

NORTH CENTRAL STATE COLLEGE

Mechanical Engineering Technology Applied Baccalaureate Degree 2021-2022

FALL				YEAR ONE
Complete	Course Number	Course Title	Prerequisites	Credits
	ENGL 1010	English Composition I	ENGL 0040 *	3
	ENGR 1010	Introduction to Engineering		2
	MATH 1110	College Algebra	MATH0084 *	4
	MECT 1150	Fundamentals of Engineering Design		2
	MFGT 1110	Manufacturing Processes		3
Semester Credit Hours				14

SPRING				YEAR ONE
Complete	Course Number	Course Title	Prerequisites	Credits
	CHEM 1030	Chemistry	High School Chemistry (minimum grade of C-) or CHEM 1010 (minimum grade of C-)	3
	ENRD 2150	Computer Aided Design I		3
	MATH 1130	Trigonometry	MATH1110 (minimum grade of C-)	4
	MECT 1750	Hydraulics and Pneumatics		3
	MECT 1910	Introduction to Design Project	ENGR1010	1
	PHYS 1110	General Physics I	MATH1130c (minimum grade of C-)	4
Semester Credit Hours				18

FALL				YEAR TWO
Complete	Course Number	Course Title	Prerequisites	Credits
	MATH 1150	Calculus I	MATH 1130 (minimum grade of C-)	5
	MECT 2230	Engineering Materials		3
	MECT 2330 OR MECT 2335	Statics OR Engineering Statics	PHYS1110c	3
	MECT 2905	Design Project I	MECT1750, MECT1910	1
	PHYS 1130	General Physics II	PHYS 1110 (minimum grade of C-), MATH1051	4
Semester Credit Hours				16

SPRING				YEAR TWO
Complete	Course Number	Course Title	Prerequisites	Credits
	ENGR 2010	Engineering Programming, Robotics, and PLC	ENGR1010 or ENGR1910	3
	ENGR 2850	Engineering Economics & Organization	MATH1110	3
	MATH 1151	Calculus II	MATH1150 (minimum grade of C-)	5
	MECT 2440	Strength of Materials	MECT2330	3
	MECT2910 OR ENGR 2980 AND ENGR 2990	Mechanical Design Project OR Cooperative Work Experience AND Cooperative Work Experience Seminar	MECT2905 or MECT 2440 (c) ENGR2990m, and 20 credit hours of Engineering classes with a grade of C- or better, and permission of the instructor. ENGR2980m NOTE: The Cooperative Work Experience and the Seminar may be taken during Spring or Summer of Year Two or Fall of Year Three. The student may choose to take either MECT2950 and MECT3910 (Fall Year Three) or the Cooperative Work Experience and the Seminar	1 OR 1 1
	PSYC 1010	Introduction to Psychology		3
Semester Credit Hours				18-19

c = Can be concurrent m = Must be concurrent

Baccalaureate in Mechanical Engineering Technology Curriculum Worksheet

FALL				YEAR THREE
Complete	Course Number	Course Title	Prerequisites	Credits
	ELET 1510	DC Electricity	MATH1110	3
	ENGL 1030	English Composition II	ENGL1010	3
	MECT 3010	Applied Dynamics	MATH1151, MECT2330	3
	MECT 3031	Technical Thermodynamics	MATH1151, PHYS1130	3
	MECT 3910	Design Project II	MECT 2905 NOTE: Only required for students NOT completing the Cooperative Work Experience (ENGR 2980 & ENGR 2990)	(1)
	MFGT 1640	Computer Aided Manufacturing	MFGT1110	2
Semester Credit Hours				14-15

SPRING				YEAR THREE
Complete	Course Number	Course Title	Prerequisites	Credits
	ENGR 3030	Measurement & Instrumentation	MATH 1130	3
	MECT 3050	Mechanical Design I	MECT2440, MECT3010	3
	MECT 3171	Applied Thermodynamics	MATH1151, MECT3030	3
	MECT 3950 OR ENGR 3980 AND ENGR 3990	Design Project III OR Cooperative Work Experience AND Cooperative Work Experience Seminar	MECT 3910 or ENGR 2980 ENGR 3990m, and 20 credit hours of Engineering classes with a grade of C- or better, and permission of the instructor. ENGR 3980m NOTE: The Cooperative Work Experience and the Seminar may be taken during Spring or Summer of Year Three or Fall of Year Four. The student may choose to take either MECT3950 and MECT4910 (Fall Year Three) or the Cooperative Work Experience and the Seminar	1 OR 1 AND 1
	ELET 1520	AC Electricity	ELET 1510	3
	PHIL 1010	Western Philosophy		3
Semester Credit Hours				16-17

FALL				YEAR FOUR
Complete	Course Number	Course Title	Prerequisites	Credits
	MECT 4010	Applied Fluid Mechanics	MATH1151, MECT1750	4
	MECT 4050	Mechanical Design II	MECT3050, MECT2230	3
	MECT 4910	Design Project IV	MECT 3950 NOTE: Only required for students NOT completing the Cooperative Work Experience (ENGR 3980 & ENGR 3990)	(1)
	PHIL 1110	Ethics		3
	SOCY 1010	Introduction to Sociology		3
Semester Credit Hours				13-14

SPRING				YEAR FOUR
Complete	Course Number	Course Title	Prerequisites	Credits
	ENGR 4010	Advanced PLC and Robotics	ENGR 2010	3
	ENGR 4050	Senior Technology Capstone	Complete 90 credit hours, MECT4050, MECT4910 or ENGR3980	3
	ENGR 4210	Design of Engineering Experiments	MATH1151	3
	SOCY 2010	Cultural Diversity and Racism		3
Semester Credit Hours				12
TOTAL SEMESTER HOURS				123

c = Can be concurrent m = Must be concurrent

* All incoming students will be required to provide ACT scores or take a placement test. Based on their scores, students will be placed in appropriate English and mathematics courses. Successful completion of developmental English, and mathematics prerequisites require a grade of C- or above in the course. Developmental English and mathematics course prerequisites can also be attained through placement testing. See the [Standardized Testing Cutoff Scores](#) for specific tests and test scores.

The College strongly recommends that students be covered by hospitalization insurance, which can be purchased through a private carrier. To obtain a brochure regarding insurance, contact the Student Success Center. (Rm 103 Kee Hall) or call toll free 888-755-4899, ext. 4761 or locally 419-755-4761.