

**ASSOCIATE IN SCIENCE DEGREE IN PRE-ENGINEERING
GRADUATION REQUIREMENTS WORKSHEET**

Effective Fall 2014

**Eastern Iowa Community Colleges
Clinton Community College
Muscatine Community College
Scott Community College**

Student Name:

S.S. or I.D. Number:

Concentration:

This worksheet is to be used by students and academic advisors to plan and monitor progress toward an Associate in Science degree in Pre-Engineering at this college.

An associate's degree requires a total of at least 62 hours. Select 45 hours from the General Education requirements listed on this worksheet. The remaining hours may be selected from any Arts & Sciences* course that is numbered 100 or higher, including those listed on this document.

* A maximum of 11 semester hours of elective credit toward an A.S. degree in Pre-Engineering may be in career technical courses.

General Education Requirements Summary

Area	Required	Has	Needs
1 Communications	9	_____	_____
2 Arts & Humanities	0-9	_____	_____
3 Cultural/Historical Perspective	0-9	_____	_____
4 Social Sciences	3	_____	_____
5 Natural Sciences	18-20	_____	_____
6 Mathematics	21	_____	_____
7 Computer Skills	3-6	_____	_____
8 Electives	<u>Varies</u>	_____	_____
Total	62		

The graduation requirements for the Associate in Science degree consist of two parts:

(1) General Education and (2) Elective courses.

General Education courses are those that broaden student knowledge, information and skills and consist of the following specific disciplines:

1. Communication - ability to communicate thoughts effectively through speaking and writing, and to read and to listen critically.
2. Arts and Humanities - appreciation of the Humanities and the Arts.
3. Cultural/Historical Perspectives - understanding of both Western and International geography and culture.
4. Social Sciences - understanding of economics or political systems and an understanding of how societies, groups and individuals function.
5. Natural Sciences - understanding of a branch of the Life Sciences and a branch of the Physical Sciences.
Mathematics - ability to use college level mathematics.
6. Computer Skills - understanding of computer terminology, operation and applications.

Please note that transfer of an Associate in Science degree to a four-year college is usually a course-by-course articulation. EICCD strongly recommends you contact your intended transfer institution for specific transfer information and course recommendations. Students may choose electives according to their needs, interests, and the requirements of their intended transfer institution.

Elective courses allow a student flexibility to select courses which will fulfill engineering program requirements of their intended transfer institution.

Catalog Number	Course Title	Cr.	Notes	Sem. Taken	Grade	Hrs. Earned	Total
4. SOCIAL SCIENCES - Select one course:							3
ECN:120	Principles of Macroeconomics	3					
ECN:130	Principles of Microeconomics	3					
POL:111	American National Government	3					
PSY:111	Introduction to Psychology	3					
SOC:110	Introduction to Sociology	3					
5. NATURAL SCIENCES (NOTE THAT ENGINEERING COURSES WITH PREFIX OF EGR MAY ALSO BE APPLIED TO FULLFILL THE NATURAL SCIENCES REQUIREMENT)							18-20
Select at least two Natural Sciences courses:							
BIO:105	Introductory Biology	4					
BIO:114	General Biology IA	4					
BIO:115	General Biology IIA	4					
BIO:125	Plant Biology	4					
BIO:157	Human Biology	4					
BIO:163	Ess.of Anatomy and Phys.	4					
BIO:168	Human Anatomy and Phys. w/Lab I	4					
BIO:173	Human Anatomy and Phys. w/Lab II	4					
BIO:186	Microbiology	4					
BIO:255	Neuroanatomy	3					
CHM:122	Intro. to General Chemistry	4					
CHM:132	Intro. to Organic and Biochemistry	4					
CHM:165/166	General Chemistry I w/ Lab	4-5					
CHM:175	General Chemistry II w/Lab	4					
CHM:179	Principles of General Chemistry	6					
CHM:261	Organic Chemistry I	4					
CHM:271	Organic Chemistry II	4					
ENV:111	Environmental Science	4					
ENV:139	Energy and the Environment	4					
ENV:145	Conservation Biology	4					
PHS:120	Exploring Physical Science	4					
PHS:152	Astronomy	4					
PHS:166	Meteorology: Weather & Climate	4					
PHS:172	Physical Geology	4					
PHY:110	Survey of Physics I	3					
PHY:111	Survey of Physics II	3					
PHY:162	College Physics I	4					
PHY:172	College Physics II	4					
PHY:212	Classical Physics I	5					
PHY:222	Classical Physics II	5					
6. MATHEMATICS (NOTE THAT ENGINEERING COURSES WITH PREFIX OF EGR MAY ALSO BE APPLIED TO FULLFILL THE MATHEMATICS REQUIREMENT)							21
MAT:128	Precalculus	4					
MAT:140	Finite Mathematics	3					
MAT:156	Statistics	3					
MAT:165	Business Calculus	3					
MAT:210	Calculus I	4					

