

Engineering Associate of Science Degree - 81102

Recommended Course Sequencing: 2024 – 2025

Fall- Semester 1	Prereq.	Credit Hours	Spring- Semester 2	Prereq.	Credit Hours
EGR 102 Introduction to Engineering	MAT 120	4	MAT 231 Calculus II	MAT 221	4
MAT 221 Calculus I	MAT 181	5	PHY 211 Physics with Calculus I	MAT 221	5
ENG 101 Written Communications I		3	ENG 102 Written Communications II		3
CHM 151 General Chemistry I		4	Discipline-Focused Course**	Varies	3-4
Humanities or Social Science*		3	Humanities or Social Science		3
Semester Total		19	Semester Total		18-19

Fall- Semester 3	Prereq.	Credit Hours	Spring- Semester 4	Prereq.	Credit Hours
MAT 241 Calculus III	MAT 231	4	MAT 261 Differential Equations	MAT 231	4
PHY 212 Physics with Calculus II	PHY 211	5	Discipline-Focused Course	Varies	3-5
Discipline-Focused Course	Varies	3-4	Discipline-Focused Course	Varies	3
Discipline-Focused Course	Varies	3	Discipline-Focused Course	Varies	3
Humanities or Social Science		3	Humanities or Social Science		3
Semester Total		18-19	Semester Total		16-18

* Suggest BUA 221 or BUA 223

** Suggest CHM 152 here

Discipline-Focused Course Lists

Fill the "Discipline-Focused Course" options in the schedule to complete one of the following lists based on your transfer goals. Some lists may require more than four regular semesters. Courses from an Engineering Discipline list may be replaced with up to 3 unduplicated courses of equal or greater credit value from the list on the following page.

Biomedical	Chemical	Civil	Electrical/Computer	Environmental	Mechanical/ Aerospace	Mining	General
Required courses:	Required courses:	Required courses:	Required courses:	Required courses:	Required courses:	Required courses:	Required Courses:
BIO 181	CHM 152	CHM 152	CHM 152	CHM 152	CHM 152	CHM 152	CHM 152
CHM 152	CHM 235	EGR 214	EGR 130	CHM 235	CMP 126	EGR 200	MAT 225
Choose four courses:	CHM 236	EGR 215	EGR 150	EGR 214	EGR 214	EGR 296A	EGR 214
BIO 182	MAT 225	EGR 233	EGR 220	EGR 233	EGR 215	EGR 214	EGR 215
BIO 201	Choose one course:	EGR 255	MAT 225	Choose three courses:	EGR 255	EGR 233	EGR 233
BIO 202	BIO 181	MAT 225		BIO 181	Choose three courses:	GLG 101	
BIO 205	BIO 201	Choose one course:		CHM 236	EGR 220		
CMP 126	BIO 205	BIO 181		EGR 255	EGR 233		
EGR 214	Choose one course:	GLG 101		GLG 101	MAT 225		
EGR 220	EGR 214			MAT 225	CMP 126		
MAT 225	EGR 220						

Discipline-Focused Course Options

Up to 3 courses of equal or greater credit value from an engineering discipline list may be replaced with unused courses from the following list:

Course	Credits	Semester	Prereq.
BIO 181 General Biology I	4	Fall	
BIO 182 General Biology II	4	Spring	BIO 182
BIO 201 Human Anatomy I	4	Fall/Spring	BIO 100
BIO 202 Human Anatomy II	4	Fall/Spring	BIO 201
BIO 205 Microbiology	4	Fall/Spring	BIO 100
CHM 235 Organic Chemistry I	4	Fall	CHM 152
CHM 236 Organic Chemistry II	4	Spring	CHM 235
DRF 154 Introduction to AutoCAD	2-3	Fall/Spring	
DRF 220 Parametric Solid Modeling	3	Spring	DRF 154
DRF 230 Civil Drafting	3	Fall	DRF 154
DRF 232 Structural Drafting	2-3	Spring	DRF 154
DRF 235 Geographic Information Systems I	2	Upon request	DRF 230
DRF 236 Geographic Information Systems II	3	Upon request	DRF 235
CMP 126 Java Programming I	3	Spring	
EGR 150 Digital Design Fundamentals	4	Fall	MAT 154
EGR 200 Introduction to Mining Engineering	3	Fall/Spring	
EGR 214 Statics	3	Fall	PHY 211
EGR 215 Dynamics	3	Spring	EGR 214
EGR 220 Circuits	5	Spring	MAT 260, PHY 212
EGR 233 Mechanics of Materials	3	Spring	EGR 214
EGR 255 Thermodynamics	3	Spring	CHM 151, MAT 230, PHY 211
EGR 296A Mineral Resource Seminar	1	Fall	
GLG 101 Physical Geology	4	Fall	
MAT 225 Linear Algebra	3	Fall	MAT 220

Total Minimum Degree Requirements

Total Credits	69-78
Total Curriculum Requirements	34-41
Total General Education Requirements	37

Notes:

This is a recommended sequence of courses and should be modified to meet individual needs. The sequence assumes that first-semester students meet the pre-requisites for Calculus I (MAT 221).

Selections for the "Discipline-Focused Courses" should be made based upon the student's discipline of choice (Civil, Mechanical, etc.) and the degree requirements of the student's target Bachelor program. Consultation with EAC Engineering faculty advisor is strongly recommended to ensure that students effectively complete everything they can prior to transferring.

This recommended sequence also dictates specific courses that must be taken to meet General Education requirements. Consult the current EAC course catalog to determine appropriate Humanities and Social Sciences to take, which will include classes in the Diversity and Inclusion, Global/ International/Historical Awareness, and Intensive Writing categories. All courses must be completed with a grade of "C" or better.