

Southern Illinois University - Carbondale
College of Engineering
Associate in Engineering Science Degree

The following is a list of courses that satisfy the Associate in Engineering Science Degree requirements at Sauk Valley Community College as well as the requirements for the Engineering programs at Southern Illinois University – Carbondale. See reverse side of this document to review specific course requirements for engineering specialty area. **Students transferring without the AES Degree may need to complete different general education courses.**

The AES degree does not satisfy all of the IAI general education core requirements.

COMMUNICATIONS **6 CREDITS**

 ENG 101, ENG 103 (Must have a grade of C or better in both English courses)

MATHEMATICS **13 CREDITS**

 MAT 203, 204, 205

HUMANITIES AND FINE ARTS* **3 or 6 CREDITS**

 Interdisciplinary courses encompassing both the Humanities and Fine Arts may be used either category. **If only three hours are completed in Humanities/Fine Arts, then six hours are required in Social/Behavioral Sciences and vice versa. A non-Western or minority culture course is recommended. If two courses are selected in a field, a two-semester sequence in the same discipline is recommended*

Humanities

LAN 202, 252, 262; ENG 201, 203, 204, 212, 215, 217, 225, 226, 227, 228, 230;
 PHL 101, 102, 103; ENG 220, 221, PHL 104; HUM 150, 210, 211

Fine Arts

ART 118, 119, 120, 121, 122; MUS 150, MUS 201; SPE 141;
 HUM 112,150, 210, 211

SOCIAL AND BEHAVIORAL SCIENCES** **3 or 6 CREDITS**

***If only three hours are completed in Social/Behavioral Sciences, then six hours are required in Humanities/Fine Arts and vice versa. An economics course is recommended. If two courses are selected in a field, a two-semester sequence in the same discipline is recommended*

Anthropology

SOC 115, 116

Economics

ECO 211, 212

History

HIS 131, 132, 151, 221, 222, 235, 245, 255, 265

Human Geography

GEO 122

Political Science

GOV 163, 164, 232, 261

Psychology

PSY 103, 200, 214

Sociology

SOC 111, 112, 251

PHYSICAL SCIENCES **5 CREDITS**

CHE 105 (Prerequisite: One year of high school chemistry or CHE 103/102 with a grade of "C" or higher, **and** ability to perform algebraic manipulations)

ORIENTATION **1 CREDIT**

PSY 100

Required Prerequisite Courses – 21 credits

MAT 211, PHY 211, PHY 212, PHY 213

(PHY 211 prerequisite is one year of high school physics or PHY 201, **and** MAT 203)

****Recommended** - Computer Programming CIS 122, or CIS 206 or 207 (CIS 206 & 207 prerequisite is CIS 150 or consent of instructor)

Engineering Specialty Courses – 14 credits

CHE 106, PHY 211, PHY 222, and EGR 103 (EGR 103 is an Internet course available in the fall through IVCC)

Recommended for non-civil engineering students - PHY 246/247

**** (Will need to submit a course substitution form to the Office of Admissions)**

COLLEGE OF ENGINEERING
ENGINEERING
 Southern Illinois University Carbondale
 Course Substitution List

Sauk Valley Community College 2006-08
 College Name/Catalog Date

SIUC 2006-07					Sauk Valley Community College 2006-08	
Civil Engineering	Computer Engineering	Electrical Engineering	Mechanical Engineering	Mining Engineering	Course Title	Course Substitute(s)
ENGR 102	--	--	ENGR 102	ENGR 102	Eng. Graphics	EGR 103 or DFT 208
--	ECE 222	ECE 222	ENGR 222B	--	C++ Programming	CIS 206 or 207 ¹
--	or CS 202	or CS 202	--	--	JAVA Programming	CIS 122 or 234 ²
--	CS 220	--T	--	--	Prog. with Data Structures	
CE 250	--T	--T	CE 250	CE 250	Statics	PHY 221
ME 261	--	--	ME 261	ME 261	Dynamics	PHY 222
CE 350A	--	--	CE 350A	CE 350A	Mechanics of Deform. Bodies	
--	ECE 235	ECE 235	ENGR 335	ENGR 335	Elec. Circuits	PHY 246 + 247
--	ECE 225	ECE 225	--	--	Digital Systems	
CHEM 200 + CHEM 201	CHEM 200 ³ + CHEM 201	CHEM 200 ³ + CHEM 201	CHEM 200 + CHEM 201	CHEM 200 + CHEM 201	Intro. Chem. Principles	CHE 105
CHEM 210	--T	--T	CHEM 210	CHEM 210	General & Inorganic Chem.	CHE 106
--	--	--	--	GEOL 220	Physical Geology	
MATH 150	MATH 150	MATH 150	MATH 150	MATH 150	Calculus I	MAT 203
MATH 250	MATH 250	MATH 250	MATH 250	MATH 250	Calculus II	MAT 204
MATH 251	MATH 251	MATH 251	MATH 251	MATH 251	Calculus III	MAT 205
MATH 305	MATH 305	MATH 305	MATH 305	MATH 305	Diff. Equations	MAT 211
--	--T	--T	--	--	Intro. to Linear Algebra	MAT 231
PHYS 205A + PHYS 255A	PHYS 205A + PHYS 255A	PHYS 205A + PHYS 255A	PHYS 205A + PHYS 255A	PHYS 205A + PHYS 255A	Univ. Physics I	PHY 211
PHYS 205B + PHYS 255B	PHYS 205B + PHYS 255B	PHYS 205B + PHYS 255B	PHYS 205B + PHYS 255B	PHYS 205B + PHYS 255B	Univ. Physics II	PHY 212
PHYS 205C + PHYS 255C	PHYS 205C ³ + PHYS 255C	PHYS 205C ³ + PHYS 255C	--	--	Univ. Physics III	PHY 213

¹ C++ Programming is recommended for Computer, Electrical, and Mechanical Engineering Majors.
² JAVA Programming may substitute for C++ Programming for Electrical and Computer Engineering Majors.
³ Third science course may be Chemistry I or Physics III for Electrical and Computer Engineering Majors.
 -- Not required
 --T Not required but will count as Technical Elective