

BS in Mechanical Engineering

Engineers find high-paying careers in a large number of industries. They find work in large corporations and small businesses. They often create businesses of their own and find work related to their interests such as outdoor, indoor, travel.

Marketable Skills

Students will gain the following marketable skills:

1. Confidence: Be self-assured through appreciating your own talents, abilities, skills, and qualities.
2. Critical thinking: Analyze and evaluate issues in order to solve problems and develop informed opinions.
3. Entrepreneurship: Develop, organize, and manage ideas and opportunities turning them into new products, services, firms, or industries.
4. Leadership: Step up, think, and act critically and creatively to bring others together to accomplish a common task.
5. Problem-solving: Find solutions to difficult or complex issues.
6. Teamwork: Participate as an effective, efficient member of a group in order to meet a common goal.

Additionally, students will learn about mechanical design and manufacturing.

The Mechanical Engineering curriculum is designed for students who desire to enter industry or pursue advanced studies. The curriculum provides a broad range of courses in the areas of solid mechanics, fluid mechanics, thermal systems, design and manufacturing and dynamics and mechatronics.

Vision

The Mechanical Engineering Program strives to graduate mechanical engineers of the highest quality and to conduct state-of-the-art research.

Mission

The Mechanical Engineering Program makes a high-quality, relevant engineering education available to all residents of the El Paso binational region. The department dedicates itself to providing students a set of skills, knowledge and attitudes that will permit its graduates to succeed and thrive as engineers and leaders.

The Program strives to:

- prepare its graduates to pursue lifelong learning, serve the profession and meet intellectual, ethical and career challenges; and
- maintain a vital, state-of-the-art research enterprise to provide its students and faculty opportunities to create, interpret, apply, and disseminate knowledge.

General Upper Division Prerequisite

All students must demonstrate basic competency to take any upper-division course. An upper-division course is any MECH course in the Junior or Senior year. Competency can be demonstrated by completing the following courses at UTEP with a "C" or better.

Code	Title	Hours
MECH 2311	Intro to Thermal-fluid Sci	3
MECH 2322	Mechanics of Materials	3
MECH 2340	Mechanics II -Dynamics	3

Fast Track

The Fast-Track Program (<http://catalog.utep.edu/admissions/undergraduate/fast-track/#text>) enables outstanding undergraduate UTEP students to receive both undergraduate and graduate credit for up to 15 hours of UTEP course work as determined by participating Master's and Doctoral programs.

Not all undergraduate programs have elected to participate in the Fast Track option, so students should see their departmental graduate advisor for information about requirements and guidelines. A list of courses that have been approved for possible use at the graduate level is found here (<http://catalog.utep.edu/admissions/undergraduate/fast-track/#fastrackcoursestext>).

Degree Plan

Required Credits: 128

Code	Title	Hours
University Core Curriculum		
	Complete the University Core Curriculum requirements. (p. 4)	42
Mechanical Engineering Designated Core (All courses require a grade of C or better.)		

CE 2326 Econ for Engrs & Scientists is a designated core course. It is required for graduation even if other course is used to fulfill the core. All Mechanical Engineering majors are encouraged to take CE 2326 to fulfill the core.

Required Courses:

CE 2326	Econ for Engrs & Scientists	3
CHEM 1305 & CHEM 1105	General Chemistry and Laboratory for CHEM 1305	4
MATH 1508 or MATH 1310 or MATH 1411	Precalculus (Listed if completed, but not required) Trigonometry and Conics Calculus I	3-5
PHYS 2320	Introductory Mechanics	3
PHYS 2120	Laboratory for PHYS 2320	1

Mechanical Engineering (Other Requirements) (All courses require a grade of C or better.)