Catalog Number	Course Title	Cr.	Notes	Sem. Taken	Grade	Hrs. Earned	Total
1. COMMUNICATIONS							9
Select one course in English:							
ENG:105	Composition I	3					
ENG:107	Composition I: Technical Writing	3					
Select one course in English:							
ENG:106	Composition II	3					
ENG:108	Composition II: Technical Writing	3					
Select one course in Speech:							
SPC:112	Public Speaking	3					
SPC:170	Professional Communication	3					
2. ARTS AND HUMANITIES							0-9
Literature:							
LIT:101	Introduction to Literature	3					
LIT:111	American Literature Since the Mid-1800's	3					
LIT:183	Masterpieces: Neoclassical to Modern	3					
LIT:185	Contemporary Literature	3					
Humanities:							
DRA:110*	Introduction to Film	3					
HUM:110	Changes and Choices	3					
HUM:183	Living with Space, Time & Tech.	3					
PHI:101	Introduction to Philosophy	3					
PHI:105	Introduction to Ethics	3					
PHI:110	Introduction to Logic	3					
REL:101	Survey of World Religions	3					
Fine Arts:							
ART:101	Art Appreciation	3					
DRA:101	Introduction to Theatre	3					
DRA:105	History of the Theatre	3					
DRA:110*	Introduction to Film	3					
HUM:135	Humanities of the Early World	3					
HUM:136	Humanities of the Renaissance	3					
HUM:137	Humanities of the Modern World	3					
MUS:100	Music Appreciation	3					
3. CULTURAL/HISTORICAL PERSPECTIVES							0-9
ANT:105	Cultural Anthropology	3					
ASL:151	American Sign Language I	5					
CLS:120	Non-Western Culture & Values	3					
CLS:150	Latin Am. History and Culture	3					
FL_____	Foreign Language - 1 Semester	3-4					
GEO:121	World Regional Geography	3					
GLS:100	Contemporary World Issues	3					
GLS:150	East Asia: People, Soc. & Culture	3					
HIS:112	West. Civ.: Ancient to Early Modern	4					
HIS:113	West. Civ.: Early Modern to Present	4					
HIS:117	West. Civ. I: Ancient and Medieval	3					
HIS:118	West. Civ. II: Early Modern	3					
HIS:119	West. Civ. III: Modern Period	3					
HIS:151	U.S. History to 1877	3					
HIS:152	U.S. History Since 1877	3					
HIS:211	Modern Asian History	3					
HIS:231	Contemporary World Affairs	3					
POL:121	International Relations	3					

*DRA:110 Introduction to Film can fulfill either the Humanities or the Fine Arts requirement, but not both.

6. MATHEMATICS CONTINUED							21
MAT:216	Calculus II	4					
MAT:219	Calculus III	4					
MAT:227	Differential Equations	4					
6. COMPUTER SKILLS							3-6
<p>Students must demonstrate proficiency in appropriate computer software packages and skill sets. To demonstrate proficiency, students must select one of the following options:</p> <input type="checkbox"/> Complete the Computer Skills Proficiency Exam with a passing score. <input type="checkbox"/> Complete CSC:110 Introduction to Computers with a passing grade.							
7. ELECTIVES							Enough electives to total 62 credits.
<ul style="list-style-type: none"> A maximum of 4 semester hours of Human Development courses may be counted toward an A.S. degree. A maximum of 11 semester hours in career technical courses may be used as elective credits toward an A.S. degree. Coursework for an A.S. degree must be numbered at the 100 level or higher (for example, ENG:105). 							
Catalog Number	Course Title	Crs.	Notes	Sem. Taken	Grade	Hrs. Earned	Total
Semester Hours Needed to Graduate							62

Developmental Courses							
Catalog Number	Course Title	Crs.	Notes	Sem. Taken	Grade	Hrs. Earned	Total

Note: Consult the EICCD online college catalog or your academic advisor for course prerequisites.