

# Program Change Request

Date Submitted: 10/17/18 2:36 pm

Viewing: **BS-MSEN : Materials Science and Engineering - BS**

Last approved: 03/27/18 6:13 pm

Last edit: 11/08/18 8:06 pm

Changes proposed by: jules.henry

Catalog Pages Using [Materials Science and Engineering - BS](#)  
this Program

## Contact(s)

Name	E-mail	Phone
Jules Henry	jules.henry@tamu.edu	979-862-1089

Academic level Undergraduate  
 Effective Term 2019-2020  
 Department Materials Science & Engr  
 College Engineering  
 Program type Degree  
 Degree designation BS - Bachelor of Science  
 With a major in Materials Science & Engr (MSEN)  
 Associated Program **Not Applicable**

Catalog Program Title  
Materials Science and Engineering - BS

CIP and Fund code

## Rationale for Proposal

These changes are in response to the College of Engineering **and College of Science updates. updates to the ENGR/PHYS course requirements for the freshman year. We are removing the ENGR 482 requirement per CoE request and replacing introductory CHEM courses with new numbers. In addition, courses are being updated to better support curriculum sequence for MSEN BS degree.**

Program hours 128

Is this program eligible for financial aid?

Will program hours change (increase/decrease) due to the proposed curriculum changes? No

Program delivery mode  
On-campus

## In Workflow

1. MSEN 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. 10/17/18 2:59 pm  
Ibrahim Karaman (karaman): Approved for MSEN Department Head
2. 10/18/18 4:30 pm  
Angel Mario Carrizales (carr1214): Approved for Curricular Services Review
3. 10/22/18 5:30 pm  
Eileen Hoy (ehoy): Approved for EN Committee Preparer UG
4. 10/22/18 9:02 pm  
Prasad Enjeti (enjeti): Approved for EN Committee Chair UG
5. 10/23/18 10:07 am  
Prasad Enjeti (enjeti): Approved for EN College Dean UG
6. 11/06/18 9:17 am  
Sandra Williams (sandra-williams): Approved for UCC Preparer
7. 12/10/18 10:44 am  
Terra Bissett (t.bissett): Approved for UCC Chair

## History

1. Aug 31, 2016 by Angela Allensworth (arankin)
2. Oct 20, 2016 by Angela Allensworth (arankin)

## Catalog Program Requirements

3. Sep 13, 2017 by Angel  
Mario Carrizales  
(carri1214)  
4. Mar 27, 2018 by Jules  
Henry (jules.henry)

## Plan of Study Grid

## Second Year

Fall	Semester Credit Hours
<a href="#">ENGR 217/PHYS 217</a> Experimental Physics and Engineering Lab III - Electricity and Magnetism 12	
<a href="#">MATH 251</a> Engineering Mathematics III 1	3
<a href="#">MSEN 201</a> Fundamentals of Materials Science and Engineering 1	3
<a href="#">MSEN 205</a> Materials in Society 1	2
<a href="#">PHYS 207</a> Electricity and Magnetism for Engineering and Science 1	3
<a href="#">University Core Curriculum</a> 3	3
Semester Credit Hours	16
Spring	
<a href="#">COMM 205</a> Communication for Technical Professions 1	3
or <a href="#">ENGL 210</a> or Technical and Business Writing	
<a href="#">MSEN 210</a> Thermodynamics of Materials 1	3
<a href="#">MSEN 250</a> Soft Matter 1	3
<a href="#">MSEN 301</a> Unified Materials Lab I 1,5	3
<a href="#">MSEN 260</a> Structure of Materials 1	3
<a href="#">MSEN 281</a> Materials Science and Engineering Seminar 1	1
Semester Credit Hours	16

## Third Year

Fall	Semester Credit Hours
<a href="#">MATH 308</a> Differential Equations 1	3
<a href="#">MSEN 305</a> Kinetics of Materials 1	3
<a href="#">MSEN 302</a> Unified Materials Lab II 1,5	3
<a href="#">MSEN 320</a> Deformation and Failure Mechanisms in Engineering Materials 1	3
<a href="#">MSEN 380</a> Communicating Materials Science and Engineering 1,5	1
<a href="#">MSEN 399</a> High Impact Professional Development	0
<a href="#">University Core Curriculum</a> 3	3
Semester Credit Hours	16
Spring	
<a href="#">MSEN 325</a> Properties of Functional Materials 1	3
<a href="#">MSEN 330</a> Numerical Methods for Materials Scientists and Engineers 1	3
<a href="#">MSEN 360</a> Materials Characterization 1	3
<a href="#">MSEN 400</a> Design and Analysis of Materials Experiments 1	3
<a href="#">University Core Curriculum</a> 3	3
Technical elective 1,6	3
Semester Credit Hours	18

## Fourth Year

Fall	Semester Credit Hours
<a href="#">ENGR 482/PHIL 482 Ethics and Engineering-6</a>	3
<a href="#">MSEN 401</a> Materials Research and Design I 1	3
<a href="#">MSEN 410</a> Materials Processing 1	3
<a href="#">University Core Curriculum</a> 3	3
Specialty elective 7	3
Technical elective 1, 6	3
Semester Credit Hours	15
Spring	
<a href="#">MSEN 402</a> Materials Research and Design II 1	3
<a href="#">University Core Curriculum</a> 3	3
Specialty elective 7	6
Technical elective 1,6	3
Semester Credit Hours	15
Total Semester Credit Hours	96

**5 This is a writing intensive course.**

<sup>6</sup>Select from any [MSEN 300-499](#) course not used elsewhere. Students may use up to 3 hours each of [MSEN 491](#) , [MSEN 485](#), and [MSEN 484](#).

