

I&ET Department/ Program Administration Assessment Plan

Program:     Mechanical Engineering Technology    

Program Goals	Related Department Goals	Related College Goals	Related University Goals	Method(s) of Assessment (What is the assessment?)	Who/What Assessed (population, item)	When Assessed (term, dates)	Criterion of Achievement (Expectation of how good things should be?)
<p>1. Provide for an outstanding academic and professional growth experience for students</p>	<p>1. To nurture excellent programs in Technology, and Engineering Technology related disciplines by maintaining or obtaining national accreditation in the following programs:</p> <p>8. Continuously improve support for the faculty and staff in their respective fields.</p>	<p>Goal 1 - Provide for an outstanding academic and professional growth experience for students at all CWU locations. (CWU Goals 1,2,5)</p> <p>Goal 2 - Prepare students to participate in an increasingly diverse economy and environment. (CWU Goal 6)</p> <p>Goal 3 - Recruit and retain a diverse and</p>	<p>Goal I: Maintain and strengthen an outstanding academic and student life on the Ellensburg campus: "Strengthen academic programs"</p> <p>Goal II: Provide for an outstanding academic and student life at the university centers.</p> <p>Goal III: Strengthen and further diversify our funding base and strengthen infrastructure to support academic</p>	<p>1. Survey students</p> <p>2. Survey Graduating Seniors</p>	<p>Students one year prior to graduation / perception of their academic and professional growth experience</p> <p>Students at the end of their senior presentation course / perception of their academic and professional growth experience</p>	<p>Spring Qtr</p>	<p>80% of students having a good or better experience</p> <p>80% of students had a good or better experience</p>

	<p>9. Value diversity of background, experience, beliefs, and perspectives as a means to improve the quality of the educational experience and to achieve civility.</p> <p>10. Promote lifelong learning for students, faculty and staff.</p>	<p>highly qualified faculty to develop and sustain prominent programs. (CWU Goals 1,2,5)</p> <p>Goal 4 - Build mutually beneficial partnerships with alumni, industry, professional groups, institutions, and the communities surrounding our campus locations. (CWU Goal 4)</p> <p>Goal 5 - Provide professional, high-quality staffing, facilities, technologies, and appropriate resources to ensure the</p>	<p>and student programs.</p> <p>Goal IV: Build mutually beneficial partnerships with the public sector, industry, professional groups, institutions, and the communities surrounding our campuses.</p> <p>Goal V: Achieve regional and national prominence for the university.</p> <p>Goal VI: Build inclusive and diverse campus communities that promote intellectual inquiry and encourage civility, mutual respect, and cooperation.</p>				
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		highest levels of academic and professional development. (CWU Goals 1,2,3)					
2. Maintain TAC/ABET accreditation for MET	8. Continuously improve support for the faculty and staff in their respective fields.  10. Promote lifelong learning for students, faculty and staff.	Goal 1 – Provide for an outstanding academic and professional growth experience for students at all CWU locations. (CWU Goals 1,2,5)  Goal 2 - Prepare students to participate in an increasingly diverse economy and environment. (CWU Goal 6)  Goal 3 - Recruit and retain a diverse and highly qualified faculty to	Goal I: Maintain and strengthen an outstanding academic and student life on the Ellensburg campus: "Strengthen academic programs"  Goal II: Provide for an outstanding academic and student life at the university centers.  Goal V: Achieve regional and national prominence for the university.  Goal VI: Build inclusive and diverse campus	1. Go through the accreditation experience	1. Students 2. Program educational Objectives 3. Program outcomes 4. Continuous improvement program 5. Curriculum 6. Faculty 7. Facilities 8. Support A. Administration B. Institutional C. Advisement	Summer 2010	Only Strengths

		develop and sustain prominent programs. (CWU Goals 1,2,5)	communities that promote intellectual inquiry and encourage civility, mutual respect, and cooperation.		9. Program Criteria		
3. Advance the standing of the MET program with constituency groups	7. Build mutually beneficial partnerships with industry, professional groups, institutions, inter-department, inter-university, and the communities surrounding our campus locations.  8. Continuously improve support for the faculty and staff in their	Goal 2 - Prepare students to participate in an increasingly diverse economy and environment. (CWU Goal 6)  Goal 4 - Build mutually beneficial partnerships with alumni, industry, professional groups, institutions, and the communities surrounding our campus locations. (CWU Goal 4)	Goal I: Maintain and strengthen an outstanding academic and student life on the Ellensburg campus: "Strengthen academic programs"  Goal II: Provide for an outstanding academic and student life at the university centers.  Goal IV: Build mutually beneficial partnerships with the public sector, industry, professional	1. Survey  2. Survey  3. Develop various assessment tools for accreditation agencies	Graduates  Industrial advisory committee.  Complete this form	June 2008  June 2008	25% response  80% response