Required Courses:

MATH 1411	Calculus I	4
MATH 1312	Calculus II	3
MATH 2313	Calculus III	3
MATH 2326	Differential Equations	3

Science Elective

Select one of the following options:

BIOL 1305 & BIOL 1107	General Biology and Topics in Study of Life I ^C	4
CHEM 1306 & CHEM 1106	General Chemistry and Laboratory for CHEM 1306 ^C	
PHYS 2321 & PHYS 2121	Introductory Electromagnetism and Laboratory for PHYS 2321	

MATH/Science Elective

Select one of the following:

BIOL 1306	Organismal Biology	
MATH 3323	Matrix Algebra	
MATH 3335	Applied Analysis I	
MATH 4329	Numerical Analysis	
MATH 4336	Applied Analysis II	
PHYS 2325	Survey of Modern Physics	
PHYS 3351	Analytical Mechanics I	
STAT 3320	Probability and Statistics	

MATH Elective

Select one of the following:

MATH 3323	Matrix Algebra	
MATH 3335	Applied Analysis I	
MATH 4329	Numerical Analysis	
MATH 4336	Applied Analysis II	
STAT 3320	Probability and Statistics	

Mechanical Engineering MajorRequired Courses: ¹

MECH 1305	Graphic & Design Fundamentals ^C	3
MECH 1321 or CE 2315	Mechanics I-Statics ^C Statics	3
MECH 2103	Engineering Computations	1
MECH 2311	Intro to Thermal-fluid Sci ^C	3
MECH 2322 or CE 2334	Mechanics of Materials ^C Mechanics of Materials	3
MECH 2331	Matl & Manufacturing Processes ^C	3
MECH 2340	Mechanics II -Dynamics ^C	3

MECH 2342 or ECE 2301	Electro Mechanical Systems ^C Electric Circuits I	3
MECH 3312	Thermodynamics ³	3
MECH 3314	Fluid Mechanics ³	3
MECH 3334	Mechanical Design ³	3
MECH 3345	System Dynamics ³	3
MECH 3352	Engineering Analysis ³	3
MECH 4315	Heat Transfer ³	3
MECH 4366	Senior Design Project ^{2,3}	3

Select one of the following:

MECH 2131	Manufacturing Engineering Lab ^C	
MECH 2132	Additive Manufacturing Lab ^C	
MECH 2133	Metal Casting Lab ^C	
MECH 2134	Intelligent Manufacturing Lab	

Select two of the following:

MECH 3103	Mechatronics Lab ³	
MECH 3113	Thermo-fluid Lab ³	
MECH 3123	Solid Mechanics Lab ³	
MECH 3135	Eng. Drawings & Inspection Lab	

Select one of the following:

MECH 4326	Finite Element Analysis ³	
MECH 4327	Artificial Intel. in Mech. Eng	
MECH 4328	Intro to LabVIEW	
MECH 4330	Dynamic Systems Simulation ³	
MECH 4392	Special Topics in Computation ³	

Select five of the following (minimum of one from each area):**Solid Mechanics Area**

AERO 3323	Aerospace Structures I	
AERO 4313	Aerospace Structures II	
MECH 4336	Principles of Engr Design ³	
MECH 4338	Capstone Design Projects	
MECH 4340	Mechanical Design II	
MECH 4370	Pre-Professional Experiences	
MECH 4395	Special Topics in Mech. Engr. ³	

Thermal Fluid Area

AERO 3312	Aerodynamics 1	
AERO 4322	Aerospace Propulsion	
AERO 4331	Aerodynamics II	
MECH 4316	Thermal System Design ³	
MECH 4390	Renewable Energy	
MECH 4394	Special Topics in Therm Fluid ³	

Electro-Mechanical Area

AERO 3343	Systems Modelling and Control	
MECH 4332	MECH Comp App Vision Robotics	
MECH 4334	Mechanical Systems Control	
MECH 4344	Elect. Instrumentation	
MECH 4345	Comm & Mech Sensor Protocols	
MECH 4346	Mechatronics ³	
MECH 4393	Special Topics in Elect-Mech ³	

Total Hours**128**^C Course require a grade of C or better.¹ All institutional courses appearing in this area count towards the major GPA with a minimum of 2.0

² Must be in the last full semester and have a 2.0 GPA or better in major.

³ Course requires grade of D or better

University Core Curriculum (A program may recommend specific courses. All courses require a C or better.)