<sup>7</sup>Select in consultation with advisor from [MSEN 300-499](#); [AERO 300-499](#); [BAEN 300-499](#); [BMEN 300-499](#); [CHEN 300-499](#); [CVEN 300-499](#); [CSCE 110](#), [CSCE 300-499](#); [ECEN 300-499](#); [ISEN 300-499](#); [MEEN 221](#), [MEEN 300-499](#); [NUEN 300-499](#); [ENGR 300-499](#); [BIOL 300-499](#); [CHEM 220/MSEN 220](#), [CHEM 227](#), [CHEM 228](#), [CHEM 300-499](#); [MATH 300-499](#); [PHYS 300-499](#); STAT 211, STAT 212, [STAT 300-499](#). All non-MSEN specialty electives must be approved by the Undergraduate Advising Office, on the basis of satisfying one or more of the MSEN BSE program outcomes (e.g., integrating scientific and engineering principles across disciplines).

~~8 Select in consultation with advisor from MSEN 300-499; AERO 300-499; BAEN 300-499; BMEN 300-499; CHEN 300-499; CVEN 300-499; CSCE 300-499; ECEN 300-499; ISEN 300-499; MEEN 300-499; NUEN 300-499; ENGR 300-499; BIOL 300-499; CHEM 300-499; MATH 300-499; PHYS 300-499; STAT 300-499. All non-MSEN specialty electives must be approved by the Undergraduate Advising Office, on the basis of satisfying one or more of the MSEN-BSE program outcomes (e.g., integrating scientific and engineering principles across disciplines).~~

Additional information **CHEM introductory courses are listed as 119 and 120; removed ENGR 482. Footnote numbers have been updated and the following specialty electives have been added: CSCE 110, MEEN 221, CHEM 220, 227, 228, and STAT 211, 212.**

Required Proposal ~~MSEN-Degree-Evaluation\_Adjustments.pdf~~  
Forms ~~012218PresidentApprovalMemo.pdf~~  
[2019 MSEN DegEval.pdf](#)

Reviewer Comments **Angel Mario Carrizales (carri1214) (10/18/18 4:24 pm):** Edits made to conform to catalog style guidelines.  
**Terra Bissett (t.bissett) (12/10/18 10:44 am):** UCC approved December 2018.

Key: 764


[Print](#)

# Detail Requirements

Julianne S. Henry  
Oct 15, 2018 01:24 pm

Viewing: [Degree Evaluation](#) (DEGEVAL, , [Email](#))  
[Change Student](#)

## 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.

<b>Program :</b>	BS MSEN	<b>Catalog Term :</b>	Fall 2018 - College Station
<b>Campus :</b>	College Station	<b>Evaluation Term :</b>	Fall 2018 - College Station
<b>College :</b>	Engineering	<b>Expected Graduation Date :</b>	
<b>Degree :</b>	Bachelor of Science	<b>Request Number :</b>	19
<b>Level :</b>	Undergraduate	<b>Results as of :</b>	Oct 15, 2018
<b>Majors :</b>	Materials Science & Engr	<b>Minors :</b>	
<b>Departments :</b>	Materials Science & Engr	<b>Concentrations :</b>	

	Met	Credits	Courses		
		Required	Used	Required	Used
<b>Total Required :</b>	No	128.000	0.000		0
<b>Program GPA :</b>	Yes	.00	.00		
<b>Overall GPA :</b>	No	2.00	.00		
<b>Other Course Information</b>					
<b>Transfer :</b>			0.000		0

This is NOT an official evaluation.

### Area Major Coursework ( 49.000 credits ) - Not Met

Met	Condition	Rule	Subject	Attribute	Low	High	Required Credits	Required Courses	Term	Subject	Course Title	Attribute	Credits	Grade	Source
No		A.	MSEN 201	3hrs											
No	AND	B.	MSEN 210	3hrs											
No	AND	C.	MSEN 205	2hrs											
No	AND	D.	MSEN 305	3hrs											
No	AND	E.	MSEN 250	3hrs											
No	AND	F.	MSEN 281	1hr											

