Program Change Request

Date Submitted: 10/12/18 7:43 pm

Viewing: BS-MXET-MCH : Multidisciplinary Engineering Technology - BS, Mechatronics Track

Last approved: 04/12/18 3:39 pm

Last edit: 11/08/18 8:27 pm

Changes proposed by: mdjohnson

Catalog Pages Using this Program: Multidisciplinary Engineering Technology - BS, Mechatronics Track

Contact(s)

Name	E-mail	Phone
Michael Johnson ~~Jay Porter~~	**mdjohnson@tamu.edu** ~~jporter@tamu.edu~~	**979-845-4902** ~~979-845-1459~~

Academic level	Undergraduate
Effective Term	2019-2020
Department	Eng Tech & Ind Distribution
College	Engineering
Program type	Degree w/Concentration
Degree designation	BS - Bachelor of Science
With a major in	Multidisciplinary Engineering Technology (MXET)
Associated Program	**Not Applicable**
With a concentration in	Mechatronics (MCH)

Catalog Program Title

Multidisciplinary Engineering Technology - BS, Mechatronics Track

CIP and Fund code 15040300

Rationale for Proposal

~~Two changes are being made to MXET.~~**The program is removing ENGR 482 from** ~~First, changes to~~ the ~~MXET~~ curriculum **since** ~~are being made to reflect changes by~~ the **course is being phased out by** ~~College of Engineering to~~ the **College.** ~~first year curriculum and to the engineering/physics courses sequences.~~ **To accommodate this removal, the program will:**

- change an existing course to a W course to account for the loss of ENGR 482.

-add an LPC course to account for the loss of ENGR 482 meeting the LPC requirement.

- add an ethics component to other courses in the curriculum to account for the loss of ENGR 482 satisfying the ABET ethics requirement.

~~These include substituting ENGR 111, ENGR 112, PHYS 218 and PHYS 208 with ENGR 102, ENGR 216 (cross listed with PHYS 216), ENGR 217 (cross listed with PHYS 217), PHYS 206 and PHYS 207.The rationale is to continue to have the same physics theory as before augmented by real world applications in engineering.The total hours do not change and the core curriculum requirements are still met.~~Second, in addition to the current Mechatronics focus area, another focus area is being added in STEM Education. This second focus area will prepare graduates to take jobs teaching math, science and/or engineering the junior high and high school level. This new focus area has been designed in collaboration with the College of Engineering and will allow students to set for their STEM teaching certification.

Program hours 127

In Workflow

1. **ETID Department Head**
2. **Curricular Services Review**
3. **EN Committee Preparer UG**
4. **EN Committee Chair UG**
5. **EN College Dean UG**
6. **UCC Preparer**
7. **UCC Chair**
8. **Faculty Senate Preparer**
9. Faculty Senate
10. Provost II
11. President
12. Curricular Services

Approval Path

1. 10/12/18 7:44 pm Michael Johnson (mdjohnson): Approved for ETID Department Head
2. 10/16/18 5:24 pm Sandra Williams (sandra-williams): Approved for Curricular Services Review
3. 10/18/18 5:07 pm Eileen Hoy (ehoy): Approved for EN Committee Preparer UG
4. 10/18/18 5:54 pm Prasad Enjeti (enjeti): Approved for EN Committee Chair UG
5. 10/18/18 5:56 pm Prasad Enjeti (enjeti): Approved for EN College Dean UG
6. 10/19/18 2:16 pm Sandra Williams (sandra-williams): Approved for UCC Preparer
7. 11/05/18 3:14 pm Sandra Williams (sandra-williams): Approved for UCC Chair

History

1. Feb 13, 2017 by Jay Porter (jporter)
2. Apr 20, 2017 by Angel Mario Carrizales (carri1214)

Is this program eligible for financial aid?	Yes
Will program hours change (increase/decrease) due to the proposed curriculum changes?	No
Program delivery mode	On-campus

