

**Cleveland State University**  
**Washkewicz College of Engineering**

Name \_\_\_\_\_ I.D. No. \_\_\_\_\_

**Mechanical Engineering**  
**Curriculum Sheet**  
**REVISED 7-18-2014**

**Fall Semester – Year 1**

	<u><b>Cr.</b></u>	<u><b>Grade</b></u>
ENG 101 College Writing I [W/C]*	3	_____
MTH 181 Calculus I [M/QL]*	4	_____
CHM 261 General Chemistry I [NS]*	3	_____
CHM 266 General Chemistry I Lab [NS/Lab]*	1	_____
ESC 100 New Student Orientation [INTRO]*	1	_____
ESC 120 Introduction to Engineering	2	_____
MCE 180 CAE Lab I	2	_____
<i>Semester Total</i>	16	_____

**Spring Semester – Year 1**

	<u><b>Cr.</b></u>	<u><b>Grade</b></u>
ESC 102 Tech. Writing & Prof. Comm. [W/C]*	3	_____
MTH 182 Calculus II [M/QL]*	4	_____
ESC 152 Programming with Matlab	3	_____
PHY 241 University Physics I [NS]*	5	_____
MCE 181 CAE Lab II	2	_____
ESC 130 Engineering Co-op Orientation***	1	_____
<i>Semester Total</i>	17/18	_____

**Fall Semester – Year 2**

	<u><b>Cr.</b></u>	<u><b>Grade</b></u>
ESC 250 Differential Equations for Engineers	3	_____
MTH 281 Multivariable Calculus	4	_____
ESC 201 Statics	3	_____
MCE 276 Eng. Matls & Manuf. Processes	3	_____
MCE 286 Manufacturing Processes Lab	1	_____
<i>Semester Total</i>	14	_____

**Spring Semester – Year 2**

	<u><b>Cr.</b></u>	<u><b>Grade</b></u>
ESC 202 Dynamics	3	_____
ESC 301 Fluid Mechanics	3	_____
PHY 242 University Physics II [NS]*	5	_____
ESC 211 Strength of Materials	3	_____
General Education Elective [DIV-US]*	3	_____
<i>Semester Total</i>	17	_____

**Fall Semester – Year 3**

	<u><b>Cr.</b></u>	<u><b>Grade</b></u>
ESC 321 Engineering Thermodynamics I	3	_____
ESC 350 Lin. Algebra for Engineers	3	_____
MCE 260 Kinematics	3	_____
MCE 324 Intro to Heat Transfer	3	_____
MCE 362 Machine Analysis	3	_____
<i>Semester Total</i>	15	_____

**Spring Semester – Year 3**

	<u><b>Cr.</b></u>	<u><b>Grade</b></u>
ESC 315 Electrical Engineering Concepts	3	_____
MCE 365 Machine Design I	3	_____
MCE 371 Vibrations	3	_____
MCE 421 Applied Thermodynamics	3	_____
MCE 481 Thermodynamics Lab	1	_____
General Education Elective [SS/NS]*	3	_____
<i>Semester Total</i>	16	_____

**Fall Semester – Year 4**

	<u><b>Cr.</b></u>	<u><b>Grade</b></u>
MCE 441 Intro. to Linear Controls	3	_____
MCE 450 Design Project I [Cap/WAC/SPAC]	2	_____
ESC 282 Engineering Economy [SS]*	3	_____
MCE 470 Engineering Measurements	3	_____
MCE 480 Measurements Lab	1	_____
MCE 4XX Mechanical Eng. Elective	3	_____
<i>Semester Total</i>	15	_____

**Spring Semester – Year 4**

	<u><b>Cr.</b></u>	<u><b>Grade</b></u>
MCE 451 Design Project II [Cap/WAC/SPAC]*	3	_____
MCE 4XX Mechanical Eng. Elective	3	_____
MCE 48X Mech. Eng. Lab Elective	3	_____
PHL 215 Engineering Ethics [A&HWAC]*	3	_____
General Education Elective [DIV-AA]*	3	_____
General Education Elective [A&H/NS]*	3	_____
<i>Semester Total</i>	18	_____

**Degree Total: 128 (Excluding ESC 130 required for co-op)**

**University Notes:**

**\*Gen Ed Key:**

INTRO = New student orientation, not required for transfer students

W/C = Writing/Composition Requirement (two courses; C or better required)

M/QL = Mathematics/Quantitative Literacy Requirement (two courses)

NS = Natural Sciences (two courses, one of which must have a lab)

\*\* Of the SS and A&H courses focused outside the US, one must be focused on Africa, Latin America, Asia or the Middle East (ALAAME)

\*\*\* Required for the Engineering Co-op program only

SS = Social Sciences Requirement (2 courses, one must be focused outside the US\*\*)

A&H = Arts & Humanities Reqmnt (2 courses, one must be focused outside the US\*\*)

DIV = Social Diversity Reqmnt (2 courses; one US Diversity, and one African American Exp.)