I. Communication (six hours)

Code	Title	Hours
Courses in this category focus on developing ideas and expressing them clearly, considering the effect of the message, fostering understanding, and building the skills needed to communicate persuasively. Courses involve the command of oral, aural, written, and visual literacy skills that enable people to exchange messages appropriate to the subject, occasion, and audience. Course objectives for this component are: Critical Thinking Skills, Communication Skills, Teamwork, and Personal Responsibility.		
Select six hours of the following:		6
For students whose secondary education was in English:		
COMM 1611	Written and Oral Communication	
ENGL 1313	Writing About Literature	
RWS 1301	Rhetoric & Composition I	
RWS 1302	Rhetoric & Composition 2	
RWS 1601	Rhetoric, Composition & Comm	
For students whose secondary education was not in English:		
ESOL 1311	Expos Engl Compos-Spkr Esl	
ESOL 1312	Res & Crit Writng Spkr Esl	
TOTAL HOURS		6

II. American History (six hours)

Code	Title	Hours
Courses in this category focus on the consideration of past events and ideas relative to the United States, with the option of including Texas History for a portion of this component area. Courses involve the interaction among individuals, communities, states, the nation, and the world, considering how these interactions have contributed to the development of the United States and its global role. Course objectives for this component are: Critical Thinking Skills, Communication Skills, Social Responsibility, and Personal Responsibility.		
HIST 1301	History of U.S. to 1865	3
HIST 1302	History of U.S. Since 1865	3
TOTAL HOURS		6

III. Language, Philosophy & Culture (three hours)

Code	Title	Hours
Courses in this category focus on how ideas, values, beliefs, and other aspects of culture express and affect human experience. Courses involve the exploration of ideas that foster aesthetic and intellectual creation in order to understand the human condition across cultures. Course objectives for this component are: Critical Thinking Skills, Communication Skills, Social Responsibility, and Personal Responsibility.		
Select one of the following:		3
AFST 2300	Intro-African Amer Studies	
CHIC 2302	Latina/o Presence in the U.S.	
ENGL 2311	English Literature	
ENGL 2312	English Literature	
ENGL 2313	Intro to American Fiction	
ENGL 2314	Intro to American Drama	
ENGL 2318	Intro to American Poetry	
FREN 2322	Making of the "Other" Americas	
HIST 2301	World History to 1500	
HIST 2302	World History Since 1500	
PHIL 1301	Introduction to Philosophy	
PHIL 2306	Ethics	
RS 1301	Introduct to Religious Studies	
SPAN 2340	Seeing & Naming: Conversations	

WS 2300	Introduction to Womens Studies	
WS 2350	Global Feminisms	
TOTAL HOURS		3

IV. Mathematics (three hours)

Code	Title	Hours
Courses in this category focus on quantitative literacy in logic, patterns, and relationships. Courses involve the understanding of key mathematical concepts and the application of appropriate quantitative tools to everyday experience. Course objectives for this component are: Critical Thinking Skills, Communication Skills, and Empirical & Quantitative Skills.		
Select one of the following:		
MATH 1309	College Algebra	
MATH 1310	Trigonometry and Conics	
MATH 1319	Math in the Modern World	
MATH 1320	Math for Social Sciences I	
MATH 1411	Calculus I	
MATH 1508	Precalculus	
MATH 2301	Math for Social Sciences II	
STAT 1380	Statistical Literacy	
STAT 2480	Elementary Statistical Methods	
TOTAL HOURS		3

V. Life & Physical Sciences (six hours)

Code	Title	Hours
Courses in this category focus on describing, explaining, and predicting natural phenomena using the scientific method. Courses involve the understanding of interactions among natural phenomena and the implications of scientific principles on the physical world and on experiences. Course objectives for this component are: Critical Thinking Skills, Communication Skills, Empirical & Quantitative Skills, and Teamwork.		
Select one of the following:		
ASTR 1107	Astronomy Lab I	
ASTR 1307	Elem Astronomy-Solar System	
ASTR 1308	Elem Astr Stars & Galaxies	
BIOL 1103	Introductory Biology Lab	
BIOL 1104	Human Biology Laboratory	
BIOL 1107	Topics in Study of Life I	
BIOL 1108	Organismal Biology Laboratory	
BIOL 1203	Introductory Biology	
BIOL 1304	Human Biology	
BIOL 1305	General Biology	
BIOL 1306	Organismal Biology	
BIOL 2111	Human Anat/Physio Lab I	
BIOL 2113	Human Anat/Physio Lab II	
BIOL 2311	Human Anat/Physiology I	
BIOL 2313	Human Anat/Physiology II	
CHEM 1105	Laboratory for CHEM 1305	
CHEM 1106	Laboratory for CHEM 1306	
CHEM 1107	Intro General Chemistry Lab	
CHEM 1108	Intro Organic & Biochem Lab	
CHEM 1305	General Chemistry	
CHEM 1306	General Chemistry	
CHEM 1307	Intro to General Chemistry	
CHEM 1308	Intro Organic & Biochemistry	
ESCI 1101	Environmental Sci. Lab	
ESCI 1102	Non-major Lab for ESCI 1301	
ESCI 1301	Intro to Environmental Sci	

