building Designers Building Codes Exam	A	Exam	80% of the class will score 75% or higher	TBD	TBD	SO	Include the AIBD Building Codes Exam as one of the Exams in the Course	Farmer	Spring 2015	In progress
[illegible]	Pass the American Institute of Building Designers Specifications Exam	A	Exam	80% of the class will score 75% or higher	TBD	TBD	SO	Include the AIBD Building Codes Exam as one of the Exams in the Course	Farmer	Spring 2015	In progress
[illegible]	Using Revit to document the design of a commercial building (Floor Plans & Elevations)	A	Rubric	80% of the class will score 75% or higher	85% scoring 80% or higher	Y	F	Revise current Grading Rubric and Supporting Checks along the way	Farmer	Spring 2015	Completed
DET 2050	Pass the American Institute of Building Designers Structural Design Exam Parts A & B	A	Exam	80% of the class will score 75% or higher	TBD	TBD	SO	Include the AIBD Structural Design Exam as one of the Exams in the Course	Farmer	Spring 2016	In progress
DET 2050	Analyze and size structural members in residential and commercial buildings	F	Exam	80% of the class will score 75% or higher	TBD	TBD	SO	Develop Application Exams for Wood Corrole and Steel Elements	Farmer	Spring 2015	In progress
DET 3000	Pass the USGBC LEED GA Exam	B	Exam	80% of the class will score 75% or higher	TBD	TBD	IAB	Offer the LEED GA exam on campus and as the final in the class	Farmer	Spring 2015	In progress
DET 3000	Pass the Autodesk Building Performance Analyst Certification	B	Exam	80% of the class will score 75% or higher	TBD	TBD	B	Incorporate the BPA certificate into the course	Farmer	Spring 2016	In progress
DET 4250	Pass the Autodesk Revit User & Professional Certification	B	Exam	80% of the class will score 75% or higher	TBD	TBD	IAB	Offer the Autodesk Certified Revit User & Professional exam on campus and as the final in the class	Farmer	Spring 2015	In progress
DET 4350	Coordinate clash, schedule, and quantity estimates using a BIM model	B	Rubric	80% of the class will score 75% or higher	TBD	TBD	F	Incorporate ASC competition packets as mini projects in the class	Farmer	Spring 2015	In progress

B Benchmarking Activities; SO Outcomes Metric; CEQ Course evaluation; GS Graduate Exit Survey; AS Alumni / Industry Survey; IAB Industrial Advisory Board; F Faculty Review

Relationship of Courses in the Curriculum to the Program Outcomes

Program Outcomes:

a. an appropriate mastery of the knowledge, techniques, skills, and modern tools of their disciplines
b. an ability to apply current knowledge and adapt to emerging applications of mathematics, science, engineering, and technology
c. an ability to conduct, analyze and interpret experiments, and apply experimental results to improve processes
d. an ability to apply creativity in the design of systems, components, or processes appropriate to program educational objectives
e. an ability to function effectively on teams
f. an ability to identify, analyze and solve technical problems
g. an ability to communicate effectively
h. a recognition of the need for, and an ability to engage in lifelong learning
i. an ability to understand professional, ethical and social responsibilities
j. a respect for diversity and a knowledge of contemporary professional, societal and global issues
k. a commitment to quality, timeliness, and continuous improvement

	Credit hours	ABET PROGRAM OUTCOMES ("X" indicates the course where this outcome is taught)										
COURSE		**a**	**b**	**c**	**d**	**e**	**f**	**g**	**h**	**i**	**j**	**k**
DET 1010 Intro Engineering/Tech Des	3	X		X			X					
DET 1040 Intro Residential Arch	3	X			X							
DET 1160 Geometric Dimens/Toler 3D	3	X			X			X		X		
DET 1350 Residential Architectural Des	3	X			X							
DET 2000 Commercial Architectural/BIM	3	X			X		X	X				
DET 2460 Prod Des Fund 3D CAD	3	X	X		X		X	X				
DET 2650 Prod Design and Development	3	X			X	X	X					
DET 2660 Structural Design and Detailing	3	X			X		X					
DET 3000 Green Building Methods	3	X			X							
DET 3100 Tool Design	3	X		X	X		X					
DET 3300 Applied Kinematic Analysis	3	X			X		X					
DET 3400 Rendering Basics Photoshop	3	X			X			X				
DET 3470 Intro to CATIA V5	3	X		X	X		X					X
DET 4350 Virtual Design and Constr Apps	3	X			X		X	X				X
DET 4400 Animation Basics	3	X			X			X				
DET 4470 Advanced CATIA V5	3	X		X	X		X					X
DET 4500 Hydraulic and Pneumatic Appl	3	X			X		X					
DET 4600 Senior Project I	2	X	X	X	X	X	X	X	X	X	X	X
DET 4610 Senior Project II	2	X	X	X	X	X	X	X	X	X	X	X

	Credit hours	**ABET PROGRAM OUTCOMES** ("X" indicates the course where this outcome is taught)										
COURSE		**a**	**b**	**c**	**d**	**e**	**f**	**g**	**h**	**i**	**j**	**k**
MFET 1210 Machining Principles	3	X					X	X				
MFET 2410 Quality Assurance	3	X	X									
MFET 2300 Statics/Strengths of Materials	5		X				X					
MFET 2360 Processes & Materials	3	X						X				
MET 3400 Machine Design	3		X				X					
MFET 3550 Manufacturing Supervision	3	X	X					X	X	X	X	
MFET 4610 Senior Project Planning/Est	3	X	X					X				
Lower Division Elective	2											
Upper Division Elective	6											
(The following are support courses)												
MATH QL1080 Pre - Calculus	5	X	X				X					
ENGL 2010 Intermediate College Writing	3							X				
COMM HU 1020 Principles Pub Speaking	3							X			X	
PHYS PS/SI 2010 General Physics + Lab	5	X	X									
ART CA 1030 Art for the Non-Art Majors	3										X	
COMPUTER & INFOR. LITERACY	4	X					X					
SOCIAL SCIENCE/DIVERSITY	6										X	
AMERICAN INSTITUTIONS	3										X	
HUMANITES/DIVERSITY	3										X	
LIFE SCIENCE/DIVERSITY	4									X		
SUMMARY OF COURSE/OUTCOMES	125	27	10	6	18	3	18	14	3	5	8	5

B. Continuous Improvement

The Design Engineering Technology (DET) program Continuous Improvement Plan (CIP) follows Weber State University's (WSU) and the College of Applied Science and Technology's (COAST) mission statement goals and objectives. The CIP has been designed to provide both a means of evaluating the program and to measure how effective the program is in reaching its stated goals. (Please refer to the flow chart provided on the next page.) The first part of the CIP deals with Program Evaluation

and the second part addresses Outcome Assessment. Each part uses a number of input sources and will be explained in detail.

Program Evaluation – This part of the CIP examines the methods used in teaching students the information needed to achieve the program goals. Recommendations are compiled from different sources of information and given to the faculty committee responsible for changes to the program. The following are the sources of information and the frequency of input for the committee to evaluate.

Course/Instructor Evaluation - Every semester non-tenured faculty (including adjuncts) have every class evaluated using the *Aleamoni Course/Instructor Evaluation Questionnaire* (CIEQ*).* Tenured faculty are required to have at least one of their courses evaluated using the same instrument and non-tenured or tenure-track faculty are required to have all courses evaluated every semester. The questionnaire provides information on Attitude, Method, Content, Interest and Instructor as well as giving the student an opportunity for narrative comments about the course. The results of the questionnaire and the comments are reviewed by the Dean of COAST, the Department Chairman and the Program Coordinator. The Department Chairman also tracks trends in the instructor and overall class rating. Any areas of concern are reviewed and recommendations are made to assist the instructors to improve. As an example, if an instructor's method of presentation is not as effective as it should be, they are encouraged to attend a Teaching and Learning forum that is available on campus or they may be assigned a faculty mentor that will attend their classes and make recommendations as to areas that can be improved. The results of the CIEQ questionnaire are also reviewed during the tenure process for a faculty member.

Student Exit Interviews – WSU gives students an Exit Interview when they apply for graduation. This interview provides information about the institution and the graduates' program of study and helps to identify areas of concern or positive aspects of their experiences at WSU. This information is important because the students usually provide a more critical evaluation of the program and instructors as they are prepared to graduate. This information is also balanced against the data from graduate surveys that are sent out after the students have been working for one to five years.

Technical Conference Reviews – The faculty are encouraged to attend at least one technical conference each year and to make recommendations for changes to the program based on new information that is presented during these conferences. Additional information is also obtained from review of papers from conferences and new text books. The faculty are encouraged to make changes to the courses they are responsible for during the year but major changes to a course or to the goals and objectives are evaluated by the faculty committee and other committees as needed.

Assessment of Program Outcomes – This part of the CIP evaluates the program outcomes and objectives from the point of view of the employers and graduates

after they have been working in the field. The input from these different sources is evaluated and then recommendations made for changes to the program outcomes, method of instruction and/or to the DET program educational objectives. The following are sources of information and the frequency of input into the committee.

Employer Surveys – One year after a student graduates, a survey is sent to as many of the graduate's employers as can be identified and then every five years a survey is sent to all of the graduate's employers to evaluate if the graduates are meeting the expectations of the employers.

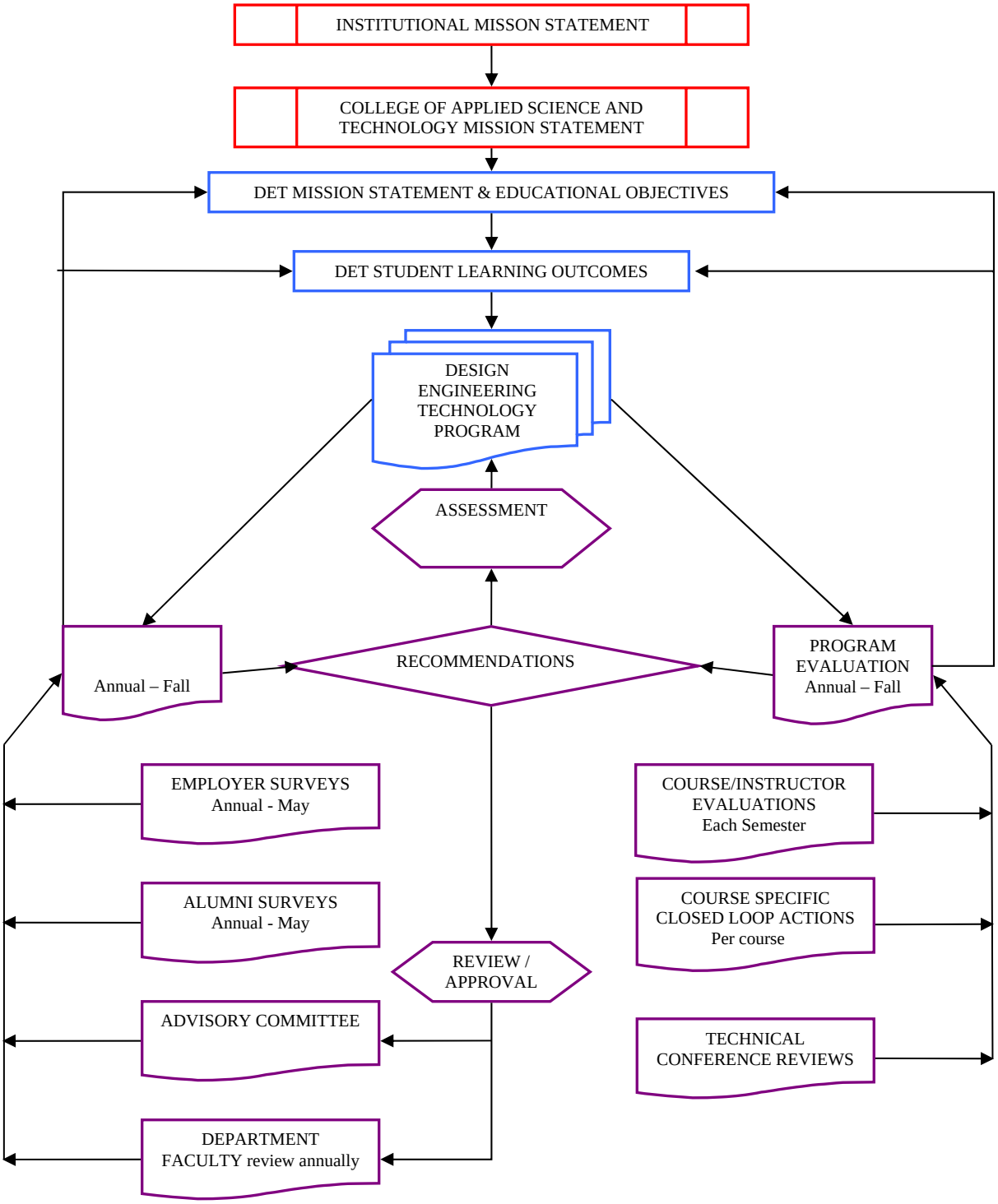
Alumni Surveys – A survey is sent to the graduates one year after they have completed the DET program and another survey is also sent to the student five years after graduation. This survey will ask the students how well the program has prepared them to work for their employers. They will also be asked to indicate what areas of the program provided the most value to their present employment and what areas have shown little value on the job.

Advisory Committee – The DET Advisory Committee meets on an annual basis. The committee is made up of representatives from industries producing mechanical and architectural products. They provide information to the faculty and department concerning their needs and review and make recommendations for changes within the program. They also examine the courses required in the program and will give feedback to the faculty about planned changes to program outcomes or educational objectives.

Peer Evaluations – The department meets with other schools within our region that have programs similar to DET in order to establish transfer guides and to look at emerging technologies that are used in other programs which will improve the DET program at WSU.

Recommendations and Action Plan – Information and recommendations from the Program Evaluation and from the Outcome Assessment activities are reviewed by the faculty and the department. Lists of changes or improvements are compiled into an Action Plan that is reviewed by the Advisory Committee and Peers with expertise in the area of DET before they are included as part of the Educational objectives, Program Outcomes or course content. A review by this committee takes place at least once a year and more frequently if needed. Members of the committee consist of the ET chairman, faculty teaching DET courses and representatives from other programs that require students to take DET courses as support for their majors. Documentation of the committee actions will be in the form of Loop Action reports and will be compiled in the Assessment and Continuous Improvement plan binder.

CONTINUOUS IMPROVEMENT PLAN FLOW CHART



Continuous Improvement of the Program

Continuous improvement is driven through annual evaluation of the Program Outcomes and Learning Objectives by the program faculty and then the Industrial Advisory Committee. Improvements that have resulted from the Closed Loop Action process include enhanced web based materials for select courses, additional student feedback on certain topics, improved senior project process management and evaluation, etc.

Employer surveys also directly drive continuous improvement. However, the surveys always suffer from no-response bias. For that reason the surveys are discussed with the Industrial Advisory Committees for validation. Surveys sent to graduates also suffer from this bias. We also strive to have several members of the Industrial Advisory Committee be relatively recent graduates in an attempt to validate the graduate surveys.

CIEQ Student evaluations of classes drive continuous improvement through the Closed Loop Action process. Each faculty member is responsible for maintaining Closed Loop Action forms for each course taught. These forms capture input from students, both formal from the CIEQ and student work and informal input from students and peers with the intent of continuously improving the courses. Improvements documented on the Closed Loop Action forms for each course are maintained as an ongoing part of the continuous improvement program at the Department.

C. Additional Information

Copies of assessment instruments or materials available upon request.

CRITERION 5. CURRICULUM

A. Program Curriculum

The DET program at Weber State University provides students with a balanced curriculum as seen in table 5-1 below.

Table 5-1 Curriculum

DESIGN ENGINEERING TECHNOLOGY

Year and Semester (or Quarter)	Course (Department, Number, Title)		Category (Credit Hours)				
		Required(R), Elective(S), or Selective (SE)	Math & Basic Sciences	Discipline Specific Topics	General Education	Offered	Average Section Enrollment
Year 1/ Sem1	DET 1010 Intro Engineering &Tech Des	R		3		F14/Sp15	30
Year 1/ Sem1	DET 1040 Intro to Residential Arch	R		3		F14/Sp15	30
Year 1/ Sem1	MFET 1210 Machining Principles	R		3		F14/Sp15	20
Year 1/ Sem1	MATH 1080 Pre Calculus	R	5			F14/Sp15/Su15	NA
Year 1/ Sem1	AI American Institutions	SE			3	F14/Sp15/Su15	NA
Year 1/ Sem2	DET 1160 GD & T Using 3D CAD	R		3		F14/Sp15	30
Year 1/ Sem2	DET 1350 Residential Arch Design	R		3		F14/Sp15	30
Year 1/ Sem2	ENGL EN2010 Intermediate Writing	R			3	F14/Sp15/Su15	NA
Year 1/ Sem 2	NTM 1700 Computer Info & Literacy	R			3	F14/Sp15/Su15	NA
Year 1/ Sem 2	LIBS 1700 Computer Info & Literacy	R			1	F14/Sp15/Su15	NA
Year 1/ Sem 2	CA Creative Arts Elective	SE			3	F14/Sp15/Su15	NA
Year 2/ Sem1	COMM HU1020 Principles Pub Speaking	R			3	F14/Sp15/Su15	NA
Year 2/ Sem1	DET 2000 Intro Comm Arch & BIM	R		3		Sp15	30
Year 2/ Sem1	DET 2460 Prod Design Fund using 3D CAD	R		3		F14/Sp15	30
Year 2/ Sem1	MFET 2410 Quality Assurance	R	3			F14/Sp15	30
Year 2/ Sem1	MFET 2360 Processes & Materials	R		3		F14/Sp15	30
Year 2/ Sem2	DET 2650 Prod Design and Dev	R		3		Sp15	30
Year 2/ Sem2	DET 2660 Arch Struct Design & Detailing	R		3		Sp15	20
Year 2/ Sem2	PHYS PS/SI 2010 General Physics	R	5			F14/Sp15/Su15	NA
Year 2/ Sem2	SS/DV Social Science/Diversity Elective	SE			3	F14/Sp15/Su15	NA
Year 2/ Sem2	Approved Lower Division Elective	SE		2		F14/Sp15/Su15	NA

TABLE 5-1 CURRICULUM - CONTINUED

DESIGN ENGINEERING TECHNOLOGY

Year and Semester (or Quarter)	Course (Department, Number, Title)		Category (Credit Hours)				
		Required(R), Elective(S), or Selective (SE)	Math & Basic Sciences	Discipline Specific Topics	General Education	Offered	Average Section Enrollment
Year 3/ Sem1	MFET 2300 Statics/Strength of Materials	R		5		F14/Sp15	30
Year 3/ Sem1	DET 3100 Tool Design	R		3		F14	30
Year 3/Sem1	DET 3400 Rendering Basics	R		3		F14	30
Year 3/ Sem1	DET 3470 Intro to CATIA V5	R		3		F14	20
Year 3/ Sem1	DET 3000 Green Methods & Certs	R		3		F14	30
Year 3/ Sem2	MET 3400 Machine Design	R		3		F14/Sp15	30
Year 3/ Sem2	DET 3300 Applied Kinematic Analysis	R		3		Sp15	30
Year 3/ Sem2	Approved Upper Division Elective	SE		3		F14/Sp15/Su15	NA
Year 3/ Sem2	MFET 3550 Manufacturing Supervision	R		3		F14/Sp15	30
Year 3/ Sem2	SS Social Science Elective	SE			3	F14/Sp15/Su15	NA
Year 4/ Sem1	DET 4350 Virtual Design & Constr Apps	R		3		F14	30
Year 4/ Sem1	DET 4600 Senior Project I (Design)	R		2		F14/Sp15	10
Year 4/ Sem1	MFET 4610 Senior Proj Plan & Estimating	R		3		F14/Sp15	30
Year 4/ Sem1	HU Humanities	SE			3	F14/Sp15/Su15	NA
Year 4/ Sem1	LS Life Science	SE	4			F14/Sp15/Su15	NA
Year 4/ Sem2	DET 4470 Advanced CATIA V5	R		3		Sp15	20
Year 4/ Sem2	DET 4500 Hydraulic and Pneumatic Appl	R		3		Sp15	30
Year 4/ Sem2	DET 4610 Senior Project II (Build)	R		2		F14/Sp15	10
Year 4/ Sem2	DET 4400 Animation Basics	R		3		Sp15	30
Year 4/ Sem2	Approved Upper Division Elective	SE		3		F14/S15/Su15	NA
TOTALS REQUIRED FOR DEGREE			17	83	25		
PERCENT OF TOTAL			13.6%	66.4%	20%		

Total credits for the program are 125 semester hours, which exceeds the minimum of 124 semester hours outlined in criteria 4. The distribution of credit hours is also

in line with requirements specified in criterion 4. There are 83 credit hours of technical content required. This provides students with technical breadth and depth while allowing good concentration in other areas.

The curriculum is aligned with Educational Objectives. Courses are linked to learning outcomes and learning outcomes are linked to PEOs;

PEO 1; Graduates will demonstrate the ability to create mechanical and architectural designs using a variety of computer aided design tools. (related to outcomes a, b, d).

PEO 2; Graduates will demonstrate their knowledge using oral, written, and graphical communications and have a desire for lifelong learning, keeping current within the discipline and be responsible citizens able to contribute as active members of society. (reference outcomes c, d, f, g, k)

PEO 3; Graduates will have the abilities and skills to work in a variety of different industries and businesses including manufacturing, mechanical, electrical, architectural, and government. (reference outcomes e, g)

PEO 4; Graduates will demonstrate a commitment to quality, ethics, service and continuous improvement in personal and professional situations (reference outcomes h, i, j, k).

	Credit hours	ABET PROGRAM OUTCOMES ("X" indicates the course where this outcome is taught)										
COURSE		**a**	**b**	**c**	**d**	**e**	**f**	**g**	**h**	**i**	**j**	**k**
DET 1010 Intro Engineering/Tech Des	3	X		X			X					
DET 1040 Intro Residential Arch	3	X			X							
DET 1160 Geometric Dimens/Toler 3D	3	X			X			X		X		
DET 1350 Residential Architectural Des	3	X			X							
DET 2000 Commercial Architectural/BIM	3	X			X		X	X				
DET 2460 Prod Des Fund 3D CAD	3	X	X		X		X	X				
DET 2650 Prod Design and Development	3	X			X	X	X					
DET 2660 Structural Design and Detailing	3	X			X		X					
DET 3000 Green Building Methods	3	X			X							
DET 3100 Tool Design	3	X		X	X		X					
DET 3300 Applied Kinematic Analysis	3	X			X		X					
DET 3400 Rendering Basics Photoshop	3	X			X			X				
DET 3470 Intro to CATIA V5	3	X		X	X		X					X
DET 4350 Virtual Design and Constr Apps	3	X			X		X	X				X
DET 4400 Animation Basics	3	X			X			X				
DET 4470 Advanced CATIA V5	3	X		X	X		X					X
DET 4500 Hydraulic and Pneumatic Appl	3	X			X		X					

DET 4600 Senior Project I	2	X	X	X	X	X	X	X	X	X	X	X
DET 4610 Senior Project II	2	X	X	X	X	X	X	X	X	X	X	X

	Credit hours	**ABET PROGRAM OUTCOMES** ("X" indicates the course where this outcome is taught)										
COURSE		**a**	**b**	**c**	**d**	**e**	**f**	**g**	**h**	**i**	**j**	**k**
MFET 1210 Machining Principles	3	X					X	X				
MFET 2410 Quality Assurance	3	X	X									
MFET 2300 Statics/Strengths of Materials	5		X				X					
MFET 2360 Processes & Materials	3	X						X				
MET 3400 Machine Design	3		X				X					
MFET 3550 Manufacturing Supervision	3	X	X					X	X	X	X	
MFET 4610 Senior Project Planning/Est	3	X	X					X				
Lower Division Elective	2											
Upper Division Elective	6											
(The following are support courses)												
MATH QL1080 Pre - Calculus	5	X	X				X					
ENGL 2010 Intermediate College Writing	3							X				
COMM HU 1020 Principles Pub Speaking	3							X			X	
PHYS PS/SI 2010 General Physics + Lab	5	X	X									
ART CA 1030 Art for the Non-Art Majors	3										X	
COMPUTER & INFOR. LITERACY	4	X					X					
SOCIAL SCIENCE/DIVERSITY	6										X	
AMERICAN INSTITUTIONS	3										X	
HUMANITES/DIVERSITY	3										X	
LIFE SCIENCE/DIVERSITY	4									X		
SUMMARY OF COURSE/OUTCOMES	125	27	10	6	18	3	18	14	3	5	8	5

Capstone or integrated experiences

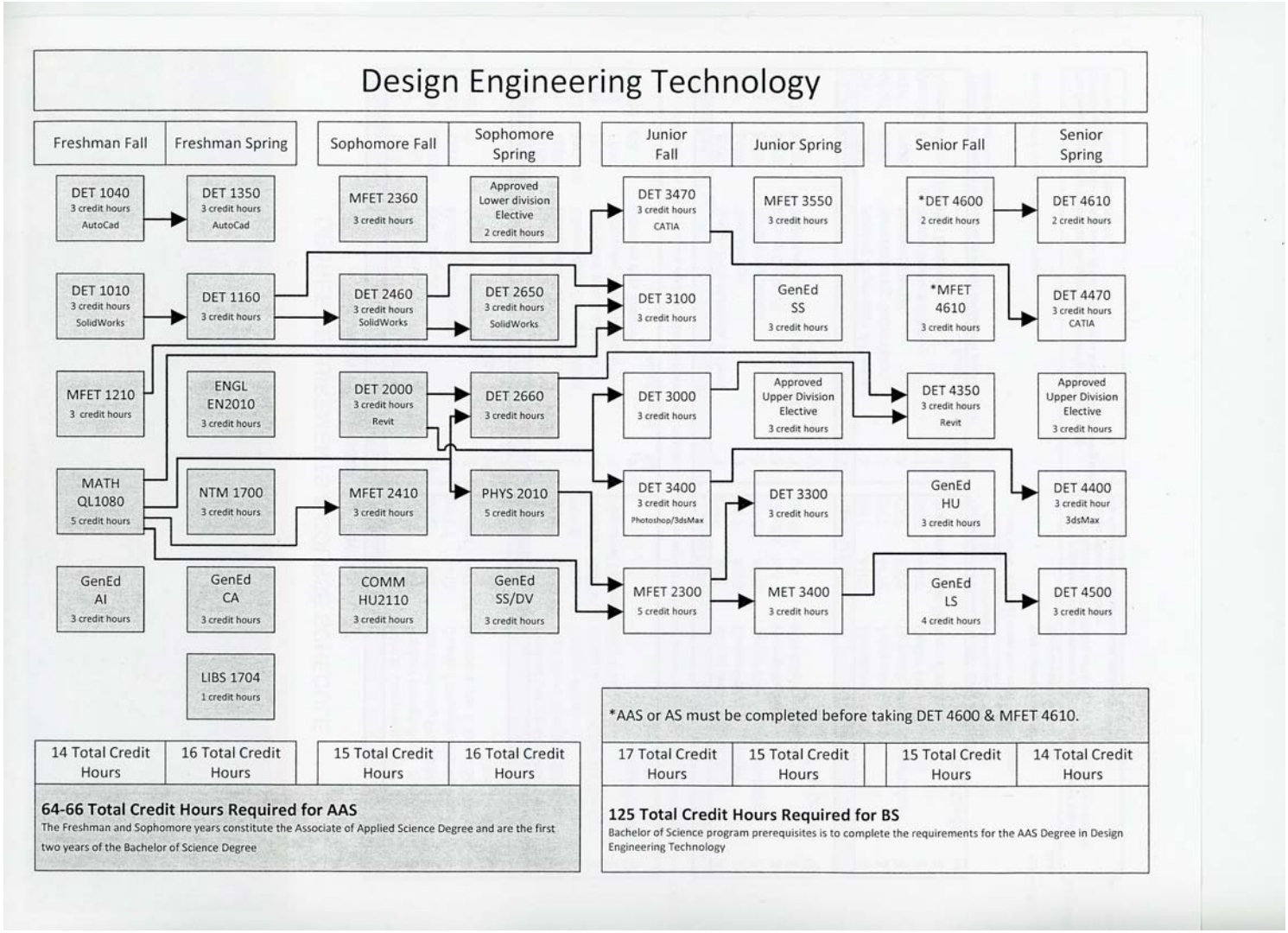
The Design Engineering (DET) senior project provides students with a significant capstone experience during their final year in the program. It also allows students to demonstrate how well they have mastered the technical skills of the discipline.

By working in a team environment, students also have the opportunity to demonstrate their mastery of communication, human relations and management skills.

The senior project is designed to help students achieve theoretical knowledge and practical skills. In addition, the concepts of human relations, communications, and fundamental project management skills are taught by creating a learning environment as close to the "real world" of work as academic situations allow. Students are able to create a powerful portfolio that demonstrates their abilities to potential employers. As part of their senior project, students are required to:

- Demonstrate appropriate mastery of knowledge, skills and modern tools that they acquire through course work in the DET discipline, as they identify, analyze and solve the technical problems associated with their project.
- Apply the current knowledge they have, as well as seek to adapt new applications of technology they may discover in the course of considering alternative solutions to problems.
- Apply creativity in the design of systems, components, and processes necessary to successfully complete their senior project.
- Function effectively as a senior project team including showing respect for differing opinions and a willingness to compromise as situations call for it.
- Demonstrate effective communication among team members during review presentations and in all written documentation.
- Conduct research to answer questions beyond their current knowledge.
- Promote ethical practices within their team and understand the potential impact the project may have on its users.
- Have a commitment to quality, timeliness and continuous improvement as their team progresses through the various phases of the project.

Prerequisite Flow Chart



B. Course Syllabi

Course Syllabi for each course used to satisfy the mathematics, science, and discipline-specific requirements required by Criterion 5 are shown in Appendix A

C. Advisory Committee

The DET Advisory Committee meets a minimum of once a year. The committee is made up of representatives from industries producing mechanical and architectural products. They provide information to the faculty and department concerning their needs and review and make recommendations for changes within the program. They also examine the courses required in the program and will give feedback to the faculty about planned changes to program outcomes or educational objectives.

CRITERION 6. FACULTY

A. Faculty Qualifications

- **Faculty Competencies**

  George Comber:

  Mr. Comber teaches the following courses: MFET 2440/L, Computer Numeric Control (CNC) in Manufacturing, MFET 3350/L, Plastics and Composites, MFET 3710/L, Computer Aided Manufacturing and Rapid Prototyping, and MFET 4610L/MFET 4620L, Senior Project Lab. Mr. Comber spent 13 years in industry and has a broad background in manufacturing processes including hands-on experience as a manual machinist and a CNC programmer. In addition to his industrial background, he has had several years of teaching experience in the discipline at a local community college prior to joining the faculty at WSU.

  Jeremy Farner

  Mr. Farner is an assistant professor who is up for the rank of associate professor this academic year. He teaches the following courses; DET 1010 - Introduction to Engineering and Technical Design, DET 1040 - Introduction to Residential Architecture, DET 1350 – Residential Design, DET 2000 – Introduction to Commercial Architecture & BIM, DET 2660 – Structural Design & Detailing, DET 3000- Green Building & Certifications, DET 4350 – Virtual Design & Construction Applications. Prior to joining the faculty at WSU, Mr. Farner worked for 11+ years in the housing industry in various capacities as a framer, general contractor, draftsman, and designer. He worked for 2 years in the manufacturing industry as a

tool designer. He holds an Associates of General Studies, Associates of Applied Science in Design Graphics Engineering Technology, and a Bachelor of Science in Design Engineering Technology from Weber State University as well as a Master of Science in Construction Management from Purdue University.

Kelly Harward:

Mr. Harward teaches the following courses: MFET 1150, Pre-professional Seminar, MFET 2300, Statics and Strength of Materials, MFET 3200, Machine Design, MFET 3460, CAD/CAM Modeling Techniques, MFET 4610L/MFET 4620L, Senior Project Lab, and the MFET 4995, SME CmfgT Exam Review, courses. Mr. Harward's educational background and work experience focused on design engineering technology and CAD work prior to joining the faculty at WSU. He has since had the opportunity to do consulting with local companies and to complete a sabbatical leave at Iomega where he worked directly in creating solid models in a SDRC CAD system. These opportunities have continued to add to his experience in design and CAD applications. He is currently doing consulting at AutoLiv working in the SolidWorks CAD system. The experience mentioned above has given him valuable insights into the subject content of his assigned courses.

J.D. Julander

Mr. Julander is an adjunct professor who has a passion for teaching and design. His classes include DET 2000 - Introduction to Building Information Modeling (BIM), DET 3400 - Rendering Basics, and DET 4400 - Animation Basics (3ds Max). J.D. is self employed and has provided freelance work for local businesses during the last 12 years. His work involves numerous areas of design such as drafting, graphic design, web design, architectural design, and video productions. He holds a Bachelor's degree in Design Engineering Technology from Weber State University.

Meg Leatherbury:

Ms. Leatherbury is an assistant professor in the Design Engineering Technology program and teaches the following courses: DET 1010, Introduction to Engineering and Technical Design, DET 1160, Geometric Dimensioning and Tolerancing Using 3D CAD, DET 2460, Product Design Fundamentals Using 3D CAD, DET 3470, Introduction to Catia V5, and DET 4470, Advanced Catia V5. Prior to joining the faculty at WSU, Ms. Leatherbury worked in automotive industry as a design engineer and mechanical engineer for over 5 years. She holds an Associate of Applied Science degree in Computer Design Graphics Technology from Weber State University as well as Bachelor of Science and Master of Science degrees in Computer Graphics Technology from Purdue University.

Daniel Magda:

Although Dr. Magda's primary assignment is in the MET program, he teaches the MFET 3310/L, Material Selection and Heat Treat, course for the MFET program. Dr. Magda's earned all three of his degrees in Mechanical Engineering. He has several years of industrial experience where he performed fracture toughness and corrosion fatigue crack propagation tests on aircraft aluminum alloys. In addition, he was employed for a time as a machinist.

Rick Orr:

Mr. Orr has taught the following courses: MFET 1150, pre-Professional Seminar, MFET 2410, Quality Concepts and Statistical Applications, MFET 3810, Statistical Process Control, MFET 3910, Six Sigma Tools, MFET 4610, Senior Project Planning and Estimating, MFET 4610L/ MFET 4620L, Senior Project Lab and, MFET 4995, Certified Manufacturing Technologist (CMfgT) Exam Review. Mr. Orr has a very strong background in engineering, manufacturing processes, lean manufacturing and engineering management. He is APICS Certified in Production Management and Inventory Control and Green Belt Certified by ASQ. Mr. Orr has over 20 years experience in manufacturing, with experience in R&D, production supervision, manufacturing engineering, project and program management, manufacturing strategy development, and tooling. He is active in assisting local firms with lean manufacturing and Six Sigma implementation and serves as Director of the Technology Assistance Center at WSU. With a Master's Degree from MIT in the Management of Technology, a Masters Degree in Engineering Administration from the University of Utah, and a Bachelor's degree in Mechanical Engineering from the U of Utah he is well qualified to teach the courses indicated.

Kerry Tobin:

Mr. Tobin teaches the following courses: MFET 1210, Machining Principles I, MFET 2150/L, Metal Forming, Casting and Welding, MFET 3010, Tool Design, MFET 3340/L, Applied Fluid Power and, MFET 4610L/MFET 4620L, Senior Project Lab. Prior to joining the faculty at WSU, Mr. Tobin had the opportunity of working in a variety of manufacturing settings as an Industrial and Manufacturing Engineer. Since that time, he has also worked part-time and done consulting as a tooling designer and engineer. He is particularly well suited to teach the machining and process-oriented classes since he earned a machine tool certificate and graduated from the MFET program at WSU in 1975.

Glen West:

Mr. West is the Design Engineering Technology program coordinator and teaches the following courses: DET 1010, Introduction to Engineering and Technical Design, DET 2460, Product Design Fundamentals Using 3D CAD, DET 2650, Product Design and Development, DET 3100, Tool Design, DET 3300, Applied Kinematic Analysis, and DET 4500, Hydraulic and Pneumatic Applications. Prior to joining the faculty at WSU, Mr. West worked for 23 years in industry as a draftsman, designer, and mechanical engineer. He holds an Associate of Applied Science degree in Drafting and Design Technology from Utah Valley University as well as Bachelor of Science and Master of Science degrees in Mechanical Engineering from the University of Utah.

Table 6-1. Faculty Qualifications

Design Engineering Technology and Manufacturing Engineering Technology

Faculty Name	Highest Degree Earned-Field and Year	Rank [1]	Type of Academic Appointment[2]	FT or PT[3]	Years of Experience			Professional Registration/ Certification	Level of Activity[4] H, M, or L		
					Govt./Ind. Practice	Teaching	This Institution		Professional	Professional	Consulting/summer work in industry
Mark Baugh	M.S	P	T	FT	25	22	11	CWI	M	M	H
Dustin Birch	M.S	AST	TT	FT	20	4	4		M	H	H
George Comber	M.S.	P	T	FT	15	24	14	CPE,CMfgt	L	M	M
Andrew Deuceuster	PhD	AST	TT	FT	10	6	2	CMfgt	H	M	H
Jeremy Farner	M.S	ASC	T	FT	11	7	7	CGP, LeedGA	H	H	H
Mary Foss	M.S.	A	NTT	PT	12	4	4		L	L	H
Kelly Harward	M.S	P	T	FT	20	28	27		M	H	H
John Julander	B.S.	A	NTT	PT	10	5	5		M	M	H
Meg Leatherbury	M.S.	ASC	T	FT					M	M	L
Dan Magda	PhD	P	T	FT	20	18	18		H	M	M
Julie McCulley	M.S.	ASC	T	FT	15	9	9		H	H	L
Rick Orr	M.S.	P	T	FT	23	15	15		H	H	M
Kerry Tobin	M.S.	P	T	FT	20	33	33		H	L	L
Glen West	M.S	ASC	T	FT	12	10	10		L	H	L

Instructions: Complete table for each member of the faculty in the program. Add additional rows or use additional sheets if necessary. Updated information is to be provided at the time of the visit.

1. Code: P = Professor ASC = Associate Professor AST = Assistant Professor I = Instructor A = Adjunct O = Other
2. Code: TT = Tenure Track T = Tenured NTT = Non Tenure Track
3. At the institution
4. The level of activity, high, medium or low, should reflect an average over the year prior to the visit plus the two previous years.