No	AND	G.	MSEN 301 3hrs Must make a grade of 'C' or better.
No	AND	H.	MSEN 302 3hrs Must make a grade of 'C' or better.
No	AND	I.	MSEN 260 3hrs Must make a grade of 'C' or better.
No	AND	J.	MSEN 320 3hrs Must make a grade of 'C' or better.
No	AND	K.	MSEN 330 3hrs Must make a grade of 'C' or better.
No	AND	L.	MSEN 410 3hrs Must make a grade of 'C' or better.
No	AND	M.	MSEN 360 3hrs Must make a grade of 'C' or better.
No	AND	N.	MSEN 400 3hrs Must make a grade of 'C' or better.
No	AND	O.	MSEN 401 3hrs Must make a grade of 'C' or better.
No	AND	P.	MSEN 402 3hrs Must make a grade of 'C' or better.
No	AND	Q.	MSEN 325 3hrs Must make a grade of 'C' or better.
No	AND	R.	MSEN 380 1hr Must make a grade of 'C' or better.

Total Credits and GPA 0.000 .00

unofficial evaluation

**Area Supporting Coursework ( 24.000 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 102 2hrs													
No	AND	B.	ENGR 216 or PHYS 216 2hrs													
No	AND	C.	ENGR 217 or PHYS 217 2hrs													
No	AND	D.	Technical Electives 9hrs													
No	AND	E.	Specialty Electives 9hrs													

← Add CSCE 110, MEEN 221, CHEM 220, CHEM 227, CHEM 228, STAT 211 and STAT 212.

Total Credits and GPA 0.000 .00

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**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 104 3hrs													
No	AND	B.	Communication Rqmt 3hrs													

Total Credits and GPA 0.000 .00

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**Area Mathematics ( 14.000 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											
No	AND	B.	MATH 152	4hrs											
No	AND	C.	MATH 251	3hrs											
No	AND	D.	MATH 308	3hrs											
Total Credits and GPA													0.000	.00	

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**Area Life and Physical Sciences ( 14.000 credits ) - Not Met**

Met	Condition	Rule	Subject	Attribute	Low	High	Required Credits	Required Courses	Term	Subject	Course Title	Attribute	Credits	Grade	Source
No		A.	<del>CHEM 101 and 111</del>	4hrs				CHEM 119							
No	AND	B.	<del>CHEM 102 and 112</del>	4hrs				CHEM 120							
No	AND	C.	PHYS 206	3hrs											
No	AND	D.	PHYS 207	3hrs											
Total Credits and GPA													0.000	.00	

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**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.	<del>ENGR 482</del>	3hrs				Language, Philosophy & Culture - 3 hrs							
								Select three hours from any course with the LP&C attribute							
Total Credits and GPA													0.000	.00	

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**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											
Total Credits and GPA													0.000	.00	

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**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
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No A. Social Science Rqmt 3hrs

Select from courses with the Social and Behavioral Science attribute [KSOC].

Total Credits and GPA 0.000 .00

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**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
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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

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**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
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No		A.	Courses not applied												
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Total Credits and GPA 0.000 .00

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**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
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No		A.	High-Impact Experience												

One course required.  
A list of possible high-impact experiences is available in the MSEN advising office.

Includes:

- MSEN 399
- MSEN 484
- MSEN 491

Total Credits and GPA 0.000 .00

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**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
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No		A.	Writing Requirement												

Two courses required.  
Only sections of ~~ENGR 482~~ MSEN 301, 302 with the Writing attribute [UWRT] or sections of MSEN 380 with the Oral Communication attribute [UCRT] may be used to satisfy this requirement.

Only sections of MSEN 301, MSEN 302 or MSEN 380 with the Writing attribute [UWRT] may be used to satisfy this requirement.

Total Credits and GPA 0.000 .00

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**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												
<p>Select from courses with the International and Cultural Diversity attribute [UICD] (except sections of BUSN 289 with the UWRT attribute).</p>																
<p>← CHANGE TO REFLECT NEW ICD/CD REQUIREMENTS</p> <p>3 HRS FROM INTERNATIONAL AND CULTURAL DIVERSITY COURSES 3 HRS FROM CULTURAL DISCOURSE COURSES</p>																
														Total Credits and GPA	0.000	.00

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**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													
<p>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.</p>																
														Total Credits and GPA	0.000	.00

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**Area : Residence Requirement ( 36.000 credits ) - 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.

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Met	Condition	Rule	Subject	Attribute	Low	High	Required Credits	Required Courses	Term	Subject	Course	Title	Attribute	Credits	Grade	Source
No		A.	Residence-Major	12hrs												
<p>Includes MSEN 300-499.</p>																
No	AND	B.	Residence - 300-499	24hrs												
														Total Credits and GPA	0.000	.00

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**Area : GPR-Major - Not Met**

**Description** A GPR of 2.00 must be maintained in all major field courses.

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Met	Condition	Rule	Subject	Attribute	Low	High	Required Credits	Required Courses	Term	Subject	Course	Title	Attribute	Credits	Grade	Source
No		A.	Major GPR	49+hrs												
<p>Includes MSEN 100-499.</p>																
														Total Credits and GPA	0.000	.00

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