

ASSOCIATE IN ENGINEERING SCIENCE DEGREE

Degree Requirements

(Total Minimum Credits Required: 68)

Students should check with an Engineering advisor at College of DuPage and consult the Transfer Guide at <http://www.cod.edu/programs/engineering/transfer.aspx>.

Each candidate for an Associate in Engineering Science (A.E.S.) degree shall:

- Select courses to complete the required 68 credits from:
 - Essential prerequisite courses totaling 36 to 40 credit hours;
 - Engineering specialty courses totaling 8 to 23 credit hours;
 - General education core requirement courses totaling 9 to 18 credit hours;
 - Additional elective coursework¹ to bring the total for the degree to 68 credit hours.
- Satisfy graduation requirements (<https://catalog.cod.edu/educational-opportunities/#gradreqs>) for all associate degrees.
- Earn no credit with a satisfactory/fail grade option.
- Earn no more than 42 credits for the Communication, Physical and Life Sciences, Mathematics, Humanities and Fine Arts, and Social and Behavioral Sciences categories by demonstrated competence through the Advanced Placement Program (AP), designated course-specific subject examinations of the College Level Examination Program (CLEP), and the College of DuPage Proficiency Through an Instructor Program.

Essential Prerequisite Courses - 36 to 40 credit Hours

Mathematics - 18 Credits

Code	Title	Credits
MATH 2231	Calculus and Analytic Geometry I (M1 900-1)	5
MATH 2232	Calculus and Analytic Geometry II (M1 900-2)	5
MATH 2233	Calculus and Analytic Geometry III (M1 900-3)	4
MATH 2270	Differential Equations	4
Total Credits		18

Chemistry - 5 Credits

Code	Title	Credits
CHEM 1551	Principles of Chemistry I (P1 902L)	5
Total Credits		5

Physics - 10 to 14 Credits

Code	Title	Credits
Required		
PHYSI 2111	Physics for Science and Engineering I (P2 900L)	5
PHYSI 2112	Physics for Science and Engineering II	5
Optional		

PHYSI 2115	Physics for Science and Engineering III	4
Total Credits		10-14

Computer and Information Science - 3 to 4 Credits

Code	Title	Credits
CIS 2485	C++ for Science and Engineering	3-4
or CIS 2541	C++ Language Programming	
Total Credits		3-4

Engineering Speciality Courses - 8 to 23 credit hours

Code	Title	Credits
Engineering		
ENGIN 1101	Engineering Graphics and Design	
ENGIN 2201	Statics	
ENGIN 2202	Dynamics	
ENGIN 2203	Mechanics of Materials	
ENGIN 2205	Engineering Thermodynamics	
ENGIN 2207	Engineering Economy	
ENGIN 2210	Circuit Analysis I	
ENGIN 2213	Introduction to Digital Systems	
ENGIN 2220	Circuit Analysis II	
ENGIN 2223	Microcontrollers	

Other Sciences

<i>Biology</i>		
BIOLO 1151	Principles of Biological Science (L1 910L)	
<i>Chemistry</i>		
CHEM 1552	Principles of Chemistry II	
CHEM 2551	Organic Chemistry I	
CHEM 2552	Organic Chemistry II	
Total Credits		8-23

General Education Courses - 9 to 18 credit hours

Communication - 6 credits

Code	Title	Credits
ENGLI 1101	English Composition I ²	3
ENGLI 1102	English Composition II ²	3
Total Credits		6

Humanities and Fine Arts - 0 to 9 credits

Code	Title	Credits
Humanities		
<i>Chinese</i>		
CHINE 2202	Intermediate Chinese II (H1 900)	
<i>English</i>		
ENGLI 1130	Introduction to Literature (H3 900)	
ENGLI 1150	Short Fiction (H3 901)	
ENGLI 1151	Novel (H3 901)	
ENGLI 1152	Poetry (H3 903)	
ENGLI 1153	Drama (H3 902)	
ENGLI 1154	Film As Literature (HF 908)	
ENGLI 1157	Children's Literature (H3 918)	
ENGLI 1158	Bible As Literature (H5 901)	
ENGLI 1159	Greek Mythology (H9 901)	
ENGLI 1161	Multicultural Literatures of the U.S. (H3 910D)	

