



John A. Logan College

Associate in Engineering Science Degree in Mechanical Engineering

Transfer Curriculum AES 0096
Associate in Engineering Science:
67-68 Hrs. Min.
Major Code: 1.1 141901
Effective Date: Fall 2020

GENERAL EDUCATION (IAI GECC, 27-39 CREDITS)

The Illinois Articulation Initiative (IAI) General Education Core Curriculum (GECC) requires 27 to 39 credit hours from the following five areas: communication; mathematics; physical and life sciences; humanities; and social and behavioral sciences. Courses selected to meet IAI GECC requirements may also meet course requirements for a specific major.

Consult with the transfer institution to determine if certain courses require a grade of "C" or higher, or if there is a minimum grade point average for admission to your declared major. Please select courses on this guide in accordance with the Articulation Notes for your transfer institution.

FIRST SEMESTER (FALL)

Dept.	No.		Hrs.	Grade
MAT	131	Calculus I	5	_____
EGR	101	Engineering Graphics <u>or</u> Elective***	3	_____
ENG	101	English Composition I	3	_____
CHM	151	Chemical Principles	5	_____
ORI	100	College 101	1	_____
			17	

Fall Only Courses:

EGR 101
CHM 201
CPS 215
MAT 202
PHY 201
PHY 206

Spring Only Courses:

CHM 202
CPS 206
MAT 205
PHY 202
PHY 203
PHY 214/224

*Recommended Social Science electives: ANT 111, ANT 202, ANT 216, GEO 112, SOC 215. For other IAI Social Science Electives, see below.

SECOND SEMESTER (SPRING)

Dept.	No.		Hrs.	Grade
MAT	201	Calculus II	5	_____
PHY	205	University Physics I	5	_____
CPS	206	Computer Science I <u>or</u> CHM 152 Chemical Principles w/ Qualitative Analysis***	4-5	_____
ENG	102	English Composition II	3	_____
			17-18	

**Recommended Humanities/Fine Arts Electives: HIS 103, HIS 104, HIS 213, LIT 284, LIT 295, PHL 200. For other IAI Humanities, see below.

***Choose electives based on your chosen transfer institution requirements.

IAI INFORMATION: This guide follows the guidelines established by the IAI Engineering major Panel for an Associates in Engineering Science Degree. This guide is not designed to complete the full IAI GECC component. You will need to fulfill the remaining IAI GECC courses at your transfer institution.

THIRD SEMESTER (FALL)

Dept.	No.		Hrs.	Grade
MAT	202	Calculus III	3	_____
PHY	206	University Physics II	5	_____
PHY	201	Statics	3	_____
ECO	201	Macroeconomics <u>or</u> Social Science Elective*	3	_____
IAI Life Science Elective <u>or</u> Elective***			3-4	_____
			17-18	

IAI Fine Arts Electives:

Art: ART 111, 220, 221, 291
Literature: LIT 275
Music: MUS 105, 225
Theater: THE 113

IAI Humanities Electives:

Foreign Language: FRE 202, GER 202, SPN 202
History: HIS 101, 102, 213
Literature: LIT 210, 230, 235, 264, 280, 281, 284, 295
Philosophy: PHL 111, 121, 131, 200, 260

FOURTH SEMESTER (SPRING)

Dept.	No.		Hrs.	Grade
MAT	205	Differential Equations	3	_____
PHY	202	Dynamics	3	_____
PHY	203	Mechanics of Materials	3	_____
PHY	224	Electric Circuit Analysis w/ Lab <u>OR</u> PHY 214 Intro to Circuit Analysis	4-3	_____
ECO	202	Microeconomics <u>or</u> Social Science Elective*	3	_____
			16	

IAI Social and Behavioral Sciences Electives:

Anthropology: ANT 111, 202, 216, 240
Economics: ECO 201, 202
Geography: GEO 112
History: HIS 103, 104, 201, 202
Political Science: PSC 131, 211, 212, 213, 289
Psychology: PSY 132, 200, 203, 262
Sociology: SOC 133, 215, 263, 264

IAI Life Science Electives:

Biology: BIO 100, 101, 105, 225
Interdisciplinary: PHS 101 with PHS 111, SCI 210A and SCI 210B
Life Science: SCI 215

Please see your advisor for possible specific four-year university transfer guides.

