

# Bachelor of Science – Engineering Innovation and Leadership Degree Plan - Engineering Innovation Concentration (checklist)

2023

Catalog: 2022-2023

Expires: 08/01/2029

Last Name \_\_\_\_\_

First Name \_\_\_\_\_ M.I. \_\_\_\_\_

UTEP ID \_\_\_\_\_

**NOTE: Overall GPA ≥ 2.0 AND In-Major GPA ≥ 2.0 REQUIRED for graduation**

A Core Curriculum (45 SCH) (minimum of "C" grade required)		Semester Completed	Final Grade	SCH	Sub #
1 Communication (6 credit hours required)					
RWS 1301*	Rhetoric and Composition I				
RWS 1302*	Rhetoric and Composition II				
2 Mathematics (4)					
MATH 1411*	Calculus I				
3 Life and Physical Sciences (8)					
PHYS 2320*	Introductory Mechanics				
PHYS 2120*	Laboratory for PHYS 2320				
PHYS 2321*	Introductory Electromagnetism				
PHYS 2121*	Laboratory for PHYS 2321				
4 Language, Philosophy, and Culture (3)					
PHIL 2306*	Ethics				
5 Creative Arts (3) Select and circle one:					
ART 1300*, ARTH 1305*, 1306*, CHIC 1311*, DANC 1304*, FILM 1390*, MUSL 1324*, 1327*, 2321*, THEA 1313*					
6 American History (6)					
HIST 1301*	History of the U.S. to 1865				
HIST 1302*	History of the U.S. since 1865				
7 Government/Political Science (6) – all 6 SCH must be completed at the same institution					
POLS 2310*	Introduction to Politics				
POLS 2311*	American Govt. & Politics				
8 Social and Behavioral Sciences (3)					
CE 2326*	Econ. For Engrs & Scientists				
9 Component Area Option (6)					
EL 1301*	Eng. Innovation & Leadership				
CS 1320 <sup>3</sup>	Computer Programming Sci. / Engr.				

B Foundational Math & Science (15 SCH)		Semester Completed	Final Grade	SCH	Sub #
CHEM 1305*	General Chemistry				
MATH 1312*	Calculus II				
MATH 2313*	Calculus III				
MATH 2326*	Differential Equations				

F Upper Division Math/Science Elective (3 SCH) see advisor for approved courses		Semester Completed	Final Grade	SCH	Sub #
MATH 3323*	Matrix Algebra				

SUBSTITUTIONS**				
Sub #	Course on degree plan to substitute	Institution where course was taken	Name of Course as it appears on UTEP Transcript	Course as it appears on UTEP Transcript
ex				
1				
2				
3				
4				

C Engineering Leadership Coursework (25 SCH)		Semester Completed	Final Grade	SCH	Sub #
EL 1402*	Fund of Leadership, Design and Graphics				
EL 2301*	Modeling and Simulation				
EL 3302*	Engineering Measurements				
EL 3003*	Professional Practice I				
EL 3005*	Professional Practice II				
EL 3331*	Engineering Design: People to Products				
EL 3332*	Engineering Entrepreneurship: Products to People				
EL 3373* or IE 3373 or EE 3384	Engineering Probability & Stat. Models Engr Probability & Stat Models				
EL 4395*	Capstone Design I: Definition & Exploration				
EL 4396*	Capstone Design II: Development & Evaluation				

D Engineering Innovation Concentration Required Courses (16 SCH)		Semester Completed	Final Grade	SCH	Sub #
MME 2303	Intro to Materials Sci & Engrg				
MME 2434	Mechanics of Materials				
CE 2377 or IE 2377 or MECH 2342	Electro Mechanic Systems				
CE 2338 or MECH 2340	Mechanics II (Dynamics)				
MECH 2311	Intro to Thermo Fluid Science				

E Major: Emphasis Courses (15 SCH) See advisor for list of emphasis & approved courses within emphasis.		Semester Completed	Final Grade	SCH	Sub #

F Upper Division Engineering Technical Elective (9 SCH) see advisor for approved courses		Semester Completed	Final Grade	SCH	Sub #