ENGLI 1165	Literature, Gender, and Sexualities (H3 911D)	PHILO 1100	Introduction to Philosophy (H4 900)
ENGLI 2220	British Literature to 1800 (H3 912)	PHILO 1110	Ethics (H4 904)
ENGLI 2221	British Literature From 1800 Through The Present (H3 913)	PHILO 1116	Environmental Ethics (H4 904)
ENGLI 2223	American Literature From the Colonial Period to the Civil War (H3 914)	PHILO 1120	Logic (H4 906)
ENGLI 2224	American Literature From the Civil War to the Present (H3 915)	PHILO 1125	Critical Thinking (H4 906)
ENGLI 2226	World Literature (H3 907)	PHILO 1150	World Religions (H5 904N)
ENGLI 2227	Modern European Literature (H3 907)	PHILO 2010	Ancient Philosophy (H4 901)
ENGLI 2228	Shakespeare (H3 905)	PHILO 2011	Early Modern Philosophy (H4 902)
ENGLI 2262	Non-Western Literature (H3 908N)	PHILO 2150	Philosophy of Religion (H4 905)
<i>French</i>		PHILO 2155	Asian Thought (H4 903N)
FRENC 2202	Intermediate French II (H1 900)	<i>Religious Studies</i>	
FRENC 2251	Conversation and Composition I (H1 900)	RELIG 1100	Introduction to Religion (H5 900)
FRENC 2252	Conversation and Composition II (H1 900)	RELIG 1110	Introduction to the Bible: Old Testament (H5 901)
<i>German</i>		RELIG 1120	Introduction to the Bible: New Testament (H5 901)
GERMA 2202	Intermediate German II (H1 900)	RELIG 1150	World Religions (H5 904N)
GERMA 2251	Conversation and Composition I (H1 900)	RELIG 2155	Asian Thought (H4 903N)
GERMA 2252	Conversation and Composition II (H1 900)	RELIG 2160	Judaism, Christianity and Islam (H5 901)
<i>History</i>		<i>Russian</i>	
HISTO 1110	Foundations of the European World (H2 901)	RUSSI 2202	Intermediate Russian II (H1 900)
HISTO 1120	Europe in the Modern World (H2 902)	<i>Spanish</i>	
HISTO 1160	World Civilization Since 1300 (H2 907)	SPANI 2202	Intermediate Spanish II (H1 900)
HISTO 2205	History of Asia (H2 903N)	SPANI 2206	Spanish for Heritage Speakers I (H1 900)
HISTO 2220	History and Culture of China (H2 903N)	SPANI 2208	Spanish for Heritage Speakers II (H1 900)
HISTO 2225	History and Culture of Russia (H2 908)	SPANI 2251	Conversation and Composition I (H1 900)
HISTO 2230	History and Culture of Japan (H2 908)	SPANI 2252	Conversation and Composition II (H1 900)
HISTO 2235	20th Century World History (H2 903N)	<i>Fine Arts</i>	
HISTO 2245	History and Culture of England (H2 908)	<i>Art</i>	
<i>Humanities</i>		ART 2213	Art Histories Since 1950 (F2 902)
HUMNT 1102	Introduction to Humanities: Ideas and Values (H9 900)	Social and Behavioral Sciences - 0 to 9 credits	
HUMNT 1103	Introduction to World Mythology (H9 901)	Code	Title
HUMNT 1104	Women in Arts: Cultural and Artistic Expressions of Gender (HF 907D)	Credits	
HUMNT 1105	Humanities Beyond the U.S. & Europe (HF 904N)	<i>Anthropology</i>	
HUMNT 1110	The Arts and Cultural Diversity (HF 906D)	ANTHR 1000	Introduction to Anthropology (S1 900N)
HUMNT 1120	Introduction to Medical Humanities (H9 900)	ANTHR 1100	Cultural Anthropology (S1 901N)
HUMNT 1150	Intersections of Humanities, Math, And Science (H9 900)	ANTHR 1105	Practical Anthropology (S1 904D)
<i>Italian</i>		ANTHR 1130	People and Cultures of the World (S1 904D)
ITALI 2202	Intermediate Italian II (H1 900)	ANTHR 1200	Discovering Archaeology (S1 903)
<i>Japanese</i>		ANTHR 1400	Race, Sex and Human Evolution (S1 902)
JAPAN 2202	Intermediate Japanese II (H1 900)	<i>Economics</i>	
<i>Korean</i>		ECONO 2200	Principles of Economics (S3 900)
KOREA 2202	Intermediate Korean II (H1 900)	ECONO 2201	Macroeconomics and the Global Economy (S3 901)
<i>Motion Picture/Television</i>		ECONO 2202	Microeconomics and the Global Economy (S3 902)
MPTV 1154	Film As Literature (HF 908)	<i>Geography</i>	
<i>Philosophy</i>		GEOGR 1100	Western World Geography (S4 901)
		GEOGR 1105	Eastern World Geography (S4 902N)
		GEOGR 1120	Economic Geography (S4 903N)
		GEOGR 1130	Cultural Geography (S4 900N)
		<i>History</i>	
		HISTO 1130	History of the United States to 1865 (S2 900)

HISTO 1140	History of the United States Since 1865 (S2 901)
HISTO 2210	History and Culture of Africa (S2 907N)
HISTO 2215	History and Culture of South Asia (S2 916N)
HISTO 2242	African-American History (S2 923D)
HISTO 2260	United States History Since 1945 (S2 901)

Political Science

POLS 1100	Introduction to Political Science (S5 903)
POLS 1101	American Politics (S5 900)
POLS 1105	State and Local Politics (S5 902)
POLS 2203	Comparative Politics (S5 905)
POLS 2220	World Politics (S5 904N)

Psychology

PSYCH 1100	General Psychology (S6 900)
PSYCH 2230	Developmental Psychology: Childhood and Adolescence (S6 903)
PSYCH 2233	Developmental Psychology: Adolescence (S6 904)
PSYCH 2235	Developmental Psychology: Adulthood (S6 905)
PSYCH 2237	Developmental Psychology: The Life Span (S6 902)
PSYCH 2240	Social Psychology (S8 900)

Sociology

SOCIO 1100	Introduction to Sociology (S7 900)
SOCIO 1120	Sociology of Sex, Gender and Power (S7 904D)
SOCIO 2210	Social Problems (S7 901)
SOCIO 2215	Race and Racism in America (S7 903D)
SOCIO 2220	Sexual Relationships, Marriage & Family (S7 902)

Notes

¹ If needed, select remaining elective courses from IAI General Education, Essential Prerequisite Courses and Engineering Specialty Courses to reach 68 credits.

² Grade of C or higher required.

Courses listed under Essential Prerequisite Courses and Engineering Specialty Courses, as well as the A.E.S. degree, will transfer from COD based on criteria set by each baccalaureate degree-granting institution. Check with an advisor at College of DuPage and your transfer institution for the appropriate choices in Humanities, Social and Behavioral Sciences, and Fine Arts for transfer to a chosen program of study.

Biology may be required for Bio-Engineering majors. See a Student Success Counselor for help in choosing the correct biology course.