B. Faculty Workload

Table 6-2. Faculty Workload Summary - Design Engineering Technology

Faculty Member (name)	PT or FT[1]	Classes Taught (Course No./Credit Hrs.) Term and Year[2]	Program Activity Distribution[3]			% of Time Devoted to the Program[5]
			Teaching	Research or Scholarship	Other[4]	
Baugh, Mark (Support Faculty)	FT	Fall Semester 2014 DET 4600 Senior Project I (Design) (2) DET 4610 Senior Project II (Build) (2) MFET 3060 Codes, Weld Inspection & QA (3) MFET 3630 Fusion Joining & Brazing (2) MFET 3630L Fusion Joining & Brazing Lab (1) MFET 3750 Welding Metallurgy I (2) MFET 3750L Welding Metallurgy Lab (1) MFET 3890 Cooperative Work Experience (3) MFET 4090 Welding Power Sources (2) MFET 4610L Senior Project & Planning Lab (2) MFET 4620L Senior Project Lab (2) MFET 4830 Directed Readings (0 paid – student rec. 3) Department Coordinator (1)	75%	10%	15% Weld Pgm Coord,	10%
		Spring Semester 2015 DET 4600 Senior Project I (Design) (2) DET 4610 Senior Project II (Build) (2) MFET 2670 GMA, FCA, and GTA Welding (1) MFET 2670L GMA, FCA, and GTA Welding Lab (2) MFET 3760 Welding Metallurgy II (2) MFET 3760L Welding Metallurgy II Lab (1)	75%	10%	15% Weld Pgm Coord,	10%

		MFET 3820 Nondestructive Testing (3) MFET 3890 Cooperative Work Experience (3) MFET 4310 Corrosion & Corrosion Control (2) MFET 4610L Senior Project & Planning Lab (2) MFET 4620L Senior Project Lab (2) MFET 4890 Cooperative Work Experience (0 paid – student receives 3) Department Coordinator (1)				
Birch, Dustin (Support Faculty)	FT	Fall Semester 2014 MET 2890 Coop Work Experience (0 paid – student rec. 3) MET 3050 Dynamics (3) MET 3400 Machine Design (3) MET 3400 Machine Design (2nd Section) (3) MET 3700 Testing & Failure Analysis (3) MET 3890 Coop Work Experience (3) MET 4500 Senior Project (3) MET 4800 Individual Research MET (0 paid – student rec.3) MET 4830 Directed Readings (0 paid – student rec. 3) MET 4830 Directed Readings (2nd Sect.) 0 paid – student rec. 3) Department coordinator (3)	65%	10%	25% MET Pgm Coord,	10%
		Spring Semester 2015 MET 2500 Modern Engineering Technology (3) MET 2500 Modern Engineering Technology (2nd Section) (3) MET 2890 Coop Work Experience (0 paid – student rec. 3) MET 3400 Machine Design (3) MET 3400 Machine Desing (2nd Section) (3) MET 3890 Coop Work Experience (0 paid – student rec. 3) MET 4510 Senior Project (3) MET 4800 Individual Research MET (0 paid – student rec. 3) MET 4830 Directed Readings (0 paid – student rec. 3) Department Coordinator (3)	65%	10%	25% MET Pgm Coord,	10%
Comber, George (Support Faculty)	FT	Fall Semester 2014 MFET 2850 CNC/CAM for Plastics & Composites (3)				

		MFET 2860 Plastics/Composites Materials/Properties (3) MFET 3350 Plastic & Composite Manufactur (2) MFET 3350L Plastic & Composite Manuf Lab (2) MFET 3350L Plastic & Composite Manuf Lab (2nd Section) (2) MFET 3870 Mold Design & Process Strategi (3) MFET 3890 Cooperative Work Exp.(0 paid – student rec. 3) MFET 4830 Directed Readings (0 paid – student rec. 3) Department Coordinator (1)	75%	10%	15% Plastics Pgm Coord,	10%
		Spring Semester 2015 MFET 3500 Mech Measures & Instruments (3) MFET 2440 CNC in Manufacturing (2) MFET 2440L CNC in Manufacturing Lab (1) MFET 3550 Manufacturing Supervision (3) MFET 3710 Comp Aided Manuf & Rapid Proto (2) MFET 3710L Comp Aided Manufacturing Lab (1) MFET 3710L Comp Aided Manufacturing Lab (2nd Section) (1) MFET 3890 Cooperative Work Exp. (0 paid – student rec. 3) MFET 4890 Cooperative Work Exp. (0 paid – student rec. 3) Department Coordinator (1)	75%	10%	15% Plastics Pgm Coord,	10%
Deceuster, Andrew	FT	Fall Semester 2014 MET 1000 Intro Mech Engin Tech & Design (3) MFET 2360 Manufg Processes & Materials (3) MFET 2410 Quality Concept & Stat Appl (3) MFET 3810 Stat Process Control & Reliab (3) MFET 4610L Senior Project & Planning Lab (2)	85%	15%		43%
		Spring Semester 2015 MET 1500 Mechanical Design Engineering (3) MET 1500 Mechanical Design Engineering (2nd Section) (3) MFET 2410 Quality Concept & Stat Appl (3) MFET 3910 Six Sigma Methods & Tools (4) MFET 4620L Senior Project Lab (2) MFET 4800 Individual Research (0 paid – student rec. 3)	85%	15%		43%
Farner, Jeremy	FT	Fall Semester 2014				

		DET 1040 Intro Residential Architecture (3) DET 1350 Residentl Architectural Design (3) DET 3000 Green Building Methods/Certif (3) DET 4600 Senior Project I (Design) (2) DET 4610 Senior Project II (Build) (2) DET 4890 Cooperative Work Exp. (0 paid – student rec. 2) DET 4890 Cooperative Work Exp. (2nd Sect. 0 paid – student rec. 2) MFET 4620L Senior Project Lab (2)	90%	10%		100%
		Spring Semester 2015 DET 1350 Residential Architectural Design (3) DET 2000 Commercial Architecture/BIM (online) (3) DET 2660 Structural Design & Detailing (3) DET 2920 Workshop – Thailand Orphanage (3) DET 4600 Senior Project I (Design) & MFET 4610L (2) DET 4610 Senior Project II (Build) (2) DET 4830 Directed Readings (0 paid – student rec. 3)	90%	10%		100%
Foss, Mary	PT	Fall Semester 2014 MFET 2410 Quality Concept & Stat Appl (3)	100%			10%
		Spring Semester 2015 MFET 2410 Quality Concept & Stat Appl (3) MFET 2920 Workshop – Applied Calc EngTec (3)	100%			10%
Harward, Kelly (Support Faculty)	FT	Fall Semester 2014 MFET 1150 Pre-Prof Seminar in Manufactur (1) MFET 1890 Cooperative Work Exp. (0 paid – student rec. 1) MFET 2300 Statics & Strength of Materials (5) MFET 2300 Statics & Strength of Materials (2nd Section) (5) MFET 2830 Directed Readings (0 paid – student rec. 1) MFET 2890 Cooperative Work Experience (1) MFET 3460 Eng Design Using Sold Model (2) MFET 3460L Eng Design Using Sold Model Lab (1) MFET 3890 Cooperative Work Experience (1) MFET 4830 Directed Readings (0 paid – student rec. 3)	70%	5%	25% MFET Pgm Coord.	40%

		MFET 4830 Directed Readings (0 paid – student rec. 1) Department Coordinator (3)				
		Spring Semester 2015 DET 3460 Parametric Design Graphics (3) MFET 2300 Statics & Strength of Material (5) MFET 2300 Statics & Strength of Materials (2nd Section) (5) MFET 2870 Design of Plastics/Composites (3) MFET 3890 Cooperative Work Exp. (0 paid – student rec. 3) MFET 4830 Directed Readings (3) MFET 4890 Cooperative Work Exp. (0 paid – student rec. 3) Department Coordinator (3)	70%	5%	25% MFET Pgm Coord.	40%
Julander, John (Adjunct)	PT (I for S15)	Fall Semester 2014 DET 2000 Commercial Architecture/BIM (3) DET 3400 Rendering Basics-Photoshop/3ds (3)	100%			100%
		Spring Semester 2015 DET 1040 Intro residential Architecture (3) DET 4400 Animation basics (3ds Max) (3) DET 2650 Product Design & Development (3) DET 3300 Applied Kinematic Analysis (3) DET 4500 Hydraulic & Pneumatic Appl (3)	100%			100%
Lanzetti, Jennifer (Adjunct)	PT	Fall Semester 2014 DET 4350 Virtual Design & Constr Applic (3)	100%			100%
		Spring Semester 2015 (none)	na	na	Na	Na
Leatherbury, Megumi	FT	Fall Semester 2014 DET 1010 Intro Engineering/Tech Design (3) DET 1160 Geo Dimension/Tolerance 3D CAD (3) DET 3470 Introduction to CATIA V5 (3) DET 4600 Senior Project I (Design) (2) MFET 4610L Senior Project & Planning Lab (2)	85%	10%		100%
		Spring Semester 2015 DET 1010 Intro Engineering/Tech Design (3)				

		DET 1010 Intro Engineering/Tech Design (3) DET 1010 Intro Engineering/Tech Design (2nd Section) (3) DET 1160 Geo Dimension/Tolerance 3D CAD (3) DET 2460 Prod Design Fund Using 3D CAD (3) DET 4470 Advanced Catia V5 (3) DET 4610 Senior Project II (Build) (2) MFET 4620 Senior Project Lab (2)	85%	10%		10%
McCulley, Julanne (Support Faculty)	FT	Fall Semester 2014 EET 2170 Industrial Controls (3) EET 3040 Instrumentation & Measurements (4) EET 4890 Cooperative Work Exp. (0 paid – student rec. 3) MFET 4580 Process Automation (1) MFET 4580L Process Automation Lab (2) MFET 4580L Process Automation Lab (2nd Section) (2) Department Coordinator (3)	70%	5%	25% EET Pgm Coord.	19%
		Spring Semester 2015 EET 1140 DC Circuits (3) EET 3090 Project Management (2) EET 4800 Individual Studies (4) EET 4890 Cooperative Work Exp. (0 paid – student rec. 3) MFET 4850 Integration of Automated Syst (3) Department Coordinator (3)	70%	5%	25% EET Pgm Coord.	10%
Orr, Rick	FT	Fall Semester 2014 DET 4610 Senior Project II (Build) & MFET 4620L (2) MFET 3550 Manufacturing Supervision (Online) (3) MFET 4610 Sr Project Plan & Estimating (3) MFET 4995 CMfgT Exam Review (1) Department Chair (6)	45%	5%	50% Chair MFET .	20%
		Spring Semester 2015 DET 4600 Senior Project I (Design) (2) MFET 3830 Reinforced Plastics/Comp (3) MFET 4610 Sr Project Plan & Estimating (3) MFET 4610L Senior Project & Planning Lab (2)	45%	5%	50% Chair MFET .	20%

		Department Chair (6)				
Thomas, Russell	PT	Fall Semester 2014 MFET 1210 Machining Principles I (3)	100%			10%
		Spring Semester 2015 MFET 1210 Machining Principles I (3)	100%			10%
Tobin, Kerry	FT	Fall Semester 2014 MFET 1210 Machining Principles I (3) MFET 1210 Machining Principles I (2nd Section) (3) MFET 2150 Metal Forming, Casting & Weld (2) MFET 2150L Metal Forming, Casting & Weld (1) MFET 2151 Metal Forming Lecture/Lab (1) MFET 2152 Metal Casting Lecture/Lab (1) MFET 2153 Metal Welding Lecture/Lab (1) MFET 3340 Applied Fluid Power (2) MFET 3340L Applied Fluid Power Lab (1) MFET 3340L Applied Fluid Power Lab (2nd Section) (1)	95%	5%		10%
		Spring Semester 2015 MFET 1210 Machining Principles I (3) MFET 1210 Machining Principles I (2nd Section) (3) MFET 2360 Manufg Processes & Materials (3) MFET 3340 Applied Fluid Power (2) MFET 3340L Applied Fluid Power Lab (1) MFET 3340L Applied Fluid Power Lab (2nd Section) (1) MFET 4995 CMfgT Exam Review (1)	95%	5%		10%
		Spring Semester 2014 (none)	na	na	na	na
West, Glen (Support Faculty)	FT	Fall Semester 2014 DET 1010 Intro Engineering/Tech Design (3) DET 1010 Intro Engineering/Tech Design (2nd Section) (3) DET 2460 Prod Design Fund Using 3D CAD (3) DET 2830 Directed Readings (3) DET 2890 Cooperative Work Experience (3) DET 3100 Tool Design (3)	65%	10%	25% DET Pgm Coord.	100%

		DET 4600 CEL Senior project I (Design) (2) DET 4610 Senior Project II (Build) (2) DET 4830 Directed Readings (0 paid – student rec. 3) DET 4830 Directed Readings (0 paid – student rec. 1) DET 4890 Cooperative Work Exp. (0 paid – student rec. 3) MFET 4610L Senior Project & Planning Lab (2) MFET 4620L Senior Project Lab (2) Department Coordinator (3)				
		Spring Semester 2015 DET 4600 Senior Project I (Design) (2) DET 4610 Senior Project II (Build) (2) DET 4890 Cooperative Work Exp. (0 paid – student rec. 3) MFET 4610L Senior Project & Planning Lab (2) MFET 4620L Senior Project Lab (2) Department Coordinator (3)	65%	10%	25% DET Pgm Coord.	100%

1. FT = Full Time Faculty or PT = Part Time Faculty, at the institution
2. For the academic year for which the Self-Study Report is being prepared.
3. Program activity distribution should be in percent of effort in the program and should total 100%.
4. Indicate sabbatical leave, etc., under "Other." Note; service, other than program coordinators and chairs, is listed under teaching
5. Out of the total time employed at the institution.

	Range	Average
Credit Hours	11 - 19	13
Contact Hours Per Week	12 - 20	17
Laboratory Size	10 - 15	12
Class Size	10 - 55	20
Advisees	10 - 20	15

Twelve semester hours is considered full-time (24 for the year). Any teaching load above 12 credit hours per semester is considered overload and faculty are compensated on a per credit hour basis at adjunct rates. Each faculty is required to maintain a minimum of 5 office hours for student consultation and advising each week. One credit hour of class time is approximately 50 minutes per week and one credit hour of lab time is approximately two hours of actual lab time per week.Table 6-2. Faculty Analysis

C. Faculty Size

In addition to their normal teaching load, the DET faculty are required to set aside a minimum of 5 hours per week for student advising. Each of the faculty is also involved in providing service to the University by serving on various committees at the department, college and university levels. Each of the faculty is allowed up to eight hours per week to do consulting and to interact with local industry. The three faculty teaching full time in the DET program and seven faculty teaching classes for the DET program as part of their fulltime load are sufficient in number to give adequate coverage for all DET courses and allow faculty time for professional development and service.

Appendix B contains an abbreviated resume for each program faculty member.

D. Professional Development

The department and the college usually provide adequate funding for each faculty to travel to at least one conference or seminar per year.

Tenured faculty are encouraged to take sabbatical leave, which is a leave of absence with compensation for one or two semesters as approved by the Board of Trustees for purposes of study, research or other pursuits, the objectives of which are the professional improvement and advancement of faculty members as well as an increase in their usefulness to the institution. Sabbatical leaves are granted to

faculty members only for purposes that will improve the ability of the recipient to discharge effectively teaching, research or service obligations to the University including the following:

Research and writing in the recipient's field of specialization

Regular attendance at classes or laboratories of an institution of higher learning

Pursuance of training in the recipient's field of specialization

Other specifically defined purposes which would clearly further the objectives of the sabbatical-leave plan as set forth in the WSU policies and procedures manual.

Sabbatical leave is accrued as follows:

3 years = 1 semester @ 100% salary for the semester

6 years = 2 semesters @ 75% salary for 2 semesters

Faculty on sabbatical are eligible for consideration for merit pay, advancement in rank, one-time bonuses and for any general or special adjustment in salary received by other faculty members of the University per the WSU policies and procedures manual.

Although faculty are not required to take sabbatical leave, the program has a rotation schedule set in place for all faculty who qualify for sabbatical leave to minimize disruption.

E. Authority and Responsibility of Faculty

The primary responsibility for defining revising, and implementing program educational objectives, the development of new courses, deletion or changes in existing courses, the initiation of new programs, the discontinuance of existing programs, or other program modifications lies with the faculty. The program educational objectives are reviewed by the DET program faculty. The Department Chairman and the Dean's office are involved in reviewing the objectives, and substantial input is expected from the Advisory Committee as shown in the continuous improvement section. Major reviews of educational objectives and outcomes are driven by the ABET accreditation cycle, with the review of this material a major element in the Advisory Boards the year prior to ABET accreditation visits.

The process used to ensure consistency and quality of the courses taught involves student assessment of select courses through the CIEQ process, described earlier, as well as continuous improvement driven by individual faculty through the closed-loop action forms discussed in the continuous improvement section. Tenured faculty are required to have one course per semester evaluated through the CIEQ system, while non-tenured faculty are required to have every course taught evaluated every semester. Results from CIEQ evaluations are maintained in professional files for each faculty member.

Course Offerings and Content

Faculty members are responsible for planning and presenting course material; establishing course objectives and requirements including grading policies in accordance with University policy and making them known to students; selecting and ordering texts and supplemental materials in accordance with University policy; preparing, administering, and grading assignments; and assigning grades. Faculty are responsible for identifying relationships between learning outcomes and course material and responsible for demonstrating that outcomes are adequately measured in each course.

CRITERION 7. FACILITIES

A. Offices, Classrooms and Laboratories

1. Offices – Each faculty member has an individual office where they can have private conversations as needed. All the offices are located in a central office area with easy access to a secretary and a copy machine along with a departmental conference room. Each office is equipped with a networked computer loaded with the appropriate software used by the program.

2. Classrooms and associated equipment - There are seven main classrooms within the Engineering Technology building that the DET program uses. Four of the classrooms seat up to 35 students. Two of the classrooms will seat up to 45 students. One classroom will seat 65 plus. Each of these classrooms is equipped with conference tables and chairs. Each classroom is also equipped with a networked computer (CD and zip drive), sound system, VCR and ceiling mounted projection unit. Standard software on these computers includes Microsoft Word, Word Perfect, Excel, Power Point, several CAD applications and access to the internet. Other software such as Microsoft Project and MINITAB are installed in several classrooms as needed. All classrooms have been updated since the last ABET visit.

3. Laboratory facilities including those containing computers - Laboratories are maintained at the department level and shared by the different programs within the department. These laboratories are well equiped and maintained. There are three main computer labs with 25 computer stations each. There is also an 18-station computer lab set aside for use with high end CAD systems (CATIA and Solid Works). The three main computer labs have access to the internet and have Microsoft Office, Word Perfect, Excel, Power Point, AutoCAD and SolidWorks software. In addition students also have access to Microsoft Project and MINITAB and other course specific software. Computer labs are available to students from 7 a.m. to 10 p.m. daily Monday through Saturday. Lab aides are available during peak times throughout the day.

   In addition to the computer labs, other labs for use by the DET students include a manual machining shop (14 lathes and 11 mills), a casting lab, a welding shop, a sheet metal and heat-treat shop, an automation and robotics lab (10 PLC stations and 5 Seiko robot stations), a fluid power lab, and a plastics lab. Additional shop areas are also available for use by students in senior projects. Each lab is equipped with industrial type equipment in good condition.

4. All laboratory equipment and software used within the program is characteristic of that encountered in the industrial and professional settings served by the program. All laboratories are well equipped and maintained.

All of these facilities are such that they contribute positively to the program's ability to help students to attain the student outcomes. A list of major instructional and laboratory equipment has been attached as Appendix C.

B. Computing Resources

Students and faculty have access to the Internet through department computers, Ethernet access points, and secured and unsecured WiFi throughout the office, lecture, and laboratory spaces. Many courses also augment lecture material with online resources provided via the university's server and/or Canvas (online web enhancement tool). Standard software packages are also available at all computer terminals. These include design, analysis, and development packages such as MATLAB, PSpice (ORCAD), LABVIEW, XLINX, MASM, PSOC, CYPRESS EASY I/O, AXIDE, AUTO TRAX, and MS development software.

University-wide computing resources are available to all students at various locations such as student housing, library, student union, and off-campus. The hours the various computing facilities are open to students varies by location. These facilities are adequate to support the scholarly and professional activities of the students and faculty in the program.

C. Guidance

Students are taught how to use the equipment specific to the course and its associated lab that they are enrolled in at the time. In addition, they are taught the necessary safety measures, particularly with respect to the lab that have power equipment, during the very first lab session. Safety continues to be emphasized throughout the course.

D. Maintenance and Upgrading of Facilities

The department has one-and-a-half FTE technicians, one of whom has computer training, to take care of much of the equipment and facilities. The college also has a full-time computer technician with several student aides to help maintain all of the computers in the department. In addition, the program uses student aides to help maintain the DET specific equipment and labs. The faculty determines what upgrades are required and request the necessary equipment annually through the budgeting process.

E. Library Services

The library, through its collections of publications and online access, has more than ample resources to support the department teaching and learning objectives. The department has an annual library budget of $2,300 for the purchase of library materials and services. This fund has been invaluable in helping the department provide needed resources for faculty and students. The library has designated a specific librarian, JaNae Kinikin, who coordinates the expenditures and manages the library's related technical materials.

F. Overall Comments on Facilities

The Engineering Technology Department has one and a half full-time technicians to support the five programs in the department including the Manufacturing Engineering Technology and Design Engineering Technology programs. In addition, the college has a full-time computer support person that provides technical IT support for all of the

departments in the college except for Computer Science. This person also has a number of hourly student employees to assist him in maintaining both the hardware of software within the college. The Department also has one secretarial support staff.

In addition to the above staff within the Department, the university has also assigned individuals to work full time with the college in the areas of Career Service, Advising, and Development. The three individuals in each of these areas work very closely with the Department to provide these services. Also the college has a full-time recruiter to help with recruitment for the programs in the Department.

Support for the program is also provided by Ms. Julie Snowball and Ms. Kelly Stackaruk. Ms. Snowball is the Director of Career and Technical Education for the University. She also coordinates online classes and related funding efforts. Ms. Stackaruk is the Colleges Development Director and successfully obtains donations from local industry to support scholarships, senior project efforts, and equipment acquisition.

CRITERION 8. INSTITUTIONAL SUPPORT

A. Leadership

Each of the programs in the Engineering Technology Department has an appointed program coordinator. The major responsibilities of this person is to handle the scheduling of courses, review and submit any curriculum changes, oversee the necessary assessment activities, and coordinate the requests for new equipment of the maintenance of existing equipment. This person usually receives some reassigned time to carry out these duties and reports directly to the department chair who reports to the dean of the college. This leadership structure works well as all faculty are involved in the decisions regarding the program.

B. Program Budget and Financial Support

The budget for the program consists of two major components, salaries (including benefits), and operations. Salaries are determined at the time of hire and are only increased if a faculty member receives a cost-of-living increase, promotion, completes a degree, or is meritorious. Benefits, including retirement, health, dental, and life insurance, are set by the institution and are currently at 44% for full-time employees. Operating budgets are based upon past history including past spending patterns and are usually modified if there are significant changes in the program, which may cause the need for budget support to change. While operating budgets are not overly generous, the institution continues to support the program and has not had to cut funds for operational budgets.

Departments receive their operational funding through the college and the dean, in conjunction with the department chairs, establishes the departmental budgets and in turn, the program budgets annually. The college and its associated programs, receive their financial support from four major sources: money that comes from the university, gifts including

endowments, self-generated funding such as course fees and self-support courses, and grants. The university has had no capital budgets since the mid-nineteen eighties. Therefore, capital equipment is paid for primarily by grants, course fees, and endowments.

While budgets have been adequate and there has been enough soft money available to meet normal needs, there continues to be a problem with obtaining funding for high cost capital equipment. When there is a need for the more expensive type of equipment, it is frequently necessary to take money from several sources to have an adequate amount available. However, even with tight budgets, resources have been adequate to make certain that students in the program are able to attain the student outcomes.

C. Staffing

The Design Engineering Technology program uses student help to support the technical needs of the department's programs. The department has one-and-a-half technicians to help with mechanical and computer equipment. In addition, the college has a full-time computer support person that provides technical IT support for all of the departments in the college except for Computer Science. This person also has a number of hourly student employees to assist him in maintaining both the hardware and software within the college. The department also has a three-quarters time secretary who also has student aides. This level of administrative and technical support is adequate at this time.

In addition to the above staff within the college and the department, the university has also assigned individuals to work full-time with the college in the areas of Career Service, Advising, and Development. The three individuals in each of these areas work very closely with the program to provide these services. Also the college has a full-time recruiter to help with recruitment for all of the programs in the college.

The university working conditions and benefits are such that staff tend to stay and there is very little problem with retaining them. Staff have numerous opportunities to get additional training, both on campus and through workshops off campus.

D. Faculty Hiring and Retention

When a position becomes open, a faculty search committee is formed. The major functions of this committee are to develop the position description, perform the necessary screening once applications are received, and interview the candidates who come on campus. This committee then recommends to the dean through the department chair their preference for the hire. The dean then makes the final recommendation to the provost, the president, and the Board of Trustees.

Several strategies are used to help retain qualified faculty. New faculty, in their first year at the institution, are normally given a reduced teaching load to help them get started with their teaching and scholarly activities and are assigned and mentor to assist them in getting acclimated. Various on-campus workshops for faculty are available throughout the year for them to attend. In addition, most faculty are given the opportunity to attend at least one off-

campus conference every year. The campus atmosphere at WSU is very open and faculty are strongly encouraged to express their views about the operation of their respective programs.

E. Support of Faculty Professional Development

The university's sabbatical policy is very generous. Once a faculty member has achieved tenure, which is normally six years after their initial hire, they may request a one semester sabbatical at full pay or a full year sabbatical at three quarters pay. If they only take a one semester sabbatical, they can request another one semester sabbatical after three years.

One of the major components of professional development is travel. The college keeps travel funds separate rather than allocating them out to departments. There is a priority system for travel requests where faculty needing certifications or licenses come first, faculty presenting at national conferences come second, faculty who are officers in national societies come third, attendance at a national conference comes fourth, and local travel is last. Many departments will fund local travel out of their own budgets. There have been sufficient travel funds available every year such that faculty have been able to make at least one trip a year to a national conference. In addition to travel, funds are available to provide individual faculty with webinars, CDs, and other training materials.

Planning for travel is done by the faculty member in conjunction with the department chair. Attendance at conferences, workshops, seminars, etc. is to be in conjunction with the faculty's own development plan along with the goals of the department and college.

PROGRAM CRITERIA

The program criterion states that "An accreditable baccalaureate degree program in Design Engineering Technology will prepare graduates with technical and leadership skills necessary to enter careers in product and architectural design technology. Part of the program mission statement says, ". . . We will prepare students with a broad technical foundation along with the communication and interpersonal skills which will enable them to demonstrate professional competence within the discipline and serve the needs of industry." The program has been very successful in placing graduates in design technology related positions, even when the economy is poor. The feedback that we get from employers and graduates is very positive. We have graduates in virtually all of the positions listed in the Program Objective criterion.

The Program Outcomes criterion states, "Programs must demonstrate that graduates are prepared for careers centered on the manufacture of goods. In this context, 'manufacturing' is a process or procedure through which plans, materials, personnel, and equipment are transformed in some way that adds value.

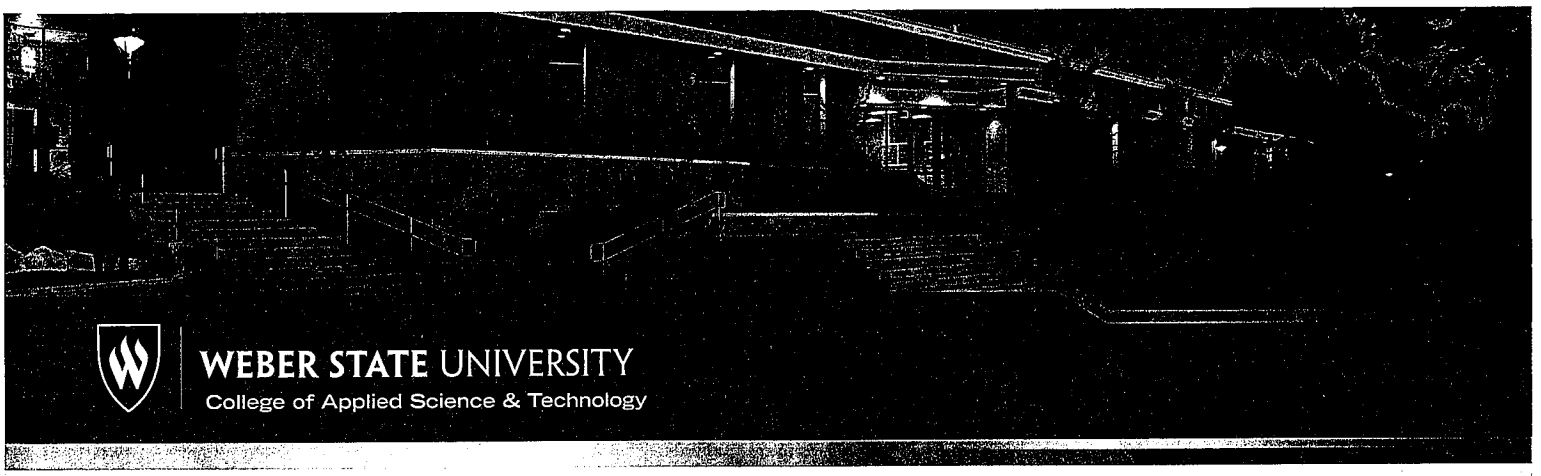
Graduates must demonstrate the ability to apply the technologies of math, physics, materials, CAD software, and design principles to the solution of manufacturing/design problems.

Graduates must demonstrate the ability to successfully complete a comprehensive design project related to the field of manufacturing."

The majority of our students are working full or part time in industry. Most of our students are non-traditional and range in ages from their mid twenties to early forties. Many of our students are skilled designers before they enter the program. Some have even carried the title of Design Engineer while they are going through the program. In these cases, the curriculum serves to enhance what they already know. Those students who are not employed in industry are strongly encouraged by the faculty to do one or two summer internships so they will also have some practical experience prior to graduation.

The program curriculum teaches the principles and gives hands on experience for each of the outcomes listed above. Students are required to demonstrate that they have mastered those skills through a rigorous senior project capstone experience.

There will be videotapes, CDs, and documentation of Senior Project presentations available for the visiting team to evaluate as well as framed displays hanging in the main hallway that detail many of the recent senior projects.



DEGREE REQUIREMENTS & COURSE SCHEDULE

Design Engineering Technology

Freshman Fall			
DET	1010	Intro to Engr & Tech Design	3
DET	1040	Intro to Residential Arch	3
MATH	QL1080	Pre-Calculus	5
MFET	1210	Machining Principles	3
GenEd	AI	American Institutions	3
		Total Credits	14

Freshman Spring			
DET	1160	GD&T using 3D CAD	3
DET	1350	Residential Arch Design	3
ENGL	EN2010	Intermediate College Writing	3
NTM	1700	Computer Info & Literacy**	3
LIBS	1704	Computer Info & Literacy**	1
GenEd	CA	Creative Arts Elective	3
		Total Credits	16

Sophomore Fall			
DET	2000	Intro to Commerical Arch & BIM	3
DET	2460	Product Design Fund 3D CAD	3
MFET	2360	Manufacturing Proc & Materials	3
MFET	2410	Quality Concepts & Stats Apps	3
COMM	HU1020	Or COMM HU2110	3
		Total Credits	15

Sophomore Spring			
DET	2650	Product Design and Develop	3
DET	2660	Arch Struct Design & Detailing	3
PHYS	PS2010	College Physics I	5
GenEd	SS/DV	Social Science/Diversity Elective	3
Approved Lower Division Elective			2
		Total Credits	16

The Freshman and Sophomore years constitute the Associate of Applied Science degree and are the first two years of the Bachelor of Science Degree.

Junior Fall			
DET	3000	Green Bldg Methods & Certs	3
DET	3100	Tool Design	3
DET	3400	Rendering Basics	3
DET	3470	Intro to Catia V5	3
MFET	2300	Statics and Strength of Material	5
		Total Credits	17

Junior Spring			
DET	3300	Applied Kinematics Analysis	3
MFET	3550	Manufacturing Supervision	3
MET	3400	Machine Design	3
GenEd	SS	Social Science Elective	3
Approved Upper Division Elective			3
		Total Credits	15

** Computer & Information Literacy may be satisfied with exams or specific courses (http://programs.weber.edu/cil/)

Senior Fall			
DET	4350	Virtual Des & Constr Apps	3
DET	4600	Senior Project I (Design)	2
MFET	4610	Senior Proj Plan & Estimating	3
GenEd	HU	Humanities Elective	3
GenEd	LS	Life Science Elective	4
		Total Credits	15

Senior Spring			
DET	4400	Animation Basics	3
DET	4470	Advanced Catia V5	3
DET	4500	Hydraulic and Pneumatic Appl	3
DET	4610	Senior Project II (Build)	2
Approved Upper Division Elective			3
		Total Credits	14

*Choose one of the following for the DET SS/DV requirement:
ANTH SS/DV 2010 Peoples and Cultures of the World
GEOG SS/DV 1300 People and Places of the World
HIST SS/DV 1510 World History from 1500 CE to the Present

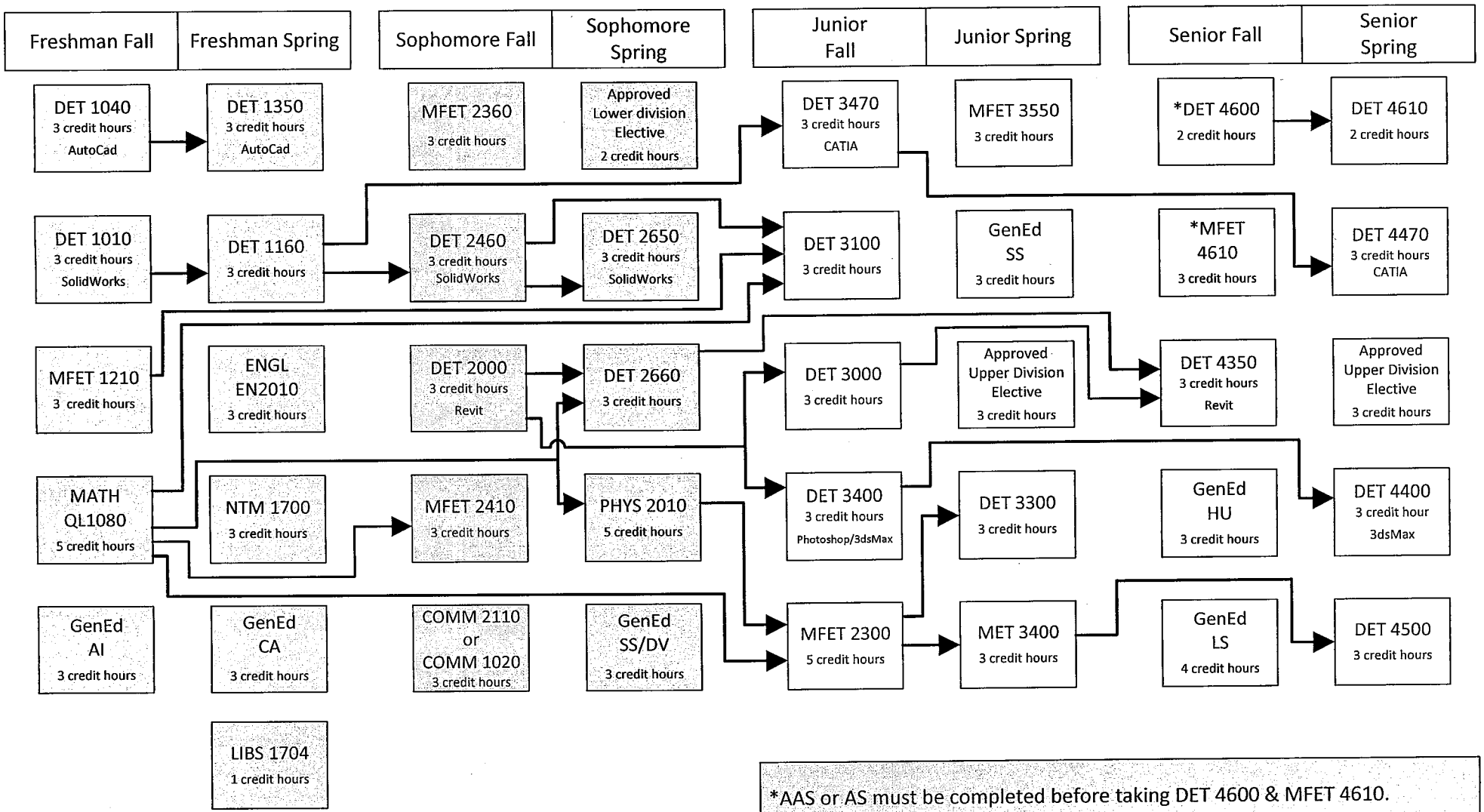
source 2014-2015 catalog, revised 05/14 pdejong

Total Credit Hours for BS	125
Total Credit Hours for AAS	64-66

The Design Engineering Technology Program is accredited by the Engineering Technology Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET). www.abet.org

This is a suggested course sequence not an academic contract with the specific department. Curriculum and program requirements are subject to change without notification.
For more information go to weber.edu/coast

Design Engineering Technology



14 Total Credit Hours	16 Total Credit Hours	15 Total Credit Hours	16 Total Credit Hours

64-66 Total Credit Hours Required for AAS

The Freshman and Sophomore years constitute the Associate of Applied Science Degree and are the first two years of the Bachelor of Science Degree

*AAS or AS must be completed before taking DET 4600 & MFET 4610.

17 Total Credit Hours	15 Total Credit Hours	15 Total Credit Hours	14 Total Credit Hours

125 Total Credit Hours Required for BS

Bachelor of Science program prerequisites is to complete the requirements for the AAS Degree in Mechanical Engineering Technology

Weber State University

Design Engineering Technology 1010
Introduction to Engineering & Technical Design (Solidworks)

Course Outline

Catalog Course Description:
An introductory course to explore engineering and technical design solutions using critical thinking in Science, Technology, Engineering and Mathematics. Topics include Engineering Design Processes & Professions, Sketching and Documentation, Design Measuring, Introduction to CAD and Geometric Constraints, Design Visualization, Orthographic Projection and Multi-View Drawings, Fasteners, Assembly Drawings, Dimensioning, and Tolerancing.

Objectives:
To obtain a fundamental understanding of the following principles, practices, and techniques as applied to mechanical drawing using three-dimensional parametric modeling software:

- Design Visualization
- Engineering Geometry and Construction
- Three-Dimensional Modeling
- Multi-View Drawings
- Axonometric and Oblique Drawings
- Perspective Drawings
- Auxiliary Views
- Section Views
- Dimensioning and Tolerancing Practices
- Fastening Devices and Methods
- Working Drawings

Instructor:
Glen West - Engineering Technology 214B - Phone (801) 626-6301 – E-mail: glenwest@weber.edu
ET Department Secretary – Pat DeJong - Phone (801) 626-6305

Office Hours:
Refer to Schedule

Prerequisites:
None

Time, Days, and Location:
Lecture - 10:30-11:20 A.M. – M,W,F – Engineering Technology 128
Lecture - 11:30-12:20 A.M. – M,W,F – Engineering Technology 128
Open Lab Times and Locations: – M,T,W,TH,F – 6:00 A.M.-10:00 P.M., S-8:00 A.M.-3:00 P.M.
Engineering Technology 103, 126, and 202

Text:
Technical Graphics Communication, 4th edition, Gary R. Bertoline **(Optional)**
ISBN 978-0-07-312837-5, Copyright 2005-2007

Parametric Modeling with SolidWorks 2014, Randy H. Shih **(Optional)**
ISBN: 978-1-58503-852-7, Copyright 2014

Materials:
12" Triangular Scale – Architect, Engineer, Metric (Series 110 Student/Vocational Triangular Scales, 120PC)
6" - 45° Triangle (Alvin Academic Transparent Triangles, No. S1450-6)
6" - 30° - 60° Triangle (Alvin Academic Transparent Triangles, No. S1390-6)
6" Semi-Circular Protractor (Alvin Semi-Circular Protractor, No. 476)
Art Gum or Magic Rub Eraser (Mercur Large Gum Art Eraser, No. M00497 and/or Stanford Magic Rub Eraser, No. 1954FC)
Pad of white with non-photo blue grid sketch paper (Ampad Evidence 5 x 5 Quad Pad, 8 ½" x 11")

Homework:
Homework assignments are due, in class, on the due dates indicated in the lecture schedule. **Late homework will not be accepted.** Homework assignments are to be completed using Solidworks and are to be submitted, in person **(no e-mailed files)**. **Some method for backing up your work is highly recommended. Sharing of the work load, as related to homework assignments, will result in a shared grade for the assignments.**

Quizzes: A number of quizzes will be given during the course of the semester. Quizzes will be announced the class period before they are given in class. **Make-up quizzes will not be given.**

Exams:
There will be two exams given during class time, a midterm and a final exam. The format for exams will be as follows:
One (1) - 8 ½" x 11" note sheet is allowed for each exam.
The use of electronic devices is not allowed during exams.
The exams will be closed book and closed notes (with the exception of the one (1) - 8 ½" x 11" note sheet that is allowed for each exam).
The exams will be closed neighbor.
No make-up exams will be given.

Homework and Exam Values:

Homework Assignments	40%
Quizzes	10%
Midterm Exam	25%
Final Exam	25%
	100%

Grading Policy: Grades will be computed based on the following scale as a result of points earned on homework assignments, quizzes, and exams.

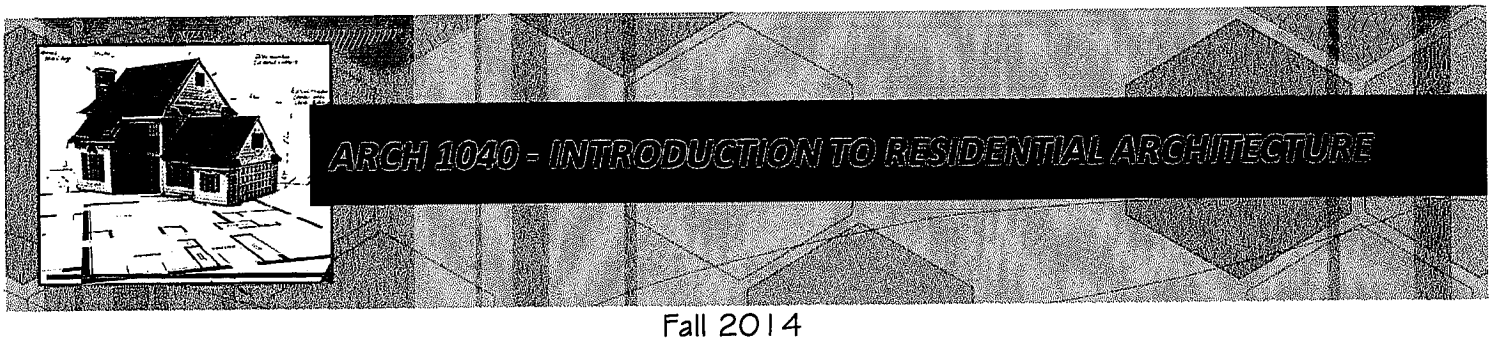
94-100% =	A	74-76% =	C
90-93% =	A-	70-73% =	C-
87-89% =	B+	67-69% =	D+
84-86% =	B	64-66% =	D
80-83% =	B-	60-63% =	D-
77-79% =	C+	59-0% =	E

Rights/Responsibilities: This course outline is the governing document for this course. Your decision to take this course indicates your agreement to the conditions of this course outline. Please review the WSU Policies and Procedures Manual student code regarding ethics found at http://documents.weber.edu/ppm/6-22.htm , specifically section IV. Academic dishonesty, as described in the WSU Policies and Procedures Manual, will not be tolerated. Consequences may vary from grade adjustment to expulsion from the university.