<b>BSEIL Total Hours</b>	<b>125</b>
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a--COMM 1320 is required for CS Concentration

\* -- C or better required

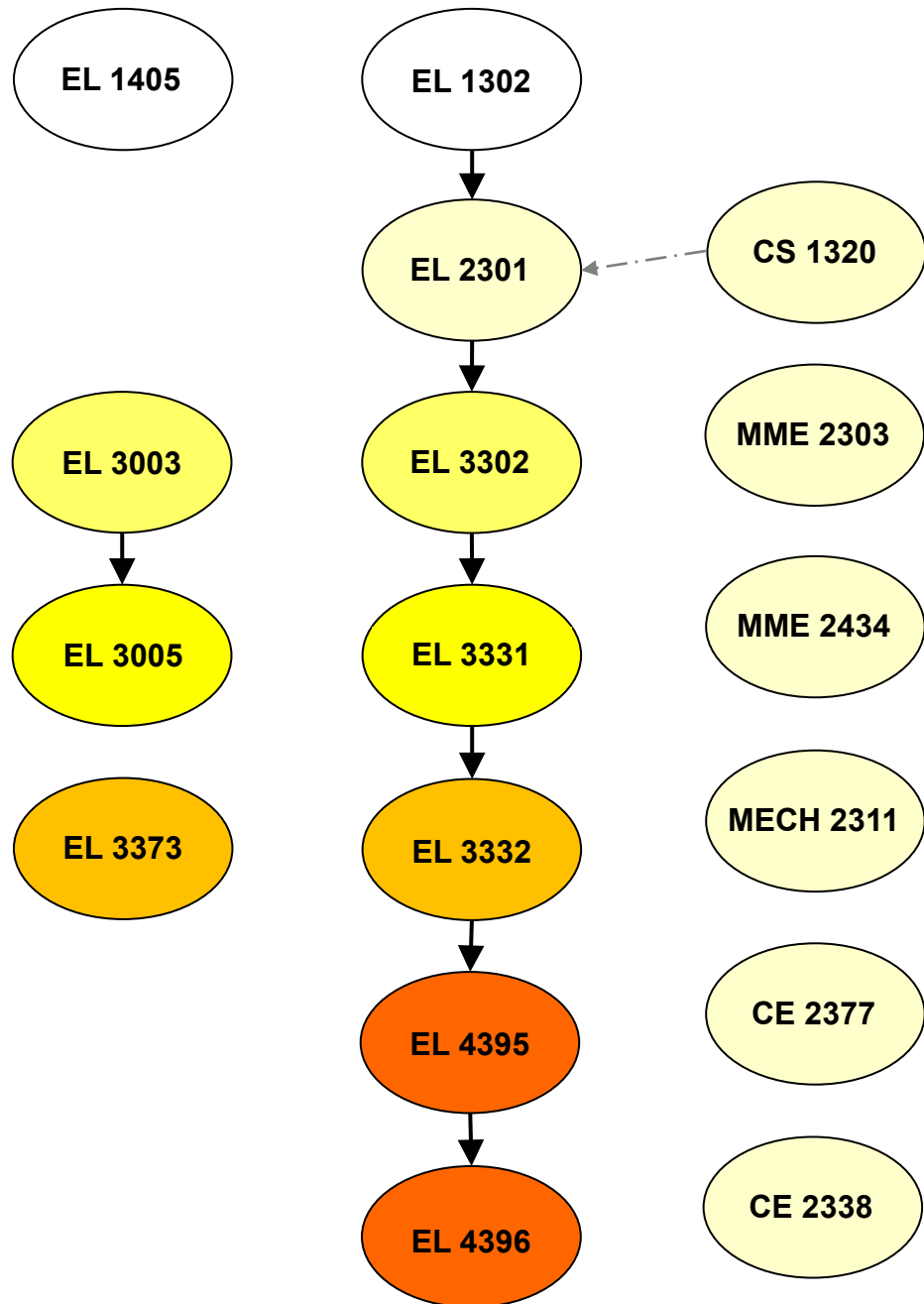
\*\* -- requires submission of official substitution form available at <https://www.utep.edu/engineering/student-resources/student-resources-forms.html>

