Engineering

AWARD

ENGINEERING FUNDAMENTALS A.S. . . . . 60 cr

A.S., ENGINEERING FUNDAMENTALS
(60 CREDITS)

Engineering Core Curriculum . . . . . 21 cr
Engineering Specialty Requirement . . . . . 9 cr
Liberal Arts . . . . . 30 cr

PURPOSE

The A.S. in Engineering Fundamentals prepares students for transfer to a four-year college or university to complete a bachelor's degree in one of the following engineering disciplines: aerospace, biomedical, chemical, civil, computer, electrical, environmental, manufacturing, materials mechanical or nuclear. The program covers courses typically offered in freshman and sophomore years of an accredited engineering curriculum in the United States. Students are strongly recommended to keep themselves informed of the rules and requirements related to the major department at the transfer institution (four-year college or university where they plan to transfer). Students are advised to work with academic advisors and counselors to complete a course plan specific to each engineering discipline listed above.

ENGINEERING CORE CURRICULUM — 21 CREDITS

MATH 1133	Calculus I	5
MATH 1134	Calculus II	5
MATH 2219	Multivariable Calculus	5
MATH 2221	Introduction to Linear Algebra	3
MATH 2222	Introduction to Differential Equations	3

ENGINEERING SPECIALTY REQUIREMENT — 9 CREDITS

Choose courses specific to intended engineering major.

ENGR 1110	Introduction to Engineering	4
ENGR 2000	Thermodynamics	4
ENGR 2020	Statics	3
ENGR 2024	Mechanics of Materials	3
ENGR 2025	Dynamics	3
ENGR 2041	Linear Circuits I	4
ENGR 2042	Linear Circuits II	4
ENGR 2043	Introduction to Digital Circuits and Logic Design	4
ENGR 2250	Special Topics in Engineering	1-3
CHEM 1062	Principles of Chemistry II	5
CHEM 2061	Organic Chemistry I	5
CHEM 2062	Organic Chemistry II	5
CS 1119	Computer Programming with C++	4

LIBERAL ARTS CURRICULUM — 30 CREDITS

ENG 1108	Writing and Research Skills	4
COMM 1100 COMM 1110 COMM 2240	Interpersonal Communication OR Public Speaking OR Intercultural Communication	3
PHYS 1081	Calculus Based Physics I	5
PHYS 1082	Calculus Based Physics II	5
History/Social Science/Behavioral Science (MnTC Goal 5)		3
Humanities/Fine Arts/Literature (MnTC Goal 6)		3
Goals 7-10 of MnTC		3
Liberal Arts Electives (MnTC courses only)		4

Note: Many Engineering majors and programs require CHEM 1061 and ECON 1106. Student may choose these as part of their liberal arts curriculum to strengthen the degree.

Inver Hills Community College

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2018-2019 CATALOG