WAC/SPAC = Writing/Speaking Across the Curriculum Reqmnt (3 courses, one in the major)

CAP = Capstone Requirement

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Advisor \_\_\_\_\_

Date \_\_\_\_\_

**Cleveland State University**  
**Washkewicz College of Engineering**

Name \_\_\_\_\_ I.D. No. \_\_\_\_\_

**Mechanical Engineering**  
**Co-op Curriculum Sheet**  
**REVISED 3-11-2016**

<u>Year 1</u> <u>Fall Semester</u>	<u>Cr.</u>	<u>Grade</u>	<u>Spring Semester</u>	<u>Cr.</u>	<u>Grade</u>	<u>Summer Semester</u>	
ENG 101 College Writing I [W/C]*	3	_____	ESC 102 Tech. Writing & Prof. Comm. [W/C]*	3	_____	Work or school	
MTH 181 Calculus I [M/QL]*	4	_____	MTH 182 Calculus II [M/QL]*	4	_____		
CHM 261 General Chemistry I [NS]*	3	_____	ESC 152 Programming with Matlab	3	_____		
CHM 266 General Chemistry I Lab [NS/Lab]*	1	_____	PHY 241 University Physics I [NS]*	5	_____		
ESC 100 New Student Orientation [INTRO]*	1	_____	MCE 181 CAE Lab II	2	_____		
ESC 120 Introduction to Engineering	2	_____	ESC 130 Engineering Co-op Orientation	1	_____		
MCE 180 CAE Lab I	2	_____					
<i>Semester Total</i>	16		<i>Semester Total</i>	18			
<u>Year 2</u> <u>Fall Semester</u>	<u>Cr.</u>	<u>Grade</u>	<u>Spring Semester</u>	<u>Cr.</u>	<u>Grade</u>	<u>Summer Semester</u>	<u>Cr.</u>
ESC 250 Differential Equations for Engineers	3	_____	ESC 202 Dynamics	3	_____	ESC 400 Co-op**	1
MTH 281 Multivariable Calculus	4	_____	ESC 301 Fluid Mechanics	3	_____		
ESC 201 Statics	3	_____	PHY 242 University Physics II [NS]*	5	_____		
MCE 276 Eng. Matls & Manuf. Processes	3	_____	ESC 211 Strength of Materials	3	_____		
MCE 286 Manuf. Processes Lab	1	_____	General Education Elective [DIV-US]*	3	_____		
<i>Semester Total</i>	14		<i>Semester Total</i>	17			
<u>Year 3</u> <u>Fall Semester</u>	<u>Cr.</u>	<u>Grade</u>	<u>Spring Semester</u>	<u>Cr.</u>	<u>Grade</u>	<u>Summer Semester</u>	<u>Cr.</u>
ESC 321 Engineering Thermodynamics I	3	_____	ESC 300/400 Co-op**	1	_____	ESC 400 Co-op**	1
ESC 350 Lin. Algebra for Engineers	3	_____					
MCE 260 Kinematics	3	_____					
MCE 324 Intro to Heat Transfer	3	_____					
MCE 362 Machine Analysis	3	_____					
<i>Semester Total</i>	15						
<u>Year 4</u> <u>Fall Semester</u>	<u>Cr.</u>	<u>Grade</u>	<u>Spring Semester</u>	<u>Cr.</u>	<u>Grade</u>	<u>Summer Semester</u>	<u>Cr.</u>
ESC 300/400 Co-op**	1	_____	ESC 315 Electrical Engineering Concepts	3	_____	ESC 400 Co-op**	1
			MCE 365 Machine Design I	3	_____		
			MCE 371 Vibrations	3	_____		
			MCE 421 Applied Thermodynamics	3	_____		
			MCE 481 Thermodynamics Lab	1	_____		
			General Education Elective [SS/NS]*	3	_____		
			<i>Semester Total</i>	16			
<u>Year 5</u> <u>Fall Semester</u>	<u>Cr.</u>	<u>Grade</u>	<u>Spring Semester</u>	<u>Cr.</u>	<u>Grade</u>		
MCE 441 Intro. to Linear Controls	3	_____	MCE 451 Design Project II [Cap/WAC/SPAC]*	3	_____		
MCE 450 Design Project I [Cap/WAC/SPAC]	2	_____	MCE 4XX Mechanical Eng. Elective	3	_____		
ESC 282 Engineering Economy [SS]*	3	_____	MCE 48X Mech. Eng. Lab Elective	3	_____		
MCE 470 Engineering Measurements	3	_____	PHL 215 Engineering Ethics [A&H/WAC]*	3	_____		
MCE 480 Measurements Lab	1	_____	General Education Elective [DIV-AA]*	3	_____		
MCE 4XX Mechanical Eng. Elective	3	_____	General Education Elective [A&H/NS]*	3	_____		
<i>Semester Total</i>	15		<i>Semester Total</i>	18			

**Degree Total: 129 (Excluding ESC 400 co-op courses) – SEE GEN ED KEY ON REVERSE SIDE**

Advisor \_\_\_\_\_ Date \_\_\_\_\_