GEOG 1106	Laboratory for GEOG 1306
GEOG 1306	Physical Geography
GEOL 1103	Lab for GEOL 1313
GEOL 1104	Lab for GEOL 1314
GEOL 1111	Principles of Earth Sci - Lab
GEOL 1112	Laboratory for Geology 1212
GEOL 1211	Principles of Earth Sciences
GEOL 1212	Principles of Earth Science
GEOL 1230	The Blue Planet
GEOL 1231	Natural Hazards
GEOL 1313	Intro to Physical Geology
GEOL 1314	Intro to Historical Geol
HSCI 2302	Fundamentals of Nutrition
HSCI 2303	Wellness Dynamics
MICR 2330	Microorganisms and Disease
PHYS 1403	General Physics I
PHYS 1404	General Physics II
PHYS 2120	Laboratory for PHYS 2320
PHYS 2121	Laboratory for PHYS 2321
PHYS 2320	Introductory Mechanics
PHYS 2321	Introductory Electromagnetism
TOTAL HOURS	6

VI. Political Science (six hours)

Code	Title	Hours
Courses in this category focus on consideration of the Constitution of the United States and the constitutions of the states, with special emphasis on that of Texas. Courses involve the analysis of governmental institutions, political behavior, civic engagement, and their political and philosophical foundations. Course objectives for this component are: Critical Thinking Skills, Communication Skills, Social Responsibility and Personal Responsibility.		
Required Courses:		
POLS 2310	Introduction to Politics	3
POLS 2311	American Gover & Politics	3
TOTAL HOURS		6

VII. Social & Behavioral Sciences (three hours)

Code	Title	Hours
Courses in this category focus on the application of empirical and scientific methods that contribute to the understanding of what makes us human. Courses involve the exploration of behavior and interactions among individuals, groups, institutions, and events, examining their impact on the individual, society, and culture. Course objectives for this component are: Critical Thinking Skills, Communication Skills, Empirical & Quantitative Skills, and Social Responsibility.		
Select one of the following:		
ANTH 1301	Intro-Phys Anth/Archeolog	3
ANTH 1302	Intro-Cultural Anthropology	
ANTH 1310	Cultural Geography	
ANTH 2320	Intro to Linguistics	
ASIA 2300	Asian American Studies	
CE 2326	Econ for Engrs & Scientists	
CHIC 2311	Intro to Chicano Studies	
COMM 2350	Interpersonal Communication	
COMM 2372	Mass Media and Society	
ECON 2303	Principles of Macroeconomics	
ECON 2304	Principles of Microeconomics	
EDPC 1301	Introduction to Ed Psychology	

EDU 1342	Action Research in Classrooms	
ENGL 2320	Introduction to Linguistics	
GEOG 1310	Cultural Geography	
LEAD 2300	Leadership in Action	
LING 2320	Introduction to Linguistics	
LING 2340	Lang. Inside & Out: Sel Topics	
PSYC 1301	Introduction to Psychology	
SOCI 1301	Introduction to Sociology	
SOCI 1310	Cultural Geography	
TOTAL HOURS		3

VIII. Creative Arts

Code	Title	Hours
Courses in this category focus on the appreciation and analysis of creative artifacts and works of the human imagination. Courses involve the synthesis and interpretation of artistic expression and enable critical, creative, and innovative communication about works of art. Course objectives for this component are: Critical Thinking Skills, Communication Skills, Teamwork, and Social Responsibility.		
Select one of the following:		
ART 1300	Art Appreciation	
ARTH 1305	History of Art I	
ARTH 1306	History of Art II	
CHIC 1311	Chicana/o Fine Arts Appreciat	
DANC 1304	Introduction to Dance	
FILM 1390	Intro-Art of Motion Pict.	
MUSL 1324	Music Appreciation	
MUSL 1327	Jazz to Rock	
MUSL 2321	Music, Culture, and Society	
THEA 1313	Introduction to Theatre	
TOTAL HOURS		3