	<p>respective fields.</p> <p>9. Value diversity of background, experience, beliefs, and perspectives as a means to improve the quality of the educational experience and.</p>	<p>Goal 5 - Provide professional, high-quality staffing, facilities, technologies, and appropriate resources to ensure the highest levels of academic and professional development. (CWU Goals 1,2,3)</p>	<p>groups, institutions, and the communities surrounding our campuses.</p> <p>Goal V: Achieve regional and national prominence for the university.</p>				
<p>4. Recruit new students</p>	<p>2. Strengthen the preparedness of freshman and transfer students.</p> <p>9. Value diversity of background, experience, beliefs, and perspectives as a means to improve the quality of the educational experience and</p>	<p>Goal 1 - Provide for an outstanding academic and professional growth experience for students at all CWU locations. (CWU Goals 1,2,5)</p> <p>Goal 2 - Prepare students to participate in an increasingly</p>	<p>Goal I: Maintain and strengthen an outstanding academic and student life on the Ellensburg campus: "Strengthen academic programs"</p> <p>Goal II: Provide for an outstanding academic and student life at the university</p>	<p>1. Survey</p>	<p>Advisors will survey new majors</p>	<p>Each new major 08-09</p>	<p>Maintain 20/class</p>

	<p>to achieve civility.</p> <p>10. Promote lifelong learning for students, faculty and staff.</p>	<p>diverse economy and environment. (CWU Goal 6)</p> <p>Goal 3 - Recruit and retain a diverse and highly qualified faculty to develop and sustain prominent programs. (CWU Goals 1,2,5)</p> <p>Goal 5 - Provide professional, high-quality staffing, facilities, technologies, and appropriate resources to ensure the highest levels of academic and professional development. (CWU Goals 1,2,3)</p>	<p>centers.</p> <p>Goal V: Achieve regional and national prominence for the university.</p> <p>Goal VI: Build inclusive and diverse campus communities that promote intellectual inquiry and encourage civility, mutual respect, and cooperation.</p>				
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<p>5. Enhance the learning environment</p> <p>Explore alternative revenue sources through public/private partnerships</p> <p>Recruit, support, retain, and graduate well-qualified, diverse, and motivated students who will benefit from the CWU educational and social experience. Recruit and financially support academically promising students at all campuses and centers.</p> <p>Increase opportunities for and encourage greater student participation in scholarly</p>	<p>4. Continuously improve physical educational environment.</p> <p>6. Develop a diversified funding base to support academic and student programs.</p>	<p>Goal 1 - Provide for an outstanding academic and professional growth experience for students at all CWU locations. (CWU Goals 1,2,5)</p> <p>Goal 3 - Recruit and retain a diverse and highly qualified faculty to develop and sustain prominent programs. (CWU Goals 1,2,5)</p> <p>Goal 5 - Provide professional, high-quality staffing, facilities, technologies, and appropriate resources to ensure the</p>	<p>Goal I: Maintain and strengthen an outstanding academic and student life on the Ellensburg campus: "Strengthen academic programs"</p> <p>Goal II: Provide for an outstanding academic and student life at the university centers.</p> <p>Goal III: Strengthen and further diversify our funding base and strengthen infrastructure to support academic and student programs.</p> <p>Goal V: Achieve regional and national prominence for the university.</p>	<p>1. Solicit stakeholders to put money in the MET foundation account.</p>	<p>Ask the Dept. Chair to direct appropriate funds to the MET foundation account</p> <p>Ask graduates for money after getting permission from all the correct people to ask the graduates for money</p>	<p>June 2008</p>	
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<p>activities</p> <p>Develop collaborative relationships with partner community colleges to maximize resources, share costs, and be a contributing partner of each center's growing community</p>		<p>highest levels of academic and professional development. (CWU Goals 1,2,3)</p>					
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I&ET Student Learning Outcome Assessment Plan Preparation Form

