Columbus State Community College – Associate of Science (AS)
Systems Engineering Bachelor's Degree Transfer Major to
Otterbein University – Bachelor of Science (BS)
Major: Mechanical Engineering
2+2 Sample Plan of Study

Freshman Year (CSCC)

Autumn Semester		Spring Semester	
ENGL 1100 Composition I [INST 1500, WI]	3	ENGL 2767 Comp II: Writing About Science & Technology [DS]*	3
MATH 1151 Calculus I** [MATH 1700]	5	MATH 1172 Engineering Mathematics A** [MATH 1800]	5
ENGR 1181 Fundamentals of Engineering I** [ENGR 1000 and ENGR 1001, WI]	3	ENGR 1182 Fundamentals of Engineering II** [ENGR 1010 and ENGR 1011, WI]	3
PHYS 1250 Calculus-Based Physics I** [PHYS 1500, DS]	5	PHYS 1251 Calculus-Based Physics II** [PHYS 1600, DS]	5
COLS 1100 First Year Experience Seminar	1		
Total Hours	17	Total Hours	16

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Sophomore Year (CSCC)

Autumn Semester		Spring Semester	
MATH 2173 Engineering Math B** [MATH 2700]	5	MATH 2174 Linear Algebra Differential Equations for Engineering** [MATH 2500]	5
ENGR 2040 Statics & Intro to Mechanics of Materials** [ENGR 2000]	4	ENGR 2030 Dynamics** [ENGR 2100]	4
HUM 1160 Music & Art Since 1945 [INST 2600]	3	Social & Behavioral Sciences*	3
GEOG 2400 Economics and Social Geography [INST 2000]	3	HIST 1181 or HIST 1182 (choose one) [INST 2800]	3
Total Hours	15	Total Hours	15

***List of courses that meet this requirement can be found after notes **Courses must be completed with a grade of C or higher to transfer to the Engineering major at Otterbein.**
Courses number in [brackets] is the Otterbein equivalent course. WI=Writing Intensive; three are required for an Otterbein degree DS=Disciplinary Skills- 8-9 hours required for an Otterbein degree.

Junior Year (Otterbein)

Autumn Semester		Spring Semester	
FYS First Year Seminar or TYS Transfer Year Seminar	2-3	MENG 2000/2001 Thermodynamics	4
MENG 3000 Machine Design I	3	ENGR 3010/3011 Electrical System II	4
ENGR 3100/3101 Production Processes	4	ENGR 3300 Statistics & Quality Control	3
ENGR 3200 Materials Engineering	3	MENG 3100 Machine Design II	3
CHEM 1700/1710 Engineering Chemistry	4	LFW Lifestyle Fitness & Wellness	1
Total Hours	16/17	Total Hours	15

Senior Year (Otterbein)

Autumn Semester		Spring Semester	
MENG 4000 Heat Transfer	3	ENGR 4999 Major Elective Course	2
INST 2200 **or** 2400 (choose one)	3	ENGR 4999 Major Elective Course	2
MENG 4100/4101 Fluid Dynamics + Thermo Lab	4	INST 2200 **or** 2400 (choose one)	3
MATH 3100 Ordinary Differential Equations	3	MENG 4800 Senior Capstone Design Project (WI)	3
ENGR 4100/4101 Automation + Automation Lab	4	INST 3000 Integrative Seminar	3
		SYE Senior Year Experience	3
Total Hours	17	Total Hours	16

- At Otterbein, at least 36 credit hours of coursework must be taken in Otterbein classes. Of these hours: at least 9 credit hours must be taken in each of a student's majors at the 3000 level or above, at least 5 credit hours (any level) must be taken in each minor, and at least one INST 2XXX thread course, INST 3XXX, and an SYE course must be taken at Otterbein.. Otterbein requires 120 credit hours to complete the bachelor's degree with an overall GPA of 2.0 or higher.

- ****Students must earn a C or higher in all prerequisite course work for the Mechanical Engineering major at Otterbein.** Classes denoted by the double asterisk are prerequisite courses for the Mechanical Engineering major. Students must complete BOTH ENGR 1181 and 1182 to receive credit for ENGR 1000/1001 and 1010/1011 at Otterbein, both prerequisites for higher ENGR course work. Students are encouraged to meet with an Otterbein advisor regarding their major course work and general education course work meant to satisfy Otterbein's general education or INST requirement.

- Students in the Mechanical Engineering Major at Otterbein will need to purchase a specific laptop computer with required identified software prior to enrolling in engineering classes at Otterbein (ENGR and/or MENG courses). The laptop and software may be purchase through Otterbein. Please contact the Engineering Department at Otterbein to clarify the specifications and software needs prior to purchase.

- **ENGR 4999 Major Elective Course**: Students must complete 4 hours of ENGR 4999 course work to graduate with degree at Otterbein. Students should consult with their Otterbein academic advisor on appropriate 4999 courses to complete when enrolling at Otterbein.

- ***Columbus State Course Options**: For the Intermediate Composition requirement for the AS degree, ENGL 2767: Comp II: Writing about Science and Technology is suggested, but other 2X67 (except ENGL 2267) courses will meet AS degree requirement. For Social and Behavioral Science course, a student can choose from any published option on the Associate of Science curriculum or from the recommended courses on the Systems Engineering Bachelor's Degree Transfer Major plan of study.

- **CSCC Degree Plan:** This 2+2 Plan of Study was created with the assumption that students would complete the Systems Engineering Bachelor's Degree Transfer Major (new option starting with the 2018-2019 academic year) before transferring into the stated bachelor's degree. Completing the general Associate of Science degree is also an option and this document can still be used for degree planning. If you have questions, contact a Columbus State Arts and Sciences Academic Advisor and an advisor at Otterbein University.