IX. Component Area Option (six hours)

Code	Title	Hours
a. A minimum of 3 SCH must meet the definition and corresponding Core Objectives specified in one of the foundational component areas. b. As an option for up to 3 semester credit hours of the Component Area Option, an institution may select course(s) that: (i) Meet(s) the definition specified for one or more of the foundational component areas; and (ii) Include(s) a minimum of three Core Objectives, including Critical Thinking Skills, Communication Skills, and one of the remaining Core Objectives of the institution's choice.		
BUSN 1301	Intro to Global Business	
COMM 1301	Public Speaking	3
COMM 1302	Business/Profession Comm	
CS 1310	Intro-Computational Thinking	
CS 1320	Computer Programming Sci/Engr	
EL 1301	Eng Innovation and Leadership	
ENGR 1302	Engineering Design Experience	
ENGR 1303	Applied Engineering Analysis	
LEAD 1300	Introduction to Leadership	
SCI 1301	Inquiry in Math & Science	
SPLP 1312	Comm. Var. Across the Lifespan	
UNIV 1301	Seminar/Critical Inquiry	
TOTAL HOURS		6

4-Year Sample Degree Plan**BS Mechanical Engineering (Starting with Pre-Calculus)**

Code	Title	Hours
BACHELOR OF SCIENCE IN MECHANICAL ENGINEERING		
Summer		
(if needed)		
MATH 1508 or MATH 1310	Precalculus Trigonometry and Conics	
FRESHMAN		
Fall		
RWS 1301	Rhetoric & Composition I ¹	3
UNIV 1301	Seminar/Critical Inquiry ¹	3
PHYS 2320	Introductory Mechanics	3
PHYS 2120	Laboratory for PHYS 2320	1
MATH 1411	Calculus I ¹	4
MECH 1305	Graphic & Design Fundamentals ¹	3
Spring		
HIST 1301	History of U.S. to 1865 ¹	3
RWS 1302	Rhetoric & Composition 2 ¹	3
CHEM 1305	General Chemistry ¹	3
CHEM 1105	Laboratory for CHEM 1305 ¹	1
MECH 1321 or CE 2315	Mechanics I-Statics ¹ Statics	3
MATH 1312	Calculus II ¹	3
SOPHOMORE		
Fall		
HIST 1302	History of U.S. Since 1865 ¹	3
MECH 2322 or CE 2334	Mechanics of Materials ¹ Mechanics of Materials	3
MECH 2331	Matl & Manufacturing Processes ¹	3
Design and Manufacturing Studio ^{1,8}		1
MATH 2313	Calculus III ¹	3
Science Elective *		4
Spring		
CE 2326	Econ for Engrs & Scientists ¹	3
MECH 2340	Mechanics II -Dynamics ¹	3
MECH 2311	Intro to Thermal-fluid Sci ¹	3
MECH 2342 or ECE 2301	Electro Mechanical Systems ¹ Electric Circuits I	3
MECH 2103	Engineering Computations ¹	1
MATH 2326	Differential Equations ¹	3
JUNIOR		
Fall		
POLS 2310	Introduction to Politics ¹	3
MECH 3314	Fluid Mechanics	3
MECH 3312	Thermodynamics	3
MECH 3352	Engineering Analysis	3
Math Elective ^{1,3}		3
Laboratory Experience ²		1
Spring		
COMM 1302	Business/Profession Comm ¹	3
Language, Philosophy, and Culture		3

MECH 3345	System Dynamics	3
MECH 3334	Mechanical Design	3
Science/Math Elective ⁴		3
Laboratory Experience ²		1

SENIOR**Fall**

MECH 4315	Heat Transfer	3
Computational Elective ⁶		3
Design Elective Solid Mechanics Area ⁵		3
Design Elective Thermal Fluid Area ⁵		3
Design Elective Electro-Mechanical ⁵		3

Spring

POLS 2311	American Gover & Politics ¹	3
MECH 4366	Senior Design Project ⁷	3
Design Elective Any Area ⁵		3
Design Elective Any Area ⁵		3
Creative Arts Elective		3

Notes:

- Must be either CHEM 1306 with CHEM 1106, BIOL 1107 with 1305 or PHYS 2421 or by permission of advisor.

1 Grade of C or better required

2 From the department approved list of Design and Project Experience I and II courses.

3. Selected from MATH 3323, 3335, 4329, 4336, STAT 3320. By completing 3 of these electives you may be eligible for a Mathematics minor, interested students should consult the Department of Mathematics.

