

## Associate in Engineering Science (A.E.S.) Degree Requirements

**Semester Credits in General Education Core Curriculum outside of Mathematics and Natural Sciences) : ~~44-29~~ 9-18**

**Essential Prerequisite Courses: ~~55-60~~ 28-36 Semester Credits**

**Engineering Specialty Courses: ~~43-33~~ 8-22 Semester Credits**

**Total *semester* credits Required: ~~402~~ 68**

*IAI numbers given when available. For other courses, new numbers needed. This list will be verified against the final submissions and additions of IAI-approved courses and semester conversion course numbers in each category.*

### GENERAL EDUCATION CORE CURRICULUM REQUIREMENTS OUTSIDE OF MATHEMATICS AND NATURAL SCIENCES: ~~44-29~~ 9-18 semester credits

*All courses used to fulfill General Education Core Curriculum Requirements must be IAI-approved.*

**Communication: ~~9~~ 6 semester credits**

Written (~~9~~ 6 semester credits): English Composition IAI C1 900 and IAI C1 901R. Grade of "C" or higher required for both courses.

**Humanities/Fine Arts: ~~0-15~~ 0-9 semester credits**

Choose courses with different IAI numbers.

*Humanities:* Chinese, French, German, Italian, Japanese, Korean, Russian, or Spanish IAI H1 900; English IAI H3 900, IAI H3 901, IAI H3 902, IAI H3 903, IAI H3 905, IAI H3 907, IAI H3 910D, IAI H3 911D, IAI H3 912, IAI H3 913, IAI H3 914, IAI H3 915, IAI H5 901, IAI H9 901, IAI HF 908; German IAI H3 909; History IAI H2 901, IAI H2 902, IAI H2 903N; Humanities IAI H9 900, IAI HF 904N, IAI HF 906D; Philosophy IAI H4 900, IAI H4 901, IAI H4 904, IAI H4 905, IAI H4 906, IAI H5 904N; Religious Studies IAI H4 903N, IAI H5 900, IAI H5 901, IAI H5 904N.  
*Fine Arts:* Art IAI F2 900, IAI F2 901, IAI F2 902, IAI F2 903N; English IAI F2 905, IAI F2 908, IAI HF 908; Humanities IAI F9 900, IAI HF 904N, IAI HF 906D; Music IAI F1 900, IAI F1 903N, IAI F1 904; Theater IAI F1 907.

**Social and Behavioral Sciences: ~~0-15~~ 0-9 semester credits**

Choose courses with different IAI numbers.

Anthropology IAI S1 901N, IAI S1 902, S1 903, IAI S1 904D; Economics IAI S3 901, IAI S902; Geography IAI S4 900N, IAI S4 901, IAI S4 902N, IAI S4 903N; History IAI S2 900, IAI S2 901, IAI S2 907N, IAI S2 916N; Political Science IAI S5 900, IAI S5 903, IAI S5 904N, IAI S5 905; Psychology IAI S6 900, IAI S6 902, IAI S6 903, IAI S6 904, IAI S6 905, IAI S8 900; Sociology IAI S7 900, IAI S7 901, IAI S7 902, IAI S7 903D, IAI S7 904D.

### ESSENTIAL PREREQUISITE COURSES: ~~55-60~~ 28-36 semester credits + 1 Mathematics credit as elective. All courses must be IAI-approved.

Mathematics 231, 232, 233, 234

~~20~~ 11-13 semester credits

Equivalent to IAI EGR 901, 902, 903

+ 1 Mathematics credit as elective

Mathematics 270

~~5~~ 3-4 semester credits

Equivalent to IAI EGR 904

Chemistry IAI EGR 961

~~40~~ 4-5 semester credits

Physics IAI EGR 911 and 912

~~15~~ 8-10 semester credits

Computer Information Systems 255 or 256

~~5~~ 2-4 semester credits

CIS equivalent to IAI EGR 921 or 922 needed

**ENGINEERING SPECIALTY COURSES:** ~~43-33~~ **8-22 semester** credits

**All courses must be IAI-approved.**

**Engineering:** Choose from

IAI EGR 931L	<b>4 semester hours</b>
IAI EGR 932L	<b>4 semester hours</b>
IAI EGR 941	<b>2-4 semester hours</b>
IAI EGR 942	<b>2-3 semester hours</b>
IAI EGR 943	<b>2-3 semester hours</b>
IAI EGR 945	<b>3-4 semester hours</b>
IAI EGR 946	<b>3 semester hours</b>

**Other Sciences:**

Biology	IAI L1 900L	<b>4 semester hours</b>
Chemistry	IAI EGR 962	<b>4-5 semester hours</b>
	IAI EGR 963	<b>3-5 semester hours</b>
	IAI EGR 964	<b>3-4 semester hours (laboratory optional)</b> <b>(COD's current 3-course Organic Chemistry sequence is expected to be converted from the current 15 quarter credits to two courses 5 semester credits for Organic Chemistry I and 4 semester credits for Organic Chemistry II)</b>

**ELECTIVES:** Select remaining elective courses from IAI General Education Essential Prerequisite Courses and Engineering Courses to ~~402~~ **68 semester** credits

**ADDITIONAL SPECIFICATIONS:**

Satisfy graduation requirements for all associate's degrees.

Earn no credits through courses graded satisfactory/fail.

Earn no more than ~~65~~ **42 semester** credits by demonstrated competence **through the Advanced Placement Program (AP) , the subject examinations of the College Level Examination Program (CLEP) and the College of DuPage Proficiency Through an Instructor Program. (Note: Brings this wording in line with specific wording in other transfer degrees.)**

**NOTES:** There is no guarantee that courses listed under Essential Prerequisite Courses and Engineering Specialty Courses, or that the AES degree will transfer to any baccalaureate-granting institution. Check with an Engineering adviser both at College of DuPage and your transfer institution.

See an Engineering adviser for the appropriate choices in Humanities, Social and Behavioral Sciences, and Fine arts for transfer to your chosen program.

Students should complete entire courses sequences in calculus and physics at the same school before transfer, since topics are covered in different orders by different schools.

Biology may be required for Bio-Engineering majors. See an Engineering adviser for help in choosing the correct biology course.