

# BS in Engineering Curriculum – MECH Concentration

MECH ENGR - TIER II – Math ACT of 22-24/Math SAT of 520-560

Freshman Fall Semester			Freshman Spring Semester		
MATH 111	College Algebra*	3	MATH 115	Precalculus	3
ENGR 100	Freshman Seminar	1	BIOL 111	Basic Biology & Lab	4
ENGR 110	Introductory Engineering Applications*	3	ENGR 120	Foundations of Engineering Design I	3
ENGL 101	Academic Writing	3	ENGL 102	Academic Writing & Literature	3
CHEM 111	General Chemistry I & Lab	4	CHEM 113	General Chemistry II & Lab	4
CUC 100	Connections	0.5	CUC 100	Connections	0.5
Semester Total:		14.5	Semester Total:		17.5

Summer Semester after Freshman Year		
MATH 122	Calculus I	4
ENGR 121	Foundations of Engineering Design II	3
Semester Total:		7.0

Sophomore Fall Semester			Sophomore Spring Semester		
MATH 223	Calculus II	4	MATH 224	Calculus III	4
PHYS 251	Physics I & Lab	4	ENGR 260	Electrical Circuits & Lab	4
ENGR 220	Statics/Strength of Materials	3	ENGR 330	Dynamics	3
ENGR 240	Engineering Materials & Processes	4	PHYS 252	Physics II & Lab	4
ENGL 2xx	English Literature	3	CUC 200	Connections	0.5
			HIST 111 or 112	Western Civilization 1 or 2	3
Semester Total:		18.0	Semester Total:		18.5

Junior Fall Semester			Junior Spring Semester		
MATH 337	Differential Equations	3	ENGR 320	Fluids	3
ENGR 300	Engineering Economics	3	MECH 345	Advanced Thermodynamic Systems	3
ENGR 380	Thermodynamics	3	MECH 365	Heat Transfer	3
ENGL 305	Technical Writing and Presentations	3	MECH 375	Machine Design	3
MECH 325	Advanced Strength & Mechanics of Materials & Lab	4	CHRS 125	Introduction to Christianity	3
			CUC 200	Connections	0.5
Semester Total:		16.0	Semester Total:		15.5

# BS in Engineering Curriculum – MECH Concentration

MECH ENGR - TIER II – Math ACT of 22-24/Math SAT of 520-560

Senior Fall Semester			Senior Spring Semester		
ENGR 440	Sensors & Controls & Lab	3	ENGR 491	Senior Design II	3
HIST/FINE ARTS	Elective	3	ENGR 460	Statistical Methods for Engineers	3
ENGR 490	Senior Design I	3	PE 185	Lifetime Wellness	2
ENGR 480	Lean Manufacturing	3	ART 131, MUSIC 131 or THEA 131	Fine Arts	3
MECH 435	Manufacturing Engineering	3	ECON 201	Microeconomics	3
HIST/FINE ARTS or SOC/BEH SCI	Elective	3	MECH 445	Modern Manufacturing Processes	3
Semester Total:		18.0	Semester Total:		17.0
Degree Total					136

## ABET Requirements (2015-2016 Cycle)

Total Math and Science Hours: 41 (includes statistics for engineers and pre-calc but not college algebra)

Total Engineering Hours: 61 (includes engineering economics but not introductory engineering applications)

1 year Math and Science: minimum of 32 hours

1.5 years Engineering: minimum of 48 hours

1 year = minimum of 32 hours or 0.25 of total credit hours

## LEGEND:

\* this course does not count toward the BS ENGR degree; this course is required for students who enter the program without the required pre-requisite knowledge

BOLD-FACED FONT – designates a course taught by the School of Engineering

BLUE BOX – indicates a course taken by all same-Tier MECH and CHPH concentration students in the same semester