Program \_\_\_ Mechanical Engineering Technology \_\_\_\_\_

Student Learning Outcomes (performance, knowledge, attitudes)	Related Program Goals	Related Departmental Goals	Related College Goals	Related University Goals	Method(s) of Assessment (What is the assessment?) *	Who Assessed (Students from what courses – population)**	When Assessed (term, dates) ***	Standard of Mastery/ Criterion of Achievement (How good does performance have to be?)
3.a. an appropriate mastery of the knowledge, techniques, skills and modern tools of their disciplines.	2. Maintain TAC/ABET accreditation for EET and MET  MET I. 1. Integrate the body of knowledge and skills required to function as a Mechanical Engineering Technology professional in industry. ABET 3a,b,f  I. 4. Employ computer skills necessary in industry such as word	1. To nurture excellent programs in Technology, and Engineering Technology related disciplines by maintaining or obtaining national accreditation in the following programs:	Goal 1 - Provide for an outstanding academic and professional growth experience for students at all CWU locations. (CWU Goals 1,2,5)  Goal 2 - Prepare students to participate in an increasingly diverse economy and environment. (CWU Goal 6)	Goal I: Maintain and strengthen an outstanding academic and student life on the Ellensburg campus: "Strengthen academic programs"  Goal II: Provide for an outstanding academic and student life at the university centers.  Goal V: Achieve regional and	Fund. Exam pass rate	All MET Sr	April of SrYr	50% Nat'l Norm

	processors (Word), spreadsheets (Excel), programming languages (Basic), drawing (AutoCAD), & analysis (MathCAD). ABET 3a  MET I. 5. Perform calculations in either SI or US engineering units. ABET 3a			national prominence for the university. Goal VI: Build inclusive and diverse campus communities that promote intellectual inquiry and encourage civility, mutual respect, and cooperation.				
3.b. an ability to apply current knowledge and adapt to emerging applications of mathematics, science, engineering and technology.	MET I. 1. Integrate the body of knowledge and skills required to function as a Mechanical Engineering Technology professional in industry. ABET 3a,b,f				Fund. Exam PM score Application Support	All MET Sr	April of SrYr	50% Nat'l Norm

	<p>III. 3. Perform literature searches using reports, internet sources, journal articles, and books in the student's technical content field. ABET 3b,g,h</p>							
<p>3.c. an ability to conduct, analyze and interpret experiments and apply experimental results to improve processes.</p>	<p>MET I. 3. Specify the required instrumentation, calibrate the sensors and connect the sensors to data loggers or other data systems for product testing or research experimentation. ABET 3c</p>				<p>Rubric TBD</p>	<p>MET426</p>	<p>Spr, Juniors</p>	<p>Formative</p>

	III. 1. Perform an experiment or test a product as specified in a set of instructions, correlate the test data, and report in a clear and concise manner. ABET 3c							
3.d. an ability to apply creativity in the design of systems, components, or processes appropriate to program objectives.	MET I. 2. Design machine components and integrate subsystems to produce an overall design solution to a design requirement. ABET 3d				Rubric TBD	MET495	MET Seniors	Summative
3.e. an ability to function effectively on teams	MET II. 2. Identify opportunities and implement modifications				Rubric TBD	MET418	Fall/Spring	Formative

	<p>to increase efficiency and profit in engineering and manufacturing processes. ABET 3d,f,k</p> <p>III. 4. Work profitably and efficiently in teams as members or leaders. ABET 3e,g</p>							
<p>3.f. an ability to identify, analyze and solve technical problems.</p>	<p>MET I. 1. Integrate the body of knowledge and skills required to function as a Mechanical Engineering Technology professional in industry. ABET 3a,b,f</p> <p>MET II. 2. Identify opportunities and implement</p>				Rubric TBD	MET495	Spr., Seniors	Summative

	<p>modifications to increase efficiency and profit in engineering and manufacturing processes. ABET 3d,f,k</p>							
<p>3.g. an ability to communicate effectively</p>	<p>III. 2. Deliver oral and written reports in a clear and concise manner using multimedia resources. ABET 3g</p> <p>III. 3. Perform literature searches using reports, internet sources, journal articles, and books in the student's technical content field.</p>				Rubric TBD	<p>COMM345 MET495</p>	<p>Wtr, Junior Spr, Senior</p>	<p>Formative Summative</p>

	<p>ABET 3b,g,h</p> <p>III. 4. Work profitably and efficiently in teams as members or leaders. ABET 3e,g</p>							
<p>3.h. a recognition of the need for, and an ability to engage in lifelong learning.</p>	<p>II. 4. Embrace life-long learning by participating in ASME student chapter activities ABET 3h</p> <p>III. 3. Perform literature searches using reports, internet sources, journal articles, and books in the student's technical content field. ABET 3b,g,h</p>				Rubric TBD	ASME participation	All MET Stds	Summative