Weekly Schedule - DET 1010 - Fall Semester 2014

Date	Reading Assignment	Homework Assignment
Week 1 Aug 25-29	TGC Chapter 1 TGC Chapter 6 SolidWorks Chapter 1	Assignment 1 **Due Sep 3**
Week 2 Sep 1-5 **Sep 1**	TGC Chapter 7 SolidWorks Chapter 2 **Labor Day Holiday**	Assignment 2 **Due Sep 10**
Week 3 Sep 8-12	TGC Chapter 7 (continued) SolidWorks Chapter 3	Assignment 3 **Due Sep 17**
Week 4 Sep 15-19	TGC Chapter 5 TGC Chapter 8 SolidWorks Chapter 4	Assignment 4 **Due Sep 24**
Week 5 Sep 22-26	TGC Chapter 8 (continued) SolidWorks Chapter 5	Assignment 5 **Due Oct 1**
Week 6 Sep 29-Oct 3	TGC Chapter 17 Solidworks Chapter 6	Assignment 6 **Due Oct 8**
Week 7 Oct 6-10	**Review for Midterm Exam – Oct 6 and Oct 8** **Midterm Exam – Oct 10**	
Week 8 Oct 13-17 **Oct 17**	TGC Chapter 17 (continued) Solidworks Chapter 7 **Fall Break Holiday**	Assignment 7 **Due Oct 22**
Week 9 Oct 20-24	TGC Chapter 9 Solidworks Chapter 8	Assignment 8 **Due Oct 29**
Week 10 Oct 27-31	TGC Chapter 10 Solidworks Chapter 9	Assignment 9 **Due Nov 5**
Week 11 Nov 3-7	TGC Chapter 11 TGC Chapter 13 Solidworks Chapter 10	Assignment 10 **Due Nov 12**
Week 12 Nov 10-14	TGC Chapter 16 Solidworks Chapter 11	Assignment 11 **Due Nov 19**

Week 13 Nov 17-21	TGC Chapter 19 TGC Chapter 20 Solidworks Chapter 12	Assignment 12 **Due Nov 26**
Week 14 Nov 24-28 **Nov 27-28**	CAD Assembly **Review for Final Exam – Nov 26** **Thanksgiving Day Holiday**	
Week 15 Dec 1-5	**Review for Final Exam – Dec 1** **Final Exam – Dec 3**	



Fall 2014
Hybrid Course
Monday & Wednesday 10:30-11:20 A.M.
Friday Open Lab
ET 126
Syllabus

Instructor:
Jeremy Farner
Preferred contact method: jfarner@weber.edu
Office Hours: Posted Outside Office

Course Description:

An introductory course in residential architecture to apply drafting standards & terminology using CAD/BIM technology to prepare plans for the construction industry. Topics include; Architectural Related Careers; Design Process, Construction Procedures & Prints; Conventions & Procedures; 2D Sketching; Architectural Symbols; Floor Plans; Foundation Plans; Wall, Stair & Cross Sections; Roof Plans; Elevation Plans; Site Plans; and Electrical Plans. (AutoCAD)

Course Modules:

1. Architectural Related Careers
2. The Residential Design, Bid, & Build Process
3. Conventions and Procedures
4. Sketching & Drawing
5. Architectural Symbols
6. Floor Plans
7. Foundation Plans
8. Wall, Stair, & Cross Sections
9. Roof Plans
10. Elevation Plans
11. Site Plans
12. Electrical Plans

Learning Outcomes:

1. Identify related careers in the architecture, engineering and construction (AEC) industry, discover their own personal favorite buildings/architects, navigate applicable CAD/BIM software, and understand the importance of organizing class work as they develop a digital architectural portfolio in which to document assignments and progress.
2. Identify the major milestones in the residential construction process, the stakeholders involved, and the construction documents used throughout the process.
3. Understand and apply mathematics, measuring conventions and scales using scale factors; understand and apply the correct use of linetypes, lineweights, lettering and sketching techniques; and understand and apply the correct use of tools and media
4. Generate architectural sketches as well as plan and elevation views using principals of orthographic projection.
5. Demonstrate competency in the understanding and placement of architectural symbols used in a typical residential floor plan including; wall, door, window, appliance, and fixture symbols, as well as all other typical symbols used in the average residential floor plan or elevation.
6. Identify, draw, and label the components of a residential floor plan in accordance to the IRC, using industry standard symbols, notes, and dimensions.
7. Identify, draw, and label the components of a residential foundation plan in accordance to the IRC, using industry standard symbols, notes, and dimensions.
8. Identify, draw, and label the components of a residential wall, stair & cross section plan in accordance to the IRC, using industry standard symbols, notes, and dimensions.
9. Identify, draw, and label the components of a residential roof plan in accordance to the IRC, using industry standard symbols, notes, and dimensions.
10. Identify, draw, and label the components of residential elevation plans in accordance to the IRC, using industry standard symbols, notes, and dimensions.
11. Identify, draw, and label the components of a residential site plan in accordance to the IRC, using industry standard symbols, notes, and dimensions.
12. Identify, draw, and label the components of a residential electrical plan in accordance to the IRC, using industry standard symbols, notes, and dimensions.

ABET Learning Outcomes

a. An appropriate mastery of the knowledge, techniques, skills and modern tools of their disciplines by learning and using CAD software to document the design of a Residential Home.

b. An ability to apply current knowledge, and adapt to emerging applications of mathematics, science, engineering, and technology by learning and using CAD software to document the design of a Residential Home.

Course Administration:

Lectures and in class discussion will concern the body of knowledge or "theory" needed to complete the learning outcomes. Demonstrations will cover specific operations and techniques. Students are expected to be at all class sessions. It is the responsibility of the students to secure all materials and information presented in class. ***Lectures will not be repeated.*** Lectures may be taped recorded with the professor's permission.

- DET students are considered Design Engineering Technology professionals and are responsible for directing their own education. As such, the decision to attend class is at each student's personal discretion.
- Absences CAN effect student grades if they do not understand the material or are not aware of changes to the class that can include (but are not limited to) the scheduling of quizzes, exams, assignments, projects, and extra credit. The instructor has the right to alter the course at his own discretion, so students missing class may not be aware of important information.
- Students are responsible for the body of information in the lectures, labs, and assigned reading materials. Students who do not attend class will not be given makeup lecture sessions or notes by the instructor. Similarly, makeup tests and quizzes will also not be given. If a student misses a class, it is up to them to make sure they acquire the relevant material from another source. Do NOT send the instructor an e-mail asking "did we cover anything important today" or ask to explain the contents of a missed lecture or lab.
- Students are expected to attend class for mandatory events such as tests and quizzes, and it is up to the individual student to know when those events are. Ignorance of these events is not an excuse, and any student who wants current information is expected to attend class.
- Outside work will be absolutely necessary. Students will NOT be able to do well in this course if they work only in regularly scheduled class sessions.
- As in the AEC industry, the instructor has the right to make changes to many portions of the curriculum due to the ever-changing nature of technology; certain information on Canvas may be obsolete or out-of-date. As such, it is up to the student to confirm this information by either attending class or obtaining the information from another source.
- In the event of a major campus emergency; course requirements and deadlines are subject to change that may be necessitated by a revised semester calendar or other circumstances. Here are ways to get information about changes in the course in order; Canvas, my email address: jfarner@weber.edu, or my office phone 801-626-6962
- Students are expected to attend class for mandatory events such as tests and quizzes, and it is up to the individual student to know when those events are. Ignorance of these events is not an excuse, and any student who wants current information is expected to attend class.

Grading Policy:

Grades will be given using the following total earned percentages. (See the weighted assignment groups in canvas under the course syllabus)

94-100% = A
90-93% = A-
87-89% = B+
84-86% = B
80-83% = B-
77-79% = C+
74-76% = C

You must get a "C" or better in order for this to class to count towards graduation.

Resources Needed:

- UEN Canvas Login
- Firefox or Google Chrome Internet Browser
- Adobe PDF Reader
- CAD Software (AutoCAD, Revit, ArchiCAD, Sketchup)
- Software Templates (AutoCAD, Revit, ArchiCAD)
- One-Note Software (Digital Portfolio)
- Print to PDF capability
- Something Capable of digitizing Letter & Ledger size paper
- Engineers Scale
- Architects Scale
- Digital Camera or Camera Phone
- File Storage (online or physical)

Textbooks: None (everything is embedded into this course including the e-book)

Student Conduct Policy:

- No swearing, or derogatory comments about, or towards, any member of the class will be tolerated in any class period.
- No food or drinks of any kind will be allowed in any lab sessions.
- Students are expected to arrive on time for all class and lab sessions.
- Late assignments will not be accepted unless prior arrangements have been made with the Instructor and because of extreme circumstances. (Not coming to lab, or forgetting, doesn't rate as an extreme circumstance.)
- No student will be allowed to make up any written exam, lab practical, exam, or quiz unless they have an official or medical excuse.
- Any student found participating in cheating, plagiarism, copying material from another person's disk, using illegal cribs or other materials during a written examination, lying to course instructors and lab assistants about his or her own work, stealing tests, quizzes, or answer keys, and any such activities will be considered in conflict with the printed academic honesty guidelines as set out by Weber State University. In such cases the matter will be reported to the Office of the Dean and the appropriate Weber State University administration officers for consideration and possible disciplinary action.
- Any student requiring accommodations or services due to a disability must contact Services for Students with Disabilities (SSD) in room 181 of the Student Service Center. SSD can also arrange to provide course materials (including this syllabus) in alternative formats if necessary.
- It is permissible to bring a laptop (notebook, tablet etc.) computer to class for the purpose of taking notes. Turn the sound OFF--- the clicking, clacking, or sound effects distracts other students. Similarly, there will be no tolerance for beeping, chirping, ringing (or any other sound) from a cell phone in class. If students must use your cell phone for any reason, they must leave the room.

Computer Lab Policy:

- The computer labs are restricted to ONLY those students registered in the current semester for a class in the Engineering Technology or Construction Management Technology departments within the College of Applied Science and Technology.
- NO food or drinks are allowed in the computer labs. DO NOT INSTALL ANY PROGRAMS ON THE MACHINES IN ANY OF THE LABS.
- Viewing or use of ANY PORNOGRAPHIC MATERIAL IS STRICTLY PROHIBITED! Anyone caught viewing pornographic material will not only be asked to leave, but will have their lab privileges REVOKED.
- No one should ever abuse the equipment in any way.
- No one should use any command or function to copy or backup licensed software from any WSU computer. It is a violation of Federal Copy Right Laws to possess pirated software. Anyone who is found guilty of such violations will be expelled from the College of Applied Science and Technology and Weber State University.
- Do not disconnect or connect any devices in the lab. If you are having problems with any device please immediately notify the lab aide on duty.
- When in the labs please keep your level of noise down. Other students may be working and may not appreciate your conversation from across the room. Please take social conversations outside the labs.
- No speakers are provided, if you need to listen to music or videos please use your personal headphones.
- The computers shut down after 30 minutes of "inactivity". (No mouse movement or key strokes) All program changes, internet browsing, temporary files, and your saved files on the C: drive, including viruses is removed when the computer is shut down. Always shut down the computer you used before you leave.
- The D: drive is not protected nor does it get erased on these computers after shut down or restart. It is a local drive only seen on the computer you are working on. Use it while you are working or have forgotten your flash drive. This drive gets whipped every semester so don't forget to get the information you have saved to the D: drive.

No learning takes place until a question is posed or a personal need is discovered!

SYLLABUS

Course Title: Pre-Calculus

Course Number: Mathematics QL1080

Credit Hours: 5

Prerequisites: Math 1010 with a grade of C or better or Math ACT score of at least 23, or placement test.

Catalogue Description: A course covering college algebra and trigonometry concepts preparatory to calculus.

Objectives: To provide the student with college algebra and trigonometry skills and understanding. To emphasize the algebraic and trigonometric concepts that will be used in calculus. To help the student gain a measure of mathematical understanding that will aid in the understanding of subsequent courses, such as calculus.

To convey, to the extent possible using the content of this course, the quantitative literacy skill set adopted by the Utah State Board of Regents:

1. Interpret mathematical models such as formulas, graphs, tables, and schematics, and draw inferences from them.

2. Represent mathematical information symbolically, visually, numerically, and verbally.

3. Use arithmetical, algebraic, geometric, and statistical methods to solve problems.

4. Estimate and check answers to mathematical problems in order to determine reasonableness, identify alternatives, and select optimal results.

5. Rec organize that mathematical and statistical methods have limits.

6. [Optional] Understand basic concepts describing time-varying systems, and how prediction follows from the formulation of basic law of change, both analytically and numerically.

Course Coverage:

1. Inequalities
   a. Nonlinear inequalities
   b. Inequalities invloving absolute value

2. Functions and Graphs
   a. Composition
   b. Polynomial Functions
   c. Rational functions and asymptotic behavior
   d. Concept of limit
   e. Inverse functions
   f. Maximum and minimum applications

3. Exponential and logarithmic functions
   a. Properties
   b. Inverse relationships
   c. Solving exponential and logarithmic equations
   d. Graphs and inverse relationships
   e. Growth and decay applications

4. Systems of equations and matrices
   a. Solving linear systems
   b. Solving nonlinear systems
   c. Algebra of matrices, matrix inverse
   d. Applications

5. Trigonometric Functions
   a. Definitions and properties
   b. Graphing

6. Trigonometric Identities and Equations
   a. Sum, difference, double-angle and half-angle formulas
   b. Simplifying trig expressions
   c. Solving trigonometric equations

7. Trigonometric Applications
   a. Periodic behavior
   b. Solving right triangles
   c. Solving general triangles using the laws of sines and cosines
   d. Solving triangles arising from vector problems

8. Sequences
   a. Summation notation
   b. Arithmetic and geometric sequences
   c. Applications
   d. Counting theory

9. Conics and Polar coordinates
   a. Ellipses (circles), parabolas, and hyperbolas
   b. Relationships between polar and cartesian coordinates and equations
   c. Graphs of equations in polar coordinates

Adopted Text: (2008) *Precalculus, 8th Edition,* by Sullivan

Required Sections:

Appendix A	A9	Chapter 7	7.1 - 7.5, 7.7, 7.8
Chapter 2:	2.1, 2.3 - 2.5	Chapter 8	8.1 - 8.3
Chapter 3:	3.3 - 3.5	Chapter 9	9.1, 9.2, 9.4
Chapter 4:	4.1 - 4.4	Chapter 10	10.1 - 10.4
Chapter 5:	5.1 - 5.8	Chapter 11	11.1 - 11.4, 11.6
Chapter 6	6.1 - 6.6	Chapter 12	12.1 - 12.3
		Chapter 13	13.1 - 13.3

Recommended Sections: 11.5 Partial Fraction Decomposition, 11.7 Systems of inequalities, 12.4 Mathematical Induction

WEBER STATE UNIVERSITY
MANUFACTURING ENGINEERING TECHNOLOGY
MFET 1210/1210L
COURSE SYLLABUS

COURSE TITLE: Machining Principles and Practices

COURSE NUMBER: MFET 1210/1210L

PREREQUISITES: None

INSTRUCTOR: Specified in the class schedule

ROOM NUMBER: Lecture....ET 205 Lab.....ET 201

TIME: Lecture.....Specified in the class schedule
Labs.....Specified in the class schedule

TEXT: Machine Tool Practices (Kibbe, 9th Edition)

COURSE DESCRIPTION
Of all the manufacturing processes, machining technology will always remain among the most important. This course is designed to introduce students to machining technology and other manufacturing processes. A working knowledge of the machining processes and related subjects offered in this course will provide an excellent fundamental technical foundation on which to build exciting careers in manufacturing/mechanical engineering technology, engineering graphics and design, or machining technology.

COURSE OBJECTIVES
By the end of this course, you should *know*:
1. The safety concepts associated with a machine shop.
2. What quality is and the various inspection devices used to control quality.
3. The formula's to calculate proper speeds and feeds for efficient and economical production.
4. The terminology used in the machining processes environment.

By the end of this course, you should *be able to*:
1. Setup and safely operate an engine lathe, milling machine and surface grinder to produce close tolerance parts with high quality surface finishes.
2. Calculate proper speeds and feeds for efficient and economical production.
3. Read and understand simple engineering drawings.
4. Correctly use a wide variety of inspection devices and methods to control quality.

NOTE: *Rights/Responsibilities* - This syllabus is the governing document for this course; your decision to take this course amounts to tacit consent to the conditions of this syllabus. Please review the WSU Policies and Procedures Manual student code regarding ethics found at http://documents.weber.edu/ppm/6-22.htm, specifically section IV. Academic dishonesty, as described in the WSU Policies and Procedures Manual, will not be tolerated. Consequences may vary from grade adjustment to expulsion from the university.
Disabilities; Any student requiring accommodations or services due to a disability must contact Services for Students with Disabilities (SSD) in room 181 of the Student Service Center. SSD can provide assistance to disabled students in many ways, including accommodated/adapted testing.

Attendance: Although attendance will not be graded, absenteeism will adversely affect your grade through missed lectures and you will fail to receive assignments in a timely fashion. If you miss any class, it will be your responsibility to obtain relevant information from your fellow students.
Emergencies: If you find that during the semester you will not be able to turn in an assignment or take an exam on the date scheduled due to an illness or emergency, please contact the professor 24 hours before the date at the latest.

REQUIRED TEXTBOOK AND WORKBOOK
Purchase at WSU Bookstore

1 each text book - Machine Tool Practices (Kibbe, 9th Edition)
1 each Student Workbook for MFET 1210/1210L
1 each 6 inch scale
1 each safety glasses
1 each combination or key-type lock (for locker use)

ASSIGNMENTS AND EXAMS
A combined grade for lab and lecture will be determined as follows:
Note: Subject to change

Mill, Drill, Ream Project	5% of Grade
2 Slider Project	35% of Grade
Scheduled Quizzes	20% of Grade
Chip Formation Project	5% of Grade
Window Jack Project	35% of Grade

GRADING

93 - 100 = A	80 - 82 = B-	63 - 66 = D
90 - 94 = A-	77 - 79 = C+	60 - 62 = D-
87 - 89 = B+	70 - 76 = C	59 or less = E
83 - 86 = B	67 - 69 = D+	

KEYS TO SUCCESS AND DEADLINES:

- Daily attendance is critical because demonstrations and lectures will be given as required during the 2-1/2 hour labs.
- All scheduled quizzes will be given at the start of the class period. **NO MAKE UPS**
- Each student will be required to clean, wipe-down their machines and sweep their work area at the end of every lab.
- All tools that are not being used will be organized and placed on a red rag on one of the small gray tables.
- Safety glasses must be worn at all times. No open-toed shoes are allowed in the shop.
- **No late assignments or projects will be accepted after the due date.**
- The instructor reserves the right to lower a student's grade by up to 10% for lack of maintaining shop cleanliness, attendance, and professional work ethics.
- **A required two and one half (2-1/2) hour final test and clean-up period will be held the last scheduled class period of the term. Your grade will be lowered one letter grade if you fail to attend.**

Weber State University
Design Engineering Technology

DET 1160 – Geometric Dimensioning and Tolerancing 3D CAD
Fall 2014

Course description:

Learning to use CAD to create industrial level production working drawings, including ANSI standards, precision dimensions, fits and tolerances, surface finishes, symbols for welding, piping, etc., machine elements and processes, sheet metal, and surface and solid modeling, Geometric Dimensioning and Tolerancing (GD&T) basics, and descriptive geometry. Three lectures per week.

Prerequisite: DET 1060

Course Instructor: Meg Leatherbury

Office: ET 214L
Office hours: Monday & Wednesday 9:30AM ~ 10:30AM
Tuesday & Thursday 9:45AM ~ 11:15 AM
Phone: (801) 626-6951
Email : megumiusui@weber.edu (Primary communication method: include your name and class number in the subject line)

Course Schedule: Two 75 minute sessions per week, 3 credit hours
Monday and Wednesday 10:30AM – 11:15AM @ ET 210

Required Textbook and tools:

- Geometric Dimensioning and Tolerancing: Based on ANSI/ASME Y14.5-2009
  by David A. Madsen & David P. Madsen
  ISBN 978-1-60525-938-3
- 2 GB Thumb Drive
- Solidworks experience

Course Goals:

- An understanding of GD&T application and its function
- An appropriate mastery of the knowledge, techniques, skills, and modern tools of their discipline.
- An ability to conduct, analyze and interpret experiments, and apply experimental results to improve processes
- An ability to identify, analyze and solve technical problems
- A commitment to quality, timeliness, and continuous improvement

Course Administration:

Lecture	Students are expected to attend all the lectures. It is students' responsibility to secure all materials and information presented in lecture, even with an excused absence. Lectures will not be repeated.
Absence	Students must inform the instructor of an absence in advance. Students will be asked for legitimate documentation if necessary. In case of circumstances beyond students' control, it will be handled case-by-case. Attendance may be taken at any/all meeting times.
Philosophy	Students are expected to be self-disciplined, to be prepared, to be on-time with assignments, and to do original work. Failure to do so will result in lost course points or failure.
File Security	Students are responsible for the security of their files. Students are expected to maintain their digital data. In case of data loss, students must recreate their work without exceptions.
Student Conduct and Policies	• Students are expected to be respectful and professional towards the instructor and classmates. • Students are expected to arrive on time for all class and lab sessions. • Students are required to set up and use blackboard for completing assignments on time. • Students are required to set up and use a Weber State University email account to communicate with the Instructor as needed. • **Each assignment has a scheduled due date and time frame. Assignments can be used during the lecture. Late assignments will not be accepted unless prior arrangements have been made with the Instructor and because of extreme circumstances. (Not coming to lab, or forgetting, does not rate as an extreme circumstance.)** • No student will be allowed to make up any written exam, lab practical, exam, or quiz unless they have an official or medical excuse. • **Students participating in cheating, plagiarism, copying data from another person's disk, using other materials during a written examination, lying to course instructor about his or her own work, stealing tests, quizzes, or answer keys, and any such activities will be considered in conflict with the printed academic honesty guidelines as set out by Weber State University. In such cases the matter will be reported to the Office of the Dean and the appropriate Weber State University officers for consideration and possible disciplinary action.**

	• Any students requiring accommodations or services due to a disability must contact Services for Students with Disabilities (SSD) in room 181 of the Student Service Center. SSD can also arrange to provide course materials (including this syllabus) in alternative formats if necessary. • Electronic devices (cell phones, pagers, etc.) are not allowed in the room during any test, exam, or quiz. • It is each student's responsibility to confirm correct assignment submission on timely manner on blackboard. • Students are not allowed to submit their assignments via email unless otherwise specified by the Instructor.
Laptops, cell phone and other electronics	It is permissible to bring your own laptop to lecture for taking notes purpose. Any electronic devices should be on silent. If your device becomes a disturbance to class members, you will be asked to turn it off, or not to bring it back. If you need to use your cell phone, please leave the room.
Lab Rules	• **No food or drinks of any kind will be allowed in any lab sessions!!!** • A Wildcat Card will be necessary to access to the labs. There are locks on CAD labs that allow access by card swipe. • **Abuse of the equipment in any way will not be tolerated.** • It is a violation of Federal Copy Right Laws to possess pirated software. Anyone who is found guilty of such violation will be expelled from the College of Applied Science and Technology at Weber State University. • No one may use any command or function to copy or backup licensed software from any WSU computer. • Any student not following these lab rules may be asked to leave the lab or may fail the course.

Weekly Topics

Week	Topics	Assignments
1 **Aug 25 - 27**	Introduction to GD&T Dimensioning	Email assignment **Due: Sept 1**
2 **Sept 1 - 3**	Dimensioning Chapter 1: Dimensioning and Tolerancing	Handout

3 **Sept 8 - 10**	Chapter 2: Symbols and Terms Chapter 3: Datums	Handout
4 **Sept 15 - 17**	Chapter 3 cont.	Handout
5 **Sept 22 - 24**	Chapter 4: Material Condition and Material Boundary	Handout
6 **Sept 29 – Oct 1**	Chapter 5: Form Tolerances	Handout
7 **Oct 6 - 8**	Chapter 6: Orientation Tolerances	Handout
8 **Oct 13 - 15**	Chapter 7: Location Tolerances Chapter 8: : Location Tolerances and Virtual Condition	Handout
9 **Oct 20 - 22**	Chapter 9 Profile Tolerances Chapter 10: Runout Tolerances	Handout
10 **Oct 27 – 29**	Assemblies Term Project handout	Handout
11 **Nov 3 - 5**	Term Project (No attendance necessary)	
12 **Nov 10 - 12**	Term Project (No attendance necessary)	
13 **Nov 17 - 19**	Term Project (No attendance necessary)	
14 **Nov 24 - 26**	Term Project (No attendance necessary)	
15 **Dec 1 - 3**	Term project due on the 8th of December.	
16 **Dec 8 - 10**	**No final**	

Grading Criteria:

Homework assignments (Attendance, Class work, Quizzes, and others)	60%
Term Project	40%

	100%

Testing and Grading:

Homework will be assigned throughout the semester and will count toward the final grade. Students are responsible for keeping track of their grade throughout the semester. The instructor cannot divulge grades over the phone or via email. *The instructor reserves the right to modify the requirements of the class during the semester and will inform the students of any changes during the class lecture time.*

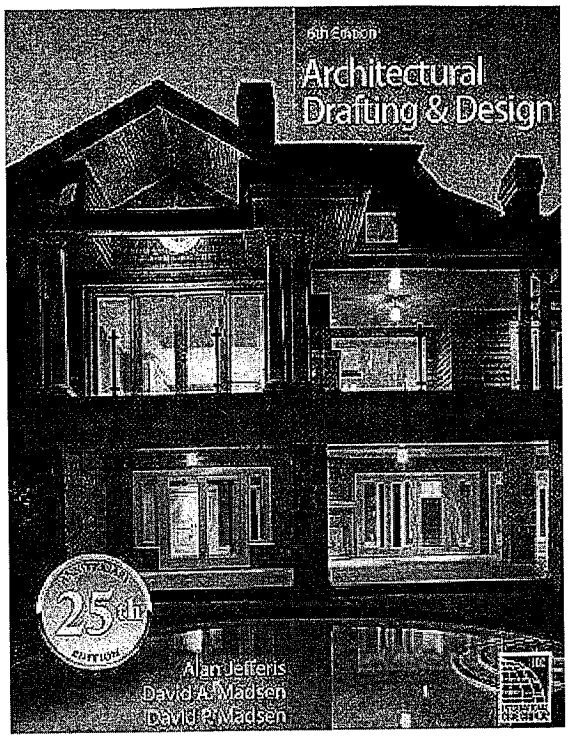
Grading Policy:

Grade will be given using the following total earned scores.

94 – 100% = A	74 – 76% = C
90 – 93% = A-	70 – 73% = C-
87 – 89% = B+	67 – 69% = D+
84 – 86% = B	64 – 66% = D
80 – 83% = B-	60 – 63% = D-
77 – 79% = C+	59 – 0% = F

Solidworks download

Website	www.solidworks.com/sdk
SDK-ID	94120GGG
Serial #	9020005064035239C6CX4G4C



Residential Architectural Design

Course Syllabus

Spring 2013

Instructor:
Jeremy Farner, ET 214-G
Phone 626-6962
Preferred contact method: jfarner@weber.edu
Office Hours: Posted outside office

Course Number:
DET 1350
Monday & Wednesday
8:30-9:45 A.M.
Room ET 238 & Lab 126
(Required course for DET & BIS in BIM majors)

Monday (ET 238)	Wednesday (ET 126)
Lecture & Peer Reviews	Lab Time
Required Attendance	Required Attendance

Course Description:

The study of residential and light commercial (Type IV and V buildings) architectural design and construction documents. Covers procedures used in developing residential plans using 2D CAD. Includes architectural design and drafting standards, conventions, procedures, and current building code requirements of the International Residential Code (IRC) and International Energy Conservation Code (IECC). Prerequisites: DET 1250.

Students will demonstrate Abet Program Outcomes in the following categories;

a. An appropriate mastery of the knowledge, techniques, skills and modern tools of their disciplines by documenting their own unique design solution with a full set of residential plans.

d. An ability to apply creativity in the design of systems, components, or processes appropriate to program educational objectives by designing a custom home that meets the design requirements specified by local industry professionals for a specific subdivision and demographic of homebuyers.

f. An ability to identify, analyze and solve technical problems by documenting their own unique design solution to a real-world home design problem for a local business partner with a full set of residential plans.

g. An ability to communicate effectively by orally presenting research to their peers on residential styles and design that appeal to them, current entry level home pricing and inclusions, as well as a report on a historical architectural style of their choice.

Course Objectives:

1. Apply the guidelines and codes that affect residential design (International Residential Code (IRC) and International Energy Conservation Code (IECC)) to produce a design solution to a real-world design scenario with local business partners with the following drawings:
    1. Cover Sheet
    2. Foundation Plan
    3. Basement Floor Plan
    4. Main Floor Plan
    5. Front & Right Elevations
    6. Rear & Left Elevations
    7. Roof Plan
    8. Interior Elevations
    9. Main & Basement Electrical/ HVAC Plans
2. Identify and utilize 3D freeware (Google Sketch-up) to aid in the visualization of conceptual design.
3. Identify the symbols and annotation used to develop a floor plan layout using room relationships and sizes for proper flow and functionality including stair layout and construction.
4. Apply exterior design factors, roof styles and historical architectural styles to design historically consistent exterior elevations.
5. Apply drawing standards and conventions to create a foundation plan.
6. Show how land is legally described and developed to build on using the 6 major orientation factors by applying zoning, covenants, codes & restrictions (CC&R's) to design a site plan.
7. Use common components of finish work and cabinetry to design interior elevations of a kitchen, fireplace, closets and other built in elements of a floor plan.
8. Design an electrical/ HVAC plan using code requirements.

Course Textbooks:

Architectural Drafting & Design, 6th Edition, Alan Jefferis (ISBN 978-1-4354-8162-6)

Course Equipment:

Architects Scale (Triangle with 11 Scales)
Architects Symbol Template ¼"=1'0" (Doors, Furniture etc.)
Multiple Storage Devices (USB) Back Up files regularly
Sketching Paper (Grid paper works the best)

Course Administration:

Lectures will concern the body of knowledge surrounding residential architectural drafting & design. Demonstrations will cover specific operations and techniques. Students are expected to be at all class sessions (see Excused Absences policy below). If a student has to miss a lecture or a demonstration, permission for an excused absence must be granted by the professor before class. It is the responsibility of the students to secure all materials and information presented in class, even with an excused absence. Lectures will not be repeated. Lectures may be taped recorded with the professor's permission.

Excused Absences:

Students must clear any absence beforehand with the instructor, who will require documentation before the absence is excused. Absences due to illness or other circumstances beyond a student's control will be handled on a case-by-case basis and will also require documentation.

Attendance Policy:

- DET students are considered Design Engineering Technology professionals and are responsible for directing their own education. As such, the decision to attend class is at each student's personal discretion.
- Absences CAN effect student grades if they do not understand the material or are not aware of changes to the class that can include (but are not limited to) the scheduling of quizzes, exams, assignments, projects, and extra credit. The instructor has the right to alter the course at his own discretion, so students missing class may not be aware of important information.
- Students are responsible for the body of information in the lectures, labs, and assigned reading materials. Students who do not attend class will not be given makeup lecture sessions or notes by the instructor. Similarly, makeup tests and quizzes will also not be given. If a student misses a class, it is up to them to make sure they acquire the relevant material from another source. Do NOT send the instructor an e-mail asking to explain the contents of a missed lecture or lab.
- Students are expected to attend class for mandatory events such as tests and quizzes, and it is up to the individual student to know when those events are. Ignorance of these events is not an excuse, and any student who wants current information is expected to attend class.

Campus Emergency:

In the event of a major campus emergency; course requirements and deadlines are subject to change that may be necessitated by a revised semester calendar or other circumstances. Here are ways to get information about changes in the course in order; Canvas, my email address: jfarner@weber.edu , or my office phone 801-626-6962

Course Schedule:

Aside from the syllabus, the information contained on Canvas IS subject to change and is NOT the most current source of information. As in the AEC industry, the instructor has the right to make changes to many portions of the curriculum due to the ever-changing nature of technology; certain information on Canvas may be obsolete or out-of-date. As such, it is up to the student to confirm this information by either attending class or obtaining the information from another source.

Outside Work:

Outside work will be absolutely necessary. Students will NOT be able to do well in this course if they work only in regularly scheduled class sessions.

Student Conduct and Polices:

- No swearing, or derogatory comments about, or towards, any member of the class will be tolerated in any class period.
- No food or drinks of any kind will be allowed in any lab sessions.
- Students are expected to arrive on time for all class and lab sessions.
- Late assignments will not be accepted unless prior arrangements have been made with the Instructor and because of extreme circumstances. (Not coming to lab, or forgetting, doesn't rate as an extreme circumstance.)
- No student will be allowed to make up any written exam, lab practical, exam, or quiz unless they have an official or medical excuse.
- Any student found participating in cheating, plagiarism, copying material from another person's disk, using illegal cribs or other materials during a written examination, lying to course instructors and lab assistants about his or her own work, stealing tests, quizzes, or answer keys, and any such activities will be considered in conflict with the printed academic honesty guidelines as set out by Weber State University. In such cases the matter will be reported to the Office of the Dean and the appropriate Weber State University administration officers for consideration and possible disciplinary action.
- Any student requiring accommodations or services due to a disability must contact Services for Students with Disabilities (SSD) in room 181 of the Student Service Center. SSD can also arrange to provide course materials (including this syllabus) in alternative formats if necessary.

File Security and Disks:

Students are responsible for the security of their files! They should have multiple copies on multiple sources (laptop, home computer, flash drives) at all times. Given a faulty flash drive or other media, the instructor will assist students in attempting to recover lost files. However, ultimately each individual is responsible for maintaining their digital data. Loss of data, files, or other associated items needed for a project will require that a student recreate their work, with no exceptions.

Although a rare occurrence, Flash Drives have been known to become corrupted, resulting in the permanent loss of the data. As such, it is highly recommended that students use Flash Drives for storage only, and that they not work directly from them. Instead, they should work from a copy on your local hard drive or on the D: drive on the school computers, and then save to the flash drive once they are finished working with the file(s).

Computer Lab Policy:

1. The computer labs are restricted to ONLY those students registered in the current semester for a class in the Engineering Technology or Construction Management Technology departments within the College of Applied Science and Technology.
2. NO food or drinks are allowed in the computer labs.
3. DO NOT INSTALL ANY PROGRAMS ON THE MACHINES IN ANY OF THE LABS.
4. Viewing or use of ANY PORNOGRAPHIC MATERIAL IS STRICTLY PROHIBITED! Anyone caught viewing pornographic material will not only be asked to leave, but will have their lab privileges REVOKED.
5. No one should ever abuse the equipment in any way.

6. No one should use any command or function to copy or backup licensed software from any WSU computer. It is a violation of Federal Copy Right Laws to possess pirated software. Anyone who is found guilty of such violations will be expelled from the College of Applied Science and Technology and Weber State University.
7. Do not disconnect or connect any devices in the lab. If you are having problems with any device please immediately notify the lab aide on duty.
8. When in the labs please keep your level of noise down. Other students may be working and may not appreciate your conversation from across the room. Please take social conversations outside the labs.
9. No speakers are provided, if you need to listen to music or videos please use your personal headphones.
10. The computers shut down after 30 minutes of "inactivity". (No mouse movement or key strokes) All program changes, internet browsing, temporary files, and your saved files on the C: drive, including viruses is removed when the computer is shut down. Always shut down the computer you used before you leave.
11. The D: drive is not protected nor does it get erased on these computers after shut down or restart. It is a local drive only seen on the computer you are working on. Use it while you are working or have forgotten your flash drive. This drive gets whipped every semester so don't forget to get the information you have saved to the D: drive.

Laptops & Cell Phones:

It is permissible to bring a laptop (notebook, tablet etc.) computer to class for the purpose of taking notes. Turn the sound OFF--- the clicking, clacking, or sound effects distracts other students.

Similarly, there will be no tolerance for beeping, chirping, ringing (or any other sound) from a cell phone in class. If students must use your cell phone for any reason, they must leave the room. *"I know if you are texting on your phone.... No one looks at their crotch and smiles"*

Course Assignments - Projects:

Students will be expected to successfully complete multiple projects throughout the course of the semester. Projects will be graded on professionalism, execution, creativity, technical merit, and communicative value.

Exams:

Exams will cover material from the lecture, demonstrations, and laboratory portions of the course and be administered during the regularly scheduled lecture period. The final exam will be a comprehensive exam and given at the appropriately scheduled time.

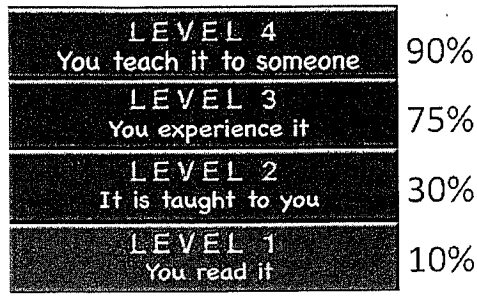
Grading Criteria:

The final grade will be a summation of all homework, quizzes and exams. (ie. 900 earner points/ 1000 possible points = 90% or A-) The exams will be a comprehensive assessment of both theoretical (book) and application (AutoCAD) at the end of the semester.

Grading Policy:

Grades will be given using the following total earned scores.

94-100%	A	74-76%	C
90-93%	A-	70-73%	C-
87-89%	B+	67-69%	D
84-86%	B	64-66%	D
80-83%	B-	60-63%	D-
77-79%	C+	59-0%	



Lecture only 5%

Tips for studying:

No learning takes place until a question is posed or a personal need is discovered!

If you do not have the textbook, you are planning on not passing the class unless you are lucky! All information cannot possibly covered in class and therefore you must come to class prepared and ready to ask questions about what will be covered. (This means that you should have read the chapter prior to class so questions can be dealt with during the lecture.) You are responsible for all information in the chapter not just what is lectured on!

(Test questions will come from lecture & from text)

English 2010 Intermediate College Writing: Section 22656
Mondays, Wednesdays, & Fridays 10:30-11:20 am
Davis Building 2: Room 106

Instructor: José L. Otero
Office: D2: 304J
Email: joseotero@weber.edu
Phone: 801.395.3560

Office Hours: MW 12:00-1:00 pm, TTh 10:00-11:00 am, or by appointment.

I encourage you to see me in my office with any questions you have about an assignment, to get feedback on your writing, or to discuss your progress in the course. If you are unable to meet with me during my regular office hours, please contact me and we will set up a time to meet that is convenient for both of us.

Course Description:

English 2010 builds upon the habits and skills developed in English 1010. The course provides instruction and practice in exposition, argumentation/persuasion, and documented research. It emphasizes critical thinking, the reciprocity of reading and writing, and the production of well-developed analytical arguments.

Required Texts:

Howard, Rebecca Moore. *Writing Matters*. 2nd ed. McGraw-Hill. ISBN: 9780077505974.

Weber Writes 2014. (This title is only available through the bookstore.)

Course Outcomes:

Intermediate College Writing is a course designed to further your experiences in writing for academic disciplines. In this course, you will think and read critically and assess and use information to construct essays and research papers. A complete list of outcomes can be found at: http://www.weber.edu/Composition/2010goals.html.

Assignments:

In this course, you will write three research papers. Each paper will involve writing a brief proposal, an annotated bibliography, and the final paper itself.

1. Research Proposals: You will begin each paper by first writing a 1-2 page research proposal that will state the question you will explore for your proposed project, the reasons why you chose to explore that question, and the methods you will use to complete the project. Your research proposals must be approved by me. If they are not approved, I will not accept the final papers.
2. Annotated Bibliographies: You will then gather research for each paper and create an annotated bibliography of sources that are relevant to your intended project. The

Attendance, Late Papers, and Missed Assignments:

You are expected to attend every class and participate in classroom activities and discussions; however, students may miss one full week of class without penalty. After that, students will receive a ½ letter grade deduction for each additional day missed. No make-up assignments will be assigned for missed in-class exercises. Exercises assigned as homework must still be completed by the next class meeting, which means you must contact me or a classmate to retrieve them in time. Late papers will be reduced by 5% for each day late. Any exceptions to these policies will be made on a case-by-case basis.

Academic Dishonesty:

As specified in PPM 6-22 IV D, cheating and plagiarism violate the Student Code. Plagiarism is "the unacknowledged (uncited) use of any other person's or group's ideas or work." Students found guilty of cheating or plagiarism are subject to failure of a specific assignment, or, in more serious cases, failure of the entire course.

Core Beliefs:

According to PPM 6-22 IV, students are to "[d]etermine, before the last day to drop courses without penalty, when course requirements conflict with a student's core beliefs. If there is such a conflict, the student should consider dropping the class. A student who finds this solution impracticable may request a resolution from the instructor. This policy does not oblige the instructor to grant the request, except in those cases when a denial would be arbitrary and capricious or illegal. This request must be made to the instructor in writing, and the student must deliver a copy of the request to the office of the department head. The student's request must articulate the burden the requirement would place on the student's beliefs."

Disability Accommodation:

PPM 3-34 notes: "When students seek accommodation in a regularly scheduled course, they have the responsibility to make such requests at the Center for Students with Disabilities before the beginning of the quarter [semester] in which the accommodation is being requested. When a student fails to make such arrangements, interim accommodations can be made by the instructor, pending the determination of the request for a permanent accommodation."

Emergency Closure:

If for any reason the university is forced to close for an extended period of time, we will conduct our class via Canvas. Check your Weber email for information should this occur.

Schedule:

A schedule of readings and assignments is provided below. Readings should be completed before coming to class. Writing projects should be submitted through Canvas before midnight on the days they are due. On days when a peer review is scheduled, please bring a printed copy of the

Read: Chapter 31 (Tab 9) "Engaging Readers with Variety and Emphasis"
Read: Chapter 32 (Tab 9) "Choosing Appropriate Language"
Read: Chapter 33 (Tab 9) "Choosing Effective Words"

Wed. Oct. 1 **Peer-Review #1: Bring Draft of Paper #1**

Fri. Oct. 3 **Peer-Review #2: Bring Revised Draft of Paper #1**
Read: Chapter 26 (Tab 7) "Formatting a Paper in APA Style"

Research Paper #2: Literary Analysis

Mon. Oct. 6 **Research Paper #1 Due**
Read: Chapter 12 (Tab 4) "Writing about Literature"

Wed. Oct. 8

Fri. Oct. 10

Mon. Oct. 13 **Peer Review: Bring Draft of Research Proposal #2**

Wed. Oct. 15 **Research Proposal #2 Due**

Fri. Oct. 17 **Fall Break – No Classes**

Mon. Oct. 20

Wed. Oct. 22 Read: Skim Chapter 20 (Tab 6) "Preparing an MLA-Style List of Works Cited"

Fri. Oct. 24 **Peer-Review: Bring Draft of Annotated Bibliography #2**

Mon. Oct. 27 **Annotated Bibliography #2 Due**
Read: Chapter 19 (Tab 6) "Creating MLA-Style In-Text Citations"

Wed. Oct. 29

Fri. Oct. 31

Mon. Nov. 3

Wed. Nov. 5 **Peer-Review #1: Bring Draft of Paper #2**

Fri. Nov. 7 **Peer-Review #2: Bring Draft of Paper #2**
Read: Chapter 22 (Tab 6) "Formatting a Paper in MLA Style"

Research Paper #3: Student Choice

SYLLABUS NTM 1700

This is an online syllabus. Feel free to print off what you need. Be aware that assignments and testing materials are listed in modules and will need to be printed separately. If you print only this syllabus, you do NOT have all the information that you need to successfully complete this course.

Instructor

An easy contact through Canvas: Click on People Tab > Conversations > Select instructor's name > fill in the message or contact your instructor through WSU email.

Supplies

Software Requirements

The course is taught using current technology such as Google docs, **Microsoft Office Suite 2013 on a PC OR Microsoft Office 2011 for the MAC,** and cloud computing. You will learn how to stay secure online, create a research paper, a resume and cover letter for employment, and how to analyze and present data. The assignments and tests are designed for PC Word 2013, or MAC 2011 and assignments and tests received must be in those formats.

