



# Associate of Science with Emphasis Degree Area of Emphasis: Pre-Engineering - General

## Suggested Degree Pathway at Tri-C

[Rev. August 18, 2016]

The adjacent courses are suggested for students interested in transferring to a four-year university, after earning their Associate of Science degree, to pursue a Bachelor of Science in **Engineering**. Students following this degree pathway will earn an **Associate of Science** degree from Cuyahoga Community College.

**Completion of this degree pathway does not guarantee admission to the four-year program of your choice, nor admission at the junior level.** Be sure to consult with a representative at your university of choice regarding admission requirements and transferability of specific courses. This guide is provided solely for convenience and completion of the Associate of Science degree; **be sure to work closely with your Tri-C counselor and representatives at your intended transfer school.**

\* Indicates TAG (Transfer Assurance Guide) approved classes. TAGs are officially transferable to Ohio four-year public universities.

\*\* See a counselor for assistance selecting a transferable math course.

\*\*\* See a counselor for assistance selecting a transferable course that also fulfills the Associate of Science degree requirement.

\*\*\*\* See a counselor for assistance selecting a transferable course.

### TECHNICAL ELECTIVES (select 9 credits total)

CHEM 1310/131L*	General Chemistry I /Chem Lab*	4
CHEM 131H/131L*	Honors General Chemistry I /Chem Lab*	4
CHEM 2300*	Organic Chemistry I	5
CHEM 2310*	Organic Chemistry II	5
ESCI 1410/141L*	Physical Geology /Geology Lab	4
ESCI 141H/141L*	Honors Physical Geology /Geology Lab	4
HLTH 1230*	Standard First Aid and Personal Safety	1
IT 2670	C/C++ Programming Language	4
MATH 2010	Introduction to Discreet Mathematics	4
MATH 2410*	Introduction to Linear Algebra	3
MET 2041*	CAD II and GD&T	3
MET 2422	Fundamentals of Engineering Economics	3
MET 2620	Engineering Dynamics	3

Prerequisite ENG and MATH – see counselor		
Semester One		Credits
ENG 1010 <b>OR</b>	College Composition I*	3
ENG 101H	Honors College Composition I*	
CHEM 1300/130L <b>OR</b>	General Chemistry I /Chemistry Lab*	5
CHEM 130H/130L	Honors General Chemistry I /Chemistry Lab*	
MATH 1610** <b>OR</b>	Calculus I*	5
MATH 161H**	Honors Calculus I*	
MET 1100	Technology Orientation	2
<b>TOTAL</b>		<b>15</b>

Semester Two		Credits
ENG 1020	College Composition II*	3
ENG 102H	Honors College Composition II*	
PHYS 2310	General Physics I*	5
MET 2430**** <b>OR</b>	Engineering Probability and Statistics	3
MET 2610****	Engineering Statics	
MATH 1620** <b>OR</b>	Calculus II*	5
MATH 162H**	Honors Calculus II*	
<b>TOTAL</b>		<b>16</b>

Semester Three		Credits
MATH 2310** <b>OR</b>	Calculus III*	4
MATH 231H** <b>OR</b>	Honors Calculus III*	
MATH 2520	Differential Equations*	3
PHYS 2320	General Physics II*	5
DEGR-xxxx***	Social & Behavioral Sciences Elective	3
DEGR-xxxx***	Arts & Humanities Elective	3
<b>TOTAL</b>		<b>18</b>

Semester Four		Credits
DEGR-xxxx****	Technical Electives (see list)	9
DEGR-xxxx***	Social & Behavioral Sciences Elective	3
DEGR-xxxx***	Arts & Humanities Elective	3
<b>TOTAL</b>		<b>15</b>

**- Associate of Science Degree Awarded - Total Hours: 64**

SEE IMPORTANT NOTES ON 2<sup>ND</sup> PAGE OF THIS GUIDE.



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Your English and Math placement scores will determine if you must complete prerequisite coursework before starting this pathway. Meet with a Tri-C counselor to discuss options.

### IMPORTANT NOTES:

- The degree earned by using this guide will be labelled **Associate of Science**. The specific area of emphasis (Pre-Engineering - General) is not included on the Associate of Science degree/diploma nor on student transcripts.
- Your English and Math placement scores will determine the classes you must take in those course sequences. **Placement at a level lower than the initial English and Math courses listed in this guide will likely delay your completion of this degree pathway. Meet with a counselor at your campus to discuss options.**
- Students should take courses in the Ohio Transfer Module (OTM) for all associate degree required areas, and approved Transfer Assurance Guide (TAG) courses when possible.
- Students who complete the entire Ohio Transfer Module and graduate will complete the general education requirements at many Ohio public and private institutions.
- **This suggested degree pathway is intended as a guide only.** Each student's path is unique, and no single course sequence will serve all purposes. To ensure that your course selections will meet your transfer needs, be sure to:
  - **Meet with a Tri-C counselor to choose appropriate courses to achieve your transfer goals.**
  - Speak with an admissions representative at your intended transfer school.
  - Contact the department of your intended major at your intended transfer school to discuss that program's specific requirements.
  - **Check the Tri-C Transfer Center webpage** where you will find Articulation Agreements with a number of four-year institutions. The Agreements show requirements and seamless Transfer Pathways specific to various programs at those institutions.
    - **If an Articulation Agreement exists for your intended transfer school and program, use it instead of this Area of Emphasis guide.**
    - If an Articulation Agreement does not exist, use this Area of Emphasis guide but keep in mind that electives are typically best decided by the transfer school to meet their institutional requirements.