

Applied Mathematics/Operations Research Concentration • Bachelor of Science

Why Choose Operations Research?

Operations Research is a relatively new field of mathematics, having begun during World War II. The military had to answer such questions as 'How do we distribute supplies to troops?' or 'What is the best way to position our fleet?' Businesses adapted these mathematical techniques to industry for production scheduling, inventory and marketing problems. Operations Research deals with determining the optimum way of solving a problem based on a mathematical model. Job opportunities include working in business or industry or for the military.

Admission Requirements

First year student admission is open to high school graduates (or equivalent) who demonstrate academic preparedness, maturity and seriousness of purpose with educational backgrounds appropriate to their chosen program of study. High school courses and grade point average, ACT composite score, and ACT reading and mathematics subscores will be considered in the admission and placement process. Transfer students must have at least 12 credits at the time of application with a minimum 2.0 overall GPA including an English and mathematics course, or they must provide their high school records and ACT scores for admission review.

Graduation Requirements

The applied mathematics program leads to a bachelor of science degree. Graduation requires a minimum 2.0 overall GPA and a minimum of 120 credits including completion of all general education requirements as outlined on the General Education website. Additionally, a minimum 2.5 GPA in all math and computer science course work is required.

Required Courses

Credit Hours

General Education:

This degree requires completion of the General Education requirements for a Bachelor of Science degree. Details of these requirements are delineated on the General Education website. Courses listed below as program/major required courses with the indicators: C, S, Z, R, G, may also be used to satisfy some of these general education requirements.

Applied Mathematics Core (19 credits required)

MATH 220	Analytical Geometry & Calculus 1	5
MATH 230	Analytical Geometry & Calculus 2	5
MATH 251	Statistics for the Life Sciences	3
MATH 320	Analytical Geometry & Calculus 3	3
MATH 322	Linear Algebra	3

Operations Research Concentration:

MATH 330	Differential Equations	3
MATH 360	Operations Research	3
MATH 440	Mathematics Modeling	3
CPSC 320	Computer Simulations	3

MATH or CPSC 300/- 400 elective		3
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MATH or CPSC 300/- 400 elective		3
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Choose one:

CPSC 200	Object Oriented Programming	4
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OR

CPSC 244	Scientific Programming w/FORTRAN	3
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More Information

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FERRIS STATE UNIVERSITY

C O L L E G E O F A R T S & S C I E N C E S