Storage

You will need your own storage device to use as you work through the course. You may use our computers in Elizabeth Hall 311 for your work or any computer with Microsoft Office 2013, or Microsoft Office 2011 for the Mac.

Textbooks & Resources

There is not a required textbook for this course. The following Internet sites can be used for a reference for the course:

MAC USERS
Recommended resources:
TRAINING MATERIALS FOR MAC USERS
http://office.microsoft.com/en-us/mac-word-help/word-for-mac-2011-training-HA103525723.aspx

Microsoft Office 2011 for Mac: Visual QuickStart Guide
http://hal.weber.edu:2200/login?url=http://proquest.safaribooksonline.com

PC USERS
Recommended resources:
MICROSOFT OFFICE TRAINING MATERIALS FOR PC
http://www.gcflearnfree.org/office

Microsoft Office 2013: Visual QuickStart Guide
http://hal.weber.edu:2200/login?url=http://proquest.safaribooksonline.com

The following textbooks can be used for a reference for the course:

PC USER with Office 2013: Misty E. Vermaat, *Microsoft Office 2013 Weber State University Custom Edition,* Boston: Cengage Learning, a Division of Thomson Learning, 2013. ISBN 10: **1-285-88591-0** | ISBN 13: **978-1-285-88591-9** | Edition: **1**

OR

PC USER with Office 2013: Misty E. Vermaat, *Microsoft Office 2013 Introductory,* Boston: Cengage Learning, a Division of Thomson Learning, 2013. ISBN 10: **1285166027** | ISBN 13: **978-1285166025** | Edition: **1**

OR

MAC USER with Office 2011: Gary B. Shelly and Mali B. Jones, *Microsoft Office 2011 for Mac Introductory,* Boston: Cengage Learning, a Division of Thomson Learning, 2012. ISBN -13: **978-1-133-62639-8** Edition: **1**

OR

Microsite for ebook options for MAC and PC users:
http://www.cengagebrain.com/shop/search/9781133626398 or
www.cengagebrain.com/micro/customWeberStateU_NTM1700

http://hal.weber.edu:2200/login?url=http://proquest.safaribooksonline.com

Assignment and Test Submission

Assignments and tests will be submitted only once and graded only once. All assignments are submitted through Canvas. A score of zero will be entered for any assignment or test not submitted and graded by the scheduled deadline date. There is no extra credit.

The production test for the first and third units and the multiple-choice test for the second unit are each submitted through Chitester.

Grading

Grading will be according to the standards established for lab classes at WSU in the NTM Department as follows:

100 - 95 = A	94 - 90 = A-	
89 - 87 = B+	86 - 83 = B	82 - 80 = B-
79 - 77 = C+	76 - 73 = C	72 - 70 = C-
69 - 67 = D+	66 - 63 = D	62 - 60 = D-
59 - 0 = E	> 59 = F	

Grading will be according to the standards established for lab classes at WSU in the NTM Department. Grades will be assigned according to the following percentages:

- Homework Assignments 45%
- Unit Exams 45%
- Final Project 10%.

Units are weighted as follows:

- Document Creation 30%
- Content, Internet Identity, and Device Management 30%
- Data Manipulation, Visualization, and Presentation 30%
- Final Project 10%

Due Dates

All assignments and tests must be completed by the dates provided in the modules for the course. Refer to the calendar often to be sure you are meeting all due dates. ***Assignments can always be turned in early and tests can be taken early.*** Please do not ask for extensions!!!

Any homework handed in late or tests taken late will result in a loss of 20 percent of the possible points for that homework or for that test.

Services for Students with Disabilities Services

Any student requiring accommodations or services due to a disability must contact Services for Students with Disabilities (SSD) in room 181 of the Student Service Center. SSD can also arrange to provide course materials (including this syllabus) in alternative formats if necessary.

Learning Outcomes

A. Document Creation

A.1. Prepare a Research Paper

Students will use current software to produce correctly formatted research papers with an accepted academic reference format such as MLA or APA.

A.2. Prepare Employment Documents

Students will use current software/technology to produce effective employment documents such as a resume and a cover letter.

A.3. Document Collaboration

Students will be able to use multiple collaboration mediums to effectively share, communicate, and collaborate with their peers.

B. Content, Internet Identity, and Device Management

B.1. Content and File Management

Students will use current software/technology to manage content on local devices and in the cloud.

B.2. Internet Identity Management

Students will manage their web identity and presence according to e-safety, security, and privacy best practices and standards.

B.3 Device Management and Security

Students will manipulate multiple computing platforms and troubleshoot problems when they arise. Students will protect local devices from security threats including viruses, malware, and adware using current best practices and technologies.

C. Data Manipulation, Visualization, and Presentation

C.1. Data Manipulation

Students will manipulate and analyze data using various software applications and basic programming.

C.2. Data Visualization

Students will organize data using various graphical methods such as charts and infographics to appropriately convey information.

C.3. Data Presentation

Students will create an effective, well-designed presentation using current technologies.

NTM Lab/Course Policies

1. Students should expect to spend about six hours a week working on assignments for this course.
2. Be sure to read each weekly module so that you can keep up with the coursework.
3. Any homework handed in late will result in a **20-point** grade reduction. Any homework submitted after the unit tests will receive a "0" (zero).
4. Any test taken late will result in a **20-point** grade reduction. **All late tests must be taken within one week of testing date.**
5. When in the lab, computers are to be used for **academic purposes** only. Students may be asked to leave the room if they are using the computers for some other purpose.
6. ***No bonus/extra credit assignments will be given.***
7. **No food or drink is allowed in any NTM computer classroom or lab.**
8. Copyrighted material is NOT to be reproduced or downloaded from the Internet without permission of the author.
9. Students are expected to **complete their own work.** Shared work receives a shared grade of "0" (zero). If you are caught cheating in this course, you will be subject to academic discipline including the imposition of University sanctions. A description of cheating and possible

sanctions is found in the WSU Student Code available on the WSU home page and at the office of the Vice President for Student Services and the WSUSA Office.

10. WSU is an educational institution, dedicated to providing a positive learning environment where all **students' rights are respected**. Students are expected to act professionally and to respect fellow students. If a situation arises making you feel uncomfortable, discuss it immediately with an instructor.
11. By enrolling at WSU students agree to maintain certain standards which, if violated, will result in loss of computer privileges. According to the WSU student code, students agree to avoid unethical, wasteful, and/or inappropriate use of any computer. In addition, students agree not to interfere with the productivity of other users and therefore will avoid disorderly, lewd, indecent, defamatory, or obscene conduct or expression. http://documents.weber.edu/ppm/6-22.htm

Any student requiring accommodations or services due to a disability **must** contact Services for Students with Disabilities (SSD) in Room 181 of the Student Service Center. SSD can also arrange to provide course materials in alternative formats if necessary. Among the services available by this department is test anxiety counseling. For more information about the SSD contact them at 801-626-6413, ssd@weber.edu, or departments.weber.edu/ssd

12. The last day to withdraw from this class and from school is the end of the seventh week, November 4. If you would like to withdraw, do so by this date.
13. Cell phones, pagers, or other personal communication devices are to be turned off or placed in silent or vibrate mode during lab time. Students using these devices should leave the lab or class prior to using the device. These devices are not to be used during testing.

Ethical Conduct

Any form of academic dishonesty (cheating, plagiarism, etc.) will not be tolerated. Proof of academic dishonesty will result in a failing grade (E) for the course. The following is an explanation of cheating as stated in the student code.

A. Cheating, which includes but is not limited to:
   i. Copying from another student's test;
   ii. Using materials during a test not authorized by the person giving the test;
   iii. Collaborating with any other person during a test without authorization;
   iv. Knowingly obtaining, using, buying, selling, transporting, or soliciting in whole or in part the contents of any test without authorization of the appropriate University official
   v. Bribing any other person to obtain any test;
   vi. Soliciting or receiving unauthorized information about any test;
   vii. Substituting for another student or permitting any other person to substitute for oneself to take a test.
B. Plagiarism, which is the unacknowledged (uncited) use of any other person's or group's ideas or work. This includes purchased or borrowed papers;
C. Collusion, which is the unauthorized collaboration with another person in preparing work offered for credit;
D. Falsification, which is the intentional and unauthorized altering or inventing of any information or citation in an academic exercise, activity, or record-keeping process;
E. Giving, selling, or receiving unauthorized course or test information;

F. Using any unauthorized resource or aid in the preparation or completion of any course work, exercise, or activity;
G. Infringing on the copyright law of the United States which prohibits the making of reproductions of copyrighted material except under certain specified conditions.

LIBRARY SCIENCE 1704—CRN 24112
LIBRARY SKILLS, RESOURCES AND RESEARCH
Fall 2014

Instructors:
Misty Allen
Library Rm. 005
801-626-7820
mallen4@weber.edu

Jennifer Hansen
Library Rm. 30
jenniferhansen11@weber.edu

Welcome to Library Science 1704!!! I am happy to have YOU as one of my students this semester. This course is online and all the assignments will be turned in through the course management software Canvas. Since each assignment builds upon the previous one, firm deadlines have been set up. Please read through the syllabus VERY carefully. Email or call me if you have questions.

1. Course Objective
Students completing this course will be able to use an academic library and the internet to successfully identify, access, evaluate, and use information resources to support academic success and lifelong learning. Successful completion of this course with a C or higher meets Part D of the WSU Computer and Information Literacy Requirement.

2. Information Literacy Competencies:

- Identify Information Needs:
  Use the research process; construct a research question with a manageable focus; differentiate and apply different types and formats of information (scholarly/popular, primary/secondary, etc.)
- Find Information Effectively:
  Demonstrate how information is organized; use Boolean Logic and other search strategies to effectively use library catalogs, article databases, and Internet search engines.
- Critically Evaluate Information:
  Identify and apply evaluation criteria to assess the quality of information retrieved.
- Use Information Ethically:
  Demonstrate the importance of properly and correctly citing a source used. Identify what constitutes plagiarism and how to avoid it.

3. Required Materials

A desire to LEARN a little more about how to access information using *Library Resources* and the *Internet*. If you take it seriously, this class **WILL** help you with library research and information searching for other classes and in life!!! The readings for the course are located within each module. It might be helpful to **PRINT THESE (preferably in color)**, so that you can read and take notes on the material.

4. Course Grade

A. Introduction Posting

In the *Discussions* area of the course, post a short introduction of yourself. At the very least, list your name, major/minor, and something that is unique about you. You are welcome to post more. See my posting as an example. This posting is worth 10 points and is due by **midnight, Friday, August 29th.**

B. Quizzes

To increase your learning, you need to understand the information found in the textbook. To encourage you to read the material, I have created quizzes for each learning module. Please complete the quizzes AFTER you have read the module. You may take each quiz TWICE. Quizzes WILL NOT be accepted after the deadline.

Quiz	Points	Due by midnight on....
Module 1	10	Friday, September 5th
Module 2	10	Friday, September 19th
Module 3	10	Friday, October 10th
Module 4	10	Friday, November 7th
Module 5	10	Friday, November 21st
Total Points	*50*	

C. Assignments

There are 5 assignments in this course. Completing these assignments will increase your understanding of the material covered in each module. Each of the assignments has a deadline and is due by midnight on the due date stated. Late assignments ARE NOT accepted. I will allow you to revise and resubmit an assignment if the assignment is initially turned in 5 days prior to the due date. This will give me time to grade your assignment and also give you enough time to revise before the final due date

Your assignments will be provided in Microsoft Word format and you will save them as Word documents, *with your first and last name and the assignment number*. If you do not have Microsoft Word, please let me know. Save **ALL** of your assignments on your computer's hard drive or some other storage device. The assignments build on each other, so you will need the

previous one to complete the next one. Plus, you will need a backup copy in case WSU Online goes down.

I will grade and return your submitted assignments within 3 calendar days of the submission deadline.

You must submit all assignments through the WSU Online system. Contact me if you have trouble attaching assignments.

Assignments	Points	Revisable Due Date Due by midnight on...	Final Due Date Due by midnight on....
Module 1 Assignment	15	Monday, Sept. 8th	Friday, Sept. 12th
Module 2 Assignment	15	Monday, Sept. 22nd	Friday, Sept. 26th
Module 3 Assignment	30	Monday, Oct. 20th	Friday, Oct. 24th
Module 4 Assignment	60	Monday, Nov. 10th	Friday, Nov. 14th
Module 5 Assignment	30	Monday, Dec. 1st	Friday, Dec. 5th
Total Points	*150*		

D. Final Posting

In the Discussions area of the course, post the research question you chose to research, the reasons you chose to research this topic, and a summary of what you learned about your research topic. This posting is worth 10 points and is **due by midnight on Monday, Dec. 8th.**

F. Final Exam

To sum up what you learned about library and information research, the final is a multiple choice assessment focused on the concepts learned throughout the semester. This assessment is worth **50 points and is open book/open notes, but you only you will only have one attempt to complete it correctly.** This final assessment is **due by midnight on Wednesday, Dec. 10th.**

G. Course Grade

	Points
Introduction Posting	10
Assignments	150
Quizzes	50
Final (posting)	10
Final (assessment)	50
Total	*270*

H. Grading Scale

Percentage	Points	Grade
93-100	>251	A
89-92	240-250	A-
85-88	229-239	B+
82-84	221-228	B
78-81	210-220	B-
75-77	202-209	C+
71-74	191-201	C
68-70	183-190	C-
64-67	172-182	D+
61-63	164-171	D
57-60	153-163	D-
below 60	<152	E

4. Additional Information

A. WSU Online/Course Readings

Course materials and the course readings are available within the WSU Online system at http://online.weber.edu. Please log-in to WSU Online on a regular basis (*at least every other day*) to receive important announcements and updates about the course, including updated grades in the grade book.

B. Email

Please use the EMAIL in the WSU Online system for this class. If WSU Online is down, please wait until it is back up. **If you must get in contact with me when the system is down, call (801-626-7820) or use my Weber email address (mallen4@weber.edu).**

C. Grade Appeals

If after receiving a grade for an assignment or quiz and you feel a mistake has been made, please email me using the course email within **5 calendar days** what your questions are and note references that back your stance. Within 5 calendar days, you will receive a response and a grade adjustment, if necessary.

D. "Free" Pass

I give one "free" pass. You can miss the deadline for **ONE** assignment and turn the assignment in without providing a reason. Since each assignment builds on the previous one, you must submit the late assignment **within 5 calendar days** of the missed deadline. This "free" pass CANNOT be used for the discussions, or the final.

E. Plagiarism/Cheating

Students are expected to abide by the Student Code which is found at http://www.weber.edu/ppm/Policies/6-22_StudentCode.html. Cheating, plagiarism or any other form of academic dishonesty **will not** be tolerated. Proof of academic dishonesty will result in a final grade of E for the course, and a formal report will be made to appropriate University authorities.

F. Spelling and Grammar

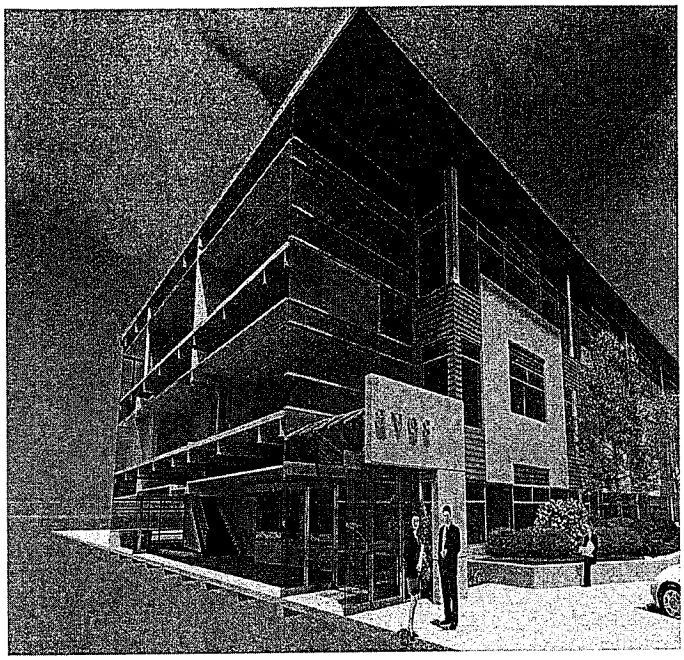
Writing is an important skill in school and in life. For this reason, the use of proper PUNCTUATION, SPELLING, and GRAMMAR in ALL of the assignments/postings is required. Points may be deducted for incorrect English usage (e.g. the use of small "i" for the proper pronoun "I"). To assist you in writing correctly, please use the spelling or grammar check feature of a word processing program to type your assignments before saving and submitting them. You might also consult a style manual for questions about grammar. If you need additional assistance in writing correctly, please use the Writing Center on campus in room 210 in Elizabeth Hall. **Points may be taken off for incorrect spelling and grammar.**

G. Students with Disabilities

Any student requiring special accommodations or services due to a disability must contact Services for Students with Disabilities (SSD) in rm. 181 of the Student Services Center. SSD can arrange to provide course materials in alternative formats, if necessary.

H. Students' Rights and Responsibilities

Please look at the following Web site which is part of the Student Code which lists students' rights and responsibilities http://www.weber.edu/ppm/Policies/6-22_StudentCode.html



Introduction to Building Information Modeling (BIM I)

Course Syllabus
Spring 2013

Instructor:
Jeremy Farner, ET 214-G
Phone 626-6962
Preferred contact method: jfarner@weber.edu
Office Hours: Posted outside office

Course Number:
DET 2000
Monday & Wednesday
10:30-11:45
Room ET 120 & Lab 126
(Required course for DET & BIS in BIM majors)

Monday (ET 120)	Wednesday (ET 126)
Lecture & Demo	Lab
Required Attendance	Required Attendance

Course Description:

The study of commercial architectural (Type I, II and III buildings) construction documents and an introduction to Building Information Modeling. Covers procedures used in developing commercial plans using 3D CAD to create a building information model that uses integrated design between architecture, structure and mechanical electrical and plumbing (MEP). Includes commercial architectural drafting standards, design procedures, and building code requirements; including the latest release of the International Building Code (IBC) and Americans with Disabilities Act (ADA) guidelines. Software applications used to develop commercial architectural designs will be explored.

Students will demonstrate Abet Program Outcomes in the following categories;

a. An appropriate mastery of the knowledge, techniques, skills and modern tools of their discipline by learning and using Revit to develop a set of commercial plans.

h. Recognition of the need for, and an ability to engage in lifelong learning by identifying in a written report on career path of their choice found within the AEC community the credential options available to that career path and the continuing education requirements necessary to maintain that credential.

i. An ability to understand professional, ethical and social responsibilities by researching and reporting.

j. A respect for diversity and knowledge of contemporary professional, societal and global issues by researching and reporting in a written report on career path of their choice found within the AEC community.

Course Objectives:

1. Identify AEC careers & pay scales that utilize BIM.
2. Define BIM and how it is changing the AEC community and project delivery.
3. Identify commercial construction procedures and the plans to carry them out.
4. Apply the International Building Code & Americans with Disabilities Act Guidelines.
5. Relate drawing standards and conventions to create floor, roof, elevation, section & interior elevation plans.
6. Identify and specify common commercial construction materials to address fire protection and resistivity.
7. Demonstrate proficiency in commercial design procedures.
8. Demonstrate commercial print reading skills.
9. Relate construction specifications for a variety of construction types.
10. Develop a site plan for a commercial structure that includes ramps and parking stalls based on Universal Design & code.
11. Demonstrate proficiency in the navigation & manipulation of 3D BIM models to create & modify architectural objects.

Course Textbooks:

Design Integration Using Autodesk Revit 2013, Stine (ISBN 978-1-58503-736-0)
Commercial Drafting and Detailing, Alan Jefferis 3rd Edition (ISBN 978-1435425972)

Course Equipment:

Multiple Storage Devices (USB) Back Up files regularly

Course Administration:

Lectures will concern the body of knowledge surrounding commercial architectural drafting & design. Demonstrations will cover specific operations and techniques. Students are expected to be at all class sessions (see Excused Absences policy below). If a student has to miss a lecture or a demonstration, permission for an excused absence must be granted by the professor before class. It is the responsibility of the students to secure all materials and information presented in class, even with an excused absence. Lectures will not be repeated. Lectures may be taped recorded with the professor's permission.

Excused Absences:

Students must clear any absence beforehand with the instructor, who will require documentation before the absence is excused. Absences due to illness or other circumstances beyond a student's control will be handled on a case-by-case basis and will also require documentation.

Attendance Policy:

- DET students are considered Design Engineering Technology professionals and are responsible for directing their own education. As such, the decision to attend class is at each student's personal discretion.
- Absences CAN effect student grades if they do not understand the material or are not aware of changes to the class that can include (but are not limited to) the scheduling of quizzes, exams, assignments, projects, and extra credit. The instructor has the right to alter the course at his own discretion, so students missing class may not be aware of important information.

- Students are responsible for the body of information in the lectures, labs, and assigned reading materials. Students who do not attend class will not be given makeup lecture sessions or notes by the instructor. Similarly, makeup tests and quizzes will also not be given. If a student misses a class, it is up to them to make sure they acquire the relevant material from another source. Do NOT send the instructor an e-mail asking to explain the contents of a missed lecture or lab.

- Students are expected to attend class for mandatory events such as tests and quizzes, and it is up to the individual student to know when those events are. Ignorance of these events is not an excuse, and any student who wants current information is expected to attend class.

Campus Emergency:

In the event of a major campus emergency; course requirements and deadlines are subject to change that may be necessitated by a revised semester calendar or other circumstances. Here are ways to get information about changes in the course in order; Canvas, my email address: jfarner@weber.edu , or my office phone 801-626-6962

Course Schedule:

Aside from the syllabus, the information contained on Canvas IS subject to change and is NOT the most current source of information. As in the AEC industry, the instructor has the right to make changes to many portions of the curriculum due to the ever-changing nature of technology; certain information on Canvas may be obsolete or out-of-date. As such, it is up to the student to confirm this information by either attending class or obtaining the information from another source.

Outside Work:

Outside work will be absolutely necessary. Students will NOT be able to do well in this course if they work only in regularly scheduled class sessions.

Student Conduct and Polices:

- No swearing, or derogatory comments about, or towards, any member of the class will be tolerated in any class period.
- No food or drinks of any kind will be allowed in any lab sessions.
- Students are expected to arrive on time for all class and lab sessions.
- Late assignments will not be accepted unless prior arrangements have been made with the Instructor and because of extreme circumstances. (Not coming to lab, or forgetting, doesn't rate as an extreme circumstance.)
- No student will be allowed to make up any written exam, lab practical, exam, or quiz unless they have an official or medical excuse.
- Any student found participating in cheating, plagiarism, copying material from another person's disk, using illegal cribs or other materials during a written examination, lying to course instructors and lab assistants about his or her own work, stealing tests, quizzes, or answer keys, and any such activities will be considered in conflict with the printed academic honesty guidelines as set out by Weber State University. In such cases the matter will be reported to the Office of the Dean and the appropriate Weber State University administration officers for consideration and possible disciplinary action.
- Any student requiring accommodations or services due to a disability must contact Services for Students with Disabilities (SSD) in room 181 of the Student Service Center. SSD can also arrange to provide course materials (including this syllabus) in alternative formats if necessary.

File Security and Disks:

Students are responsible for the security of their files! They should have multiple copies on multiple sources (laptop, home computer, flash drives) at all times. Given a faulty flash drive or other media, the instructor will assist students in attempting to recover lost files. However, ultimately each individual is responsible for maintaining their digital data. Loss of data, files, or other associated items needed for a project will require that a student recreate their work, with no exceptions.

Although a rare occurrence, Flash Drives have been known to become corrupted, resulting in the permanent loss of the data. As such, it is highly recommended that students use Flash Drives for storage only, and that they not work directly from them. Instead, they should work from a copy on your local hard drive or on the D: drive on the school computers, and then save to the flash drive once they are finished working with the file(s).

Computer Lab Policy:

1. The computer labs are restricted to ONLY those students registered in the current semester for a class in the Engineering Technology or Construction Management Technology departments within the College of Applied Science and Technology.
2. NO food or drinks are allowed in the computer labs.
3. DO NOT INSTALL ANY PROGRAMS ON THE MACHINES IN ANY OF THE LABS.
4. Viewing or use of ANY PORNOGRAPHIC MATERIAL IS STRICTLY PROHIBITED! Anyone caught viewing pornographic material will not only be asked to leave, but will have their lab privileges REVOKED.
5. No one should ever abuse the equipment in any way.
6. No one should use any command or function to copy or backup licensed software from any WSU computer. It is a violation of Federal Copy Right Laws to possess pirated software. Anyone who is found guilty of such violations will be expelled from the College of Applied Science and Technology and Weber State University.
7. Do not disconnect or connect any devices in the lab. If you are having problems with any device please immediately notify the lab aide on duty.
8. When in the labs please keep your level of noise down. Other students may be working and may not appreciate your conversation from across the room. Please take social conversations outside the labs.
9. No speakers are provided, if you need to listen to music or videos please use your personal headphones.
10. The computers shut down after 30 minutes of "inactivity". (No mouse movement or key strokes) All program changes, internet browsing, temporary files, and your saved files on the C: drive, including viruses is removed when the computer is shut down. Always shut down the computer you used before you leave.
11. The D: drive is not protected nor does it get erased on these computers after shut down or restart. It is a local drive only seen on the computer you are working on. Use it while you are working or have forgotten your flash drive. This drive gets whipped every semester so don't forget to get the information you have saved to the D: drive.

Laptops & Cell Phones:

It is permissible to bring a laptop (notebook, tablet etc.) computer to class for the purpose of taking notes. Turn the sound OFF--- the clicking, clacking, or sound effects distracts other students.

Similarly, there will be no tolerance for beeping, chirping, ringing (or any other sound) from a cell phone in class. If students must use your cell phone for any reason, they must leave the room. *"I know if you are texting on your phone.... No one looks at their crotch and smiles"*

Course Assignments - Projects:

Students will be expected to successfully complete multiple projects throughout the course of the semester. Projects will be graded on professionalism, execution, creativity, technical merit, and communicative value.

Exams:

Exams will cover material from the lecture, demonstrations, and laboratory portions of the course and be administered during the regularly scheduled lecture period. The final exam will be a comprehensive exam and given at the appropriately scheduled time.

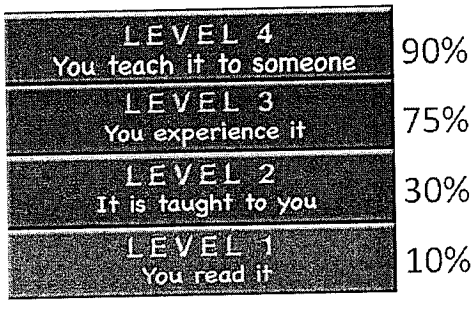
Grading Criteria:

The final grade will be a summation of all homework, quizzes and exams. (ie. 900 earner points/ 1000 possible points = 90% or A-) The exams will be a comprehensive assessment of both theoretical (book) and application (AutoCAD) at the end of the semester.

Grading Policy:

Grades will be given using the following total earned scores.

94-100%	A	74-76%	C
90-93%	A-	70-73%	C-
87-89%	B+	67-69%	D
84-86%	B	64-66%	D
80-83%	B-	60-63%	D-
77-79%	C+	59-0%	



Lecture only 5%

Tips for studying:

No learning takes place until a question is posed or a personal need is discovered!

If you do not have the textbook, you are planning on not passing the class unless you are lucky! All information cannot possibly covered in class and therefore you must come to class prepared and ready to ask questions about what will be covered. (This means that you should have read the chapter prior to class so questions can be dealt with during the lecture.) You are responsible for all information in the chapter not just what is lectured on! (Test questions will come from lecture & from text)

Weber State University

Design Engineering Technology 2460
Product Design Fundamentals Using 3D CAD

Course Outline

Course Description:
Product design is the creative process of applying scientific and mathematical principles, experience, and judgment to the development of the solution of a technical product or system to meet a specific need. Turning ideas into designs will incorporate problem identification, market research and brainstorming possible solutions, develop detailed part and assembly drawings, implementation, and evaluation. Sketching, gears, shafts, tolerance build-up, tolerances for assemblies, and introduction to rapid prototyping will be presented.

Objectives:
To successfully create 3D CAD models and detail drawings for multiple, open-ended design projects; master the processes associated with reverse engineering functions as related to the design of mechanical components; obtain a fundamental knowledge of the application of design improvements to existing features; gain an understanding of the characteristics intrinsic to the design of components fabricated from traditional engineering materials, and become familiar with a variety of material selection processes and manufacturing methods.

Instructor:
Glen West - Engineering Technology 214B - Phone (801) 626-6301 – E-mail: glenwest@weber.edu
ET Department Secretary – Pat DeJong - Phone (801) 626-6305

Office Hours:
Refer to Schedule

Prerequisites:
DET 1060 and DET 1160

Time, Days, and Location:
Lecture - 9:30-10:20 A.M. – MWF – Engineering Technology 128

Text:
DET 2460 Product Design Fundamentals Using 3D CAD Course Materials - Fall 2014 - WSU Printing (Required)

Required Materials:
None

Homework:
Homework assignments are due, in class, on the due dates indicated in the lecture schedule. **Late homework will not be accepted.** Homework assignments are to be completed using some form of CAD software and are to be submitted, in person **(no e-mailed files)** on standard 11 x 17 drawing paper with a formatted border and title block. **Some method for backing up your work is highly recommended. Sharing of the work load, as related to homework assignments, will result in a shared grade for the assignments.**

Homework Values:

Assignments 1 through 12	80%
Assignment 13	20%
Total	100%

Grading Policy: Grades will be based on the following scale as a result of points earned on assignments.

94-100% =	A	74-76% =	C
90-93% =	A-	70-73% =	C-
87-89% =	B+	67-69% =	D+
84-86% =	B	64-66% =	D
80-83% =	B-	60-63% =	D-
77-79% =	C+	59-0% =	E

Rights/Responsibilities: This course outline is the governing document for this course. Your decision to take this course indicates your agreement to the conditions of this course outline. Please review the WSU Policies and Procedures Manual student code regarding ethics found at http://documents.weber.edu/ppm/6-22.htm , specifically section IV. Academic dishonesty, as described in the WSU Policies and Procedures Manual, will not be tolerated. Consequences may vary from grade adjustment to expulsion from the university.

Weekly Schedule - DET 2460 - Fall Semester 2014

Date	Design Task	Homework Assignment
Aug 25-29	Week 1 Gear Shift Support Plate	Design Problem 1 **Due Sep 10**
Sep 1-5	Week 2 Gear Shift Handle	Design Problem 2 **Due Sep 17**
Sep 1	**Labor Day Holiday**	
Sep 8-12	Week 3 Gear Shift Knob	Design Problem 3 **Due Sep 24**
Sep 15-19	Week 4 Shift Yoke	Design Problem 4 **Due Oct 1**
Sep 22-26	Week 5 Drive Gear	Design Problem 5 **Due Oct 8**
Sep 29-Oct 3	Week 6 Drive Shaft	Design Problem 6 **Due Oct 15**
Oct 6-10	Week 7 Transmission Housing	Design Problem 7 **Due Oct 22**
Oct 13-17	Week 8 Cover Plate	Design Problem 8 **Due Oct 29**
Oct 17		**Fall Break – No School**

Week 9 Oct 20-24	Finger Pin	Design Problem 9	**Due Nov 5**
Week 10 Oct 27-31	Follower Gear	Design Problem 10	**Due Nov 12**
Week 11 Nov 3-7	Reduction Gear	Design Problem 11	**Due Nov 19**
Week 12 Nov 10-14	Gaskets	Design Problem 12	**Due Nov 26**
Week 13 Nov 17-21	Transmission Assembly	Design Problem 13	**Due Dec 3**
Week 14 Nov 24-28	Open Lab		
Nov 27-28	**Thanksgiving Day Holiday**		
Week 15 Dec 1-5	Open Lab		

WEBER STATE UNIVERSITY
MANUFACTURING ENGINEERING TECHNOLOGY (MFET)
MFET 2360 COURSE OUTLINE

DEPARTMENT:	Manufacturing and Mechanical Engineering Technology
COURSE NUMBER:	MFET 2360
COURSE TITLE:	Materials and Processes (This is a required course for DGET and MET)
Course Time:	12:30-1:20pm
Course Location:	ET 224/8
Final:	12/10/2014 12:30-2:20pm
Instructor:	Andrew Deceuster
Office:	ET 214K
Email:	Andrewdeceuster@weber.edu
Phone:	801-626-6189
Office Hours:	T, R, F 2:30-3:30 pm, R 10:00-11:30am

COURSE DESCRIPTION: (2013-2014 Weber State University Catalog) After a brief review of engineering materials, this course surveys industrially important processes used to add utility to industrial standard stock by changing material shape and condition

PREREQUISITES: None

REQUIRED TEXTBOOK, WORKBOOK AND TOOLS:
Modern Materials and Manufacturing Processes, 3rd Edition, Bruce, Dalton, Neely Kibbe. Pearson-Prentice Hall, 2004, ISBN 0-13-094698-2

COURSE LEARNING OUTCOMES & EXPECTED PERFORMANCE CRITERIA (ABET Criterion 3. Program Outcomes)

- Outcome a: An appropriate mastery of the knowledge, techniques, skills and modern tools of their disciplines:
  i. You should be able to describe the basic engineering materials, basic properties of significant engineering materials, basic casting and foundry processes, metal joining processes. metal forming processes, sheet metal working processes, powder metal processes, basic polymers and polymer processes, metal removal processes, basic design for assembly techniques
  ii. You should know the overall process capabilities of industrial significant processes (surface finish and tolerance capability)
  iii. You should be able to identify appropriate manufacturing methodologies for a given product based on: process capabilities and design requirements
- Outcome g: An ability to communicate effectively

LAB/CLASS SCHEDULE: 50 minutes per day, 3 days per week

CONTRIBUTION OF COURSE TO MEETING CURRICULUM REQUIREMENTS (ABET CRITERION 5)

Students are prepared for a professional career and further study:
Students are introduced to basic engineering materials, processes, and design for manufacturability issues that will enhance their ability to participate on engineering design teams. Competence is determined through exams and a formal term paper.

Capstone or integrating experiences
Students are required to professionally present research done on select products and associated processes in a term report.

RELATIONSHIP OF THIS COURSE TO PROGRAM OUTCOMES:

Students learn basic engineering materials and processes (ABET outcome a). Students also demonstrate effective technical communication skills (ABET outcome g). These outcomes support DGET and MET objectives and better equip the student to design competitively in the world market.

GRADING CRITERIA:

There will be three exams. The exams will test comprehension of material covered in the assigned text and lectures. The exams may be closed book. Although not on the schedule, quizzes may be given. They will be used as informal assessments, i.e., they will not harm your grade.

Grade Evaluation:

	Points	Percentage
Exam I	100	20%
Exam II	100	20%
Exam III	100	20%
Term Presentation	50	10%
Term Paper	50	10%
Quizzes	100	20%
	TOTAL = 500	points

Letter grades for the course will be based on the following scale:

A	95.0 - 100.0	C-	70.0 - 72.0
A -	90.0 – 94.0	D+	67.0 - 69.0
B+	87.0 – 89.0	D	63.0 - 66.0
B	83.0 - 86.0	D-	60.0- 62.0
B-	80.0 - 82.0	E	Below 60.0
C+	77.0 - 79.0		
C	73.0 - 76.0		

Term Report:

Choose a simple manufactured part or product. Build a presentation addressing the following:

- Technical description of the material used
- Why you think that material was chosen (i.e. material properties, economics, manufacturability, etc.)
- Description of the manufacturing process used.
- Suggest alternatives

Presentation is expected to last between 5 and 10 minutes. In addition to the presentation, a paper on the same topic is to be turned in. Target length is 7 to 10 pages. Quotations must be properly cited using the APA method. Failure to give credit for others work is considered plagiarism. **Failure to give proper credit for others work will result in zero credit for the assignment.**

Rights/Responsibilities - This syllabus is the governing document for this course; your decision to take this course amounts to tacit consent to the conditions of this syllabus. Please review the WSU Policies and Procedures Manual student code regarding ethics found at http://documents.weber.edu/ppm/6-22.htm, specifically section IV. Academic dishonesty, as described in the WSU Policies and Procedures Manual, will not be tolerated. Consequences may vary from grade adjustment to expulsion from the university.

Electronic Devices - Please refrain from the use of electronic devices during class. If a call must be taken please set out of the class to take the call. Students who disrupt the learning atmosphere for other students will be asked to leave the class for the day. Any electronic device not previously approved by the instructor will be taken during an exam. Please just be courteous to your fellow students.

Academic Integrity - Cheating and dishonesty will not be tolerated. Weber State University Student Code dealing with academic integrity can be found at http://weber.edu/ppm/6-22.htm. If a student is caught cheating an 'E" will be assigned for a final grade and a letter will be drafted documenting the incident and placed in the student's file

Disabilities; Any student requiring accommodations or services due to a disability must contact Services for Students with Disabilities (SSD) in room 181 of the Student Service Center. SSD can also arrange to provide course materials (including this syllabus) in alternative formats.

Harassment/Discrimination - Weber State University and this class are committed to providing a learning environment that is free from discrimination or harassment. While students come from a diverse background and have differing viewpoints, respect will be shown to each every student. Questions regarding the university's policy can be directed to the AA/EO office (626-6239) or http://departments.weber.edu/aaeeo/

Attendance; Although attendance will not be graded, absenteeism could adversely affect your grade through missed lectures. If you miss any class, it will be your responsibility to obtain relevant information from your fellow students.

Emergencies; If you find that during the semester you will not be able to turn in an assignment or take an exam on the date scheduled due to an illness or emergency, you must contact the professor before the date in question, if at all possible, or within 24 hours of the date at the latest.

PREPARED BY: Andy Drake; AUGUST 16, 2011 **MODIFIED BY:** Andrew Deceuster; AUGUST 2014

WEBER STATE UNIVERSITY
MANUFACTURING ENGINEERING TECHNOLOGY (MFET)
MFET 2410 COURSE OUTLINE

DEPARTMENT:	Manufacturing and Mechanical Engineering Technology
COURSE NUMBER:	MFET 2410
COURSE TITLE:	Quality Concepts and Statistical Applications (This is a required course for MFET Majors)
Course Time:	11:30-12:20pm
Final:	12/8/2014 11:30-1:20 pm
Course Location:	ET 204
Instructor:	Andrew Deceuster
Office:	ET 214K
Email:	Andrewdeceuster@weber.edu
Phone:	801-626-6189
Office Hours:	T, R, F 2:30-3:30 pm, R 10:00-11:30am

COURSE DESCRIPTION: (2014-2015 Weber State University Catalog)
This provides students with a foundation in current quality paradigms and introduces students to software tools (MS Excel and Minitab) used to statistically analyze problems encountered in manufacturing firms. This is the first course in a series designed to impart the six-sigma body of knowledge.

PREREQUISITES: Math 1010, TBE 1700

REQUIRED TEXTBOOK, WORKBOOK AND TOOLS:
Weiss, N.A., *Introductory Statistics 8th Edition,* Pearson Education/Addison Wesley, 2009

The Memory Jogger 2 Tools for Continuous Improvement and Effective Planning, Goal/QPC, 2010. ISBN 978-1-57681-113-9. This is also available in electronic format for Kindle.

LEARNING OUTCOMES & EXPECTED PERFORMANCE CRITERIA (ABET Criterion 3. Program Outcomes)

- Outcome a: An appropriate mastery of the knowledge, techniques, skills and modern tools of their disciplines:
  i. Understand current quality paradigms and terminology in manufacturing today (Deming, Juran, Crosby, Taguchi, six-sigma, lean, etc.)
  ii. Understand and be able to describe the concepts associated with the cost of quality, customer focus and the "voice of the customer" as well as current quality awards and certifications.
  iii. Understand and be able to describe the types of data and data distributions, concepts of probability, discrete probability distributions, binomial & Poisson distributions, normal probability distributions, sampling distributions, the meaning of level of significance and p value
- Outcome b: An ability to apply current knowledge (quality and statistics) and adapt to emerging applications of mathematics, science, engineering and technology:
  i. Be able to apply basic statistical quantitative analysis tools in MS Excel and Minitab; Create and display quantitative and qualitative data with graphs and describe distributions and data with numbers
  ii. Use MS Excel or Minitab to perform basic inferential statistical tests, calculate normal probabilities, generate normal probability plots,
  iii. Be able to interpret control charts and process capability to determine if processes are out of control.

TOPICS COVERED:
Total Quality Management; basic principles and approaches, quality awards and certifications, basic tools in total quality management, types of data, collecting data, exploring data with graphs and tables, exploring Quantitative data with numerical descriptive measures, basic probability concepts, discrete & continuous probability distributions, estimation of population parameters, confidence intervals, control charts and process capability.

RELATIONSHIP OF THIS COURSE TO PROGRAM OUTCOMES:

This course gives the student an understanding of the terms and concepts associated with statistics as they relate to quality (Educational Objective 1, ABET Outcomes a). At the conclusion of the course students should be able to effectively use descriptive statistics in industrial problem solving (Educational Objective 2, ABET Outcomes b, f).

LAB/CLASS SCHEDULE: 50 minutes per day, 3 days per week

CONTRIBUTION OF COURSE TO MEETING CURRICULUM REQUIREMENTS:

Students are prepared for a professional career and further study:

Students are introduced to various quality paradigms and statistical thinking as a foundation for subsequent quality courses in the MFET program. Competence is determined through written assignments, quizzes, & exams. The course builds expertise in the use of MS Excel and Minitab as statistical problem solving tools.

Capstone or integrating experiences

A semester project is required that requires students to utilize the descriptive statistics covered in the class. Students are required to develop a PowerPoint presentation to professionally present their findings.

GRADING CRITERIA:

Homework will be assigned at regular intervals, and completion is expected. The assignments will be graded primarily on submission, but will be spot checked. Late homework will not be accepted. All homework will be turned in online. All communication pertaining to the course will be done through the online system. Students may collaborate on homework. All charts and graphs must be computer generated. A "professional" appearance is expected

There will be homework, quizzes, a class project, two exams and a final. There will also be a simple semester project with presentation, and homework assignments. Exams will test comprehension of material covered in the assigned text and lectures; all exams will be closed book and consist of multiple choice, short answer and calculation type problems. If you must take an exam after the class for any reason, 20% will be deducted from your score.