ARTICULATION NOTES: Consult your academic advisor and/or transfer institution to assess if any courses required for your major require a grade of C or higher and if there is a minimum grade point average needed for admission consideration into your major.

IAI ENGINEERING MAJOR PANEL INFORMATION

Take EGR 101 (IAI EGR 941), PHY 201 (EGR 942), PHY 202 (EGR 943), PHY 214 (EGR 931) or PHY 214 and 224 (EGR 931L) and PHY 203 (EGR 945).
Take MAT 131 (IAI MTH 901), MAT 201 (MTH 902), MAT 202 (MTH 903), CHM 151 (CHM 911), PHY 205 (PHY 911), PHY 206 9PHY 912) and CPS 206 (CS 911).

ECO 202 (IAI S3 9020 is recommended. In addition, if two courses are selected in this GECC area, a two course sequence is recommended (ECO 202 and ECO 201)

SIUC TRANSFER INFORMATION.

SIUC offers a B.S. degree in Mechanical Engineering. In addition, a specialization and minor is available in Energy Engineering.

Take BIO 225 (BIO 202), ECO 202 (ECON 240) and MAT 131 (MATH 150).

Take CHM 151 (CHEM 200/201) and CHM 152 (CHEM 210), PHY 205 (PHYS 205A/255A), PHY 206 (PHYS 205B/255B), MAT 131(MATH 150), MAT 201 (MATH 250), MAT 202 (MATH 251), MAT 205 (MATH 305), PHY201 (ENGR 250), PHY 202 (ENGR 261), PHY 203 (ENGR 350A) and EGR 101 (ME 102).

SIUE TRANSFER INFORMATION

SIUE offers a B.S. degree in Mechanical Engineering

Take MAT 131 (MATH 150), MAT 201 (MATH 152), MAT 202 (MATH 250), MAT 205 (MATH 205), EGR 101 (CE 204), PHY 201 (CE 240), PHY 205 (PHYS 151L), PHY 206 (PHYS 152L), PHY 202 (ME 262), PHY 203 (CE 242), PHY 214 or 215 (ECE 210), ECO 201 (ECON 111) and COM 116 (ACS 103).

CHEM 131-ENGINEERING CHEMISTRY, CHEM 135-ENGINEERING CHEMISTRY LAB, PHYS 141-PHYSICS I FOR ENGINEERING, PHY 142-PHYSICS II FOR ENGINEERING, IE 106-ENGINEERING PROBLEM SOLVING AND CS 145-INTRO TO COMPUTING FOR ENGINEERS ARE ALSO REQUIRED BUT EQUIVALENTS ARE CURRENTLY NOT OFFERED AT JALC.

UIUC TRANSFER INFORMATION

UIUC offers a degree in Mechanical Engineering. It is generally expected that applicants to an Engineering program will have a minimum GPA of 3.00 (A=4.00). The average GPA in 2019 for admitted transfer students was 3.91 for Mechanical Engineering.

Take ENG 101/102 (RHET 105), CHM 151 (CHEM 102/103), CHM 152 (CHEM 104/105), MAT 131 (MATH 220), PHY 205 (PHYS 211), ECO 202 (ECON 102), ECO 201 (ECON 103) and CPS 206 (CS101).

Also take MAT202 (MATH 241-to get credit for 241 a bridge course must be completed at UIUC /MATH 292), MAT 205(MATH 284), PHY 206 (PHYS 212), PHY 201 (TAM 211), PHY 202 (TAM 212), PHY 203 (TAM 251)

As a Graduation Requirement, a single foreign language through the third level-FRE 201, GER 201 or SPN 201 is required. It is not an admission requirement.

OTHER

Of the other Illinois Public Senior Institutions, NIU, UIC and WIU offer a degree in Mechanical Engineering.