3. Apr 12, 2018 by Jay Porter (jporter)

Catalog Program Requirements

Plan of Study Grid

Second Year		
Fall		Semester Credit Hours
ENGR 217/PHYS 217	Experimental Physics and Engineering Lab III - Electricity and Magnetism 1	2
ESET 210	Circuit Analysis 1	4
ESET 219	Digital Electronics 1	4
MMET 207	Metallic Materials 1	3
PHYS 207	Electricity and Magnetism for Engineering and Science 1	3
	Semester Credit Hours	16
Spring		
ESET 269	Embedded Systems Development in C 1	3
ESET 350	Analog Electronics 1	4
MMET 275	Mechanics for Technologists 1	3
MMET 376	Strength of Materials 1,6	4
University Core Curriculum 3		3
	Semester Credit Hours	17
Third Year		
Fall		
ESET 349	Microcontroller Architecture 1,6	4
MMET 303	Fluid Mechanics and Power 1,6	4
MMET 361	Product Design and Solid Modeling 1,6	3
MXET 375	Applied Dynamic Systems 1	3
Math elective 1,7		3
	Semester Credit Hours	17
Spring		
ESET 359	Electronic Instrumentation 1	4
ESET 369	Embedded Systems Software 1,6	4
MMET 363	Mechanical Design Applications I 1	3
MMET 370	Thermodynamics for Technologists 1	4
MXET 300	Mechatronics I – Mobile Robotic Systems 1,6	3
High Impact Experience 8		0
ENTC 399	High Impact Experience	
	Semester Credit Hours	18
Fourth Year		
Fall		
ESET 419	Engineering Technology Capstone I 1	3
or MMET 429	or Managing People and Projects in a Technological Society	
ESET 462	Control Systems 1,6	4
MXET 400	Mechatronics II – Industrial Robotic Systems 1,6	3
Technical elective 1,7		2
University Core Curriculum 3		3
	Semester Credit Hours	15
Spring		
~~ENGR 482/PHIL 482~~	~~Ethics and Engineering~~	~~3~~
ESET 420	Engineering Technology Capstone II 1	2
or MMET 422	or Manufacturing Technology Projects	
Select one of the following:		3
COMM 203	Public Speaking	
COMM 205	Communication for Technical Professions	
ENGL 210	Technical and Business Writing	
Technical elective 1,7		2

University Core Curriculum	3	3
University Core Curriculum	**3**	**3**
	Semester Credit Hours	13
	Total Semester Credit Hours	96

6Meets the 29 hr Mechatronics focus area requirements.

7See a departmental advisor for a list of approved electives.

8All students are required to complete a high-impact experience in order to graduate. The list of possible high-impact experiences is available in the ETID advising office.

This curriculum lists the minimum number of classes required for graduation. Additional courses may be taken.

Total Program Hours 127

Additional information	~~4.10.2018 a new catalog page and CARS program proposal have been created for the STEM Education Focus Area.https://nextcatalog.tamu.edu/programadmin/?key=898~~
Required Proposal Forms	~~Support Letter - College of Education.pdf~~ ~~CIP Code Change Request _JRP - Rev DP.pdf~~ ~~MXET Degree Eval_Rev.pdf~~ ~~012218PresidentApprovalMemo.pdf~~ **MXET_Mech_Deg_Eval.pdf**
Reviewer Comments	**Sandra Williams (sandra-williams) (11/05/18 3:14 pm):** UCC approved November 2018.

Key: 716

Print

Detail Requirements

Michael Johnson
Oct 12, 2018 07:23 pm

Viewing: Degree Evaluation (DEGEVAL, , Email)
Change Student
Print

Information for Degree Evaluation

This is NOT an official evaluation.

Print Instructions

Program Evaluation

Limitation Correspondence: No more than 12 hours of correspondence earned through an accredited institution may be used for an undergraduate degree.

Limitation Combination: Maximum combination of 18 hours of 481, 482, 485 and/or 491 courses may be used for an undergraduate degree.