Semester Project; students are required to select a process, collect data, provide descriptive statistics, relevant graphs, and generate a relevant confidence interval for a statistic as a semester project. Students will present their work in a MS Power Point to the class. Details are provided in the assignment.

The final grade will be composed of;

Assignments 15%, Exam average 50% Term Project 20% Quizzes 15%

Letter grades for the course will be based on the following scale:

A	Overall Score $\geq$ 93	B	82 $\leq$ Overall Score $<$ 86	C	72 $\leq$ Overall Score $<$ 76
A-	90 $\leq$ Overall Score $<$ 93	B-	79 $\leq$ Overall Score $<$ 82	D	65 $\leq$ Overall Score $<$ 72
B+	86 $\leq$ Overall Score $<$ 90	C+	76 $\leq$ Overall Score $<$ 79	E	65 $\leq$ Overall Score

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Attendance; Although attendance will not be graded, absenteeism could adversely affect your grade through missed lectures. If you miss any class, it will be your responsibility to obtain relevant information from your fellow students.

Emergencies; If you find that during the semester you will not be able to turn in an assignment or take an exam on the date scheduled due to an illness or emergency, you must contact the professor before the date in question, if at all possible, or within 24 hours of the date at the latest.

PREPARED BY: Rick W. Orr; May 2, 2011 **MODIFIED BY:** Andrew Deceuster; August 2014

Comm 2110: Intro to Interpersonal and Small Group - Fall 2014

Professor: Dr. Cynthia. M. Bishop **Office:** EH-342 or Davis 304-R
E-Dress: cynthiabishop@weber.edu **Phone:** (801) 626.6559/(801) 626.8924

Office Hours: Davis: M/W 8:00-8:30 a.m.; 10:30-11:00 a.m.; Main: T/Th 8:00-9:00; or by Appointment

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Course Text: Edwards, A., Edwards, C., Wahl, S. T., & Myers, S. A. (2013). *The communication age: Connecting & engaging.* Los Angeles: Sage Publications, Inc.

Required: Dr. Bishop's Course Packet for Comm 2110

CANVAS: We will use Canvas for this course. I am fairly new to it but am learning quickly. Be sure to go to the Canvas Page regularly. Read what is posted and know what resources are available for your there.

Small Group Component – Terminal Objectives :

1. Demonstrate an understanding of discussion in small groups and teams, as part of the communication discipline.
2. Successfully engage in problem-solving group dynamics.
3. Practice skills of listening and feedback, decision making and problem solving, creativity, and conflict strategy.
4. Engage in experiencing technology as a tool in group exchange.
5. Develop confidence identifying and using appropriate conflict negotiation skills.

Small Group Component – Enabling Objectives: Students will -

1. Define multiple terminologies for group dynamics.
2. Examine requirements for Communicative Groups to be a System per Systems Theory.
3. Understand group norms and roles and practice them in group discussion.
4. Define and explain the phases of group development.
5. Examine the uses and functions of groups within business and industry
6. Reinforce fundamentals of the power and impact of verbal and nonverbal group communication.
7. Practice the processes of decision making and problem solving in group discussion.
8. Understand the importance of leadership and power within groups

Interpersonal Component – Terminal Objectives:

9. Students will know theoretical aspects of interpersonal communication.
10. Students will demonstrate proficiency in critical thinking, researching, reasoning, strategizing, organizing, delivering, and assessing interpersonal communication as a topic for analyses.
11. Students will articulate how cultural aspects of ourselves affect our interpersonal selves and communicative "default" modes.
12. Students will acquire a reservoir of effective interpersonal communication choices from which they can draw, in their own daily activity.

Interpersonal Component – Enabling Objectives: Students will -

13. Overcome the perception of a taken-for-grantedness frequently presumed in communication.
14. Apply text data to their own communication events in and outside class.
15. Develop understanding of the importance of listening as a pre-requisite skill and listen actively in class.
16. Analyze their own relationships using reflective analysis of course constructs and models.
17. Examine their own verbal and nonverbal effectiveness – both presented and

perceived.

Core Beliefs:

If a student believes that course content conflicts with h/is/er core belief system, then that student should consider dropping the class before a drop penalty applies. For more, see PPM 6-22 IV.

Course Responsibilities:

E-Mail: As a member of Weber State University's student body, you have an E-mail address account. If you collect E-communication at a different E-dress, it is your responsibility to forward your student/campus account mail to your preferred E-dress. We may have communication through this channel and using your school account is the only way I will contact you. Check it regularly!! I DO NOT USE ELECTRONIC MEDIA TO DISCUSS PARTICIPATION, EXTREME CIRCUMSTANCES OR GRADES!!

Cell Phones, I-Pods or other Electronics: No Cell Phones!!! Do NOT LEAVE THEM ON YOUR DESK. Turn them off and stow them somewhere other than on your person!! If it goes off, or you check it when it vibrates, you must leave the classroom and don't return with a phone. No texting, or earphones during class. If you bring a lap-top for note-taking, good for you. If you use it for other purposes during class, you will be asked to stow it for the remainder of the semester. Remember, it is rude to do less than pay attention to the communication in the classroom. You show disrespect for the people in your group, the people in the class, and the purpose of this educational opportunity. I DO NOT WANT TO SEE/HEAR YOUR ADDICTION!

Academic Expectations:

18. For every one (1) hour you spend in a classroom, it is expected, and courses are designed around, an additional three (3) hours in study, research, writing, analyzing, thinking critically, making connections, and other learning activities. Adjust your schedule accordingly.

    Important: You must plan to complete **all** major assignments (speeches/exams) in order to pass this course. If you do not, you will fail.

19. At the university level, all written work should be free of spelling, grammar, and punctuation errors. They should be neat, well organized, and aesthetically pleasing. If you have concerns and/or numerous errors in your writing, please contact Student Services (SSB, Room 261, next to the testing center) and make use of their free writing consultation services. It is my experience that these errors can be eliminated if you follow good writing strategies and don't try to rush the process. In other words, don't wait until the last minute to do the work.

20. Grades are assessed based on **Quality not Quantity** (do not ask how many pages) according to the following:

C The assignment is delivered on time and meets minimum criteria as identified on the assignment sheet.

B The assignment is delivered on time, and does more than meet the minimum criteria as identified on the assignment sheet – more breadth and depth of understanding.

C These assignments clearly demonstrate critical thinking and extend beyond the minimum criteria to the presentation of creative and thought-provoking ideas that go beyond the usual and mundane – breadth and depth are more than for a B.

D/F When work does not meet minimum criteria, a grade of D (barely passing) or F (failure) will be the result. These outcomes speak to me more about who you are than what you can do.

1. Grade Disputes: Remember the "72-Hour Rule." Wait 72 hours from the time you receive your work back. Think carefully about assignment criteria and how

you completed the assignment. Then prepare a WRITTEN rebuttal – state your claims and support them. Make an appointment so we can discuss your concerns. Your written rebuttal is our agenda.

5. ***There are only two sure ways to fail this course – don't show up and/or don't complete all major course assignments.***

Participation: This is a DOING class, wherein you will continuously be practicing what you learn. In order to meet the course objectives, you ***must*** participate! It is not only imperative you be here for your in-class quizzes & assignments, but that you assist your classmates via feedback as a participative listener.

PARTICIPATE by **asking and responding to questions, positing ideas for discussion, and orally critiquing peer speeches. I may call names randomly from the roster.**

Attendance Policy: Because of the communicative nature of this course, students are required to attend. The guidelines established for this class are: You may have three (3) medically documented (excused) absences. You will not receive participation points for these missed classes but there is no grade-reduction either.

Flagrant Absence Policy: If you miss four (4) you may receive a ½ grade reduction applied at the end of the term. If you miss five (5) you may receive a full grade reduction applied at the end of the term. If you miss six (6) you may automatically fail the course. I endeavor to be in class on time and I expect the same of you. **Continual late entry and early leave-taking will, at my discretion, accumulate into absences.** ***If there is some specific disability that causes you to be late on a regular basis, you must talk with me before the next class.*** NOTE: For an illness to be medically documented, I need a Letter of Doctor's Orders, on their letterhead.

Extreme Circumstances: I'm open to discussing **extreme** circumstances which may arise. These are to be **handled in person.** Notify me immediately. Remember, I can not help you if you do not communicate with me **pro-actively**. : I do not provide make-up exams and we do not have time for make-up speeches – SO PLEASE DO NOT ASK! **If you are not in class at the beginning of the class, on the day you are scheduled to speak, you will forfeit your right to speak. Final grades are available per university policies.**

Class Conduct: In this class you are an **adult** and will be held to the behavioral standards of adults: **respectful**, attentive, considerate, involved, proper use of language, listening for critical thought, and most importantly, accepting responsibility for your academic success – come to class ready to discuss. It is assumed you attend college because you are bright, curious, intrinsically driven to succeed, and prepared to make appropriate choices. High school performance is not necessarily the best indicator for collegiate readiness or academic success. **On speaking/activity days, do NOT enter the room until the activity concludes.**

Emergency Closure: If, for any reason, the University is forced to close for an extended period of time, we will stay in contact, and conduct class as best we can, using a combination of E-mail, Weber On-Line Canvas, and/or Skype. Because of this, you must use the E-mail address assigned by WSU and verify that it works.

Emergency Procedures: In case – we quickly gather our things and walk out as a group. Once outside, I shall take attendance to ensure all are out safely.

Special Needs: If you have special needs, it is important you contact Disability Services in room 181 of the Student Services building. You may call them at (801) 626-6413. Also, speak with me before second class.

Assignments: Assignments will be oral and written. Some work will be accomplished in class and some will be assigned for a future class date. All work is expected to be finished on time. All written work is to be computer generated or typed (use 12 point font and staple pages together in the upper left hand corner) and have a cover sheet – no folders please unless I ask for them! Plan for computer foul-ups and complete your work well in advance. I will NOT accept the "my printer broke" (or similar) excuse -- this speaks to me about your study habits, and nothing more. There is no extra credit and you can not re-do any assignment unless I ask you to do so.

Timeliness: I am happy to take any work early but I reserve the right to not accept late work at all. Minimally, I assess shall penalties for work handed in after the beginning of the class at which they are due. Turning work in late negatively impacts the learning environment in the following ways:

1. It is not fair to those who do their work in a timely fashion.
2. It is not fair to you -- part of the learning process is to be on time – meeting deadlines. This skill transfers to other aspects of your life. Time management is critical in college and beyond.
3. My time is managed with great precision, and I tend to get ruffled when impediments to my schedule arise.

Readings: Certain chapters, or selected pages, of your text will be assigned for particular dates. You are expected to come to class ready to discuss, or work with the information from those readings on the correct dates. Please keep your *Tentative Schedule* handy – any changes which may occur will be gone over in class and you can make the notations on that form. . REMEMBER: you are responsible for the information in the text (whether we have time to discuss it in class or not). All text and supplemental information is fair game for the exams.

Plagiarism & Academic Dishonesty: Plagiarism is to steal the words and/or ideas of another and present them as your own. Plagiarism is not only unethical, it is absolutely unacceptable. Be certain you are familiar with the plagiarism policy set forth in your student handbook. Academic Dishonesty is simply, **cheating in all forms and other unethical conduct** such as lying. If you participate in unethical conduct, and are caught, you will automatically fail this course. You may be expelled! **To participate in this class, you must sign an Honor Code.**

Plagiarism & Academic Dishonesty: Plagiarism is to steal the words and/or ideas of another and present them as your own. Plagiarism is not only unethical, it is absolutely unacceptable. Academic Dishonesty is simply, cheating in all forms and other unethical conduct such as lying. If you participate in unethical conduct, and are caught, you will automatically fail this course. You may be expelled! To participate in this class, you must sign the Honor Code.

Turnitin.Com: If applicable, written outlines/papers must be submitted to Turnitin.com *prior* to the due date. If you fail to perform this task, as a required part of the assignment, an automatic zero is assigned. *TURNITIN.COM MUST BE COMPLETED BEFORE CLASS BEGINS – IF I CANNOT SEE THE RESULTS, YOU WILL NOT HAVE THE OPPORTUNITY TO SPEAK. NO MAKE-UPS for this infraction.* Grade Adjustments for Plagiarism: If you earn 83/100 points on your speech, and you have a 28% plagiarized, according to TII.com, I look at citations. If there are NO ORAL CITES, I will take 28% of 83, which is 23.24 pts. I subtract 23 from 83 and your final score is 60, a D-. If you cite your research, enough to overcome 28%, then no points are deducted and the 83, B/B- is in tact. If cites are weak, only 1 or 2, for instance, then a few points may be deducted but no more than 10. The higher the percentage of plagiarism, the more critical it is to cite your sources orally & in text. This strategy is taught in class.

Dress Code: In-class presentations are "practice" for the real world. In this regard, you should dress professionally. This means ***no blue denim, no T-shirts, no casual sandals, no flip-flops, and no athletic-type shoes.*** At a minimum, come to class dressed in "business casual." For males, this means slacks (dress or docker type – NO leg pockets!!) and a nice, **neatly pressed** shirt with a collar (you don't need a tie or a jacket but they enhance ethos), and shined shoes. For females, this means dresses, skirts and blouses and shined shoes. If you opt for dress slacks, it should be a suit or wear a vest or blazer to finish the professional look. Additionally, don't wear caps while presenting and don't chew gum or candy. **If you don't own an iron, get one!! I am happy to teach you how to use it.**

Rudeness Factor: Unfortunately, an increasing element of rudeness is emergent in classrooms. Habitual late entry is rude and disruptive so if you can't get here on time, enroll in another section! Attempting to wheedle a professor for special treatment is just plain wrong! Asking for special considerations or treatment is tantamount to egocentrism. *It is not fair to the students who do the work, follow the instructions, meet the criteria, and perform well, for me to change criteria or water-down grades for a few.* This penalizes the diligent student and robs them of their honor. If I let you get away with it, it robs me of mine. You will read, write, study, and do so in order to meet assignment criteria. If you do not understand common courtesy, please DROP THIS CLASS or change sections.

Assignments, Evaluation, and Grading:	(See Tentative Schedule for dates)		Tracking
Exams: 4 @ 100 each		400	
Service Learning Project	150		
Interpersonal Exploration or Critique	130		
Signature Assignment		20	
Skills Retention Quiz		20	
Participation (28 @10)		280	
Total Points			1000

(Rev. 8.14)

Course Syllabus

Communication 1020 - Public Speaking Fall 2014, 5:30-8:10 Tue, Elizabeth Hall 307

Carrie McCloud, MPC
Phone: 801-626-6886 Email: carriemccloud@weber.edu
Office Hours: By appointment

The Course Syllabus is broken down into four sections:

Course Description And Objectives
Campus Policies And Services
Class Expectations
Grading

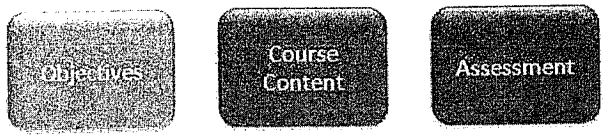
Note of Disclaimer

The instructor reserves the right to adjust, amend, delete or otherwise alter the schedule, expectations, grading, assignments, course content or objectives as needed due to holidays, time constraints, student performances (or lack thereof), weather, whims, wars, or any acts of God as so it seems fit. The instructor will have final say on any and all matters.

In the event of a revision to the syllabus or schedule the instructor will notify you by circulating an update in class and by posting the new syllabus on Canvas.

Course Description and Objectives

Course Description



Public speaking is not a course about speech delivery. This course is grounded in **critical thinking!** Ideas are power. Well-expressed ideas become dynamic through effective **argument**, artistic **persuasion,** and meaningful, animated **language**. The person who can express his/her ideas coherently, cogently, and responsibly possesses a valuable skill. Effective oral communication skills are a necessity in all occupations today, as well as an aid for full participation in social and political processes. The capability to inform/persuade an audience is a learned behavior with potentially compelling effects for a skilled orator. It is designed to develop the student's ability to communicate effectively in public situations to small, large, and mass audiences while addressing topics that are **significant** and **relevant**.

Herbert W. Simons has said, "The need for competence at persuading others should be obvious. Although we may object to the terminology, each of us is a **human engineer**, involved in the tasks of constructing arguments and manufacturing our own images so as to influence others. Like it or not, **we cannot not function as persuaders whether on the job or in our personal lives.** Virtually all occupations require some degree of the persuasive ability, and the so-called people professions -- politics, law, social work, counseling, business management, advertising, sales, public relations, the ministry -- might as well be called **persuasion professions**."

Becoming a well-educated person requires growing, evolving, enriching and refining oneself as a human being and contributing to a better world. Becoming well-educated involves learning to interact with the world around us as well as preparing for a career. Students satisfying the Humanities General Education requirement through COMM 1020 will gain skills, abilities, and/or increase understanding in three areas:

Area #1: Students will address critical thinking, cognitive learning, and problem solving skills (both individually and in groups).

Area #2: Students will improve or develop their knowledge and understanding of the history and key terminology in the Communication discipline.

Area #3: Students will improve their ability to recognize biases and influences that shape thinking.

Course Objectives

A. Develop each student's ability to communicate ideas, feelings, and actions to his/her listeners in a variety of speaking-listening situations.

B. Develop critical thinking skills through analysis of the audience, situation, topic, arguments and evidence, and methods of organization.

C. Develop reasonable and understandable speech content via logos and basic research skills in the construction of speech outlines.

D. Develop student's poise through practice of effective skills of delivery.

E. Develop student's ability to appropriately and effectively use visual aids, computer assisted and/or new media support within speech presentations.

F. Develop a greater reserve in coping with speech anxiety.

G. Help the student to develop a responsible attitude toward public address and communication.

H. Help the student to develop a fuller appreciation of the art of good speech. (Poise, elimination of vocal segregates, animation, emphasis, etc.)

I. Develop student's ability to listen critically and evaluate oral communication (argumentation/refutation and persuasion).

J. Learn and utilize the skill of improvisation within impromptu performances and other speech presentations.

Course Texts and Materials

One book is required reading and is available at the Bookstore:

The Communication Age - Connecting & Engaging
Sage Publications, 2013

Additional readings and materials may be added, and will be posted on Canvas.

Course Content

A. Examinations...200 Pts (20%)

There will be four exams administered via Chi Tester.

B. Speeches...400 Pts (40%)

Speech of Personal Relevance	4-6 min.	100 Pts
Speech to Inform with Visual Support	5-7 min.	100 Pts
Impromptu Performance	3-5 min.	100 Pts
Speech to Persuade	6-8 min.	100 Pts

C. Outlines...300 Pts (30%)

Full-sentence outlines developed to at least the second level of subordination (1, 2, 3) are required. Sub-points must have a direct connection of support and reasoned line of thought to major points, as well as for each level of subordination.

D. Critical Listening Projects...100 Pts (10%)

Two listening projects (critical evaluations) are required. Each is to be a maximum of two (not less than one and three-quarter) typewritten pages.

Campus Policies and Services

Disability Services

Any student requiring accommodations or services due to a disability must contact Services for Students with Disabilities (SSD), room 181, Student Service Center. SSD can also arrange to provide course materials (including this syllabus) in alternative formats if necessary. See the SSD website for more information: (http://www.weber.edu/ssd/)

Counseling and Psychology Services

College is a stressful time in your lives. On top of academic stresses such as exams, papers, presentations, reading, etc. you may also be struggling to balance work and family obligations, and many of you may also be dealing with illnesses of family members. Please know that if you experiencing anxiety, depression, or grief there are University services available to assist you. Many of these services are free of charge to you as they are funded by student fees. The first step is just asking for help. So if you are struggling with depression, anxiety, relationship problems, academic or career uncertainty, identity confusion, loneliness, grief, or other concerns, the WSU Counseling & Psychological Services Center can help. Please call 801-626-6406 to schedule an appointment or visithttp://www.weber.edu/counselingCenter/ for more information.

Harassment

Weber State University is committed to providing an environment free from harassment and other forms of discrimination based upon race, color, ethnic background, national origin, religion, creed, age, lack of American citizenship, disability, status of Veteran of the Vietnam era, sexual orientation or preference or gender, including sexual/gender harassment. Specifically the University policy on sexual harassment prohibits both unwelcome sexual contact and unwanted sexual comments/language and includes an anti-retaliation policy to protect complainants. If you have questions regarding the University's policy against discrimination and harassment you may contact the university's Affirmative Action/Equal Opportunity

office (i.e. the AA/EO office) at 801-626-6239 if you face discrimination by faculty, staff or other students, or visit http://weber.edu/aaeo for more information.

Tutoring/Writing Center

It is expected that all written work will be neatly presented after being proofread. Spelling, grammar, and punctuation will be considered in your written work. Please take advantage of the university's Writing Center.

The Writing Center's mission is to promote students' academic success and life skills development by providing free drop-in and appointment tutoring during day, evening, and weekend hours, for students writing in courses across the curriculum.

The Writing Center in Elizabeth Hall, room 210. Phone: 801-626-6463

Drop-in Hours:

M-Th: 9:00 am - 7:00 pm

Fri.: 9:00 am - 3:00 pm

Sat.: 11:00 am - 2:00 pm

For tutoring schedule and other information visist: http://weber.edu/WritingCenter

Core Beliefs

Weber State University recognizes that there are times when course content may differ from a student's core beliefs. Faculty, however, have a responsibility to teach content that is related to the discipline and that has a reasonable relationship to a pedagogical goals. If you, as a student, believe that the content of the course conflicts with your ability to pursue the topic, you may request a resolution from the instructor. (Weber State University Policy and Procedures Manual 6-22, Part IV.D.9 http://www.weber.edu/ppm/Policies/6-22_StudentCode.html

Academic Dishonesty

All students are responsible for knowing and adhering to the Weber State University Student Code. Visit http://www.weber.edu/ppm/Policies/6-22_StudentCode.html

Evidence of academic dishonesty will be dealt with in accordance to Weber State University policies. Students are encouraged to become aware of all the subtleties of plagiarism. The following plagiarism web sites provide information to help you:

http://wsuonline.weber.edu/plagiarism/student_resources.asp

http://www.plagiarism.org/

Campus Closures

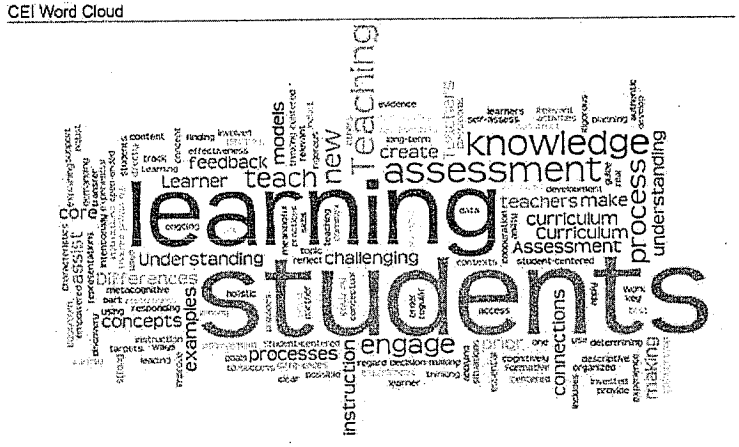
If, for any reason, Weber State University must close the campus for an extended period of time, this course will continue online through Canvas.

Code Purple is an emergency notification system that gives Weber State University the ability to communicate health and safety emergency information quickly--by text, voice, and e-mail message. By enrolling in Code Purple, you may receive safety-related information, regardless of your location. Please visit http://weber.edu/codepurple/ for more information.

Class Expectations

Teaching Philosophy

CEI Word Cloud



A student-centered-instruction (SCI) style of teaching will be utilized in this course. It is based on cooperative learning. SCI is a broad approach wherein students take responsibility for their own learning through reading, writing, and small group interactions in class. In addition to traditional lectures, active in-class learning experiences will enhance the educational process. Students are accountable for materials, whether discussed while in class, or not. Seek the wisdom, advice, and knowledge of group members through the skill of asking appropriate questions. However, if after seeking assistance from group members, a fuller understanding of issues from text readings, activities, or discussions are required, the instructor is available to during posted office hours (or by personal appointment) and within class.

Alternative names

If you prefer an alternate name or gender pronoun please advise me of your preference (e.g. first day note cards or email) and I will happily honor your request.

Class Decorum

We will be discussing potentially controversial subjects and you may vehemently disagree with something that is said by another student or perhaps even myself. However, part of respecting your colleagues is to honor differences in people, ideas, and opinions. Therefore, questions and comments by others should

be treated with civility at all times. Your own opinions and arguments become stronger by considering alternative arguments seriously—consequently it is inappropriate to interrupt each other. Furthermore, it is only appropriate to address the substance of another person's argument, not the character of the person with which you disagree. Also, it is inappropriate to expect a student to explain or defend the views or positions of a racial, ethnic, religious, or political group with which they may be associated.

Active Participation

Active Participation is essential for success in this course. Active participation includes:

Attendance – both at classes and group meetings. Please make every effort to come to class on time, and stay the duration of the class. If you miss class please obtain the notes from someone in class, review them and the readings for that day, and then see me during office hours if you have any questions.

Preparation – students are expected to have completed the assigned readings before each class and complete all assignments by each due date Groups and individuals will be assigned to provide theories, data, and information from text reading during weekly class discussions.

Discussion – each student is expected to demonstrate a knowledge of the readings through the quality and depth of insight (not necessarily quantity) while engaged in dyadic, small group, and total class discussion.

Class Activities – each student is expected to actively participate in class exercises, role plays, group encounters, etc.

Group Work – each student is expected to fully participate in all activities, assignments, and projects within assigned groups. Anonymous feedback regarding participation within groups will be solicited at semester's end.

Ask Questions - questions about the readings should be raise during class discussion. If your question is not answered, please see me during office hours or email me.

Grading

1000 possible points - Letter grades based on percentage as follows:

100-94 = A 93 - 90 = A- 89 - 87 = B+ 86-83 = B 82 - 80 = B- 79 - 77 = C+ 76 - 73 = C 72 - 70 = C-
69 - 67 = D+ 66 - 63 = D 62 - 60 = D- 59 - 0 = E

Examinations...200 points (20%)

There will be four exams requiring application of the communication theory and principles covered. Exams will be administered via Chi Tester and must be completed during the week prior to the listed due date in the syllabus.

Speeches...400 Points (40%)

Speech of Personal Relevance	4-6 min.	100 Pts
Speech to Inform with Visual Support	5-7 min.	100 Pts
Impromptu Performance	3-5 min.	100 Pts
Speech to Persuade	6-8 min.	100 Pts

Outlines...300 Points (30%)

Full-sentence outlines developed to at least the second level of subordination (1, 2, 3) are required. Sub-points must have a direct connection of support and reasoned line of thought to major points, as well as for each level of subordination. The purpose statement must be presented at the beginning of the outline. Introductions and conclusions are to be completely written just as the speaker will present them. A substantial bibliography (minimum of three sources), reflecting the preparation for the speech, must be included. **Minimally, one-third of all references must be publications (Publications may be part of a website).** Outlines are due the day the speech is presented and given to the instructor before the speaker approaches the podium, however drafts may be submitted earlier for review and assistance. **Outlines cannot be submitted for credit without a speech.**

At the conclusion of each speech, students will give the instructor all papers taken to the podium. This would include key-word outlines, note cards, etc. The only appropriate item a speaker should take to the podium is a keyword outline. (See chapter six of the text.)

Critical Listening Projects...100 Points (10%)

Two listening projects (critical evaluations) are required. Each is to be a maximum of two (not less than one and three-quarter) typewritten pages. The written projects shall be double spaced, and on one side only of 8.5x11 inch white paper. Maintain one-inch margins left, right, top, and bottom. A title page is unnecessary. Do not use large print (nothing larger than the print size used for this syllabus). Do not place written work in a folder or binder. Label all papers by single spacing on four lines in the upper left hand corner of the first page the following information: Student's name, instructor's name, class and section number, and assignment number. Place one staple only in the upper left hand corner.

Critical Listening Project #1 - Live Presentation

Each student will listen to a live speech presentation outside class (lecture, after-dinner speech, sermon, etc.) and as an audience member submit a **two page printed critique** of the speech to include the following information

1. Purpose of the speech (one paragraph - three sentences, maximum, to include - who was the speaker, when, where, why, etc.)

2. Brief (informal) sketch of the speech (one paragraph - three sentences, maximum, topic/subject matter, intent, persuasive or informative, etc.)

3. Analysis of the strengths and weaknesses of the speech in terms of (at least) the following criteria (remainder of the written project).

...Appropriateness to audience and situation

...Clarity of information or effectiveness of argument

...Effectiveness of organization and content (strategy, word/phrase selection, themes, sequence, coordination-structure, etc.)

...Effectiveness of delivery (animation, voice, poise, movement, vocal

characteristics, segregates, etc.)

Critical Listening Project #2 - Video Archive

Each student shall select a speech from history (Martin Luther King, Winston Churchill, John F. Kennedy, Franklin Roosevelt, Adolph Hitler, et al) and prepare a written analysis of the speech utilizing the same guidelines as those listed above. In addition, the student shall seek a more academic, deeper analysis to probe the symbols/themes used, the persuasive skills/techniques exploited, rhetoric, and relevance this speech (its internal strategy and delivery) had on the course of history. Enter www.americanrhetoric.com to access the all-time top 100 American Speeches.

Weber State University

Design Engineering Technology 2650
Product Design and Development

Course Outline

Catalog Course Description:
Uses CAD to lay out advanced production drawings and designs. Uses the Machinery's Handbook, ANSI standards, geometric dimensioning and tolerancing, and manufacturer's reference materials. Supports the design and drafting required for senior projects.

Objectives:
To successfully create 3D CAD models and detail drawings for multiple, open-ended design projects; master the processes associated with reverse engineering functions as related to the design of mechanical components; obtain a fundamental knowledge of the application of design improvements to existing features; gain an understanding of the characteristics intrinsic to the design of components fabricated from traditional engineering materials, and become familiar with a variety of material selection processes and manufacturing methods.

Obtain detailed information regarding product design and development in terms of development processes, product planning, identification of customer needs, product specifications, concept generation, concept selection, concept testing, product architecture, industrial design, design for manufacturing, prototyping, robust design, patents and intellectual property, and managing projects.

Instructor:
Glen West - Engineering Technology 214B - Phone (801) 626-6301 – E-mail: glenwest@weber.edu
ET Department Secretary – Pat DeJong - Phone (801) 626-6305

Office Hours:
Refer to Schedule

Prerequisites:
DET 2460

Time, Days, and Location:
Lecture - 10:30-11:20 A.M. – M, W, F – Engineering Technology 247

Text:
DET 2650 Product Design and Development Course Materials - Spring 2013 - WSU Printing
(Required)

Product Design and Development, 4th Edition
Karl T. Ulrich and Steven D. Eppinger
ISBN-13:9780073101422
(Optional)

Required Materials:
Engineers Scale

Homework:
Homework assignments are due, in class, on the due dates indicated in the lecture schedule. **Late homework will not be accepted.** Homework assignments are to be completed using some form of CAD software and are to be submitted, in person **(no e-mailed files)** on standard 11 x 17 drawing paper with a formatted border and title block. **Some method for backing up your work is highly recommended.**

Exams:
All exams will be open book and open notes. There will be two exams given during class time, Exam 1 and Exam 2.

Homework and Exam Values:

Homework Assignments	70%
Exam 1	15%
Exam 2	15%
	100%

Grading Policy: Grades will be based on the following schedule as a result of points earned on homework assignments and exams.

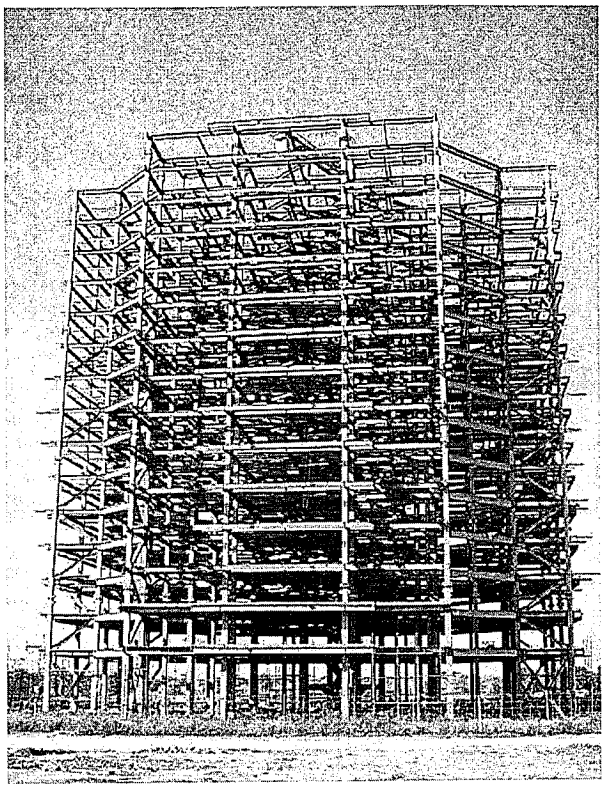
94-100% =	A	74-76% =	C
90-93% =	A-	70-73% =	C-
87-89% =	B+	67-69% =	D+
84-86% =	B	64-66% =	D
80-83% =	B-	60-63% =	D-
77-79% =	C+	59-0% =	E

Rights/Responsibilities: This course outline is the governing document for this course. Your decision to take this course indicates your agreement to the conditions of this course outline. Please review the WSU Policies and Procedures Manual student code regarding ethics found at http://documents.weber.edu/ppm/6-22.htm , specifically section IV. Academic dishonesty, as described in the WSU Policies and Procedures Manual, will not be tolerated. Consequences may vary from grade adjustment to expulsion from the university.

Weekly Schedule - DET 2650 - Spring Semester 2013

Date	Lecture and Design Task	Homework Assignment
Week 1 Jan 7-11	Loading Bucket Mechanism–Main Arm Details Gear Case Halve 1 and 2 Product Design and Development-Chapter 16	Assignment 1 - **Due Jan 16**
Week 2 Jan 14-18	Loading Bucket Mechanism–Main Arm Weldment Gear Case Divider and Pawl Product Design and Development-Chapter 1	Assignment 2 - **Due Jan 23**
Week 3 Jan 21-25		
Jan 21	**Martin Luther King Holiday**	
	Loading Bucket Mechanism–Center Arm and Link Details Spring Tensioner and Gear 2 Product Design and Development-Chapter 2	Assignment 3 - **Due Jan 30**
Week 4 Jan 28-Feb 1	Loading Bucket Mechanism–Center Arm Weldment Gear 3 and Gear 4 Product Design and Development-Chapter 3	Assignment 4 - **Due Feb 6**
Week 5 Feb 4-8	Loading Bucket Mechanism–Bucket Link and Ladder Details Gear 1 and Rockers Product Design and Development-Chapter 4	Assignment 5 - **Due Feb 13**
Week 6 Feb 11-15	Loading Bucket Mechanism–Bucket Link and Ladder Weldments Eccentric and Wind Up Key Product Design and Development-Chapter 5	Assignment 6 - **Due Feb 20**
Week 7 Feb 18-22		
Feb 18	**President's Day Holiday**	
	Gear Case Assembly Loading Bucket Details Front Disk and Back Plate Product Design and Development-Chapter 6	Assignment 7 - **Due Feb 27**
Week 8 Feb 25-Mar 1	Loading Bucket Weldment Arm Link 3 and Headless Pin Product Design and Development-Chapter 7 **Exam 1 – February 27 - Chapters 16, 1, 2, 3, 4, 5, and 6**	Assignment 8 - **Due Mar 13**
Week 9 **Mar 4-8**	**Spring Break**	
Week 10 Mar 11-15	Loading Bucket Mechanism – Pin Details and Weldments Arm Link 1 and Arm Link 2 Product Design and Development-Chapter 8	Assignment 9 - **Due Mar 20**

Week 11 Mar 18-22	Loading Bucket Mechanism and Loading Bucket Assembly Headed Pin and Case Front Product Design and Development-Chapter 9	Assignment 10 - **Due Mar 27**
Week 12 Mar 25-29	Articulation Pin Details Case Back and Leg Product Design and Development-Chapter 10	Assignment 11 - **Due Apr 3**
Week 13 Apr 1-5	Articulation Pin Assembly Head Front and Head Rear Product Design and Development-Chapter 11	Assignment 12 - **Due Apr 10**
Week 14 Apr 8-12	Air Conditioning Plenum Details Follower and Torsion Springs Product Design and Development-Chapter 12	Assignment 13 - **Due Apr 17**
Week 15 Apr 15-19	Mechanical Assembly Air Conditioning Plenum Weldment Product Design and Development-Chapter 14 **Exam 2 - April 17 - Chapters 7, 8, 9, 10, 11, 12, and 14**	Assignment 14 - **Due Apr 24**



Architectural Structural Design & Detailing (BIM II) Course Syllabus Spring 2013

Instructor:
Jeremy Farner, ET 214-G
Phone 626-6962
Preferred contact method: jfarner@weber.edu
Office Hours: Posted outside office

Course Number:
DET 2660
Tuesday & Thursday
9:00-10:15 A.M.
Room ET 238 & Lab 126
(Required course for DET & BIS in BIM majors)

Tuesday (ET 238)	Thursday (ET 126)
Lecture & Demo	Lab
Required Attendance	Required Attendance

Course Description:

An analysis of the structural behavior of architecturally engineered buildings and structures. A study of the properties of materials and their connections used in the construction of the built environment including: wood, steel, concrete, masonry and various other commonly used construction materials. Students will learn how loads are applied to simulate the stresses placed on structural components to determine what solution meets the design criterion established by code and design professionals in residential and commercial applications. 2D and 3D CAD are used to create residential and commercial construction documents including structural details, wall, floor and roof framing plans. Prerequisite: MATH 1080 (or MATH 1040 and MATH 1050) and DET 2000 .

Students will demonstrate Abet Program Outcomes in the following categories;

a. An appropriate mastery of the knowledge, techniques, skills and modern tools of their discipline by learning and using CAD to document structural members and connections of residential and commercial construction.

e. An ability to function effectively on teams by building a scaled model of a home to represent the structural skeleton of the building from foundation to roof.

f. An ability to identify, analyze and solve technical problems by sizing structural members of both residential and commercial to satisfy load requirements of their respective functions such as for roofs, floors, decks etc.

Course Objectives:

1. Identify structural components of wood, unit masonry, concrete, steel construction and the strength of that material.
2. Show how foundations interact with structural members to bear the loads on them.
3. Demonstrate proficiency in sizing and specifying wood, timber & engineered lumber framing members.
4. Identify design criteria for structural loading & the forces that create them.
5. Identify and trace structural loads from the roof to the foundation.
6. Demonstrate proficiency in sizing joists, rafters, trusses using tables and software to create floor, roof and wall framing plans.
7. Demonstrate proficiency in basic structural steel design calculations.
8. Apply knowledge to select structural steel member and detail their connections.
9. Identify the usage of trusses, beams, columns, frames, cables, arches, surface and how they form the backbone of structure and form.

Course Textbooks:

Architectural Drafting & Design, 6th Edition, Alan Jefferis (978-1-4354-8162-6)
Commercial Drafting and Detailing, Alan Jefferis 3rd Edition (978-1435425972)
Structural Steel Drafting and Design, David MacLaughlin, 2nd Edition (978-1-4018-9032-2)
Or
Architectural Structural Design & Detailing (BIM II) (978-1-133-88674-7)
&
Autodesk Revit Structure 2013 Fundamentals, (978-1-58503-741-4)

Course Equipment:

Multiple Storage Devices (USB) to Back Up files regularly

Course Administration:

Lectures will concern the body of knowledge surrounding residential & commercial structural design and drafting. Demonstrations will cover specific operations and techniques. Students are expected to be at all class sessions (see Excused Absences policy below). If a student has to miss a lecture or a demonstration, permission for an excused absence must be granted by the professor before class. It is the responsibility of the students to secure all materials and information presented in class, even with an excused absence. Lectures will not be repeated. Lectures may be taped recorded with the professor's permission.

Excused Absences:

Students must clear any absence beforehand with the instructor, who will require documentation before the absence is excused. Absences due to illness or other circumstances beyond a student's control will be handled on a case-by-case basis and will also require documentation.

Attendance Policy:

- DET students are considered Design Engineering Technology professionals and are responsible for directing their own education. As such, the decision to attend class is at each student's personal discretion.

- Absences CAN effect student grades if they do not understand the material or are not aware of changes to the class that can include (but are not limited to) the scheduling of quizzes, exams, assignments, projects, and extra credit. The instructor has the right to alter the course at his own discretion, so students missing class may not be aware of important information.

- Students are responsible for the body of information in the lectures, labs, and assigned reading materials. Students who do not attend class will not be given makeup lecture sessions or notes by the instructor. Similarly, makeup tests and quizzes will also not be given. If a student misses a class, it is up to them to make sure they acquire the relevant material from another source. Do NOT send the instructor an e-mail asking to explain the contents of a missed lecture or lab.

- Students are expected to attend class for mandatory events such as tests and quizzes, and it is up to the individual student to know when those events are. Ignorance of these events is not an excuse, and any student who wants current information is expected to attend class.

Campus Emergency:

In the event of a major campus emergency; course requirements and deadlines are subject to change that may be necessitated by a revised semester calendar or other circumstances. Here are ways to get information about changes in the course in order; Canvas, my email address: jfarner@weber.edu , or my office phone 801-626-6962

Course Schedule:

Aside from the syllabus, the information contained on Canvas IS subject to change and is NOT the most current source of information. As in the AEC industry, the instructor has the right to make changes to many portions of the curriculum due to the ever-changing nature of technology; certain information on Canvas may be obsolete or out-of-date. As such, it is up to the student to confirm this information by either attending class or obtaining the information from another source.

Outside Work:

Outside work will be absolutely necessary. Students will NOT be able to do well in this course if they work only in regularly scheduled class sessions.