4. Approved courses are: BIOL 1306, PHYS 2325, PHYS 3351 or any course listed in NOTE 3 (not already taken). Also, as per the UTEP core curriculum requirements two of your science classes must be in the same area (either BIOL, PHYS, OR CHEM).

5. From the department approved list of Design Electives.

6. From the department approved list of Computational Electives.

7. Must be in the last full semester and have a 2.0 GPA or better in major.

8. From the department approved list of Design and Manufacturing Studio courses.

Total Hours **128**

BS Mechanical Engineering (Starting with Calculus)

Code	Title	Hours
BACHELOR OF SCIENCE IN MECHANICAL ENGINEERING		
FRESHMAN		
Fall		
MATH 1411	Calculus I ¹	4
MECH 1305	Graphic & Design Fundamentals ¹	3
PHYS 2320	Introductory Mechanics	3
PHYS 2120	Laboratory for PHYS 2320	1
RWS 1301	Rhetoric & Composition I ¹	3
UNIV 1301	Seminar/Critical Inquiry ¹	3
Spring		
CHEM 1305 & CHEM 1105	General Chemistry and Laboratory for CHEM 1305 ¹	4
HIST 1301	History of U.S. to 1865 ¹	3
MATH 1312	Calculus II ¹	3
MECH 1321 or CE 2315	Mechanics I-Statics ¹ Statics	3
RWS 1302	Rhetoric & Composition 2 ¹	3
SOPHOMORE		
Fall		

HIST 1302	History of U.S. Since 1865 ¹	3
MATH 2313	Calculus III ¹	3
MECH 2322 or CE 2334	Mechanics of Materials ¹ Mechanics of Materials	3
MECH 2331	Matl & Manufacturing Processes ¹	3
Design and Manufacturing Studio ^{1,8}		1
Science Elective *		4
Spring		
CE 2326	Econ for Engrs & Scientists ¹	3
MATH 2326	Differential Equations ¹	3
MECH 2103	Engineering Computations	1
MECH 2311	Intro to Thermal-fluid Sci ¹	3
MECH 2340	Mechanics II -Dynamics ¹	3
MECH 2342 or ECE 2301	Electro Mechanical Systems ¹ Electric Circuits I	3
JUNIOR		
Fall		
POLS 2310	Introduction to Politics ¹	3
MECH 3314	Fluid Mechanics	3
MECH 3312	Thermodynamics	3
MECH 3352	Engineering Analysis	3
Math Elective ³		3
Laboratory Experience ^{1,2}		1
Spring		
COMM 1302	Business/Profession Comm ¹	3
Language, Philosophy, and Culture ¹		3
MECH 3345	System Dynamics	3
MECH 3334	Mechanical Design	3
Laboratory Experience ²		1
Science/Math Elective ^{1,4}		3
SENIOR		
Fall		
MECH 4315	Heat Transfer	3
Computational Elective ⁶		3
Design Elective Solid Mechanics Area ⁵		3
Design Elective Thermal Fluid Area ⁵		3
Design Elective Electro-Mechanical ⁵		3
Spring		
POLS 2311	American Gover & Politics ¹	3
Creative Arts Elective ¹		3
MECH 4366	Senior Design Project ⁷	3
Design Elective Any Area ⁵		3
Design Elective Any Area ⁵		3

Notes:

- Must be either CHEM 1306 with CHEM 1106, BIOL 1107 with 1305 or PHYS 2421 or by permission of advisor.

1 Grade of C or better required

2 From the department approved list of Design and Project Experience I and II courses.

3. Selected from MATH 3323, 3335, 4329, 4336, STAT 3320. By completing 3 of these electives you may be eligible for a Mathematics minor, interested students should consult the Department of Mathematics.

4. Approved courses are: BIOL 1306, PHYS 2325, PHYS 3351 or any course listed in NOTE 3 (not already taken). Also, as per the UTEP core curriculum requirements two of your science classes must be in the same area (either BIOL, PHYS, OR CHEM).

5. From the department approved list of Design Electives.

6. From the department approved list of Computational Electives.
7. Must be in the last full semester and have a 2.0 GPA or better in major.
8. From the department approved list of Design and Manufacturing Studio courses.

Total Hours

128