Limitation No more than 50% of courses required for the degree plan can be taken as Distance Education Courses for non-distance degree programs.

Limitation Only one of the following will satisfy the requirements for a degree: GENE 301, GENE 302, GENE 315, and GENE 320.

Limitation Only one of the following will satisfy the requirements for a degree: MATH 131, MATH 142, MATH 147, MATH 151, and MATH 171.

Limitation Only one of the following will satisfy the requirements for a degree: MATH 140, MATH 141, and MATH 166.

Limitation Only one of the following will satisfy the requirements for a degree: MATH 148, MATH 152, and MATH 172.

Limitation Only one of the following will satisfy the requirements for a degree: MATH 221, MATH 251, and MATH 253.

Limitation Only one of the following will satisfy the requirements for a degree: MATH 304, MATH 309, MATH 311, and MATH 323.

Limitation Only one of the following will satisfy the requirements for a degree: STAT 301, STAT 302, and STAT 303.

Program :	BS MXET-Mechatronics	**Catalog Term :**	Fall 2018 - College Station
Campus :	College Station	**Evaluation Term :**	Fall 2018 - College Station
College :	Engineering	**Expected Graduation Date :**	
Degree :	Bachelor of Science	**Request Number :**	24
Level :	Undergraduate	**Results as of :**	Oct 12, 2018
Majors :	Multidisc Engineering Tech	**Minors :**	
Departments :	Eng Tech & Ind Distribution	**Concentrations :**	

	Met	Credits		Courses	
		Required	Used	Required	Used
Total Required :	No	127.000	0.000		0
Program GPA :	Yes	.00	.00		
Overall GPA :	No	2.00	.00		
Other Course Information					
Transfer :			0.000		0

This is NOT an official evaluation.

Area : **Major Coursework (50.000 credits) - Not Met**

Description : Must make a grade of 'C' or better in all courses.

Met	Condition	Rule	Subject	Attribute	Low	High	Required Credits	Required Courses	Term	Subject	Course	Title	Attribute	Credits	Grade	Source
No		A.	ENGR 102 2hrs													
			Must make a grade of 'C' or better.													
No	AND	B.	ENGR 216 or PHYS 216 2hrs													
			Must make a grade of 'C' or better.													
No	AND	C.	ENGR 217 or PHYS 217 2hrs													
			Must make a grade of 'C' or better.													
No	AND	D.	ESET 210 4hrs													
			Must make a grade of 'C' or better.													
No	AND	E.	ESET 219 4hrs													

				Must make a grade of 'C' or better.									
No		AND	F.	ESET 269 3hrs									
				Must make a grade of 'C' or better.									
No		AND	G.	ESET 350 4hrs									
				Must make a grade of 'C' or better.									
No		AND	H.	ESET 359 4hrs									
				Must make a grade of 'C' or better.									
No		AND	I.	MMET 207 3hrs									
				Must make a grade of 'C' or better.									
No		AND	J.	MMET 275 3hrs									
				Must make a grade of 'C' or better.									
No		AND	K.	MMET 363 3hrs									
				Must make a grade of 'C' or better.									
No		AND	L.	MMET 370 4hrs									
				Must make a grade of 'C' or better.									
No		AND	M.	ESET 419 or MMET 429 3hrs									
				Must make a grade of 'C' or better.									
No		AND	N.	ESET 420 or MMET 422 2hrs									
				Must make a grade of 'C' or better.									
No		AND	O.	MXET 375 3hrs									
				Must make a grade of 'C' or better.									
No		AND	P.	Technical Elective 4hrs									
				Must make a grade of 'C' or better. See advisor for approved courses									
										Total Credits and GPA	0.000	.00	

unofficial evaluation

Area : **Focus Area Coursework (29.000 credits) - Not Met**

Description : Select one of the following options for a total of 29 hrs:

Met	Condition	Rule	Subject	Attribute	Low	High	Required Credits	Required Courses	Term	Subject	Course	Title	Attribute	Credits	Grade	Source
No		A.	ESET 349 4hrs													
			Must have a grade of 'C' or better.													
No	AND	B.	ESET 369 4hrs													
			Must have a grade of 'C' or better.													
No	AND	C.	ESET 462 4hrs													
			Must have a grade of 'C' or better.													
No	AND	D.	MMET 303 4hrs													
			Must have a grade of 'C' or better.													
No	AND	E.	MMET 361 3hrs													
			Must have a grade of 'C' or better.													
No	AND	F.	MMET 376 4hrs													
			Must have a grade of 'C' or better.													
No	AND	G.	MXET 300 3hrs													
			Must have a grade of 'C' or better.													
No	AND	H.	MXET 400 3hrs													
			Must have a grade of 'C' or better.													
										Total Credits and GPA	0.000	.00			

unofficial evaluation

Area : **Communication (6.000 credits) - Not Met**

Met	Condition	Rule	Subject	Attribute	Low	High	Required Credits	Required Courses	Term	Subject	Course	Title	Attribute	Credits	Grade	Source
No		A.	ENGL 103 or ENGL 104 3hrs													

			Must make a grade of 'C' or better.										
No	AND	B.	Communication Reqmt 3hrs										
			Select from COMM 203, 205; ENGL 210.										
										Total Credits and GPA		0.000	.00

unofficial evaluation

Area : Mathematics (11.000 credits) - Not Met

Met	Condition	Rule	Subject	Attribute	Low	High	Required Credits	Required Courses	Term	Subject	Course	Title	Attribute	Credits	Grade	Source
No		A.	MATH 151 4hrs													
			Must make a grade of 'C' or better.													
No	AND	B.	MATH 152 4hrs													
			Must make a grade of 'C' or better.													
No	AND	C.	Mathematics Elective 3hrs													
			Must make a grade of 'C' or better. See advisor for approved course.													
												Total Credits and GPA		0.000	.00	

unofficial evaluation

Area : Life and Physical Sciences (10.000 credits) - Not Met

Met	Condition	Rule	Subject	Attribute	Low	High	Required Credits	Required Courses	Term	Subject	Course	Title	Attribute	Credits	Grade	Source
No		A.	CHEM 107/117 4hrs													
			Must make a grade of 'C' or better.													
No	AND	B.	PHYS 206 3hrs													
			Must make a grade of 'C' or better.													
No	AND	C.	PHYS 207 3hrs													
			Must make a grade of 'C' or better.													
												Total Credits and GPA		0.000	.00	

unofficial evaluation

Area : Language, Philosophy & Culture (3.000 credits) - Not Met

Met	Condition	Rule	Subject	Attribute	Low	High	Required Credits	Required Courses	Term	Subject	Course	Title	Attribute	Credits	Grade	Source
No		A.	~~ENGR 482 3hrs~~General LPC 3hrs													
												Total Credits and GPA		0.000	.00	

unofficial evaluation

Area : Creative Arts (3.000 credits) - Not Met

Met	Condition	Rule	Subject	Attribute	Low	High	Required Credits	Required Courses	Term	Subject	Course	Title	Attribute	Credits	Grade	Source
No		A.	Creative Arts Requirement 3hrs													
			Select three hours from any course with the Creative Arts attribute [KCRA].													
												Total Credits and GPA		0.000	.00	

unofficial evaluation

Area : Social and Behavioral Sciences (3.000 credits) - Not Met

Met	Condition	Rule	Subject	Attribute	Low	High	Required Credits	Required Courses	Term	Subject	Course	Title	Attribute	Credits	Grade	Source
No		A.	Social Science Rqmt 3hrs Select from courses with the Social and Behavioral Science attribute [KSOC].													
												Total Credits and GPA		0.000	.00	

unofficial evaluation

Area : Citizenship (12.000 credits) - Not Met

Description : Completion of 4 semesters of Upper-Level ROTC may be substituted for 3 hours of American History and 3 hours of Political Science.