Student Conduct and Polices:

- No swearing, or derogatory comments about, or towards, any member of the class will be tolerated in any class period.
- No food or drinks of any kind will be allowed in any lab sessions.
- Students are expected to arrive on time for all class and lab sessions.
- Late assignments will not be accepted unless prior arrangements have been made with the Instructor and because of extreme circumstances. (Not coming to lab, or forgetting, doesn't rate as an extreme circumstance.)
- No student will be allowed to make up any written exam, lab practical, exam, or quiz unless they have an official or medical excuse.
- Any student found participating in cheating, plagiarism, copying material from another person's disk, using illegal cribs or other materials during a written examination, lying to course instructors and lab assistants about his or her own work, stealing tests, quizzes, or answer keys, and any such activities will be considered in conflict with the printed academic honesty guidelines as set out by Weber State University. In such cases the matter will be reported to

the Office of the Dean and the appropriate Weber State University administration officers for consideration and possible disciplinary action.

- Any student requiring accommodations or services due to a disability must contact Services for Students with Disabilities (SSD) in room 181 of the Student Service Center. SSD can also arrange to provide course materials (including this syllabus) in alternative formats if necessary.

File Security and Disks:

Students are responsible for the security of their files! They should have multiple copies on multiple sources (laptop, home computer, flash drives) at all times. Given a faulty flash drive or other media, the instructor will assist students in attempting to recover lost files. However, ultimately each individual is responsible for maintaining their digital data. Loss of data, files, or other associated items needed for a project will require that a student recreate their work, with no exceptions.

Although a rare occurrence, Flash Drives have been known to become corrupted, resulting in the permanent loss of the data. As such, it is highly recommended that students use Flash Drives for storage only, and that they not work directly from them. Instead, they should work from a copy on your local hard drive or on the D: drive on the school computers, and then save to the flash drive once they are finished working with the file(s).

Computer Lab Policy:

1. The computer labs are restricted to ONLY those students registered in the current semester for a class in the Engineering Technology or Construction Management Technology departments within the College of Applied Science and Technology.
2. NO food or drinks are allowed in the computer labs.
3. DO NOT INSTALL ANY PROGRAMS ON THE MACHINES IN ANY OF THE LABS.
4. Viewing or use of ANY PORNOGRAPHIC MATERIAL IS STRICTLY PROHIBITED! Anyone caught viewing pornographic material will not only be asked to leave, but will have their lab privileges REVOKED.
5. No one should ever abuse the equipment in any way.
6. No one should use any command or function to copy or backup licensed software from any WSU computer. It is a violation of Federal Copy Right Laws to possess pirated software. Anyone who is found guilty of such violations will be expelled from the College of Applied Science and Technology and Weber State University.
7. Do not disconnect or connect any devices in the lab. If you are having problems with any device please immediately notify the lab aide on duty.
8. When in the labs please keep your level of noise down. Other students may be working and may not appreciate your conversation from across the room. Please take social conversations outside the labs.
9. No speakers are provided, if you need to listen to music or videos please use your personal headphones.
10. The computers shut down after 30 minutes of "inactivity". (No mouse movement or key strokes) All program changes, internet browsing, temporary files, and your saved files on the C: drive, including viruses is removed when the computer is shut down. Always shut down the computer you used before you leave.
11. The D: drive is not protected nor does it get erased on these computers after shut down or restart. It is a local drive only seen on the computer you are working on. Use

it while you are working or have forgotten your flash drive. This drive gets whipped every semester so don't forget to get the information you have saved to the D: drive.

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Course Assignments - Projects:

Students will be expected to successfully complete multiple projects throughout the course of the semester. Projects will be graded on professionalism, execution, creativity, technical merit, and communicative value.

Exams:

Exams will cover material from the lecture, demonstrations, and laboratory portions of the course and be administered during the regularly scheduled lecture period. The final exam will be a comprehensive exam and given at the appropriately scheduled time.

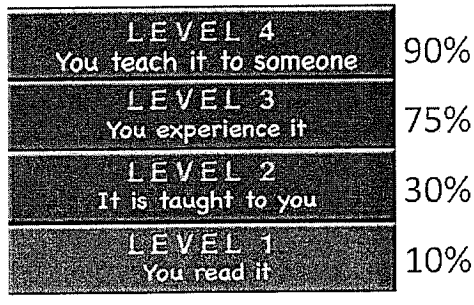
Grading Criteria:

The final grade will be a summation of all homework, quizzes and exams. (ie. 900 earner points/ 1000 possible points = 90% or A-) The exams will be a comprehensive assessment of both theoretical (book) and application (AutoCAD) at the end of the semester.

Grading Policy:

Grades will be given using the following total earned scores.

94-100%	A	74-76%	C
90-93%	A-	70-73%	C-
87-89%	B+	67-69%	D
84-86%	B	64-66%	D
80-83%	B-	60-63%	D-
77-79%	C+	59-0%	



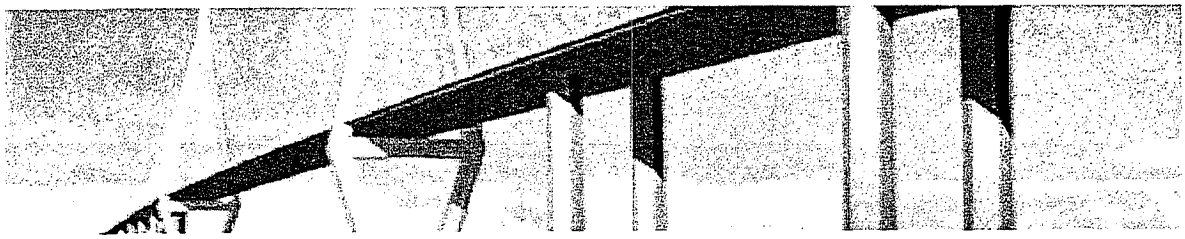
Lecture only 5%

Tips for studying:

No learning takes place until a question is posed or a personal need is discovered!

If you do not have the textbook, you are planning on not passing the class unless you are lucky! All information cannot possibly covered in class and therefore you must come to class prepared and ready to ask questions about what will be covered. (This means that you should have read the chapter prior to class so questions can be dealt with during the lecture.) You are responsible for all information in the chapter not just what is lectured on! (Test questions will come from lecture & from text)

Fall 2014 College Physics I



Instructor: Prof. Tabetha Hole
Office: SL 204
Email: tabethahole@weber.edu
Office Hours: I'm happy to schedule additional appointments. My weekly hours are
M, W, F: 10:45-noon in SL 204 (my office)
Th: 4-5:30 PM in SL 220 (the Physics computer lab)

Welcome!

Welcome to the first semester of College Physics. As a physicist, I am excited to share my field with you, along with the profound change in how you see the world that can come with this course. Physics is the study of how the material universe behaves: the way an apple falls off a tree; how electrons orbit an atomic nucleus; what water does to light to make a rainbow; and even the nature (and relativity) of time. It requires looking at familiar things in new ways, but the tools it gives us allow us to do extraordinary things, from building structures atom by atom, to launching satellites into space, which tell us exactly where we are on the surface of the Earth.

In this course, we begin building the foundation that all physics is based on. It will challenge your intuition and your understanding, but by the end you will have a new and deeper awareness of the world around you.

Course Objectives:

Students who successfully complete this course should be able to:

- Demonstrate and apply conceptual understandings of physics in the areas of *mechanics*, *waves*, *fluids*, and *thermodynamics*.
- Think critically about and solve problems regarding the above concepts.
- Use laboratory measurements and analysis to study the above concepts.

This course is designated PS, and therefore conforms to the general education learning outcomes as described here: http://www.weber.edu/AcademicAffairs/natural_sciences.html

The Text

The main course textbook is College Physics, A Strategic Approach 3rd Edition by Knight, Jones and Field, available at the bookstore. I have requested that the bookstore carry the unbound version, because that is the least expensive. You can also buy it elsewhere, and in whatever format you want as long as it is the right edition. (2nd Edition, Tech Update is also an option, though some problems and numbers will be different.) A *Mastering Physics Student Access Kit* is included with the text at the bookstore. If you buy a textbook elsewhere make sure it has Mastering Physics, otherwise you will need to purchase access separately -- note that it is approximately $66 when purchased from the Mastering Physics website. Note that the absolute cheapest version is to buy the electronic version of the book and MP access for about $110 from their website.

Finally, you will need the *laboratory manual*, also available at the University bookstore.

Grades

I'm sure most of you don't really care about grades, because you are motivated purely by the desire for knowledge. But just for the record, here is how the grades will be determined in this class. Your grades will be entered into the Canvas course gradebook throughout the semester, so you can always check how you are doing.

Fall 2014 College Physics I

Final Exam:	= 10%
Midterm Exams: (4 @ 10% each)	= 40%
Quizzes: (top 8 scores)	= 16%
Homework:	= 14%
In-Class Activities:	= 3%
Lab reports:	= 14%
Lab exam:	= 3%
Total:	= 100%

1. There will be four midterm exams, one about every 3-4 weeks. They will be worth 10% each, for 40% of your final grade.
2. You will have a final exam at 8:30am on Dec 10. It will be comprehensive, covering material from the whole course.
3. There will be a quiz every week on Friday when there is not an exam. Your top 8 quiz scores will be worth 16% of your grade.
4. You will have homework due each week on Thursday night at 11:59 PM, which will be worth 14% of your total grade. These homework assignments will be done through the Mastering Physics website.

   a) Register with masteringphysics.com using the access code that came with your text, or by purchasing one from the website directly. The course ID is THOLE2014B.

   b) You will have a 'practice' assignment the first week that will help you learn the system. This assignment is extra credit, to get everyone started off well in the course.

   c) We will average about 15 questions per week, and one extra-hard, extra-credit question to make up for those bad days that happen to everyone once in a while.

   d) The majority are ordinary, odd-numbered end of chapter problems, but with different numbers than in the text. You can work the problem with the book numbers first, check your answer with the back of the book, and then work them again with the numbers in your homework. The other questions are "tutorials" (which are not in the book) and occasionally even numbered problems. These are good practice for a crucial exam skill: checking your own answers.

   e) For short answer questions, each time you answer incorrectly, you will lose 5%, up to six chances per question. For T/F or multiple choice questions, you lose a fraction of points based on the number of choices available.

   f) Note that I will hold an office hour in the Physics computer lab (SL 220, *not* the testing center) on Thursday afternoon. This is a good time to come and work on your homework with a professor on call to answer questions.

   You should also explore the Mastering Physics website, which also provides other study and visualization tools to help your understanding.
5. In-class activities: These are designed to make sure you are reading the text before class, and to increase your understanding of the material.

   a) Some of these will be graded for correctness, or for participation. Others will be ungraded.

   b) Activities graded for correctness will be graded out of 1.5 pts. You will receive 2 pts for a correct answer, 1 pt for handing any answer in, and 0 pts if nothing is handed in in class. Note that this system allows you to make up for days when you are not there, or don't get the questions correct.

   c) The graded activities will worth 3% of the course final grade.
6. **Lab (14% lab reports, 3% lab final):** Lab is mandatory and you should be signed up for one already. Please note that making up a lab is awkward and difficult at best, and impossible in some instances. If you know ahead of time that you will miss a lab, contact your lab instructor beforehand.

In Summary

I'm excited to have you in this class. I respect your time and appreciate your attention. I expect that you will respect me and the rest of the class by doing your own work, and by silencing your cell phones and minimizing disruptions during lecture. In return, I hope to share with you the understanding of the beautiful and subtle ways of the physical universe.

Note: Any student requiring accommodations or services due to a disability must contact Services for Students with Disabilities (SSD) in room 181 of the Student Service Center. SSD can also arrange to provide course materials (including this syllabus) in alternative formats if necessary. The SSD office may be reached by phone at (801) 626-6413 or e-mail at ssd@weber.edu.

Physics 2010 Schedule – Fall 2014 – 8:30am M-F

	Monday	Tuesday	Wednesday	Thursday	Friday	Lab Topic
Aug. 25-29 *Week 1*	Welcome & Intro to the Course	Chapter 1: Representing Motion 1.1-1.3	Ch. 1.4	Ch. 1.5	Questions & Quiz	*Introduction (222)*
Sept. 1-5 *Week 2*	No Class	Chapter 2: Motion in 1D 2.1-2.3	Ch. 2.4-2.5	Ch. 2.6-2.7	Questions & Quiz	*Making Measurements and Analyzing Data (221)*
Sept. 8-12 *Week 3*	Ch. 3: Vectors & Motion 2D 3.1-3.3	Ch. 3.4-3.6	Ch. 3.7-3.8	Ch 4: Forces & Newton's Laws 4.1-4.2	Questions & Quiz	*Linear Motion with Constant Acceleration (222)*
Sept. 15-19 *Week 4*	Ch. 4.3-4.4	Ch. 4.5-4.6	Ch. 4.7-4.8	Ch 5: Applying Newton's Laws 5.1-5.2	**Exam 1: Ch. 1-4**	*Falling Objects (221)*
Sept. 22-26 *Week 5*	Ch. 5.3-5.4	Ch. 5.5-5.6	Ch. 5.7-5.8	Ch 6: Circular Motion 6.1-6.2	Questions & Quiz	*Force Vectors and Static Equilibrium (222)*
Sept. 29-Oct. 3 *Week 6*	Ch. 6.3-6.4	Ch. 6.5-6.6	Ch. 6.7	Ch 7: Rotational Motion 7.1-7.2	Questions & Quiz	**NO LABS**
Oct. 6-10 *Week 7*	Ch. 7.3-7.4	Ch. 7.5-7.6	Chapter 8: Equilib&Elast. Ch. 8.2	Ch. 8.3-8.4	Questions & Quiz	*The Simple Pendulum (221)*
Oct. 13-17 *Week 8*	Chapter 9: Momentum 9.1-9.3	Ch. 9.4-9.5	Ch. 9.6-9.7	**Exam 2: Ch. 5-8**	No Class	*Collisions and Conservation (222)*
Oct. 20-24 *Week 9*	Chapter 10: Energy 10.-10.2	Ch. 10.3-10.4	Ch. 10.5-10.6	Ch. 10.7-10.8	Questions & Quiz	*Simple Harmonic Motion (221)*
Oct. 27-31 *Week 10*	Chapter 11: Using Energy 11.1-11.2	Ch. 11.3-11.4	Ch. 11.5-11.6	Ch. 11.7-11.9	Questions & Quiz	*Fluids (222)*
Nov. 3-7 *Week 11*	Chapter 12: Thermal 12.1-12.3	Ch. 12.4-12.6	Ch. 12.7-12.8	Chapter 13: Fluids 13.1-13.2	**Exam 3: Ch. 9-11**	*The Ideal Gas Law (221)*
Nov. 10-14 *Week 12*	Ch. 13.3-13.4	Ch. 13.5-13.6	Ch. 13.7	Chapter 14: Oscillations 14.1-14.2	Questions & Quiz	*Heat and Calorimetry (222)*
Nov. 17-21 *Week 13*	Ch. 14.3-14.4	Ch. 14.5-14.6	Ch. 14.7	Ch 15: Traveling Waves 15.1-3	Questions & Quiz	*Standing Waves on a String (221)*
Nov. 24-28 *Week 14*	Ch. 15.4-15.5	Ch. 15.6-15.7	Ch 16: Super. & Standing Waves 16.1-2	No Class	No Class	**NO LABS**
Dec. 1-5 *Week 15*	Ch. 16.3-4	Ch. 16.5-7	**Exam 4: Ch. 12-15**	Make-up	Review	*Sound Waves (222)*
Dec. 8-12 *Finals*			**Final Exam** **Comprehensive** *8:30-10:20*			*Lab Final (221)*

*In weeks with an exam, the homework deadline will be extended to Sunday evening.

BIM & The Green Built Environment (BIM III)
Course Syllabus
Fall 2013

Instructor:
Jeremy Farner, ET 214-G
Phone 626-6962
Preferred contact method: jfarner@weber.edu
Office Hours: Posted outside office

Course Number:
DET 3000, T, TH 1:30-2:50
Room ET 120 & Lab 126
(Required course for DGET majors)

Lecture	Class	Demo/ LAB
Monday	Discussion	Friday
Required	Wednesday	Required
Attendance	Required	Attendance
	Attendance	

Course Description:
An analysis of sustainability in the green built environment. Course discussions will include how green building can be integrated into new and existing construction, the comparison of conventional and green construction practices, short and long term costs and benefits of green building as well as the history, current technologies, and emerging trends of green building. Software will be used to run analysis of power use and generation as well as other design decisions found within sustainability in the built environment. Prerequisite: DET 2000 .

Students will demonstrate Abet Criterion 3 Program Outcomes in the following categories;

b. An ability to apply current knowledge and adapt to emerging applications of mathematics, science, engineering and technology by calculating their own ecological, carbon and water footprint and doing a lifecycle costs and benefits analysis.

c. An ability to conduct, analyze and interpret experiments and apply experimental results to improve processes by conducting a solar site selection exercise using a solar pathfinder and using an energy use mechanism to determine where energy is being used in a home.

f. An ability to identify, analyze and solve technical problems by developing a plan to green up an existing home using data collected doing energy audits on the home.

Course Objectives:

1. Identify the need for Green building and Sustainability
2. Formulate design solutions for a more efficient building envelope
3. Discover how BIM is being used as a tool in Green Building and Sustainability
4. Identify passive solar design techniques using solar energy and shading to maximize efficiency

5. Identify material properties and energy impacts
6. Demonstrate energy efficient principles of Human Comfort
7. Implement strategies to reduce water use & maximize collection procedures
8. Identify benefits and cons of solar, hot water, wind and hydro renewable energy
9. Formulate the economics of renewable energy
10. Relate energy usage and habits to cost and design strategies
11. Demonstrate energy conservation and efficiency strategies
12. Demonstrate energy modeling techniques used to evaluate orientation, options and function
13. Identify 3 motivational factors to go Green (Social, Environmental, Economic)

Course Textbooks:

http://www.cengagebrain.com/micro/AGG2013123-164658-166

Course Equipment:

Multiple Storage Devices (USB) Back Up files regularly

Course Administration: Lectures

Lectures will concern the body of knowledge surrounding sustainability and Green Building. Demonstrations will cover specific operations and techniques. Students are expected to be at all class sessions (see Excused Absences policy below). If a student has to miss a lecture or a demonstration, permission for an excused absence must be granted by the professor before class. It is the responsibility of the students to secure all materials and information presented in class, even with an excused absence. Lectures will not be repeated. Lectures may be taped recorded with the professor's permission.

Excused Absences:

Students must clear any absence beforehand with the instructor, who will require documentation before the absence is excused. Absences due to illness or other circumstances beyond a student's control will be handled on a case-by-case basis and will also require documentation.

Attendance Policy:

- DET students are considered Design Engineering Technology professionals and are responsible for directing their own education. As such, the decision to attend class is at each student's personal discretion.
- Absences CAN effect student grades if they do not understand the material or are not aware of changes to the class that can include (but are not limited to) the scheduling of quizzes, exams, assignments, projects, and extra credit. The instructor has the right to alter the course at his own discretion, so students missing class may not be aware of important information.
- Students are responsible for the body of information in the lectures, labs, and assigned reading materials. Students who do not attend class will not be given makeup lecture sessions or notes by the instructor. Similarly, makeup tests and quizzes will also not be given. If a student misses a class, it is up to them to make sure they acquire the relevant material from another source. Do NOT send the instructor an e-mail asking to explain the contents of a missed lecture or lab.

- Students are expected to attend class for mandatory events such as tests and quizzes, and it is up to the individual student to know when those events are. Ignorance of these events is not an excuse, and any student who wants current information is expected to attend class.

Campus Emergency:

In the event of a major campus emergency; course requirements and deadlines are subject to change that may be necessitated by a revised semester calendar or other circumstances. Here are ways to get information about changes in the course; Canvas, my email address: jfarner@weber.edu , or my office phone 801-626-6962

Course Schedule:

Aside from the syllabus, the information contained on Canvas IS subject to change and is NOT the most current source of information concerning DET 3000. As in the AEC industry, the instructor has the right to make changes to many portions of the curriculum due to the ever-changing nature of technology; certain information on Canvas may be obsolete or out-of-date. As such, it is up to the student to confirm this information by either attending class or obtaining the information from another source.

Outside Work:

Outside work will be absolutely necessary. Students will NOT be able to do well in this course if they work only in regularly scheduled class sessions.

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Exams:

Exams will cover material from the lecture, demonstrations, and laboratory portions of the course and be administered during the regularly scheduled lecture period. The final exam will be a comprehensive exam and given at the appropriately scheduled time.

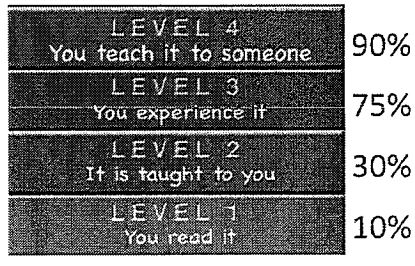
Grading Criteria:

The final grade will be a summation of all homework, quizzes and exams. (ie. 900 earned points/ 1000 possible points = 90% or A-) The exams will be a comprehensive assessment of both theoretical (book) and application (AutoCAD) at the end of the semester.

Grading Policy:

Grades will be given using the following total earned scores.

94-100%	A	74-76%	C
90-93%	A-	70-73%	C-
87-89%	B+	67-69%	D
84-86%	B	64-66%	D
80-83%	B-	60-63%	D-
77-79%	C+	59-0%	



No learning takes place until a question is posed or a personal need is discovered!

Weber State University

Design Engineering Technology 3100
Tool Design

Course Outline

Catalog Course Description:
Tool design principals used for work piece control in manufacturing and production. Topics include responsibilities of a tool designer, the design process, economics of design, tooling materials, and tool drawings and specifications. Other topics will include jigs, fixtures, gages, dies and tooling required by specialized manufacturing processes.

Objectives:
To successfully create 3D CAD models and detail drawings for multiple tooling projects including principles such as work holding, jig design, fixture design, power press applications, metal cutting, forming and drawing operations, tool design for joining processes, modular and automated tool handling, and the use of computers in tool design; gain an understanding of the characteristics intrinsic to cutting tool design; become familiar with a variety of tool materials selection processes and manufacturing methods.

Instructor:
Glen West - Engineering Technology 214B - Phone (801) 626-6301 – E-mail: glenwest@weber.edu
ET Department Secretary – Pat DeJong - Phone (801) 626-6305

Office Hours:
Refer to Schedule

Prerequisites:
MFET 1210, DET 2460, MATH 1080 or MATH 1050 and MATH 1060

Time, Days, and Location:
Lecture - 10:30-11:45 P.M. – T,TH – Engineering Technology 228

Required Text:
Fundamentals of Tool Design, 6th edition, Society of Manufacturing Engineers
ISBN 0-87263-867-7, ISBN 13: 978-087263-867-9, Copyright 2010

Required Materials:
Engineer's Computation Pad- Green tint-5 Squares/Inch, or equivalent

Homework:
Homework assignments are due, in class, on the due dates indicated in the lecture schedule. **Late homework will not be accepted.** Homework assignments requiring calculations are to be completed on engineers computation paper (green tint), or on handouts given in class, as per the instructions given on the assignment, with solutions clearly identified. Design assignments are to be completed using some form of CAD software and are to be submitted, in person **(no e-mailed files)** on standard 11 x 17 paper with a formatted border and title block. **Some method for backing up your work is highly recommended. Sharing of the work load, as related to homework assignments, will result in a shared grade for the assignments.**

Exams:
There will be two exams given during class time, Exam 1 and Exam 2.

Homework and Exam Values:

Review Questions	15%
Homework Assignments	35%
Exam 1	25%
Exam 2	25%
	100%

Grading Policy: Grades will be computed based on the following scale as a result of points earned on review questions, homework assignments, and exams.

94-100% =	A	74-76% =	C
90-93% =	A-	70-73% =	C-
87-89% =	B+	67-69% =	D+
84-86% =	B	64-66% =	D
80-83% =	B-	60-63% =	D-
77-79% =	C+	59-0% =	E

Rights/Responsibilities: This course outline is the governing document for this course. Your decision to take this course indicates your agreement to the conditions of this course outline. Please review the WSU Policies and Procedures Manual student code regarding ethics found at http://documents.weber.edu/ppm/6-22.htm , specifically section IV. Academic dishonesty, as described in the WSU Policies and Procedures Manual, will not be tolerated. Consequences may vary from grade adjustment to expulsion from the university.

Weekly Schedule - DET 3100 - Fall Semester 2014

Date	Reading Assignment	Homework Assignment
		Week 1 Chapter 1 Assignment 1 Aug 25-29 Tool Design Review Questions – Ch 1 – 1,3,4,5,6,7,10, 11 **Due Sep 2**
		Week 2 Chapter 2 Assignment 2 Sep 1-5 Tool Materials Review Questions – Ch 2 – 1 through 11 **Sep 1 Labor Day Holiday** **Due Sep 9**
Week 3 Sep 8-12		Chapter 3 Assignment 3 Cutting Tool Design **Due Sep 16**
Week 4 Sep 15-19		Chapter 4 Assignment 4 Workholding Principles Review Questions – Ch 4 – 1,2,4,7,14,15 **Due Sep 23**
Week 5 Sep 22-26		Chapter 5 Assignment 5 Jig Design Review Questions – Ch 5 – 1 through 7 **Due Sep 30**
Week 6	Chapter 6	Assignment 6

Sep 29-Oct 3	Fixture Design	Review Questions – Ch 6 – 2,3,4,5,6,7,8,11 **Due Oct 7**
Week 7 Oct 6-10	**Review for Exam 1 – Oct 7** **Exam 1 – Oct 9**	
Week 8 Oct 13-17 **Oct 17**	Chapter 7 Power Presses	Assignment 7 Review Questions – Ch 7 – 1,2,3,4,8,11,12 **Fall Break Holiday** **Due Oct 21**
Week 9 Oct 20-24	Chapter 8 Metal Cutting	Assignment 8 Review Questions – Ch 8 – 1 through 6 **Due Oct 28**
Week 10 Oct 27-31	Chapter 8 Metal Forming and Drawing	Assignment 9 **Due Nov 11**
Week 11 Nov 3-7	Chapter 10 Tool Design for Joining Processes	Assignment 10 **Due Nov 18**
Week 12 Nov 10-14	Chapter 11 Modular and Automated Tool Handling	Review Questions – Ch 11 – 1 through 5 **Due Nov 25**
Week 13 Nov 17-21	Chapter 12 The Computer in Tool Design	Review Questions – Ch 12 – 1 through 8 **Due Dec 2**
Week 14 Nov 24-28 **Nov 27-28**	Tool Design, Processes, Cost Estimation, GD & T **Thanksgiving Day Holiday**	
Week 15 Dec 1-5	**Review for Exam 2 – Dec 2** **Exam 2 – Dec 4**	

Weber State University
Design Engineering Technology
DET 3400 – Technical Illustration I

Course Outline

Catalog Course Description:
Projects in design presentation using CAD and other computer graphics software as the primary medium. Image capture, image processing and manipulation, types of views, use of color, composition, page layout, integration of text, and forms of output.

Instructor:
J.D. Julander – Phone: 801-866-8821 – E-Mail: jubius@hotmail.com
MMET department Secretary – Pat DeJong – Phone: 801-626-6305

Office Hours:
Call me any time between 5:30 P.M. and 10:00 P.M. on weekdays and all day on Sat. No Sundays.

Prerequisites:
DET 1160 and DET 2350

Time, Days, and Location:
Lecture - 7:30 A.M. - 8:20 A.M. - M, W, F - Engineering Technology 101 & 126

Text:
None (Internet Resources)

Required Materials:
None

Homework:
Homework assignments are due at the beginning of class on the dates given by the instructor. Late assignments will be accepted at a 1 point per day penalty (-10%). *All* assignments must be submitted on Canvas.

Homework and Presentation Values *(Subject to change)*:

Homework Assignments	70%
Final Presentation	30%

Grading Policy: Grades will be computed based on the following as a result of points earned on homework and exams:

94-100% =	A	74-76% =	C
90-93% =	A-	70-73% =	C-
87-89% =	B+	67-69% =	D+
84-86% =	B	64-66% =	D
80-83% =	B-	60-63% =	D-
77-79% =	C+	59-0% =	E

Weekly Schedule

Date	Topic
Week 1	Getting Started and Defining Technical Communication
Week 2	Organizing Your Information, Introduction to Photoshop
Week 3	Page Layout and Composition
Weeks 4-5	Lighting, Image Capture and Manipulation
Weeks 6-7	Photography, Presentation Medium
Week 8	Creating Graphics from Scratch
Week 9	Vector and Raster 2D Graphics
Weeks 10-11	Introduction to 3DS Max, Modeling Organically in 3D
Week 12	Intermediate 3DS Max
Weeks 13	Intermediate Photoshop (Begin Final Presentation)
Week 14	Utilizing your Models in Various Programs, Work on Final Presentation
Week 15	Final Project Presentations

Holidays and Other Important Dates

* - Does Not Effect This Class

Date	Event
9/2/2013	Labor Day Holiday
10/18/2013	Fall Break – No Classes
11/28/2013	* Thanksgiving Holiday
11/29/2013	Thanksgiving Break
12/6/2013	Last Day of Fall Semester Classes

Weber State University
Design Engineering Technology

DET 3470 – Introduction to Catia V5
Fall 2014

Course description:

The use of 2D and 3D modeling to prepare engineering documentation and model analysis for manufacturing. Course uses commercially available software. Students will complete a series of laboratory assignments and term projects in an open lab environment.

Prerequisites: TBE TE1700 and DET 1160

Course Instructor: Meg Leatherbury

Office: ET 214L
Office hours: Monday & Wednesday 9:30AM ~ 10:30AM
Tuesday & Thursday 9:45AM ~ 11:15AM
Phone: (801) 626-6951
Email : megumiusui@weber.edu (Primary communication method: please include your name and class number in the subject line)

Course Schedule: Three 50 minute sessions per week, 3 credit hours
Monday, Wednesday, & Friday: 8:30AM – 9:20AM @ ET 240

Required Textbook and tools:

- DET 3470 Catia V5
  http://www.lulu.com/shop/megumi-leatherbury/det-3470-catia-v5/paperback/product-21169001.html
- 2 GB Thumb Drive

Course Learning Outcomes:

- An appropriate mastery of the knowledge, techniques, skills, and modern tools of their discipline.
- An ability to conduct, analyze and interpret experiments, and apply experimental results to improve processes
- An ability to apply creativity in the design of systems, components, or processes appropriate to program educational objectives
- An ability to identify, analyze and solve technical problems
- A commitment to quality, timeliness, and continuous improvement

Course Administration:

Lecture	This class is a hybrid course. Lectures are given only when necessary. It is the students' responsibility to secure all materials and information presented in lecture, even with an excused absence. Lectures will not be repeated.
Absence	Students must inform the instructor of an absence in advance. Students will be asked for legitimate documentation if necessary. In case of circumstances beyond students' control, it will be handled case-by-case. Attendance may be taken at any/all meeting times.
Philosophy	Students are expected to be self-disciplined, to be prepared, to be on-time with assignments, and to do original work. Failure to do so will result in the loss of course points and/or failure.
File Security	Students are responsible for the security of their files. Students are expected to maintain their digital data. In the case of data loss, students are required to recreate their work, without exceptions.
Student Conduct and Policies	• Students are expected to be respectful and professional towards the instructor and any member of the class. • Students are expected to arrive on time for all class and lab sessions. • Students are required to set up and use a Weber State University email account to communicate with the Instructor as needed. • **Assignments must be submitted in the lab on the specified due date and time unless otherwise specified. Late assignments will not be accepted unless prior arrangements have been made with the Instructor and because of extreme circumstances. (Not coming to lab, or forgetting, does not rate as an extreme circumstance.)** • No student will be allowed to make up any written exam, lab practice, exam, or quiz unless they have an official or medical excuse. • **Students found cheating, engaging in plagiarism, copying another student's data, using disallowed materials during a written examination, lying to the course instructor about his/her own work, stealing tests, quizzes, or answer keys, or any other any such activities will be considered in conflict with the printed academic honesty guidelines as set out by Weber State University. In such cases the matter will be reported to the Office of the Dean and the appropriate Weber State University officers for consideration and possible disciplinary action.** • Any students requiring accommodations or services due to disability must contact Services for Students with Disabilities (SSD) in room 181 of the Student Service Center. SSD can also arrange to provide course materials (including this syllabus) in alternative formats if necessary. • Electronic devices (cell phones, pagers, etc.) are not allowed in the room during any test, exam, or quiz!

	• It is each student's responsibility to confirm correct assignment submission on timely manner on blackboard. • Students are not allowed to submit their assignments via email unless otherwise specified by the Instructor.
Laptops, cell phone and other electronics	It is permissible to bring your own laptop to lecture for taking notes purpose. Any electronic devices should be on silent. If your device becomes a disturbance to class members, you will be asked to turn it off, or not to bring it back. If you need to use your cell phone, please leave the room.
Lab Rules	• **No food or drinks of any kind will be allowed in any lab sessions!!!** • A Wildcat Card will be necessary to access to the labs. There are locks on CAD labs that allow access by card swipe. • **Abuse of the equipment will not be tolerated.** • It is a violation of Federal Copy Right Laws to possess pirated software. Anyone who is found guilty of such a violation will be expelled from the College of Applied Science and Technology at Weber State University. • No one may use any command or function to copy or backup licensed software from any WSU computer. • Any student not following these lab rules may be asked to leave the lab or may fail the course.

Weekly Topics

Week	Topics	Assignments
1 **Aug 25 - 29**	Introduction to Catia V5 Chapter 1	Practice zoom, rotate, and pan with a mouse - you will be asked to demonstrate these techniques in the lab on the 4th of September. **Due : Sept 1**
2 **Sept 1 - 5**	Chapter 2	Chapter 2 assignments 1, 2, and 3 **Due: Sept 8**
3 **Sept 8 - 12**	Chapter 3	Chapter 3 assignments 1, 2, and 3 **Due: Sept 15**
4 **Sept 15 - 19**	Chapter 4	Chapter 4 assignment 1 **Due: Sept 22**
5 **Sept 22 - 26**	Chapter 5	Chapter 5 assignment: Toy truck assembly and its assembly drawing **Due: Sept 29**

6 **Sept 29 – Oct 3**	Chapter 6	Chapter 6 all exercises **Due: Oct 6**
7 **Oct 6 - 10**	Chapter 7	Chapter 7 assignments 1 and 2 **Due: Oct 13**
8 **Oct 13 - 17**	Chapter 8	Chapter 8 assignment 1 **Due: Oct 20**
9 **Oct 20 - 24**	Chapter 9	Chapter 9 assignment: Bee toy **Due: Oct 27**
10 **Oct 27 – 31**	Term Project given	
11 **Nov 3 - 7**	Term Project Lab Time Attendance is not required unless otherwise necessary	
12 **Nov 10 - 14**	Term Project Lab Time Attendance is not required unless otherwise necessary	
13 **Nov 17 - 21**	Term Project Lab Time Attendance is not required unless otherwise necessary	
14 **Nov 24 - 28**	Term Project Lab Time Attendance is not required unless otherwise necessary ***Thanksgiving Holiday***	
15 **Dec 1 - 5**	**Dec. 2: Rendering picture due** **Dec. 4: Voting**	
16 **Dec 8 - 12**	**No Final**	

Grading Criteria:

Homework assignments (Attendance, Class work, Quizzes, and others)	50%
Term Project	50%

	100%

Testing and Grading:

Homework will be assigned throughout the semester and will count toward the final grade given in the class. Students are responsible for keeping track of their grade throughout the semester on blackboard. The instructor cannot inform students of their grade over the phone or via email. *The instructor reserves*

the right to modify the requirements of the class during the semester and will inform the students of any changes during lecture.

Grading Policy:

Grades will be assigned using the following total earned scores.

94 – 100% = A	74 – 76% = C
90 – 93% = A-	70 – 73% = C-
87 – 89% = B+	67 – 69% = D+
84 – 86% = B	64 – 66% = D
80 – 83% = B-	60 – 63% = D-
77 – 79% = C+	59 – 0% = F

MANUFACTURING ENGINEERING TECHNOLOGY (MFET)
COURSE OUTLINE FOR MFET 2300

WEBER STATE UNIVERSITY

DEPARTMENT: Engineering Technology

COURSE NUMBER: MFET 2300

COURSE TITLE: Statics & Strength of Materials

COURSE DESCRIPTION:

Topics include: Principles of forces, moments, resultants & static equilibrium of force systems, center of gravity, friction, and free body diagram analysis. Also concept of stress and strain, shear, bending moments, torsion, and bending stresses in beams. Five 50 minute lectures per week in Section 1, Two 125 minute (2hrs 5m) lectures in Section 2.

PREREQUISITES: PHYS PS/SI2010/L or PHYS PS/SI2210/L and MATH SI1210

REQUIRED TEXTBOOK, WORKBOOK AND TOOLS:

Statics & Mechanics of Materials, Hibbeler, 3rd Edition, ISBN (10): 0-13-216674-7
Programmable Calculator

TIME: Section 1:MTWRF 10:30 am- 11:20 am; Section 2: TR 3:30 pm – 5:45 pm
PLACE: Section 1: ET 238; Section 2: ET 238
INSTRUCTOR: Kelly Harward, ET 218D, Phone 801-626-7144, email: kharward@weber.edu

COURSE OBJECTIVES:

To give to the student a basic understanding of the principles of statics (equilibrium of rigid bodies under the action of balanced forces) and strength of materials (relationships among the external forces applied to the bodies, the resulting stresses and deformation and the determination of the proper sizes of structural members to satisfy strength and deformation requirements.) Upon completion of the course the student will be able to use the appropriate terminology, symbolism, equations, calculations to resolve statics and strength of materials problems, including:

1. Recognize the presence of forces on static bodies
2. Resolve forces & moments using vector quantities
3. Define vectors in terms of position, unit, and Cartesian vectors
4. Calculate dot and cross product of vectors and know the applications
5. Draw free body diagrams of statically determinate structures
6. Apply equilibrium equations (forces & moments) to solve for the unknown forces
7. Describe equilibrium conditions of systems (frames, trusses, machines, etc.)
8. Analyze forces in trusses, beams and frames (2D and 3D spatial problems)
9. Determine centroid and center of gravity of a body or cross-section (Calculator & CAD)
10. Determine area moments of inertia of a cross-section
11. Recognize the presence of forces on bodies and determine effects on the material
12. Determine stress and strain for axial loads
13. Determine stress and strain for torsional loads
14. Determine shear forces, and bending moments in beams
15. Determine deflections of beams due to bending
16. Size beams, trusses, frame members, and connectors based on loads and materials.

RELATIONSHIP OF THIS COURSE TO PROGRAM OBJECTIVES:

MFET: (#1) Students will demonstrate appropriate mastery of both theory and application of manufacturing engineering technology knowledge, skills and technology. (#2) Students will demonstrate ability to identify, analyze and solve technical problems.

ACADEMIC ETHICS:

All students are expected to observe the rights and responsibilities outlined in the WSU Student Code. Because an important part of being a college student is academic honesty, it is the expectation in this course that you will complete all academic work without resorting to cheating, plagiarism, lying and/or bribery. The WSU Student Code includes a more extensive list of prohibited behaviors; you should familiarize yourself with all aspects of the code. Students who commit infractions of the WSU Student Code will be dealt with according to procedures outlined in the code. Penalties could include receiving a failing grade for this course, being suspended from school, and the like. It is very important that you clearly understand this course expectation.

*** *PLEASE NOTE* ***

Disability Documentation and Disclosure

Any student requiring accommodations or services to a disability must contact Services for Students with Disabilities (SSD) in Student Service Center 181. SSD can also arrange to provide materials (including this syllabus) in alternative formats if necessary.

MFET 2300

POLICIES & PROCEDURES:

1. Lectures and problem solutions will be given during scheduled class time. Some of the assigned problems will be worked during class time with student participation expected. Study each chapter before the scheduled topic and prepare to discuss the topic in class. Complete 1/3 of the assigned problems each night so by Thursday you will have completed the assigned problems for the week.

2. Homework assignments are expected to be neatly completed on engineering graph paper. Assignments will be due each Monday by 4:30 PM unless announced in class. Prior to submission of the homework, the student should review each problem and compare answers with the published answers as announced in class. Homework handed in late will receive a penalty of approximately 10% per day. Homework will not be accepted if the instructor has scored and returned the assignment to the other students, unless prior arrangements have been made with the instructor. The last 50 minute period of each week will normally be used as a review period of the assignment and quiz and to introduce the next week's material.

3. It is expected that each student will have access to a programmable calculator and know how to use and program it. The instructor uses a TI-86 or a TI-89 and will provide some programs to help students get started with these calculators. Programming a TI-85 or lower numbered TIs may be similar but may be limited in some of the programing capabilities or other functions. An HP calculator (such as the HP 48G) may be used but the programming methods are unique and not used frequently by the instructor so the student will not have the same support in class and during help sessions.

4. It is also expected that the student will have access to the CAD lab or a student license of the software on their own computer and know at least one high-end 3D solids modeling CAD program (ie. SolidWorks, Inventor, or ProE). This software will help the student construct geometric relationships, better understand spatial problems, and also help solve problems dealing with centroid, weight / mass, and area moment of inertia.

5. Quizzes will normally be given each week on Thursday during a 30 - 45 min. period in class or given in one of the WSU Testing Centers. Some roll-call quizzes or other unannounced quizzes may be given at the beginning of class or during a class period without prior warning. Quizzes cannot be made up. Chitester quizzes will also be required in some sections but will be available for retake for a specified number of times within a given time period.

6. Tests will be given on assigned dates or as announced in class. Prior arrangements must be made in order to take the test at a different time.

7. The instructor reserves the privilege to change the schedule, assigned problems, or other requirements listed in this syllabus as needed during the semester. If changes are made, the instructor will announce them in class.