APPROVALS:	
ADVISOR	DATE
CHAIR	DATE

Subject	Course Number	Course Title	Prerequisites designated with a + might be taken concurrently. Courses designated with a * must be completed with a C or better	Co-requisites	Restrictions				Semester		
					FR	SO	JR	SR	Fall	Spring	Summer
EL	1301*	Eng Innovation and Leadership	MATH 0311*	none	✓	✓	✓	✓	✓		
EL	1402*	Fund. of Lead, Design and Graph	EL 1301*+	none	✓	✓	✓	✓		✓	
EL	2301*	Modeling and Simulation	EL 1402*	none	✓	✓	✓	✓	✓		
EL	3003	Professional Practice I	none	none	X	X	✓	✓	✓	✓	✓
EL	3005	Professional Practice II	EL 3003	none	X	X	✓	✓	✓	✓	✓
EL	3302*	Engineering Measurements	EL 2301* AND MATH 1312*	none	✓	✓	✓	✓		✓	
EL	3330	Eng Leadership Development	EL 3302* AND MATH 2326*	none	✓	✓	✓	✓	✓		
EL	3331*	Engr Design: People to Products	EL 3302* AND PHYS 2421	none	✓	✓	✓	✓	✓		
EL	3332*	Eng Entr: Products to People	EL 3331*	none	✓	✓	✓	✓		✓	
EL	3373 <sup>a</sup>	Eng Prob. & Statistical Methods	MATH 2313* OR MATH 2326*	none	✓	✓	✓	✓	✓		
EL	4171	Eng Ed and Lead Problems	none	none	X	✓	✓	✓		✓	
EL	4191	Independent Studies	none	none	✓	✓	✓	✓	✓	✓	
EL	4291	Independent Studies	none	none	✓	✓	✓	✓		✓	
EL	4330	Innovation in Technology	none	none	X	X	✓	✓	✓		
EL	4331	Intellectual Property Law	none	none	X	X	✓	✓		✓	
EL	4334	Eng Ethics & Professionalism	EL 3302* AND MATH 2326*+	none	✓	✓	✓	✓		✓	
EL	4391	Independent Studies	none	none	✓	✓	✓	✓		✓	✓
EL	4393	Special Topics in Eng and Lead	none	none	X	✓	✓	X	✓	✓	
EL	4395	CD I: Definition & Exploration	MATH 2326* AND EL 3332* AND PHYS 2321 AND CE 2326*	none	✓	✓	✓	✓	✓		
EL	4396	CD II: Develop & Evaluation	EL 4395*	none	✓	✓	✓	✓		✓	
									Last Update 06-14-2022		
<i>a -- IE 3373 OR EE 3384, may be substituted.</i>											

# BSEL Critical Path 2022 - 2023

**NOTE:** *this shows only EL courses and their relation to one another. Please refer to degree plan for complete degree requirements, and course catalog for complete course descriptions, including the complete set of prerequisites.*

