

ASSOCIATE ENGINEERING SCIENCE [4100] – CHEMICAL OPTION

STUDENT PLAN

61 CREDIT HOURS



SEQUENCE START: Fall Spring Summer

ENROLLMENT: Full-time Part-time

COURSE OFFERINGS: Day Night Online Open Learning / Flex

&Students who need to meet the prerequisite(s) for CHEM 161 and or MATH 161 should complete the prerequisite courses the summer before beginning this AES plan of study. Please see your academic advisor to adjust your plan.

FIRST YEAR	COURSE NAME	CREDIT HOURS		
		FALL	SPRING	SUMMER
CHEM 161&	General Chemistry I	5		
ENGL 101	Critical Reading and Writing	3		
MATH 161&	Calculus I	4		
Elective	Any Transferable Elective Course	3		
CHEM 162	General Chemistry II		5	
CSCI 171**&	Computing for Engineering & Science		3	
MATH 162&	Calculus II		4	
PHYS 171**	Mechanics		4	
ENGL 102	Multimodal Composition			3
Total Credit Hours		15	16	3

SECOND YEAR	COURSE NAME	CREDIT HOURS		
		FALL	SPRING	SUMMER
CHEM 241*&	Organic Chemistry I	5		
MATH 163*	Calculus III	5		
PHYS 172*	Electricity & Magnetism	4		
CHEM 242**	Organic Chemistry II		5	
MATH 272**&	Differential Equations		4	
PHYS 173**	Fluid & Thermal Physics (8W1)		2	
PHYS 174**	Quantum Physics (8W2)		2	
				-
Total Credit Hours		14	13	-

* denotes a fall only class

**denotes a spring only class

& denotes a course with a prerequisite – students should take prerequisite coursework the summer before beginning AES program

*proficiency exam available

Different universities require different coursework in preparation for transfer. You should consult your academic advisor at Heartland and the registrar of the college or university you are considering to learn how courses you've taken at Heartland will transfer.

ASSOCIATE ENGINEERING SCIENCE [4100] STUDENT PLAN

CIVIL, INDUSTRIAL OR MECHANICAL OPTIONS

61 CREDIT HOURS



SEQUENCE START: Fall Spring Summer

ENROLLMENT: Full-time Part-time

COURSE OFFERINGS: Day Night Online Open Learning / Flex

&Students who need to meet the prerequisite(s) for CHEM 161 and or MATH 161 should complete the prerequisite courses the summer before beginning this AES plan of study. Please see your academic advisor to adjust your plan.

FIRST YEAR	COURSE NAME	CREDIT HOURS		
		FALL	SPRING	SUMMER
CHEM 161&	General Chemistry I	5		
ENGL 101	Critical Reading and Writing	3		
MATH 161&	Calculus I	4		
MFTG 130	Engineering Graphics	3		
CSCI 171**&	Computing for Engineering & Science		3	
MATH 162&	Calculus II		4	
PHYS 171**	Mechanics		4	
Elective	Any Transferrable Elective Course		3	
ENGL 102	Multimodal Composition			3
Total Credit Hours		15	14	3

SECOND YEAR	COURSE NAME	CREDIT HOURS		
		FALL	SPRING	SUMMER
ENGR 271*	Engineering Mechanics: Statics	3		
MATH 163*	Calculus III	5		
PHYS 172*	Electricity & Magnetism	4		
Elective	Any Transferrable Elective Course	3		
ENGR 272**	Engineering Mechanics: Dynamics		3	
ENGR 273**	Strength of Materials		3	
MATH 272**&	Differential Equations		4	
PHYS 173**	Fluid & Thermal Physics (8W1)		2	
PHYS 174**	Quantum Physics (8W2)		2	
				-
Total Credit Hours		15	14	-

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*proficiency exam available

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ASSOCIATE ENGINEERING SCIENCE [4100] STUDENT PLAN

COMPUTER OPTION

61 CREDIT HOURS



SEQUENCE START: Fall Spring Summer

ENROLLMENT: Full-time Part-time

COURSE OFFERINGS: Day Night Online Open Learning / Flex

&Students who need to meet the prerequisite(s) for CHEM 161 and or MATH 161 should complete the prerequisite courses the summer before beginning this AES plan of study. Please see your academic advisor to adjust your plan.

This option requires 6-10 credit hours in Electrical Circuits (IAI EGR 931 or EGR 931L) and Digital Systems (IAI GER 932 or EGR 932L) to be transferred in from another institution.

FIRST YEAR	COURSE NAME	CREDIT HOURS		
		FALL	SPRING	SUMMER
CHEM 161&	General Chemistry I	5		
ENGL 101	Critical Reading and Writing	3		
MATH 161&	Calculus I	4		
CSCI 115	Discrete Structures	4		
CSCI 171**&	Computing for Engineering & Science		3	
ENGL 102	Multimodal Composition		3	
MATH 162&	Calculus II		4	
PHYS 171**	Mechanics		4	
Total Credit Hours		16	14	-

SECOND YEAR	COURSE NAME	CREDIT HOURS		
		FALL	SPRING	SUMMER
CSCI 130	Computer Science I	4		
MATH 163*	Calculus III	5		
PHYS 172*	Electricity & Magnetism	4		
CSCI 130	Computer Science II		4	
MATH 272**&	Differential Equations		4	
PHYS 173**	Fluid & Thermal Physics (8W1)		2	
PHYS 174**	Quantum Physics (8W2)		2	
Total Credit Hours		13	12	-

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