EVALUATION

There will be three exams during the semester (the two highest scores will be used in calculating the grade), problem assignments, & weekly quizzes with the following weight ranges and overall grading as follows:

2 out of 3 Exams		65% ± 10%
Quizzes		20% ± 10%
Assignments		15% ± 05%
	TOTAL	100 %

Letter Grade	Lower Bounds	Upper Bounds
A	93.0	100
A-	89.0	92.9
B+	86.0	88.9
B	82.0	85.9
B-	79.0	81.9
C+	76.0	78.9
C	72.0	75.9
C-	68.0	71.9
D+	64.0	67.9
D	60.0	63.9
D-	56.0	59.9
E	0	55.9

SEMESTER SCHEDULE
Fall 2014

Week	Date	Topic	Assignment: Read & Study each chapter,
1	08/25-29	Ch.1 General Principles	Ch1: 1-21
2	09/02-05	09/01- Labor Day Ch.2 Force Vectors: 2.1-2.6	Ch2: 3,4,19,33,41,42,53,56,59,61
3	09/08-12	Ch.2 Force Vectors 2.7-2.9	Ch2: 63,67-69,75-77,79,82,104
4	09/15-19	Ch.3 Force System Resultants	Ch3:12,23,24,27,42,47,58,74,83,91
5	09/22-26	Ch 4 Equilibrium of a Rigid Body 4.1-4.6	Ch 4: 6,7,9,12,15,17,19, 26,39,45
6	09/29-10/3	Ch 4 Equilibrium of a Rigid Body 4.7-4.10	Ch 4:48,51,64,67,72,75, 84,88,97,102
7	10/06-10	Ch 5 Structural Analysis	Ch5: 4,8,16,28,29,40,41,62,70,74
8	10/13-16 10/17	Ch 6 Center of Gravity, Centroid & MofI Fall Break	Ch 6: 7,8,10,12,13,17,19,32,44,74
9	10/20-24 10/22-24	Ch 7 Stress & Strain *Review, MidTerm Exam*	Ch 7: 25,30,32,35,41,50,62,69,82,103 *MidTerm Exam*
10	10/27-31	Ch 8 Mechanical Properties	Ch 8: 8,14,21,22,23,27,29,38,39,40;
11	11/03-07	Ch 9 Axial Load	Ch 9:17,20,25,30,51,54,60,70,73,80
12	11/10-14	Ch 11 Bending	Ch 11: 20,27,31,32,45,46,52,53,58,98
13	11/17-21	Ch 12 Transverse Shear	Ch 12: 2,9-12,24-28
14	11/24-26 11/27-28	Review; *2nd Half Test* Thanksgiving Holiday	*2nd Half Test*
15	12/01-05	Ch 10 Torsion	Ch 10: 6,8,10,11,14,15,16,38,39,40
16	12/08-11	*Final Exam*	*Final Exam*

PREPARED BY: Kelly A. Harward; 8/18/2014

Weber State University

Design Engineering Technology 3300
Applied Kinematic Analysis

Course Outline

Catalog Course Description:
Graphical representation of the motion of bodies without reference to the forces that cause the motion. Devices will be modeled and the limits of movement of components defined so that overall machine design can be animated and analyzed.

Objectives:
To successfully master the concepts associated with machines and mechanisms in terms of applied kinematic analysis. Comprehensive coverage of vectors, position and displacement analysis, mechanism design, velocity analysis, acceleration analysis, cam design and kinematic analysis, kinematic analysis and selection of gears, belt and chain drive applications, screw mechanisms, and static force analysis will provide students with a firm foundation in terms of analytical and graphical techniques as applied to these topics.

Instructor:
Glen West - Engineering Technology 214B - Phone (801) 626-6301 – E-mail: glenwest@weber.edu
ET Department Secretary – Pat DeJong - Phone (801) 626-6305

Office Hours:
Refer to Schedule

Prerequisites:
MFET 2300

Time, Days, and Location:
Lecture - 11:30 A.M.-12:45 P.M. – T, TH – Engineering Technology 238

Text:
Machines and Mechanisms: Applied Kinematic Analysis, 4th edition, David H. Myszka
ISBN-13: 978-0-13-215780-3, Copyright 2012 (Required)

Required Materials:
Engineer's Computation Pad- Greentint-5 Squares/Inch, or equivalent

Homework:
Homework assignments are due, in class, on the due dates indicated in the lecture schedule. Five (5) homework problems will be assigned from each of the chapters from the text that are covered during classroom lectures. The instructor will select and grade one (1) problem from each homework assignment. **Late homework will not be accepted.** Homework assignments requiring calculations are to be completed on engineers computation paper (green tint), with the solution clearly identified. Graphical Design Assignments are to be completed using some form of CAD software and are to be submitted in person **(no e-mailed files)** on standard drawing paper (typically "A" or "B" size) with a formatted border and title block.

Exams:
All exams will be open book and open notes. There will be three exams given during class time; Exam 1, Exam 2, and Exam 3.

Homework and Exam Values:

Homework Assignments	55%
Exam 1	15%
Exam 2	15%
Exam 3	15%
	100%

Grading Policy: Grades will be based on the following schedule as a result of points earned on homework and exams.

94-100% =	A	74-76% =	C
90-93% =	A-	70-73% =	C-
87-89% =	B+	67-69% =	D+
84-86% =	B	64-66% =	D
80-83% =	B-	60-63% =	D-
77-79% =	C+	59-0% =	E

Rights/Responsibilities: This course outline is the governing document for this course. Your decision to take this course indicates your agreement to the conditions of this course outline. Please review the WSU Policies and Procedures Manual student code regarding ethics found at http://documents.weber.edu/ppm/6-22.htm , specifically section IV. Academic dishonesty, as described in the WSU Policies and Procedures Manual, will not be tolerated. Consequences may vary from grade adjustment to expulsion from the university.

Weekly Schedule - DET 3300 - Spring Semester 2013

Date	Reading Assignment	Homework Assignment
Week 1 Jan 7-11	Chapter 1 Sections 1.1 – 1.12	Problems 1-11, 12, 13, 14, 52 **Due Jan 15**
Week 2 Jan 14-18	Chapter 3 Sections 3.1 – 3.19	Problems 3-16, 18, 24, 38, 40 **Due Jan 22**
Week 3 Jan 21-25 **Jan 21**	Chapter 4 Sections 4.1 – 4.12 **Martin Luther King Holiday**	Problems 4-6, 10, 14, 32, 64 **Due Jan 29**
Week 4 Jan 28-Feb 1	Chapter 5 Sections 5.1 – 5.6	Problems 5-2, 14, 22, 38, 44 **Due Feb 5**
Week 5 Feb 4-8	Chapter 6 Sections 6.1 – 6.14	Problems 6-12, 26, 28, 42, 46 **Due Feb 19**
Week 6 Feb 11-15	**Review for Exam 1 – Feb 5** **Exam 1 – Feb 7**	
Week 7 Feb 18-22 **Feb 18**	Chapter 7 Sections 7.1 – 7.13 **President's Day Holiday**	Problems 7-8, 24, 26, 34, 42 **Due Feb 26**
Week 8 Feb 25-Mar 1	Chapter 9 Sections 9.1 – 9.11	Problems 9-1, 7, 16, 38, 62 **Due Mar 12**
Week 9 **Mar 4-8**	**Spring Break**	
Week 10 Mar 11-15	Chapter 10 Sections 10.1 – 10.15	Problems 10-44, 46, 50, 64, 68 **Due Mar 19**
Week 11 Mar 18-22	Chapter 11 Sections 11.1 – 11.7	Problems 11-2, 8, 11, 18, 22 **Due Apr 2**

Week 12 Mar 25-29	**Review for Exam 2 – Mar 26** **Exam 2 – Mar 28**	
Week 13 Apr 1-5	Chapter 12 Sections 12.1-12.9	Problems 12-8, 10, 12, 18, 20 **Due Apr 9**
Week 14 Apr 8-12	Chapter 13 Sections 13.1-13.8	Problems 13-2, 8, 10, 16, 18 **Due Apr 16**
Week 15 Apr 15-19	Chapter 14 **Review for Exam 3 – Apr 16** **Exam 3 – Apr 18**	

MFET 3550 -Manufacturing Supervision Course Outline

MFET 3550 -The application of supervision skills. Students will gain an understanding of; motivation of subordinates, personal leadership theories, problem-solving and decision-making techniques, organizational communication, employee selection, evaluation and training process, and organizational structures. Topics will include; the American Disabilities Act, OSHA, and environmental issues, Equal Opportunity Employment, and Affirmative Action issues.

Textbook: Supervisory Management, Plunkett and Greer. 11th Ed. 2007.

Instructor: Rick Orr, Professor

Class Location and Time: Online

Office: ET 214A Phone: 626-7514 Fax: 626-7531 E-mail: rworr@weber.edu

Goals: The major objective of this course is to help students increase their understanding of the terms, concepts, good communication practices and problem solving techniques required to successfully practice the principles of modern supervision in a manufacturing environment. Additionally, students will gain a greater understanding of the professional, ethical, and social responsibilities that managers and supervisor have, as well as an increased respect and appreciation for the diversity of people. At the conclusion of the course, students should be able to do the following:

ABET Learning Outcome (a) an ability to apply the knowledge, techniques, skills, and modern tools of the discipline to ap narrowly defined engineering technology activities. Metric is class average grade on the final will be greater than 75%. SME Certification Exam average on sections 7.1.4, 7.1.5, & 7.1.6 will be 60% or greater (deals with personnel management, human behavior, motivation , leadership, and labor relations.

Upon completion of the course students will be able to do the following

a) Be able to distinguish between human motivation and maintenance factors.

b) Be able to recognize the different leadership styles as seen in industry.

c) Have a basic understanding of Labor Unions and the role they play in industry.

2) Communicate effectively. Upon completion of the course students will be able to do the following

a) Converse professionally using terminology commonly associated with supervision.

b) Recognize and practice good communication skills including the art of effective listening.

c) Understand professional, ethical and social responsibilities (Outcome i). Specifically students will have an understanding of the laws, regulations and issues that govern the hiring and continued

employment of people in the workforce, including such things as Equal Opportunity Employment, Affirmative Action, ADA, Sexual Harassment and OSHA

2) ABET Learning Outcome (i) an understanding of and a commitment to address professional and ethical responsibilities including a respect for diversity. Metric is an average score of 60% or higher on the SME exam 7.1.11 and 7.1.12

3) ABET Learning Outcome (j) a knowledge of the impact of engineering technology solutions in a societal and global context. Metric is an average score of 60% or higher on the SME exam 7.1.11 and 7.1.12

4) ABET Learning Outcome (g) an ability to apply written, oral, and graphical communication in both technical and nontechnical environments; and an ability to identify and use appropriate technical literature. Metric is 70% of the class will score C or higher on the final paper.

Exam Information

There will be a total of 3 exams for this course, 2 midterm exams and 1 comprehensive final.

- Midterm Exam 1 covers chapters 1-8 and should be completed during Week 7
- Midterm Exam 2 covers chapters 9-16 and should be completed during Week 15
- The Final Exam is a comprehensive exam and should be completed during Week 16, the final week of the course.

All exams must be taken in a secure testing environment, be sure to review the testing information links for further testing information.

Academic Ethics:

All students are expected to observe the rights and responsibilities outlined in the WSU Student Code. Because an important part of being a college student is academic honesty, it is the expectation in this course that you will complete all academic work without resorting to cheating, plagiarism, lying and/or bribery. The WSU Student Code includes a more extensive list of prohibited behaviors; you should familiarize yourself with all aspects of the code. Students who commit infractions of the WSU Student Code will be dealt with according to procedures outlined in the code. Penalties could include receiving a zero for a given assignment, a failing grade for this course, being suspended from school, and the like. It is very important that you clearly understand this course expectation.

Course Schedule

- Week 1 Chapters 1, 2
- Week 2 Chapters 3
- Week 3 Chapter 4
- Week 4 Chapter 5
- Week 5 Chapters 6, 7
- Week 6 Chapter 8

- Week 7 Exam I (Chapters 1 through 8)
- Week 8 Chapter 9
- Week 9 Chapter 10
- Week 10 Chapter 11
- Week 11 Chapters 12, 13
- Week 12 Chapter 14
- Week 13 Chapter 15
- Week 14 Chapter 16
- Week 15 Exam II (Chapters 9 through 16) / Term Report is due
- Week 16 Comprehensive Final Exam

Note : Chapter Questions may be submitted any time before the specified due date. Late work will be accepted for half credit. Exams may be taken any time during the week specified, but must be completed by Friday of that week unless prior arrangements are made with the instructor. The term paper should be submitted, as an attachment in Word Perfect or MS Word format, to the instructor during or before the last week of the course. All term papers will be reviewed by "Turn it in.com" for plagiarism.

All course work, including the mid-term exams, must be completed by the end of Week 15. No credit will be given for work submitted after that date.

Scoring

- Each set of chapter questions is worth 15 pts.
- Each chapter quiz is worth 15 pts and consists of true/false and multiple choice questions.
- Two Midterm Exams are worth 100 pts each
- Term papers will be graded on the basis of content, spelling and grammar. Turnitin.com will be used to check for plagiarism.

Your overall grade will be composed as follows:

Chapter Questions 20%

Chapter Quizzes 20%

Midterm Exams 20%

Final Exam 20%

Term Paper 20%

Final Grades will be assigned as follows:

A	94 - 100 %
A-	89 to less than 94 %
B+	86 to less than 89 %
B	82 to less than 86 %
B-	79 to less than 82 %
C+	76 to less than 79 %
C	70 to less than 76 %
D	60 to less than 70 %
E	Below 60 %

Term Paper

Using at least 3 additional sources other than the text, write a 5 to 7 page research paper on one of the following themes:

- Affirmative Action (Take a stand for or against)
- Sexual Harassment in the workplace
- Impact of A.D.A in the workplace
- Value of teams in the work place
- Ethics in the work place
- Employee Motivation (Discussion of various theories - Take a stand for or against)
- Leadership vs. Management (Discussion of various theories - Take a stand for or against)
- Do unions still have value in today's work place?

Format:	Term paper should be 5 to 7 pages of content
	Double space with 1 inch margins
	All quotations are to be properly cited using the citation method of choice. Failure to give proper credit for someone else's work is plagiarism and will result in a zero for the assignment.
	APA Format (hint use MS Word)
	References are to be listed on a separate page at the back of the paper.

WEBER STATE UNIVERSITY - MET DEPARTMENT

SYLLABUS – MET 3400 MACHINE DESIGN (CRN# 21944 – LATE SECTION)

Semester: Fall 2014
Class Time: TR 12:00 PM – 1:15 PM
Office Hours: MW 1:00 PM – 3:00 PM & R 7:30 AM – 8:30 AM (Otherwise By Appointment)
Instructor: Dustin Birch
e-Mail: dustinbirch@weber.edu

Course Description:

Application of engineering technology fundamentals to machine design. Techniques involved in designing and selecting individual machine parts.

Course Learning Outcomes & Expected Performance (ABET Criterion 3 – Program Outcomes):

1) Outcome (a) Demonstrate appropriate mastery of knowledge, skills, and modern tools in the discipline:
    i) Understand basic machines, and their application in complex machines.
    ii) Understand the fundamentals of materials selection in the fabrication of machinery.
    iii) Understand the fundamentals of solid mechanics and strengths of materials.
    iv) Understand and use basic design tables and equations to select machine components.
    v) Understand fundamental machine design technologies, such as:
        (a) Belt / Chain Drives
        (b) Gears / Gearing Systems
        (c) Keys / Couplings / Seals
        (d) Bearings
        (e) Fasteners
        (f) Spring

Text: Machine Elements in Mechanical Design (5th Edition), Mott

Final Grade Fill Be Calculated Utilizing The Following:

Homework = 10%
Mid-Term Exams (2 Total) = 60%
Final Exam = 30%
TOTAL = 100%

Prerequisites:

Passing grades (C or above) in MFET 2300 (Statics & Strengths of Materials).

Attendance Policy:

The grade in this class will not be based on attendance. However, it is the student's best interest to diligently attend class, as lectures will contain information crucial to completing the homework assignments, and performing well on exams. Numerous example problems and homework solutions will be worked in class, and will be beneficial in mastering the material. Homework problems with accompanying due dates will be assigned in class.

Homework Policy:

1) Homework is due at the beginning of class on the specified due date. Homework turned in late will not receive credit. NO EXCEPTIONS
2) If you are not going to be in class on the homework due date, it is your responsibility to e-mail me the homework prior to class time. I will not accept the homework if the e-mail time stamp is after class time. NO EXCEPTIONS
3) Homework is expected to be neatly printed on engineering sheets. All problems are to be in order as assigned, and pages stapled together. The answer must be clearly identified as such (circled or boxed). Remember, your name, and class name/number must be clearly printed on the first sheet.
4) Students can work together on the homework assignments. However, I can almost guarantee if you choose not to work the problems yourself such that you completely understand the material, it will most likely result in a poor exam performance and a failing grade in the course.
5) The homework will be spot checked only. I may select a problem or two to look at in detail. Typically, if you have honestly attempted to work the problems, and they are complete, you will receive full credit for the assignment. I will post complete homework solutions after the due date.

Mid-Term Exam:

1) Mid-Term exams will be held during class time. The problems on the exam will be representative of the example problems worked in class, and problems worked in the homework assignments. Therefore, it is in your best interest to attend class, and diligently do the homework assignments.
2) The exams will be closed book, closed notes. However, I will be providing a note sheet with all relevant equations and other information necessary to complete the exam. This note sheet will typically be made available in the exam review section prior to the test for the students to familiarize themselves with.
3) Make-up exams will not be allowed, unless prior arrangements are made.

4) A scientific calculator is allowed to be used on the exam. Extra batteries are a good idea.
5) Test takers will not be allowed to leave the classroom during the exam until their exam is completed and handed in.

Final Exam:

1) The final exam will be held in class at the assigned day and time.
2) Mid-term exams policies noted above also apply to the final exam.

Cell Phone Policy:

Under no circumstances are cell phones allowed into the classroom on exam days. If you accidentally show up on test day with your phone, I will hold it at the front of the classroom until you complete the test, and leave the room (This policy applies to tablets or any other electronic device except a calculator). NO EXCEPTIONS

Anyone caught using (even looking at) a phone during an exam will have their test collected, and will receive no credit for that exam. Anyone caught taking pictures of exams, texting or receiving information from an exam, or found to be in possession of such information will be immediately removed from the class and will receive an E letter grade for the course. NO EXCEPTIONS

Academic Dishonesty (aka cheating):

You have enrolled in college to gain skills and knowledge that will presumably be used to further your career and qualify you to work in many different industries and job responsibilities. My expectation is your academic performance is strictly a result of your hard work, and dedication to mastering the material. Any other means used to achieve a passing grade in the class or to help another student pass the course will be considered dishonest and subject to a discipline, up to, and possibly including expulsion from the course and reporting of the infraction to the Dean of Students. Items I consider cheating include, but are not limited to:

- Looking at other students work during an exam
- Sharing your work with other students during an exam
- Using any technological means to share or transmit information during an exam (see the cell phone policy above)
- Gaining and/or sharing information about exams not previously revealed by the instructor prior to the exam.

Grading:

Grades are typically calculated based on a percentage basis. The breakdown in as follows:

94% - 100%	A
90% - 93%	A-
87% - 89%	B+
84% - 86%	B
80% - 83%	B-
75% - 79%	C+
70% - 74%	C
65% - 69%	C-
60% - 64%	D+
55% - 59%	D
50% - 54%	D-
<50%	E

Once final grades are posted at the end of the term, they will not be changed. If you feel a clerical or math error has occurred, I will check into this and make changes if necessary. I will not change grades for any other reason. NO EXCEPTIONS

If you are concerned about your class performance and/or grade, it is advisable to meet with me sometime prior to the end of the term to evaluate your current status. E-mailing me after the term has ended, and final grades are posted is not likely to result in any revisions to the outcome.

Extra Credit:

No extra credit will be given in this course. Your grade is strictly based on your homework and exam performance. NO EXCEPTIONS

Students with Disabilities:

Any student requiring accommodations or services due to disability must contact Services for Students with Disabilities (SSD) in room 181 of the Student Services Center. SSD can also arrange to provide course material (including this syllabus) in alternative formats if necessary.

MET 3400 - MACHINE DESIGN - FALL 2014				
LECTURE	DATE		TOPIC	READING
	August	26	Syllabus Review / Class Introduction	
1		28	Statics Review	
2	September	2	Basic Machines / Mechanical Advantage / Mechanical Design Review	Chapter 1
3		4	Properties of Materials	Chapter 2
4		9	Stress & Deformation Analysis	Chapter 3
5		11	Stress & Deformation Analysis	Chapter 3
6		16	Stress & Deformation Analysis / Methods of Superpostion	Chapter 4
7		18	Column Design	Chapter 6
		23	**EXAM REVIEW**	
		25	**EXAM 1**	
		30	EXAM SOLUTION IN CLASS	
8	October	2	Belt Design	Chapter 7
9		7	Chain Design	Chapter 7
10		9	Gear Design	Chapter 8
11		14	Gear Design	Chapter 8
12		16	Gear Design	Chapter 8
13		21	Gear Design	Chapter 9
14		23	Gear Design	Chapter 9
15		28	Keys / Couplings / Seals	Chapter 11
16		30	Shafts	Chapter 12
	November	4	**EXAM REVIEW**	
		6	**EXAM 2**	
		11	EXAM SOLUTION IN CLASS	
17		13	Tolerances & Fits	Chapter 13
18		18	Roller Bearings	Chapter 14
19		20	Plain Surface Bearings	Chapter 16
20		25	Fasteners	Chapter 19
		27	**HOLIDAY**	
21	December	2	Springs	Chapter 18
		4	**EXAM REVIEW**	
		TBD	**FINAL EXAM**	

DET-4350

Virtual Design & Construction Applications

Fall 2014 • Tue/Thur 10:30 am – 11:45 am • August 26th – December 4th

COURSE SYLLABUS

Instructor: Jennifer Lanzetti
Principal – Cn3D Construction

Phone: 801-793-8529 (cellular)

Email: jennifer@cn3dconstruction.com (work)

Office Hours: By appointment only

Golden Brown Disclaimer: *As in the AEC industry, the instructor has the right to make changes to many portions of the curriculum due to the ever-changing nature of technology and uncontrollable acts of nature. Certain information on Canvas may be obsolete or out-of-date. As such, it is up to the student to confirm this information by either attending class or obtaining the information from another source. Students will be notified by e-mail of any changes. It is the student's responsibility to provide an email address that is checked daily.*

Class Description

Building Information Modeling (BIM) is changing the way projects are designed, constructed and maintained. This emerging practice requires new mindsets and technological savvy in order to achieve significant improvements in efficiency and cost control. This class is designed to prepare design and construction students at all experience levels to successfully implement BIM in their current or future roles. Students will learn to mix and match available resources in the most efficient combinations to complete projects on time and within budget.

Topics Include: Introduction to BIM, BIM Technology, BIM Contract Negotiation, Risk Allocation, BIM Process/Adoption/Integration, Integrated Project Delivery (IPD), 3D Spatial Coordination (Clash Detection), Scheduling and 4D Simulation, Presenting the Project Model, Modeling for Construction, 5D Estimating (QTO), 3D Laser Scanning, Virtual Mock-ups, and BIM for Operations and Facilities Management. Prerequisites: DET 2000, DET 2660, DET 3000.

Course Objectives

Upon completion of this course students should be able to:

- Identify how BIM is changing the way architectural projects are designed and constructed.
- Recognize the importance of BIM
- Define common BIM terminology
- Discuss how BIM can be used as a communication & collaboration tool
- Explain the benefits of BIM
- Explain the federated model process
- Compare examples of successful BIM usage
- Discuss issues associated with starting BIM & create a company BIM assessment
- Explain the phased structure of a BIM project & the classes of BIM tools

- Identify common BIM applications
- Develop a process for identifying and selecting BIM tools
- Demonstrate how design options are used to inform client design decisions
- Demonstrate BIM management skills
- Apply custom templates in the creation of construction documents
- Develop construction estimates with custom schedules and take-offs
- Demonstrate the ability to create custom wall types
- Create discipline specific custom families
- Demonstrate the ability to integrate and manage various models using Navisworks
- Identify and resolve clashes between various models using Navisworks
- Present the project model with renderings and animations
- Create a conceptual estimate from the model
- Create a detailed quantity take off from the model
- Understand punch-listing and project close-out

Professor Objectives

My personal goals are to:

1. Facilitate critical thinking
    a. Not telling you what to think, developing how you think
2. Cater to all learning types: visual, audible and kinesthetic
3. Provide a fair learning environment
4. Be approachable (semester end assessments)

Required

There are no required textbooks for this class.

- WSU Canvas Portal will be used
- Must have a Jumpdrive to keep assignments on (bring to every class) (and/or) a cloud account

You will be required to participate in a design charette with DET and IDT students as part of the grade for this course. The charette is an intense 48 hour design competition to come up with a design solution and proposal to satisfy the objectives given on Thursday September 11, 2014 at 4:00 P.M. You need to make arrangements to be off of work and free from other obligations to allow full concentration on this project for the entire time. **Your final proposal and deliverables will be due on Saturday September 13, 2014 at 4:00 P.M.** A formal reception will be held at 7:00 P.M. for you and your family and guests to see your work and the winner will be announced. Please contact the course instructor, Jeremy Farner (jfarner@weber.edu), if you have questions regarding this requirement.

Class Attendance

This is a hybrid class. Tuesday will be taught on campus and Thursday will be facilitated via an online GoTo Meeting environment. Attendance is required in class unless otherwise noted. Weather complications and work interferences are bound to happen; in these cases class will be canceled. Class participation is part of your grade. However, you are adults and attendance is at your discretion. If you miss class you are responsible for the material covered in class. ***Lectures will not be repeated on an individual basis and copies of notes will not be provided.*** *It is up to you to use your charm to get notes and other missed material. Find a buddy!*

Each student receives two excused absences for the semester without hurting their grade. Additional absences due to illness or other circumstances beyond a student's control will be handled on a case-by-case basis and will also require documentation.

Homework

Students are expected to spend 2 hours each week outside of class for each hour of in-class time. More hours might be necessary. Students who take this class should plan their schedule with this time commitments in mind.

- Assignments are due before class via the Canvas Portal
- All assignments are done in digital format (created on a computer- not by hand)
- Late assignments will receive half credit if 1 week late
    - Anything later than one week will receive no credit
- Name and assignment title are required on everything!
    - **All assignment titles will follow this scheme:**
        - **Initials: assignment name: date**
        - **EX: JAL: Chapter 3: 01-15-13**

Emergencies: If you will be unable to turn in an assignment or take an exam on the date scheduled due to an illness or emergency of some kind, you must contact the professor before the date in question if at all possible, or within 24 hours of the date. **I am flexible and will work with you, but do not appreciate being taken advantage of.*

Late Work: Students should make every effort to complete course work on time. Should an emergency or conflict arise where the student will not be able to complete the work as scheduled, the student should make alternate arrangements with the instructor before the course work is due. Make up work will be accepted solely at the instructor's discretion and will be subject to a late penalty. **I do not believe in any student failing extra credit work may be made available.*

Technology Review

Certain software programs are vital to the design and construction industry. Many of these programs are available free to students. The following programs will be reviewed in class:

- Autodesk Revit Architecture
- Autodesk Navisworks Manage
- Autodesk 360 – Glue, Field, Recap
- Trimble Sketchup
- Bluebeam Revu
- Microsoft Project
- Free Tools
    - Jing, Zoom-It, DWG Trueview, Microsoft Windows Live, Google Earth, Tekla BIMsight

Course Grading:

Letter grades for the course will be assigned approximately as follows:

94 % or more	A	74 - 76 %	C
90 - 93 %	A-	70 - 73 %	C-
87 - 89 %	B+	67 - 69 %	D+

84 - 86 %	B	64 - 66 %	D
80 - 83 %	B-	60 - 63 %	D-
77 - 79 %	C+	59 % or less	E

Remember, a grade of C or better is required in all DET courses (a grade of C- is not acceptable).

Student may informally challenge a grade by verbally discussing the grade with professor. Informal challenges must be made within seven days of the time when the results are available to the student. Informal challenges which are not resolved to the student's satisfaction within fourteen days must be formally challenged. Any grades that are formally challenged by a student must be submitted in writing to the instructor within fourteen days of the time when the grade was available to the student. The written challenge must include proper documentation supporting the student's reason for questioning the answer. The burden of proof resides on the student.

Quizzes, Assignments, Presentations and Exams

Look up Student Syndrome. It refers to the phenomenon that many people will start to fully apply themselves to a task at the last possible moment before a deadline. It also implies that people do not fully apply themselves unless they are going to be graded, awarded or punished.

- **Quizzes**: There will be a short quiz at the beginning of **each** class covering the reading material that is assigned.
- **Examinations**: 2 Midterms and Final examination will be given in class. They will be based on items discussed in presentations (including guest lecturers), demonstrations and class discussions.

Students will be expected to successfully complete multiple projects throughout the course of the semester. Projects will be graded on professionalism, execution, creativity, technical merit, and communicative value.

File Security and Disks:

Students are responsible for the security of their files. They should have multiple copies on multiple sources (laptop, home computer, flash drives) at all times. Given a faulty media file, the instructor will assist students in attempting to recover lost files. However, ultimately each individual is responsible for maintaining their digital data. Loss of data, files, or other associated items needed for a project will require that a student recreate their work, with no exceptions.

Although a rare occurrence, Flash Drives have been known to become corrupted, resulting in the permanent loss of the data. As such, **it is highly recommended that students use Flash Drives for storage only, and that they not work directly from them.** Instead, they should work from a copy on your local hard drive, and then save to the flash drive once they are finished working with the file(s).

Computer Lab Policy:

1. The computer labs are restricted to **ONLY** those students registered in the current semester for a class in the Engineering Technology or Construction Management Technology departments within the College of Applied Science and Technology.
2. **NO** food or drinks are allowed in the computer labs.
3. **DO NOT INSTALL ANY PROGRAMS ON THE MACHINES IN ANY OF THE LABS.**

4. Viewing or use of **ANY PORNOGRAPHIC MATERIAL IS STRICTLY PROHIBITED!** Anyone caught viewing pornographic material will not only be asked to leave, but will have their lab privileges **REVOKED**.
5. No one should ever abuse the equipment in any way.
6. No one should use any command or function to copy or backup licensed software from any WSU computer. It is a violation of Federal Copy Right Laws to possess pirated software. Anyone who is found guilty of such violations will be expelled from the College of Applied Science and Technology and Weber State University.
7. Do not disconnect or connect any devices in the lab. If you are having problems with any device please immediately notify the lab aide on duty.
8. When in the labs please keep your level of noise down. Other students may be working and may not appreciate your conversation from across the room. Please take social conversations outside the labs.
9. No speakers are provided, if you need to listen to music or videos please use your personal headphones.
10. The computers shut down after 30 minutes of "inactivity". (No mouse movement or key strokes) All program changes, internet browsing, temporary files, and your saved files on the C: drive including viruses is removed when the computer is shut down. Always shut down the computer you used before you leave.
11. The D: drive is not protected nor does it get erased on these computers after shut down or restart. It is a local drive only seen on the computer you are working on. Use it while you are working or have forgotten your flash drive. This drive gets whipped every semester so don't forget to get the information you have saved to the D: drive.

Laptops & Cell Phones:

It is permissible to bring a laptop (notebook, palmtop) computer to class for the purpose of taking notes. Turn the sound OFF--- the clicking, clacking, or sound effects distracts other students.

Similarly, there will be no tolerance for beeping, chirping, ringing (or any other sound) from a pager or cell phone in class. If students must use your cell phone for any reason, they must leave the room.

Academic Ethics

Students are expected to uphold the standards of academic ethics and honesty set forth in the student code found in Weber State's Policies and Procedures Manual Section 6-22.IV.D2. The following are specifically included:

1. Plagiarism, which is representing someone else's ideas or words as your own
2. Working with another person on graded coursework without the instructor's permission.
3. Giving or receiving any course materials from this or previous semesters, including Quiz solutions, exams, or any other graded item.
4. Making copies of copyrighted materials without the author's permission, except as allowed by the US copyright law. All course materials for this course are copyrighted.
5. Any use of your phone during an exam, including taking your phone out of your pocket to check the time, see who is calling, or turn it off.

Violation of this policy may include one or more of the following sanctions:

1. Requiring the student to complete a similar gradable assignment.

2. Giving the student a zero on the gradable assignment.
3. Giving the student an "E" for the class.
4. Sending a memo to the Dean of Students detailing the incident and the sanctions.
5. Filing a complaint with the Dean of Students regarding the student's behavior. In this case the sanctions will be determined by the Dean of Students in accordance Weber State's Policies and Procedures Manual.

No learning takes place until a question is posed or a personal need is discovered!

Jump to Today

Course Syllabus

MANUFACTURING ENGINEERING TECHNOLOGY
MFET 4610

SENIOR PROJECT PLANNING & ESTIMATING

Rick W. Orr

Fall 2012
Course Description (2011-2012 Catalog)

This is designed as a capstone course for students and is to be taken in the senior year of their program. The course will teach students entering Senior Project fundamental principles in Project Management, Cost Estimating, and Engineering Economics that will be necessary to successfully complete their Senior Project experience. Students must apply and gain departmental approval before entering Senior Project. Approval is based on an interview with department faculty and fulfilling the prerequisites listed on the "Senior Project Requirements Sheet" available from the department secretary. All students approved for Senior Project will register for this course regardless of individual project group assignments. Three lectures per week. Co-requisite: MFET 4610 Lab

Please note that this course will be taught in "flipped" mode. Students will be expected to review PowerPoint material and related text material as homework; quizzes will be given to check to see if the material was reviewed. Class time will then be spent working problems and in discussion. There are several team assignments to check progress on the senior project as well as two exams. No comprehensive final will be given.

Text: Senior Project Planning and Estimating Student Manual (WSU Printing)

Instructor: Rick W. Orr Phone: 801-626-7514 E-Mail rworr@weber.edu

Goals:

The major objective of this course is to have students demonstrate appropriate mastery of the knowledge, skills and modern tools of project management, cost estimating and selected principles of production management. The success of these objectives will be demonstrated primarily through the performance of a successful senior project. Students will also gain a better understanding of professional, ethical and social responsibilities as they pertain to the discipline. Details of these objectives are as follows:

a) Demonstrate appropriate mastery of knowledge, skills and modern tools in the discipline, including technologies of materials, manufacturing processes, tooling, automation, production operations, maintenance, quality, industrial organization and management, and statistics (ABET Outcome a).

b) Demonstrate an ability to select and apply a knowledge of mathematics, science, engineering, and technology to engineering technology problems that require the application of principles and applied procedures or methodologies (ABET outcome b)

Specifically students will:

i. Converse professionally using appropriate terminology of the discipline.

ii. Understand the role and importance of planning, cost estimating and management of a project.

iii. Know how to use basic project management tools/MS Project Software.

1. Develop a Gantt Chart

2. Develop and analyze a PERT Chart.

iv. Estimate the cost of selected manufacturing operations.

v. Perform a Type I Break-Even Analysis.

vi. Perform a Make/Buy Analysis.

vii. Understand and apply basic engineering economic principles dealing with cash flow, the time value of money, Depreciation, ROI/ROA

c) Identify, analyze and solve technical problems. (ABET outcome f). Specifically students will solve engineering economic problems in this class.

d) Function effectively on teams (ABET Outcome e). Specifically students will produce a team cost estimate.

e) Demonstrate an ability to apply written, oral, and graphical communication in both technical and nontechnical environments; and an ability to identify and use appropriate technical literature. (ABET outcome g) Specifically students must prepare all senior project first semester documentation.

f) Demonstrate a knowledge of the impact of engineering technology solutions in a societal and global context (ABET outcome i) Specifically students will understand ethical issues as they apply to the preparation of cost estimates.

g) Graduates must demonstrate the ability to successfully complete a comprehensive design project related to the field of manufacturing. This class supports the overall capstone project effort by providing skills related to project management, cost estimation and teamwork. The overall cost estimation documentation is produced in this class.

Student learning outcomes above will all be measured with student assignments, exams and the semester project (capstone cost estimate). Overall 80% of the class is expected to score 72 or above on class exams (outcome a, b, f) and 80% of the class is expected to score 72% or higher on the semester project. Additionally, an ethics related quiz will be given at the beginning of class and later to assess improvement.

Computer: Usage: Use of MS Project and Spread Sheets.

Grade Evaluation:

	Percentage
Exam I & II	50 %
Quizzes	15 %
Assignments	15 %
Term Project	20 %
	Total 100 %

Final Grades will be determined as follows:

A = 94 to 100

A- = 90 to < 94

B+ = 87 to < 90

B = 83 to < 87

B- = 80 to < 83

C+ = 77 to < 80

C = 70 to < 80

D = 60 to < 70

E = < 60

Note: Any student requiring accommodations or services due to a disability must contact Services for Students with Disabilities (SSD) in room 181 of the Student Service Center. SSD can also arrange to provide course materials (including this syllabus) in alternative formats if necessary.

ACADEMIC ETHICS:

All students are expected to observe the rights and responsibilities outlined in the WSU Student Code. Because an important part of being a college student is academic honesty, it is the expectation in this course that you will complete all academic work without resorting to cheating, plagiarism, lying and/or bribery. The WSU Student Code includes a more extensive list of prohibited behaviors; you should familiarize yourself with all aspects of the code. Students who commit infractions of the WSU Student Code will be dealt with according to procedures outlined in the code. Penalties could include receiving a failing grade for this course, being suspended from school, and the like. It is very important that you clearly understand this course expectation.

Date	Day	Details	
Sun, Sep 21	Sun	Team Assignment - Project Schedule (https://weber.instructure.com/courses/347405/assignments/1744525)	due by 11:59pm
		Team Assignment - Work Breakdown Structure (https://weber.instructure.com/courses/347405/assignments/1744524)	due by 11:59pm
Wed, Oct 1	Wed	Flipped quiz/assignment - time study/labor cost analysis (https://weber.instructure.com/courses/347405/assignments/1744526)	due by 10:59pm
Fri, Oct 10	Fri	Exam 1 (https://weber.instructure.com/courses/347405/assignments/1744530)	due by 10:30am
Fri, Oct 24	Fri	Breakeven Practice (https://weber.instructure.com/courses/347405/assignments/1744534)	due by 11:59pm
Mon, Oct 27	Mon	Learning Curves & CER Practice (https://weber.instructure.com/courses/347405/assignments/1744528)	due by 12:59am
Fri, Oct 31	Fri	Team Assignment - BoM with Costs Cost Estimating Spreadsheet (https://weber.instructure.com/courses/347405/assignments/1744527)	due by 11:59pm
Fri, Nov 14	Fri	Term Project (https://weber.instructure.com/courses/347405/assignments/1744529)	due by 4pm
Tue, Nov 18	Tue	Assignment 8 Engineering Economics (https://weber.instructure.com/courses/347405/assignments/1744532)	due by 11:59pm
Mon, Nov 24	Mon	Exam 2 (https://weber.instructure.com/courses/347405/assignments/1744531)	due by 5pm
	Other		

Date	Day	Details
		Flipped Assignment/Quiz 1 on Ethics (https://weber.instructure.com/courses/347405/assignments/1744533)
		Flipped Assignment/Quiz on Teams (https://weber.instructure.com/courses/347405/assignments/1749053)
		Flipped Quiz 2 on Project Management and WBS (https://weber.instructure.com/courses/347405/assignments/1745040)
		Flipped Quiz on Breakeven (https://weber.instructure.com/courses/347405/assignments/1759852)
		Flipped Quiz on Cost Estimating Introduction (https://weber.instructure.com/courses/347405/assignments/1749103)
		Flipped Quiz on ECM & Equipment specification (https://weber.instructure.com/courses/347405/assignments/1759687)
		Flipped Quiz on Engineering Economics (https://weber.instructure.com/courses/347405/assignments/1759404)
		Flipped Quiz on Learning Curves (https://weber.instructure.com/courses/347405/assignments/1759853)
		Flipped Quiz on Material Selection (https://weber.instructure.com/courses/347405/assignments/1759723)
		Flipped Quiz on Overheads (https://weber.instructure.com/courses/347405/assignments/1759800)
		Flipped Quiz on Product Pricing (https://weber.instructure.com/courses/347405/assignments/1759918)
		Flipped Quiz: Material Costs (https://weber.instructure.com/courses/347405/assignments/1759323)

Weber State University
Design Graphics Engineering Technology
DET 4400 – Technical Illustration II

Course Outline

Catalog Course Description:
The study of professional design presentation and the processes, tools, and media used. Problem definition, visual organization, incorporating visual identity, integrating word and image, information design and design for interactive media.

Instructor:
J.D. Julander – Phone: 801-605-8059 – E-Mail: jubius@hotmail.com
MMET department Secretary – Pat DeJong – Phone: 801-626-6305

Office Hours:
You can call me after 6:00 P.M. and before 10:00 P.M. any day but Sunday.

Prerequisites:
DET 3300 and DET 3400

Time, Days, and Location:
Lecture - 7:30 A.M. - 8:20 A.M. - M,W, F - Engineering Technology 101

Text:
None (Internet Resources & Tutorials Provided by Instructor)

Required Materials:
None

Homework:
Homework assignments go hand in hand with the material covered during classroom lectures. Assignments are to be submitted via Canvas by the end of the due date. Late homework is accepted but 1 point will be docked for every day the assignment is late up to 3 days after the due date. No homework will be accepted 4 days late or later. If I dock you on an assignment because of something you can fix, you may fix what I specify and turn it in again for full credit (given it isn't late). All homework assignments must be submitted via Canvas.

Presentations:
Presentations (if any) will be done individually.

Homework and Presentation Values:

Homework Assignments	60%
Presentation 1	10%
Final Presentation	30%

Grading Policy: Grades will be computed based on the following as a result of points earned on homework and exams:

94-100% =	A	74-76% =	C
90-93% =	A-	70-73% =	C-
87-89% =	B+	67-69% =	D+
84-86% =	B	64-66% =	D
80-83% =	B-	60-63% =	D-
77-79% =	C+	59-0% =	E

Weekly Schedule

Date	**Topic**
Week 1	Getting Started and Defining Technical Communication (Rediscovering Max) Basic Modeling Assignment (Getting back into the swing of things)
Week 2	Multimedia Authoring, Scripting, and Production More Animation Concepts and Keyframing
Jan 21 Week 3	**Martin Luther King Holiday – No Class** Web Page Layout and Design Non-Linear Editing in Premiere Pro
Weeks 4-5	Business Presentations & Parent and Child Hierarchies
Feb 18 Weeks 6-7	**President's Day Holiday – No Class** Photorealistic Rendering Creative Thinking
Week 8	Sprucing up Presentations, Eye Candy Midterm
Week 9	Advanced Video Production
Week 10	More Advanced 3DS Max
Mar 4 - Mar 8 Week 12	**Spring Break – No Classes** More Advanced 3DS Max, Advanced Photoshop, Advanced Animation
Weeks 13-14	Presenting 101 and Presenting 4400
Week 15	Business Presentations (MS Powerpoint) Part II, Presenting Pre-vis
Week 16	Final Project Presentations

Weber State University
Design Engineering Technology

DET 4470 – Advanced Catia V5
Spring 2013

Course description:

An advanced CAD course featuring 3D parametric modeling using commercially available software. Studies in parametric design and design intent, applying surfaces, rendering, and creating animated presentations.