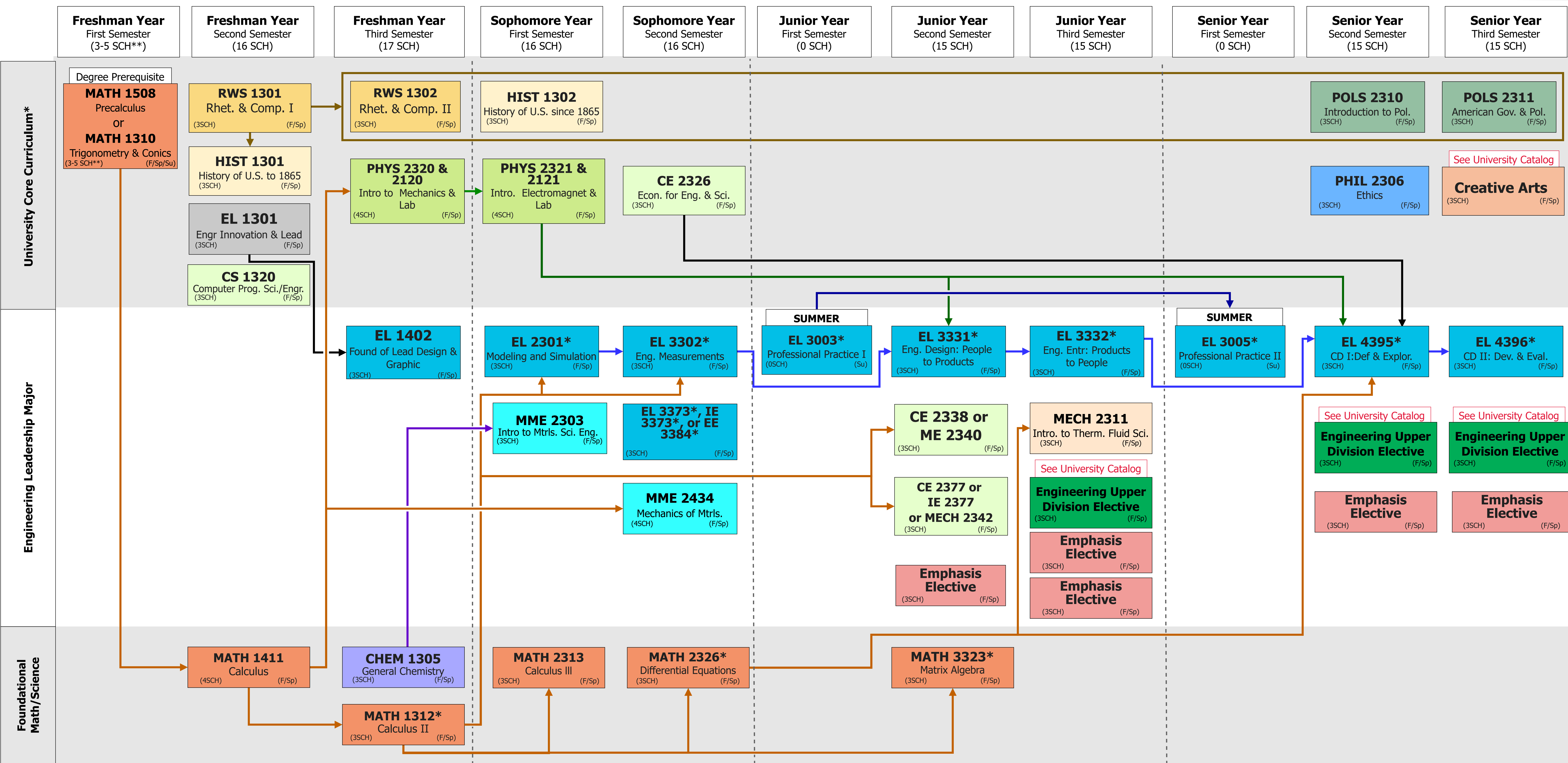


# Bachelor of Science in Engineering Innovation and Leadership (Engineering Innovation Concentration Starting with Precalculus)

Required Semester Credit Hours (SCH): 125

Refer to the University Catalog for all degree requirements at [catalog.utep.edu](http://catalog.utep.edu).  
Many core curriculum courses are also offered in the summer (Su). Students are encouraged to register early and check Goldmine for course availability.  
The flowchart below may not reflect all student schedules; courses can be shifted to different semesters where applicable.

\*C or better required.  
\*\* SCH not counted in total degree required semester credit hours.  
Arrow indicates a prerequisite.  
Color-coded boxes group the course subject.  
F/Sp/Su indicates course availability in Fall/Spring/Summer.





# Bachelor of Science in Engineering Innovation and Leadership (Engineering Innovation Concentration Starting with Calculus)

Catalog Year 2022-2023  
Sample Degree Plan

Required Semester Credit Hours (SCH): 125

Refer to the University Catalog for all degree requirements at [catalog.utep.edu](http://catalog.utep.edu). Many core curriculum courses are also offered in the summer (Su). Students are encouraged to register early and check Goldmine for course availability. The flowchart below may not reflect all student schedules; courses can be shifted to different semesters where applicable.

\*C or better required.  
Arrow indicates a prerequisite.  
Color-coded boxes group the course subject.  
F/Sp/Su indicates course availability in Fall/Spring/Summer.