3.i. an ability to understand professional, ethical and social responsibilities.	<p>MET II. 1. Address issues of safety, law and economy in the engineering process. ABET 3i</p> <p>MET II. 3. Explain and practice ethical decision-making and social responsibility in all aspects of engineering technology activities. ABET 3i,j</p>				<p>Fund. Exam PM Codes(3)</p> <p>Rubric TBD</p>	<p>April exam</p> <p>MET418</p>	<p>Spr, Seniors</p> <p>Fall, Seniors</p>	<p>Summative</p> <p>Formative</p>
3.j. a respect for diversity and a knowledge of contemporary professional, societal and	MET II. 3. Explain and practice ethical decision-making and social responsibility				Rubric TBD	MET418	Fall, Seniors	Formative

global issues.	<p>in all aspects of engineering technology activities. ABET 3i,j</p> <p>II. 5. Explain the value of diversity and demonstrate its use by solving problems in a team environment. ABET 3j</p>							
3.k. a commitment to quality, timeliness, and continuous improvement.	<p>MET II. 2. Identify opportunities and implement modifications to increase efficiency and profit in engineering and manufacturing processes. ABET 3d,f,k</p> <p>III. 5. Practice</p>				Rubric TBD	MET495	Wtr, Seniors	Formative

	safety in the shop and laboratory. ABET 3k							
ABET 9.a Students must design, analyze mechanical systems (statics, strengths, dynamics)					Statics Rubric Str. Rubric Dyn. Rubric FE Stat/Dyn	IET311 IET312 MET327 NCEES	Fall, Soph Wtr, Junior Spr, Soph All MET Sr	Formative Criteria Formative Criteria Formative Criteria Summative 50%
ABET 9.b Students must select, design and specify materials and processing to support mechanical systems					Rubric TBD	MET351 Metallurgy	Fall, Junior	Formative
ABET 9.c Students must create and communicate effectively in a CAD (3D) environment.					CAD Portfolio CAD Portfolio CAD Portfolio	IET160 IET265 MET495C	Fall, Fresh. Spr, Soph Spr, Senior	Formative Formative Summative

<p>ABET 9.d Students must evaluate mat'ls using standards for experiments and test procedures</p>					Rubric TBD	ME426	Spring, Juniors	Formative
<p>ABET 9.e Students must design, analyze and optimize thermal systems</p>					Rubric TBD	MET314	Fall, Juniors	Formative
<p>ABET 9.f Students must design, analyze and optimize fluid systems</p>					Rubric TBD	MET315	Wtr, Juniors	Formative
<p>ABET 9.g Students must design, analyze and optimize electro-mechanical and machine systems</p>					Rubric TBD	MET419	Wtr, Seniors	Summative


I&ET Department Program Assessment Plan

Program \_\_\_ Mechanical Engineering Technology \_\_\_\_\_

Program Outcomes (performance, knowledge, attitudes)	Related Program Goals	Related Departmental Goals	Related College Goals	Related University Goals	Method(s) of Assessment (What is the assessment?)*	Who Assessed (Students from what courses – population)**	When Assessed (term, dates) ***	Standard of Mastery/ Criterion of Achievement (How good does performance have to be?)
<p>ABET I (Students: The program must evaluate student performance, advise students, monitor progress, enforce transfer student policies, and enforce program requirement policies.).</p>	<p>2. Maintain TAC/ABET accreditation for MET</p>	<p>1. To nurture excellent programs in Technology, and Engineering Technology related disciplines by maintaining or obtaining national accreditation in the following programs:</p>	<p>Goal 1 - Provide for an outstanding academic and professional growth experience for students at all CWU locations. (CWU Goals 1,2,5)</p> <p>Goal 2 - Prepare students to participate in an increasingly diverse economy and environment. (CWU Goal 6)</p>	<p>Goal I: Maintain and strengthen an outstanding academic and student life on the Ellensburg campus: “Strengthen academic programs”</p> <p>Goal II: Provide for an outstanding academic and student life at the university centers.</p>	<p>1) Survey of sophomores with a four year plan</p> <p>2) A 2year plan (transfer students) is published</p> <p>3) MET Prog Requirement published</p>	<p>Instructor of MET314 students in fall of soph year</p> <p>MET Coord checks</p> <p>MET Coord checks</p>	<p>Fall : all soph annually</p> <p>Annual check for publish</p> <p>Annual check for publish</p>	<p>80% of students</p> <p>100% existence of published transfer student 2-year plan</p> <p>100% existence of published MET requirements</p>

