

TCNJ Mechanical Engineering Curriculum - Graduating Class of 2026

First year

Fall				Spring			
CSC	217	Computer Science (Python)	1	ECO	101	Microeconomics	1
MAT	127	Calculus A	1	MAT	128	Calculus B	1
PHY	201	General Physics I	1	PHY	202	General Physics II	1
ENG	144	Fundamentals of Engineering Design	0.5	MEC	145	Introduction to Computer Aided Design	0.5
FYS	16X	First Year Seminar*	1	CHE	201	General Chemistry I	1
ENG	95	Introduction to Engineering	0	ENG	92	Engineering Seminar II	0
ENG	91	Engineering Seminar I	0				
			4.5				4.5

Second year

Fall				Spring			
ENG	152	Engineering Material Science	1	MAT	229	Multivariable Calculus	1
ENG	222	Statics	1	ENG	262	Dynamics	1
ENG	232	Manufacturing Processes	1	MEC	251	Strength of Materials	1
ENG	272	Advanced Engineering Mathematics I	1	MEC	321	Numerical Analysis	1
IDS	252	Society, Ethics & Technology	1				
			5				4

Third year

Fall				Spring			
ENG	93	Engineering Seminar III	0	ENG	94	Engineering Seminar IV	0
ENG	322	Thermodynamics I	1	ENG	372	Engineering Economy	0.5
ENG	342	Advanced Engineering Mathematics II	1	MEC	361	Fluid Mechanics	1
MEC	311	Mechanical Design Analysis I	1	MEC	371	Thermodynamics II	1
MEC	263	Mechanical Engineering Laboratory I	0.5	MEC		Mechanical Engineering Elective	1
MEC	331	System Dynamics	1			Liberal Learning Elective	1
			4.5				4.5

Fourth year

Fall				Spring			
ENG	99	Senior Professional Seminar	0	ENG	98	FE Review	0
MEC	411	Heat Transfer	1	MEC	375	Dynamic Systems & Control	1
MEC	433	Mechanical Engineering Laboratory III	0.5	MEC	463	Mechanical Engineering Laboratory IV	0.5
MEC	460	Finite Elements in Mechanical Design	1	MEC		Mechanical Engineering Elective	1
MEC	495	Senior Project I	0	MEC	496	Senior Project II	1
MEC		Mechanical Engineering Elective	1			Liberal Learning Elective	1
		Liberal Learning Elective	1				
			4.5				4.5

Total: 36 CU

* if FYW is required, it is taken in the fall semester and FYS is moved to spring