

## B.S. in Mechanical Engineering 2020-21 Catalog

	Course	Title	Cr.	Sched	Prerequisites
CCET GE Courses	Quantitative Lit.	*MATH 1210 - Calculus I	4	F/S/Su	MATH 1050 & 1060 or ACT 26+
	PS GE	CHEM 1210/15 Princp. of Chemistry	4/1	F/Su	MATH 1050 or 1210 or ACT 26+
Other GE Courses are required to graduate with a Bachelor's Degree from SUU. The above-listed courses count for both GE and major requirements.					
ME Core	ENGR 1000	Engineering Success Skills	1	F/S	
	ENGR 1030	CAD & Analysis Using SolidWorks	3	F/S/Su	
	ENGR 1050	Introduction to Engineering Design	1	F/S/Su	MATH 1010 or higher
	ENGR 2010	Statics	3	F/S/Su	MATH 1210
	ENGR 2030	Dynamics	3	F/S/Su	ENGR 2010 & PHYS 2210
	ENGR 2140	Strength of Materials	3	F/S/Su	ENGR 2010 & MATH 1220
	ENGR 2145	Strength of Materials Lab	1	F/S	ENGL 2010
	ENGR 2170	Programming for Engineers	3	F/S/Su	MATH 1210
	ENGR 2250	Electric Circuits	3	F/S/Su	PHYS 2220/25 & %MATH 2250
	ENGR 2255	Electric Circuits Lab	1	F/S	ENGL 2010
	ENGR 3000	Thermodynamics	3	F	PHYS 2220/25
	ENGR 3010	Material Science Engineering	3	F	CHEM 1210 & MATH 1210
	ENGR 3030	Technical Project Management	3	S	ENGR 1010 or ENGR 2145
	ENGR 3050/55	Fluid Mechanics/Lab	3/1	S/Su	MATH 1220, PHYS 2210
	ENGR 3700	Machine Design	3	F	ENGR 1030, 2030, 2140/45, #3010
	ENGR 401015	Heat Transfer/Lab	3/1	F	ENGR 3050 & MATH 2250
	ENGR 4025	Engineering Capstone Design Lab I	3	F	ENGR 3030
	ENGR 4030/35	Electronics/Lab	3/1	F/Su	ENGR 2250/55
	ENGR 4060/65	Manufacturing/Lab	2/1	S	ENGR 3010
	ENGR 4085	Engineering Capstone Design Lab II	3	S	ENGR 4025
	ENGR 4300	Vibrations	3	F	ENGR 2030, 2140, 2170 & MATH 2250 or 2280
	ENGR 4710/15	Instrumentation & Measurement/Lab	3/1	S	ENGR 2030, 2140, 2250, 3000
MATH 1220	Calculus II	4	F/S	MATH 1210	
MATH 2210	Calculus III	4	F/S	MATH 1220	
MATH 2250	Linear Algebra & Differential Equations	4	F/S	MATH 1220	
PHYS 2210/15	Physics for Scientists & Engineers I	4	F/S	MATH 1210	
PHYS 2220/25	Physics for Scientists & Engineers II	4	F/S	PHYS 2210 & MATH 1220	
Select one	COMM 4240	Technical Writing	3	F/S/Su	None
	ENGL 3120	Grant & Technical Writing	3	S	ENGL 2010

\*If not ready for MATH 1210 students will need to take the prerequisite classes of MATH 1050 and MATH 1060 before taking MATH 1210.

% MATH 2250 can be taken concurrently with ENGR 2250

# ENGR 3010 can be taken concurrently with ENGR 3700

## TECHNICAL ELECTIVE (choose 1 for 3-4 credits)

Technical Elective	BIOL 2320/25	Human Anatomy/Lab	3/1	F/S/Su	BIOL 1610
	ENGR 4000/05	Mechatronics/Lab	3/1	S	ENGR 2030, 4030/35
	ENGR 4050	Structural Analysis	3	F	ENGR 2140/45
	ENGR 4600	Electromagnetics	3	S	PHYS 2220, MATH 2210, 2250, ENGR 2250, 2170
	MATH 3250	Complex Variables	3	S-Odd	MATH 2210
	MATH 3600	Numerical Analysis	3	S-Even	MATH 2250 & programming lan- guage
	MATH 3700	Probability & Statistics	4	F/S/Su	MATH 1220
	MATH 3800	Partial Differential Equations	3	F-Odd	MATH 2210 and 2250 or 2280
	PHYS 1040/45	Elementary Astronomy/Lab	3/1	F/S/Su	
	PHYS 3310	Quantum Physics I	3	F	PHYS 2210/15 & 2220/25
	PHYS 3320	Quantum Physics II	3	S	PHYS 3310