Prerequisites: DET 3470

Course Instructor: Meg Leatherbury

Office: ET 214L
Office hours: Monday and Wednesday 10:15am ~ 11:30am, 12:45pm ~ 1:30pm
Tuesday: 8:30am ~ 9:00am
Phone: (801) 626-6951
Email : megumiusui@weber.edu (You must include your name and class number 4470 in the subject line)

Course Schedule: Two 75 minute sessions per week, 3 credit hours
Tuesday and Thursday 9:00AM – 10:15AM @ ET 101

Required Textbook and tools:

- Advanced CATIA V5
  By: Meg Leatherbury
  http://www.lulu.com/shop/megumi-leatherbury/advanced-catia-v5/paperback/product-20487328.html

- 2 GB Thumb Drive

Course Administration:

Lecture	This class is a hybrid course. Lectures are given only when it is necessary. It is the students' responsibility to secure all materials and information presented in lecture, even with an excused absence. Lectures will not be repeated.
Absence	Students must inform the instructor of an absence in advance. Students will be asked for legitimate documentation if necessary. In case of circumstances beyond students' control, it will be handled case-by-case. Attendance may be taken at any/all meeting times.
Philosophy	Students are expected to be self-disciplined, to be prepared, to be on-time with assignments, and to do original work. Failure to do so will result in the loss of course points and/or failure.
File Security	Students are responsible for the security of their files. Students are expected to maintain their digital data. In the case of data loss, students are required to recreate

	their work, without exceptions.
Student Conduct and Policies	• Students are expected to be respectful and professional towards the instructor and any member of the class. • Students are expected to arrive on time for all class and lab sessions. • Students are required to set up and use a Weber State University email account to communicate with the Instructor as needed. • **Assignments have the specified due date, time, and the way to submit. Follow the instructions carefully. One-week late assignments will be accepted without penalty, however; they must be shown to the instructor in person. Other late assignments will not be accepted unless an arrangement been made with the Instructor and because of extreme circumstances. (Not coming to lab, or forgetting, does not rate as an extreme circumstance.)** • No student will be allowed to make up any written exam, lab practice, exam, or quiz unless they have an official or medical excuse. • **Students found cheating, engaging in plagiarism, copying another student's data, using disallowed materials during a written examination, lying to the course instructor about his/her own work, stealing tests, quizzes, or answer keys, or any other any such activities will be considered in conflict with the printed academic honesty guidelines as set out by Weber State University. In such cases the matter will be reported to the Office of the Dean and the appropriate Weber State University officers for consideration and possible disciplinary action.** • Any students requiring accommodations or services due to disability must contact Services for Students with Disabilities (SSD) in room 181 of the Student Service Center. SSD can also arrange to provide course materials (including this syllabus) in alternative formats if necessary. • Electronic devices (cell phones, pagers, etc.) are not allowed in the room during any test, exam, or quiz!
Laptops, cell phone and other electronics	It is permissible to bring your own laptop to lecture for taking notes purpose. Any electronic devices should be on silent. If your device becomes a disturbance to class members, you will be asked to turn it off, or not to bring it back. If you need to use your cell phone, please leave the room.
Lab Rules	• **No food or drinks of any kind will be allowed in any lab sessions!!!** • A Wildcat Card will be necessary to access to the labs. There are locks on CAD labs that allow access by card swipe. • **Abuse of the equipment will not be tolerated.** • It is a violation of Federal Copy Right Laws to possess pirated software. Anyone who is found guilty of such a violation will be expelled from the

	College of Applied Science and Technology at Weber State University. • No one may use any command or function to copy or backup licensed software from any WSU computer. • Any student not following these lab rules may be asked to leave the lab or may fail the course.

Weekly Topics

Week	Topics	Assignments
1 **Jan 8, 9**	Course outline/Introduction Solid Modeling review	Email assignment Handout
2 **Jan 15, 17**	Advanced Solid Modeling	Assignment handout **(Due Jan 22 on Canvas)**
3 **Jan 22, 24**	Chapter 1: Sheet metal Designing I	Chapter 1 Assignment **(Due Jan 29 on Canvas)**
4 **Jan 29, 31**	Chapter 2: Sheet metal Designing II	Chapter 2 Assignment **(Due Feb 5 on Canvas)**
5 **Feb 5, 7**	Chapter 3: Sheet metal Drafting	Chapter 3 Assignment **(Due Feb 12 on Canvas)**
6 **Feb 12, 14**	Chapter 4: Kinematics I	Chapter 4 Assignment **(Due Feb 19 in lab, right after lecture)**
7 **Feb 19, 21**	Chapter 5: Kinematics II	Chapter 5 Assignment **(Due Feb 26 in lab, right after lecture)**
8 **Feb 26, 28**	Chapter 6: Kinematics III	Chapter 6 Assignment **(Due Mar 12 in lab, right after lecture)**
9 **Mar 5, 7**	☆ **Spring Break** ☆	
10 **Mar 12, 14**	Chapter 7: Surfacing I	Chapter 7 Assignment **(Due Mar 19 on Canvas)**
11 **Mar 19, 21**	Chapter 8: Surfacing II Term Project Introduced	Chapter 8 Assignment **(Due Mar 26 on Canvas)**
12 **Mar 26, 28**	Term Project Lab Time Attendance is required	
13 **Apr 2, 4**	Term Project Lab Time Attendance is required	
14 **Apr 9, 11**	Term Project Lab Time Attendance is required	
15 **Apr 16, 18**	**Term Project Due: April 18th, 2013**	
16 **Apr 23, 25**	**No Final**	

Grading Criteria:

Homework assignments (Attendance, Class work, Quizzes, and others)	50%
Term Project	50%

	100%

Testing and Grading:

Homework will be assigned throughout the semester and will count toward the final grade given in the class. Students are responsible for keeping track of their grade throughout the semester on-line. The instructor cannot inform students of their grade over the phone or via emails. The instructor reserves the right to modify the requirements of the class during the semester and will inform the students of any changes during lecture.

Grading Policy:

Grades will be assigned using the following total earned scores.

94 – 100% = A	74 – 76% = C
90 – 93% = A-	70 – 73% = C-
87 – 89% = B+	67 – 69% = D+
84 – 86% = B	64 – 66% = D
80 – 83% = B-	60 – 63% = D-
77 – 79% = C+	59 – 0% = F

Weber State University

Design Engineering Technology 4500
Hydraulic and Pneumatic Applications

Course Outline

Catalog Course Description:
Examines the components of hydraulic and pneumatic systems, including a detailed study of each type of system and the integration of all components required for machine design. The symbols used to document hydraulic and pneumatic systems and the selection of components from vendor catalogs will be included in the detailing of complete machines.

Objectives:
To obtain a working knowledge of the following principles, practices, and techniques as applied to hydraulic, pneumatic, and electrical systems as they are interrelated with respect to multiple, open-ended design problems in a project based curriculum:

- Creation of hydraulic and pneumatic schematics using flowcharting software for engineering applications
- Selection of hydraulic and pneumatic system components in the design of simple machines
- Calculation of hydraulic, pneumatic, and electrical variable quantities as related to specific systems
- Design of support structure for hydraulic and pneumatic components in machine applications
- Analysis of hydraulic elements in various equipment configurations

Instructor:
Glen West - Engineering Technology 214B - Phone (801) 626-6301 – E-mail: glenwest@weber.edu
ET Department Secretary – Pat DeJong - Phone (801) 626-6305

Office Hours:
Refer to Schedule

Prerequisites:
MFET 3320/MET 3400

Time, Days, and Location:
Lecture - 11:30 A.M.-12:20 P.M. – M,W,F – Engineering Technology 238

Text:
DET 4500 Hydraulic and Pneumatic Applications Course Materials - Spring 2013 - WSU Printing

Required Materials:
Engineer's Computation Pad- Green tint-5 Squares/Inch, or equivalent

Homework:
Homework problems will be assigned from the material covered during classroom lectures. Homework assignments are due in class on the due dates indicated in the lecture schedule. **Late homework will not be accepted.** Homework assignments requiring calculations are to be completed on engineers computation paper (green tint), with the solution clearly identified. Microsoft Excel will be required for select homework assignments. Spreadsheets are to be submitted, in person **(no e-mailed files)**, on 8 ½" x 11" standard white copy paper. Homework assignments requiring design schematics or system layouts are to be completed using Microsoft Office Visio or equivalent system design software and are to be submitted, in person **(no e-mailed files)**, on 8 ½" x 11" standard white copy paper with a formatted border and title block. Design Assignments are to be completed using some form of CAD software and are to be submitted, in person **(no e-mailed files)**, on standard drawing paper ("B" size) with a formatted border and title block. **Some method for backing up your work is highly recommended.**

Homework Values:

Calculations, spreadsheets, system designs, layouts, schematics, and design assignments	100%
Total	100%

Grading Policy: Grades will be based on the following schedule as a result of points earned on assignments.

94-100% =	A	74-76% =	C
90-93% =	A-	70-73% =	C-
87-89% =	B+	67-69% =	D+
84-86% =	B	64-66% =	D
80-83% =	B-	60-63% =	D-
77-79% =	C+	59-0% =	E

Rights/Responsibilities: This course outline is the governing document for this course. Your decision to take this course indicates your agreement to the conditions of this course outline. Please review the WSU Policies and Procedures Manual student code regarding ethics found at http://documents.weber.edu/ppm/6-22.htm , specifically section IV. Academic dishonesty, as described in the WSU Policies and Procedures Manual, will not be tolerated. Consequences may vary from grade adjustment to expulsion from the university.

Weekly Schedule - DET 4500 - Spring Semester 2013

Date	Topic	Homework Assignment
Week 1 Jan 7-11	Hydraulic Systems	Assignment 1 **Due Jan 16**
Week 2 Jan 14-18	Hydraulic Systems	Assignment 2 **Due Jan 23**
Week 3 Jan 21-25 **Jan 21**	Hydraulic Systems **Martin Luther King Holiday**	Assignment 3 **Due Jan 30**
Week 4 Jan 28-Feb 1	Hydraulic Systems	Assignment 4 **Due Feb 6**
Week 5 Feb 4-8	Hydraulic Systems	Assignment 5 **Due Feb 13**
Week 6 Feb 11-15	Hydraulic Systems	Assignment 6 **Due Feb 20**
Week 7 Feb 18-22 **Feb 18**	Hydraulic Systems **President's Day Holiday**	Assignment 7 **Due Feb 27**
Week 8 Feb 25-Mar 1	Hydraulic Systems	Assignment 8 **Due Mar 13**
Week 9 **Mar 4-8**	**Spring Break**	
Week 10 Mar 11-15	Hydraulic Systems	Assignment 9 **Due Mar 20**
Week 11 Mar 18-22	Pneumatic Systems	Assignment 10 **Due Mar 27**

Week 12 Mar 25-29	Pneumatic Systems	Assignment 11 **Due Apr 3**
Week 13 Apr 1-5	Pneumatic Systems	Assignment 12 **Due Apr 10**
Week 14 Apr 8-12	Electrical Systems	Assignment 13 **Due Apr 17**
Week 15 Apr 15-19	Electrical Systems	

Glen West
Weber State University
Design Engineering Technology

Education:

- M.S. Mechanical Engineering, University of Utah, May 2003
- B.S. Mechanical Engineering of Utah, June 1997
- A.A.S. Drafting and Design Technology, Utah Valley University, August 1985

Academic Experience:

- Weber State University, *Associate Professor*, Ogden, Utah, 2013 -present
- Weber State University, *Assistant Professor*, Ogden, Utah, 2008-2013

Non-Academic Experience:

Full time Employment

- FMC Airport Systems - Jetway, Ogden, Utah - December 1987 to December 2007
  Mechanical Engineer
- Equi-Tech, Salt Lake City, Utah – June 1984 to December 1987
  Mechanical Designer

Patents

FMC Airport Systems –Jetway

- Adaptable Cab Floor Engagement Assembly for Commuter and Conventional Jet Aircraft-Patent Number US 7,188,383 B2
- Gangway System-U.S. Patent Application Number 09/506,964

Certifications or Professional registration:

- State of Utah, Professional Engineer-Discipline: Mechanical

Honors, awards, publications:

- Nominated three times for the Crystal Crest Award – A distinguished award spotlighting Weber State University's finest students, faculty, and staff – Spring 2009, 2010, and 2013.
- Technical Paper - Fishing for Education: A Collaborative Educational Aquatic Project Intellectbase International Consortium Academic Conference - Las Vegas, Nevada – (2010) - Manuscript published in the Peer Reviewed Conference Proceedings of the Intellectbase International Consortium, International Handbook of Academic Research and Teaching, 2010 Proceedings, Volume 13, ISSN 1940-1876.
- Journal Article - Biomechanical and Psychophysical Aspects of Handwheel Turning (2003) Proceedings of the 1st Annual Regional National Occupational Research Agenda (NORA) Young/New Investigators Symposium, 197-210.
- Master of Science Thesis - Effects of Handwheel Diameter, Orientation, Turning Rate and Hand Forces on the Biomechanical and Psychophysical Aspects of Handwheel Turning Operations (2003) Master of Science Thesis-University of Utah.

Institutional and professional service:

- Program Director – Design Engineering Technology – January 2009 to present **–** Responsible for program changes, arrangement and organization of professional advising committee and meetings, administration of senior project application and proposal approval process and interdepartmental coordination of advisors and student teams, cooperative work experience course and internships, directed readings advisement, CAD

lab aid scheduling and management, adjunct faculty selection and evaluation, student academic advising, graduation clearance, transfer articulation agreements, course scheduling, text book orders, concurrent enrollment, and BIS student advisement.

- Presented information to 7th Grade students registered in the AVID class at Highland Junior High School - Ogden, Utah. Information regarding career path choices delivered in a one-hour classroom presentation. Emphasis placed on career opportunities in the design graphics field.

- Participated in multiple "Technology Tuesday" events involving students from multiple Davis and Weber county high schools - Introduced students to the Design Engineering Technology program in an effort to recruit students to the program. Presented program specific data during four-30 minute discussion sessions. Meetings scheduled through Rainie Ingram, COAST Recruiter.

- Preparation and Lead Involvement during ABET Visit – 2009 - Prepared response document alleviating program weaknesses, concerns, and observations for improvement cited by ABET during visit. Developed and produced all Weber State University 2010-2011 Catalog changes, as applicable to the Design Graphics Engineering Technology program, based on recommendations made by ABET.

- Business After Hours – 2010 - Supported activities associated with the "Business After Hours" event held in an effort to showcase educational programs offered by the College of Applied Science and Technology at Weber State University to members of the Ogden-Weber Chamber of Commerce.

- WSU Regional CO_2 Dragster Racing and Architectural Projects Competition **–** Assisted in the organization and race competition involving students from local high schools, who designed and produced CO_2 propelled dragsters using computer aided design tools and rapid prototyping methods and techniques. The focus of the event was to promote Engineering Technology programs and to specifically introduce potential, future students to the Design Engineering Technology program at Weber State University.

Professional development activities:

University of Utah Doctor of Philosophy Mechanical Engineering In-Process*

*Work completed toward the degree and degree requirements:

- Successfully completed 18 credit hours of course work towards degree; 18 credit hours required
- Successfully completed the Ph.D. Qualifying Examination; March 25th, 2013
- Successfully completed of 4 credit hours of Ph. D. Dissertation work towards degree; 14 credit hours required
- Paper written for the Ph.D.Qualifying Examination titled *Work and Exergy Analysis for Compressed Air Energy Storage Systems* – Manuscript accepted for publication by the World Journal of Engineering and Technology – July 24, 2013

- *Work remaining beyond the 2013-2014 Academic Year
  Completion of Research Proposal and successful defense of said proposal
- 10 credit hours of Ph. D. Dissertation work
- Oral defense of Doctoral dissertation

Jeremy Ray Farner
Weber State University
Design Engineering Technology

Education:

- M.S. – Building Construction Management, Purdue University, 2011
- B.S. - Design Graphics Engineering Technology, Weber State University, 2003

Academic experience:

- Weber State University, *Assistant Professor*, Ogden, UT 2011-present
- Weber State University, *Instructor*, Ogden Utah July 2008-2011
- Weber State University, *Adjunct professor*, Ogden, Utah 2003-2004
- The Church of Jesus Christ of Latter Day Saints, *Seminary Teacher*, Ogden, Utah 2002-2003

Non-Academic experience:

Full time Employment:

- JH Designs & Consulting Services, *President/ CEO*, Design/ Build/ Pre-Construction Services, Clinton, Utah, May, 2003 - Present
- Destination Homes, *Design Center Manager*, Design/ Build, Custom/ Production Home Builder, Layton, Utah, 2007- 2008
- Ivory Homes, *Architectural Design Specialist*, Design/ Build, Custom/ Production Home Builder, Layton, Utah 2005 – 2007
- ATK Composites, *Tool Designer*, Aerospace Engineering, Clearfield, Utah 2003 - 2004

Part time Consulting (2003-Present):

- American Institute of Building Designers (AIBD), convert testing from paper to online & develop/ update new technical standards for building sets of plans.
- Habitat for Humanity Weber/ Davis chapter board, organize fundraising, Re-store floorplan coordination, student volunteer opportunities.
- State of Utah Board of Regents, Develop two Technology Intensive Concurrent Enrollment (TICE) courses to replace existing curriculum across the state
- Brent Stuart, Near Net Zero Home Design
- Mike Elwell Construction (Partnership), Estimator, Designer, Building Science, Green Building, Building Product Selection
- KLN Construction , Feng Shui Design, Green Building, Building Product Selection, Estimator, Designer
- Nilson Homes, Green Building, Building Product Selection, Building Science, Designer
- Ivory Homes, Designer, Building Science, Green Building
- The AVL Group, Designer, Building Science, Tenant Improvement, Green Building, Product Selection
- James Hardie Siding Product Usage for Elevation Improvements in Utah County
- Cereal Foods, AutoCAD implementation Training

Certifications or professional registrations:

- United States Green Building Council (USGBC) LEED Green Associate
    - Utah Chapter & Student Chapter Advisor
- National Association of Home Builders (NAHB) Certified Green Professional (CGP)
- Associated Schools of Construction (ASC)
- Rocky Mountain Solar Training Program (RMSTP)
- Solar Energy International (SEI)
- American Society of Engineering Educators (ASEE)

Honors & Awards:

- Nomination for community engaged scholar award (2015)
- Multiple teacher of the year nominations for Crystal Crest Awards
- Department of Energy Grant Photovoltaic & Solar Hot Water Train the Trainer Program, PV & SHW training for 6 faculty members, & Lab Funding for PV & Wind technologies.

Service Activities:

- BIS in Architectural Engineering Technology Adviser
- Faculty Senator representing COAST (Fall 2011-2014)
- Environmental Issues Committee – Faculty Senate Sub Committee (Fall 2011-2014)
- Faculty & Staff Association Board Member (2011-Present)
- Concurrent Enrollment Director for Program (2010-Present)
- Various promotion and tenure committees
- NCUR Abstract reviewer NCUR (14)
- Facilitator/ Moderator NCUR (3 Presentations on Sustainability)
- Judge and Sponsor for various inter-collegiate competitions
- Department tours for public entities (Chamber of commerce, scouts, schools, clubs, etc.)
- Advisory Committee member for DET architecture and mechanical, CMT FM
- Faculty Advisor for USGBC Student Chapter
- USGBC Regional Chair for the State of Utah Fall Semester 2011
- Articulation agreement between Utah College of Applied Technology for DATC, OWATC, BATC
- Northern Utah Summer Robotics Camp Board Member/ Facilitator (2010-Present)
- Summer Welding and Electronics Engineering Technology (SWEET) Camp presenter

Publications & Presentations:

- LEED GA training workshop at 2014 Intermountain Sustainability Summit
- Introduction to Residential Architecture e-book & canvas course ($122,000 grant 2014)
- Introduction to Engineering & Technical Design e-book & canvas course ($125,000 grant 2013)
- ASEE National Conference Paper Presentation (2013)
- Distinguished service award in College of Applied Science & Technology (2012)
- "How Much Do U.S. University Students Know, And Want To Know, About Sustainability And Green Building? The Findings of a Survey, And Possible Implications for General Elective Curricula." (Master's Thesis 2011)

Professional development:

- Master online teacher certification
- Autodesk Revit, Navisworks training
- NAHB National Green Building Conference May, 2011, Salt Lake City, UT
- USGBC LEED 201: Core Concepts & Strategies May, 2011, Salt Lake City, UT
- Associated Schools of Construction (ASC) Regional Student Competition/ Conference (2011-Present)
- NAHB Business Management for Building Professionals May, 2010, Atlanta, GA
- NAHB Certified Green Professional "Green Building for Bldg. Professionals" May2010,Atlanta, GA
- Solar Energy International
    - PV 101 Preparation Course, June, 2010
    - PV 101 Solar Electric Design & Installation (Grid – Direct), June 2010
    - PV 201 Solar Electric Lab Week (Grid – Direct) June, 2011
    - PV 202 Grid Direct Design and the NEC, June, 2010
    - PV 203 Battery Based Design, May, 2011
    - PV 301 Solar Electric Lab Week (Battery – Based), June, 2011
    - ST 101 Solar Hot Water Design and Installation, July, 2010

Megumi Usui
Weber State University
Design Engineering Technology

Education:

- M.S. – Computer Graphics Technology, Purdue University, 2005
- B.S. - Design Graphics Engineering Technology, Weber State University, 2003

Academic experience:

- Weber State University, *Assistant Professor*, Ogden, Utah, July 2009-present
- Purdue University, *Teaching Assistant*, West Lafayette, Indiana 2003 - 2005

Non-Academic experience:

Full Time Employment:

- Daimler Trucks North America (Freightliner), *Mechanical Engineer II*, Portland, OR, 2006 –
- M-Tek, Inc., *Design Engineer*, Upper Sandusky, OH 2005-2006
- Subaru of Indiana Automotive, Inc., *CATIA 4V Trainer*, Lafayette, IN 2004

Part Time Consulting:

- Professional service at OLSA for DTNA from May to August 2013
- Drafting for Horimasa Co. Ltd. from July to August 2012
- Design Engineer at DTNA in 2010 from June to August 2010

Certifications or Professional Registrations:

- American Society of Engineering Education (ASEE)
- Northern Utah SolidWorks User Group
- Golden Key Society

Service Activities:

- Serving a Faculty Senate Environmental Issues Committees member (2010 – 2012)
- Participating Help desk support in Fall semesters (2009 – present)
- Serving a College Hearing Committees member (2013 – present)
- Attending COAST and PARC projects meetings
- Attending a Webinar for retaining women in the STEM fields
- Being the Departmental Honors Program advisor for the ET dept. (2011 – present)
- Peer Review Committee member three times (I was the chair twice)
- Being a Concurrent Enrollment representative for mechanical courses (2010 – present)
- Meeting with Fresenius for a possible GD&T training
- Participating WSU regional CO2 Dragster Racing & Architectural Projects Competition
- Providing a GD&T training for BioFire in SLC (Feb, 2014)
- Participating Science Olympiads: Metric moderator (2013 and 2014)
- Helping Major Fest for DET (2010 – present)
- Participating Technology Tuesday (November 2011)
- Attending Parent-Daughter Engineering Day (February 2011)
- Participating The Day at the Capital (February 2011)
- Participating Business After Hours (2010)
- Attending Explore the Possibility (2009)

Publications & Presentations

- "Vegilab and Aquaponics Indoor Growing System" was published in the Science, Technology, Engineering and Math (STEM) and Education conference in Hawaii, June 2014, and Institute of Electrical and Electronics Engineers (IEEE) SusTech conference in Oregon, July 2014.
- "Dimensioning" and "Tolerancing" in TICE: Introduction to Engineering & Technical Design textbook available on Canvas
- "Mobile Element Power Plant" to American Society for Engineering Education (ASEE) presented in San Antonio, Texas June 12 2012. (AC 2012-4590) and presented at the conference.

Professional development:

- Canvas TICE IETD Training for pilot teachers: I participated a webinar for Canvas TICE IETD Training since I started to use the course material for my 1060 class. September 11th, 2013.
- OSP Grant-Writing Workshop (2 days) I attended OSP Grant-Writing Workshop on the 25th and 26th of June, 2013 to learn where to find opportunities, and how to write a proposal.
- Women Tech Council Luncheon (February 22nd, 2013) 2 hours: I attended a mentor seminar of Women Tech Council sponsored to learn about how to be a mentor for students.
- Teaching training (March 28th, 2012) 2 hours: I attended a Two River high school to see concurrent enrollment classes are being conducted by Holly Barker.
- NUSWUG workshop (March 22nd, 2012) 3 hours: I attended a workshop in SLC for NUSWUG group for advancing SolidWorks techniques.
- Canvas training (March 14th, 2012) 3 hours: I attended a Canvas training course to learn how to use Canvas for all of my courses so that students can use it efficiently.
- NX CAD & CAM demos (November 17th, 2010) 2 hours: I attended NX CAD & CAM demos at L3 Communications, November 17th, 2010 to understand how NX works more clearly. L3 is moving to NX from SolidEdge.
- Solid Works 2011 demonstration (October 26th, 2010) 5 hours: I attended a Solid Works 2011 demonstration summit in Salt Lake City, October 26th, 2010 to see how other engineers apply surfacing and sheet metal design. At this summit, there were several sessions which we could choose to attend. I chose Surfacing, Sheet metal, and drafting.
- Solid Works 2010 demonstration (September 2009) 2 hours: I attended a Solid Works 2010 demonstration held in Ogden, September 2009 to brush up on my Solidworks knowledge and to see observe updates to the software.

Appendix C – Equipment

Equipment

EQUIPMENT SUMMARY EQUIPMENT USED IN THE DESIGN ENGINEERING TECHNOLOGY (DET), MANUFACTURING ENGINEERING TECHNOLOGY (MFET), MECHANICAL ENGINEERING TECHNOLOGY (MET) PROGRAMS AT WEBER STATE UNIVERSITY			
Quantity	**Equipment**	**Condition/ year obtained**	**Use in ET Curriculum**
1	Van Doren 120 Injection Molding Machine	Good	Plastics courses
1	Scotchman Punch Station 5413	New - 2005	Welding and General Use
25 (Upgraded) 25 (Upgraded) 18 (Upgraded) 26 (Upgraded)	Pentium D PC's Pentium D PC's Pentium D 930 3.0GHz Pentium D PC's	ET 202- New 2008 ET 103- New 2006 ET 101A – New 2006 ET 126 - New 2007	MFET, MET, DET programs
5 (Upgrade from 90-70's)	GE Fanuc PLC 90-30 Trainers	Good/2003	Automation course
1	Hewlett Packard 8150 Printer	ET 202 – New 2005	General Use
1	Legend EXT 120 Watt Epilog Laser	New - 2007	Plastics and General Use
1	Haas CNC Mill	New - 2003	CNC courses and applications
1	Haas CNC Lathe	New - 2003	CNC courses and applications
1	4 Axis Wire EDM 500	Good - 2005	Rapid Prototyping Course and General Use

1	Smart Board SB580	New - 2005	Class room ET 204
11	Faculty Computers	New 2005-2008	Faculty Offices

CAPITAL EQUIPMENT USED IN THE ET PROGRAMS AT WEBER STATE UNIVERSITY			
Quantity	Equipment	Condition	Use in ET Curriculum
CNC Machines ET 203			
1	Haas CNC Mill	Good	CNC courses and applications
1	Haas CNC Lathe	Good	CNC courses and applications
1	Mazak Vertical Mill VTC-16A	New	CNC courses and applications
1	EZ Trak Bridgeport Mill	Good	CNC courses and applications
1	CNC Wire EDM	Good	CNC and Rapid Prototyping Courses
4	Pentium IV PC's	Good	CNC and Rapid Prototyping Courses
General Machine Shop ET 201			
10	Nardini Lathes	Good	Conv. Machining Courses/apps.
11	Bridgeport Vertical Mills		Conv. Machining Courses/apps.
2	Vertical Bandsaws	Good	Conv. Machining Courses/apps.
1	Cylindrical Grinder	Good	Conv. Machining Courses/apps.
1	Horizontal Bandsaw	Good	Machining Courses/applications
1	Power hacksaw	Good	Machining Courses/applications
5	Pedestal Grinder	Good	Machining Courses/applications

1	Okamoto Surface Grinder	Good	Machining Courses/applications
1	Surface Grinder	Fair	Machining Courses/applications
2	Arbor Presses	Fair	Machining Courses/applications
1	Mitutoyo Microscope	Good	Machining Courses/applications
1	B&L Microscope	Good	Machining Courses/applications
1	Coordinate Measuring Machine	Good	Machining Courses/applications
1	Starrett Optical Comparator	Good	Machining Courses/applications
1	Brown &Sharp HITE-ICATOR	Good	Machining Courses/applications
1	Clevite SURFINDICATOR	Good	Machining Courses/applications
9	Granite inspection Blocks	Good	Machining Courses/applications

INSPECTION EQUIPMENT 3 ea. Mitutoyo Height Gage #192-670 7 ea. Starrett 0"-1" mic #T230XFL 15 ea. Mitutoyo Digimatic Caliper #500-196 8 ea. Brown and Sharpe BesTest #599-7031-5 7 ea. Mitutoyo mag base and indicator #3416 3ea. Mitutoyo Height Gage #192-670 7 ea. Starrett 0"-1" mic #T230XFL 15 ea. Mitutoyo Digimatic Caliper #500-196 8 ea. Brown and Sharpe BesTest #599-7031-5 7 ea. Mitutoyo mag base and indicator #3416 6 ea. Starrett Adjustable parallel 6 ea. Starrett Adjustable parallel 8 ea. Starrett edge finder #827A 1 ea. Starrett radius gage set #S167CHZ 10 ea. Starrett center gage #C391 10 ea. Starrett center gage holder #392 5 ea. Starrett steel rule C316R 3 ea. Starrett combination set #C33H-12-16R 4 ea. Starrett protractor #C183 17 ea. Fitted Case 4 ea. Starrett 1"-2" mic #T436XFL-2 3 ea. Starrett 2"-3" mic #T436XFL-3 4 ea. Starrett 7-9 pitch mic #575AP 3 ea. Starrett 14-18 pitch mic #575CP 3 ea. Starrett 20-24 pitch mic #575DP 2 ea. Starrett Depth mic #445AZ-6RL 2 ea. Starrett Inside mic #823BZ 6 ea. Starrett Telescoping Gage #S5796Z 2 ea. Chamfer Gage		New 2002	Used by all programs
Welding ET ET 219 & ET231			
15	Syncrowave 250DX Miller Welder	Good	Welding Courses
8	Delta Weld 302 TIG Welders	Good	Welding Courses

1	Syncrowave 350	New	Applications
1	Syncrowave 350	New	Applications
1	XMT 350 cc/cv	New	Applications
1	XMT 350 Mpa	New	Applications
2	Invision 350 Mpa	New	Applications
1	Dynasty 350	New	Applications
1	Dynasty 200	New	Applications
1	Millermatic 350p	New	Applications
1	Millermatic 252	New	Applications
1	Millermatic 210	New	Applications
1	Millermatic 140	New	Applications
1	Millermatic DVI2	New	Applications
1	Aerowave 300	New	Applications
1	Access 450	New	Applications
1	Dimension 450	New	Applications
1	Miller Summit Submerged Arc	Good	Welding Courses
1	X/Y Plasma Arc Table	Good	Welding Courses
1	Portable cutting torch	Good	Welding Courses
1	Plasma Arc Cutter	Good	Welding Courses
4	Spectrum 1000 Plasma Arc Cutter	New	Welding Courses
1	Small Horizontal Band Saw	Good	Welding Courses
1	Spectrum 375 x-treme	New	Welding Courses
1	Victor 2 station cutting torch track	Fair	Welding Courses

Metallurgy Lab ET 217			
2	Acu Scope Microscope with computer and camera	Good	Material and Welding courses
2	Bakalite Specimen Press	Good	Material and Welding courses
1	Rockwell Hardness Tester 500 Series	Good	Material and Welding courses
1	3 Station Lap polisher	Good	Material and Welding courses
1	Metal Cutoff Saw	Good	Material and Welding courses
1	5 foot Vacuum Chamber/Hood	Good	Material and Welding courses
1	Rockwell Hardness Tester	Good	Materials courses/applications
Thermal/Fluid Power Laboratory ET 234			
6	Hydraulics Bench	Fair	Fluids Power course
1	Hydrostatic pressure apparatus	Fair	Fluids Power course
1	Impact Jet apparatus	Fair	Fluids Power course
1	Bernoulli's theorem demonstration	Fair	Fluids Power course
1	Laminar and turbulent forced convection in dusts apparatus	Good	Thermal/Heat trans. courses
1	Forced convection on plates app.	Good	Thermal/Heat trans. courses
1	Thermal contact resistance app.	Good	Thermal/Heat trans. courses
1	Two-dimensional conduction app.	Good	Thermal/Heat trans. courses
1	Forced convection cross flow app.	Good	Thermal/Heat trans. courses
1	Natural convection from plates app	Good	Thermal/Heat trans. courses

1	Surface-to-surface radiation app.	Good	Thermal/Heat trans. courses

SHEET METAL ET 231			
1	Adira Press Brake	New	Metal Forming Course
1	Amada Shear	Good	Metal Forming Course
1	Shipley Power shear	Fair	Metal Forming Course
1	Prexto Roll	Fair	Metal Forming Course
1	Spot Welder	Fair	Metal Forming Course
2	Punch Presses	Fair	Metal Forming Course
2	Box and Pan Hand Brakes	Good	Metal Forming Course
1	Wales Strippet Punch	Fair	Metal Forming Course
3	Hupp Electric Furnace	Fair	Heat Treat Course
1	Grob Contour Saw	Fair	Metal Forming Course
1	Hydraulic Tube Bender	Good	Metal Forming/Welding Courses
1	Scotchman Punch Station	Good	Welding and Metal Forming Courses
2	Pentium IV Computers	Good	Metal Forming/Welding Courses
1	CNC Plasma Cutter	Good	Welding and Sheet Metal Courses
Plastic and Composites ET 239			
1	Roll Mold Machine	Good	Plastics courses
1	Thermal Form Machine	Fair	Plastics courses
1	Van Doren 120 Injection Molding Machine	Good	Plastics courses
2	Plastic Welding Benches	Good	Plastics courses
1	Blue M Elect. FrictionAire Oven	Good	Plastics courses
1	Legend EXT 120 Watt Epilog Laser	New	Plastics course and Applications

1	Formech Vacumm Form Machine	Good	Plastics courses
1	Dake Hydraulic Press	Good	Plastics courses
Stress Analysis Laboratory ET 243			
1	MTS 55kip Hydraulic Actuator	Good	Instrumentation course
1	Strain Gage Tech. equipment	Fair	Instrumentation course
1	Teaching Polariscope	Fair	Teaching Photoelasticity princ.
1	Dillon Tensile Test Machine	Fair	Materials courses/applications
1	Large Heavy Duty Tensile Test	New	Materials courses/applications
1	Manual Torsion Test machine	Fair	Materials courses/applications
1	Impact Tester	Fair	Materials courses/applications
1	Spin Table	Good	Materials courses/applications
Computer Labs			
18	Pentium D 930 3.0GHz	Good	ET 101A - MFET, MET, DET programs
25	Pentium D PC's	Good	ET 103 - MFET, MET, DET programs
26	Pentium D PC's	Good	ET 126 - MFET, MET, DET programs
25	Pentium D PC's	New	ET202 - MFET, MET, DET programs

Rapid Prototyping Equipment ET 207			
1	Dimension SST 1200 3D Printer	New	All Purpose Applications
1	ThermoJet Solid Object Printer	Excellent	All Purpose Applications
1	Haake DL 30 Wax Warmer	Excellent	All Purpose Applications

Appendix D – Institutional Summary

1. The Institution

a. Weber State University
3848 Harrison Blvd
Ogden, Utah 84408

b. Dr. Charles A. White, President

c. Mr. Glen West, Associate Professor/Program Coordinator – Design Engineering Technology

d. Weber State University is regionally accredited by the Northwest Commission on Colleges and Universities. All applied technical education programs are fully accredited by the Utah State Office of Vocational Education.

2. Type of Control

Weber State University is a public state supported institution and is considered to be a Masters II institution.

3. Educational Unit

The academic side of the university consists of seven academic colleges and the library. Each college consists of several departments and each department may have one or more degree granting programs. The Design Engineering Technology program is part of the Engineering Technology Department (ET). There is a program coordinator for the Design Engineering Technology program who is Glen West and he reports to the Department Chair for ET, Rick Orr. The primarily responsibilities of the program coordinator include scheduling, curriculum development, and overseeing the meetings of the Industrial Advisory Committee. The primarily responsibilities of the department chair include budgets, faculty development, faculty evaluation, both formative and summative, and promotion and tenure. The department chair reports to the dean, David Ferro, the dean reports to the provost, Mike Vaughan, and the provost reports to the president, Charles Wight.

4. Academic Supporting Units

The advisor for the college is Rainie Ingram, X7552, and she reports directly to the Dean.
The recruiter for the college is Dana Dellinger, X7785, and she reports directly to the Dean.
The courses in mathematics and physical and natural sciences required in the program are all taught in the College of Science. The contacts for these courses are as follows:

Mathematics – Department Chair is Paul Talaga, X7038
Chemistry – Department Chair is Barry Lloyd, X6894
Physics – Department Chair is Brad Carroll, X7921

The other required course in the program that is required of all majors in the college is COMM 1020, Principles of Public Speaking. The contact for this course is:

Communication – Department Chair is Randolph Scott, X6464

5. Non-Academic Supporting Units

The Stewart Library has a full time librarian assigned to the college. In addition, each department has a budget for library materials. The University Librarian is Joan Hubbard, X6403, and the librarian assigned to our college is JaNae Kinikin, X6093.

Because the college maintains its own computing resources, it does not rely on services from the university's information technology office. The individual that maintains the computing services for the college is Brad Naisbitt, X7762.

Placement is handled through the university's Career Services office. They have a full-time individual assigned to our college who is Karen Doutre, X6877.

Tutoring is handled at the university level through Academic Support Services. In addition to tutoring being available at the university level, the college also pays for math tutors to work in the college five days a week with hours scattered throughout the day. The Director of Academic Support Services is Carl Porter, X6872, and the Director of Testing, Tutoring, and Supplemental Instruction is Prasanna Reddy, X6804.

Institution level scholarships are handled through the Financial Aid office. The Director of that office is Jed Spencer, X6586. Sponsored scholarships are allocated through the dean's office and the departments select their own awardees.

6. Credit Unit

One semester hour of credit represents one class hour or a minimum of two laboratory hours per week. One academic year is 28 weeks of classes, exclusive of final examinations.

Table D-1. Program Enrollment and Degree Data

Design Engineering Technology Program

	Academic Year		Enrollment Year					Total Undergrad	Total Grad	Degrees Conferred			
			1st	2nd	3rd	4th	5th			Bachelor	Master	Doctor	Other
CURRENT	31	FT	8	7	3	13		66					
	35	PT	7	3	4	21				8*			
2013-2014	70	FT	12	6	13	39		118					
	48	PT	6	6	13	23				12			
2012-2013	99	FT	18	19	22	40		173					
	74	PT	18	13	17	26				13			
2011-2012	149	FT	32	40	33	44		237					
	88	PT	11	15	23	39				20			
2011-2012	143	FT	22	42	30	49		241					
	98	PT	26	17	19	36				15			
2009-2010	126	FT	24	29	20	53		208					
	82	PT	14	9	19	40				13			

Official fall term enrollment figures (head count) for the current and preceding five academic years and undergraduate and graduate degrees conferred during each of those years. The "current" year means the academic year preceding the fall visit.

FT--full time
PT--part time

*Estimated

Table D-2. Personnel

Design Engineering Technology Program

Year[1]: 2015

	HEAD COUNT		FTE[2]
	FT	PT	
Administrative[2]			
Faculty (tenure-track)[3]	3		3
Other Faculty (excluding student Assistants)		3	0.75
Student Teaching Assistants[4]			
Technicians/Specialists	1.5[a]		
Office/Clerical Employees	1[b]		
Others[5]			

a. Shared with the other programs in the department

b. Shared with the other programs in the department

Report data for the program being evaluated.

1. Data on this table should be for the fall term immediately preceding the visit. Updated tables for the fall term when the ABET team is visiting are to be prepared and presented to the team when they arrive.

2. Persons holding joint administrative/faculty positions or other combined assignments should be allocated to each category according to the fraction of the appointment assigned to that category.

3. For faculty members, 1 FTE equals what your institution defines as a full-time load

4. For student teaching assistants, 1 FTE equals 20 hours per week of work (or service). For undergraduate and graduate students, 1 FTE equals 15 semester credit-hours (or 24 quarter credit-hours) per term of institutional course work, meaning all courses — science, humanities and social sciences, etc.

5. Specify any other category considered appropriate, or leave blank.

Signature Attesting to Compliance

By signing below, I attest to the following:

That _____ (*Name of the program(s)*) has conducted an honest assessment of compliance and has provided a complete and accurate disclosure of timely information regarding compliance with ABET's *Criteria for Accrediting Engineering Technology Programs* to include the General Criteria and any applicable Program Criteria, and the ABET *Accreditation Policy and Procedure Manual.*

_____

Dean's Name (As indicated on the RFE)

_____ _____

Signature **Date**

Signature Attesting to Compliance

By signing below, I attest to the following:

That DET (*Name of the program(s)*) has conducted an honest assessment of compliance and has provided a complete and accurate disclosure of timely information regarding compliance with ABET's *Criteria for Accrediting Engineering Technology Programs* to include the General Criteria and any applicable Program Criteria, and the ABET *Accreditation Policy and Procedure Manual.*

David Ferro

Dean's Name (As indicated on the RFE)

Signature

06/25/15

Date