				<p>Goal V: Achieve regional and national prominence for the university.</p> <p>Goal VI: Build inclusive and diverse campus communities that promote intellectual inquiry and encourage civility, mutual respect, and cooperation.</p>				
<p>ABET II (Each program must publish objectives, document periodic evaluations based on the needs of constituencies , and publish an appropriate curriculum.)</p>					<p>1) MET Prog Objectives published</p> <p>2) MET IAC Evaluations published</p> <p>3) MET Prog Curricula published</p>	<p>MET Coord checks</p> <p>Documents accessible</p> <p>MET Coord checks</p>	<p>Annual check for publish</p> <p>Annual check for publish</p> <p>Annual check for</p>	<p>100% existence of published MET requirements</p> <p>100% existence of published MET evaluations</p> <p>100% existence of published MET curricula</p>

							publish	
ABET III (Each program must demonstrate the following "a-k" Program Outcomes)				See Student Learning Outcomes for specific outcomes list	1) Fund. Exam pass rate	All MET Sr	April of SrYr	50% Nat'l Norm
ABET IV (The program must document regular assessment of objectives and outcomes, and evaluation of the extent to which they are being met. The results of evaluations must be used to effect continuous improvement of the program through a documented plan and process.					1) MET Task List 2)MET Course Reviews 3)CWU Admin. Review	Documents accessible  MET Coord checks  Documents accessible	Annual check for publish  Annual check for access  Annual check for access	100% existence of published MET task list  100% existence of MET course rev's  100% existence of CWU Admin Reviews

<p>ABET V (The program must provide an integrated educational experience addressing the following seven criteria: Curriculum Communication Mathematics Natural Science Social Science Technical Content Cooperative Education</p>					<p>1) Curr  2) Comm  3) Math 4) Nat. Sci.  5) Social Sci 6) Tech Cont  7) Coop Ed</p>	<p>MET Coord Checks 185 cr  To Be Done  Fund Exam in Math  Fund Exam Chem+Bio  To Be Done  MET Coord Checks 1/3 to 2/3 tech content  N/A</p>	<p>Annual check for concur       MET Sr in 495 April</p>	<p>100% existence of 185 credits    50% Nat'l Norm      100% existence of 1/3 to 2/3 tech cont</p>
<p>ABET VI (Competence of Faculty: will be evaluated through documentation of formal education, balance of academic/industrial</p>					<p>1) Faculty degrees and certifications (PhD, PE)  2) Faculty Experience (industry, consulting, research)</p>	<p>Faculty put data to annual rpt  Faculty input data to MET annual report  Faculty input data to MET</p>	<p>Annual input to report  Annual input to report</p>	<p>100% faculty have both Ph.D. and PE  100% faculty have yearly experience.</p>

experience, profession certification, teaching/scholar/service, and other appropriate attributes.)					3) Faculty Scholarship (papers and grants)	annual report	Annual input to report	100% faculty have yearly scholarship
ABET VII (Adequate facilities and support include suitable classrooms, labs, equipment, atmosphere, computers, software, internet access, and literature resources.)					1) 20 stations modern comp and software 2)Labs for all disciplines 3)Classroom with demos and access	MET Coord Checks 20 stations  MET Faculty Check lab # and quall.  MET Faculty Check lab # and quall.	Annual check for concur  Annual check for concur  Annual check for concur	100% existence of 20 modern stations  100% existence of all discipline labs  100% existence of all classrooms
		Goal 5 - Provide professional, high-quality staffing, facilities, technologies,			1)Staff Certifications in machining	Support Staff	Staff input to annual report or vita access	100% certified machinist

		and appropriate resources to ensure the highest levels of academic and professional development. (CWU Goals 1,2,3)						
ABET VIII (Support in the following three areas: ) Administratio n Institution IndAdvComm					1) Ind Adv Com with task list and reports  2)Facutly Salaries to Nat'l Norm  3)Contact hours assign to MET	IAC inputs to MET task list and reports  MET Coord receives data from CWU IR for Ann. Rpt.  MET Coord receives data from Dept for Ann. Rpt	Annual check for publish and access  Annual input to report  Annual input to report	100% existence of published IAC task inputs & rpts  Within 80% Nat'l salary  FTTT >60%, then Adj + Inter-Dept
ABET IX (Each Program must use 'amplified' criteria					1)ABET Outcomes relate to MET	MET Coord Checks concurrence	Annual input to report	100% existence of ABET/MET outcome relation

addressing specific discipline/program needs implied in the program title.) An MET Program should include a subset of the following 'Outcomes':					outcomes. 2)NCEES Fund. Exam 3) MET Sr. Projects mentored by industry	All MET Stds All MET Seniors	Annual input from CWU IR Annual input to report	FE pass rate>50% 20% SrProj are industry mentored