Met	Condition	Rule	Subject	Attribute	Low	High	Required Credits	Required Courses	Term	Subject	Course	Title	Attribute	Credits	Grade	Source
No		A.	American History Rqmt 6hrs Select from any course with the [KHIS] attribute.													
No	AND	B.	Political Science Rqmt 6hrs Take POLS 206 and POLS 207.													
												Total Credits and GPA		0.000	.00	

unofficial evaluation

Area : Work Not Applied - Met

Description : See advisor for acceptable substitutions.

Met	Condition	Rule	Subject	Attribute	Low	High	Required Credits	Required Courses	Term	Subject	Course	Title	Attribute	Credits	Grade	Source
No		A.	Courses not applied													
												Total Credits and GPA		0.000	.00	

unofficial evaluation

Area : High Impact Experience - Not Met

Met	Condition	Rule	Subject	Attribute	Low	High	Required Credits	Required Courses	Term	Subject	Course	Title	Attribute	Credits	Grade	Source
No		A.	High-Impact Experience One course required. A list of possible high-impact experiences is available in the ETID advising office. Includes: • ENTC 399													
												Total Credits and GPA		0.000	.00	

unofficial evaluation

Area : University Writing Requirement - Not Met

Met	Condition	Rule	Subject	Attribute	Low	High	Required Credits	Required Courses	Term	Subject	Course	Title	Attribute	Credits	Grade	Source
No		A.	Writing Requirement Two courses required. Only sections of ESET 100-499; MMET 100-499; ~~ENGR 482; PHIL 482~~ with the Writing attribute [UWRT] or Oral Communication attribute [UCRT] may be used to satisfy this requirement.													
												Total Credits and GPA		0.000	.00	

unofficial evaluation

Area : Int'l & Cult Diversity - Not Met

Met	Condition	Rule	Subject	Attribute	Low	High	Required Credits	Required Courses	Term	Subject	Course	Title	Attribute	Credits	Grade	Source
No		A.	Int'l & Cultural Diversity 6hr													
			Select from courses with the International and Cultural Diversity attribute [UICD] (except sections of BUSN 289 with the UWRT attribute).													
												Total Credits and GPA		0.000	.00	

unofficial evaluation

Area : Foreign Language - Not Met

Met	Condition	Rule	Subject	Attribute	Low	High	Required Credits	Required Courses	Term	Subject	Course	Title	Attribute	Credits	Grade	Source
No		A.	Foreign Language Rqmt													
			Complete one of the following: 1. Two years of the same foreign language in High School. 2. A two semester sequence of the same foreign language for University credit.													
												Total Credits and GPA		0.000	.00	

unofficial evaluation

Area : Residence Requirement - Not Met

Description : A minimum of 36 hours of 300-400 level coursework must be completed at Texas A&M University. 12 hours must be in the major field.

Met	Condition	Rule	Subject	Attribute	Low	High	Required Credits	Required Courses	Term	Subject	Course	Title	Attribute	Credits	Grade	Source
No		A.	Residence-Major 12hrs													
			Includes ESET 300-499; MMET 300-499.													
No	AND	B.	Residence 300-499 24hrs													
			Select any courses level 300-499.													
												Total Credits and GPA		0.000	.00	

unofficial evaluation

Area : GPR-Major (48.000 credits) - Not Met

Met	Condition	Rule	Subject	Attribute	Low	High	Required Credits	Required Courses	Term	Subject	Course	Title	Attribute	Credits	Grade	Source
No		A.	Major GPR 48+hrs													
			Includes ESET 100-499 and MMET 100-499; ENGR 102, 216, 217; PHYS 206, 207; CHEM 107; ENGL 103-104.													
												Total Credits and GPA		0.000	.00	

unofficial evaluation

Back to Display Options

5