Bachelor in Applied Mathematics - Minor in Faith-Based Data Analysis and Research
HBI University
Course Duration: 3 years
Credit Hours: 135 (including minor)

Program Description

The Bachelor in Applied Mathematics at HBI University equips students with strong analytical and problem-solving skills in mathematical modeling, data analysis, and computational science. This program provides students with practical applications in technology, finance, engineering, and research.

The Minor in Faith-Based Data Analysis and Research enhances this degree by integrating Christian ethics into data-driven decision-making and research methodologies. Students will explore how data analysis can be used to support faith-based organizations, humanitarian efforts, and ethical policy development.

Admissions Requirements

- High school diploma or equivalent
- Minimum GPA of 2.5
- Personal statement outlining career goals and interest in applied mathematics
- Two letters of recommendation
- Resume (if applicable)
- SAT/ACT scores (if applicable)

General Education Courses (30 Credit Hours)

Course Code	Course Name	Credit Hours
GEN 101	English Composition I	3
GEN 102	English Composition II	3
GEN 103	College Algebra	3
GEN 104	Introduction to Philosophy	3
GEN 105	Introduction to World Religions	3
GEN 106	Public Speaking and Communication	3
GEN 107	Ethics and Critical Thinking	3
GEN 108	Research Methods	3
GEN 109	Leadership and Team Development	3
GEN 110	Cross-Cultural Communication	3

Core Applied Mathematics Courses (45 Credit Hours)

Course Code	Course Name	Credit Hours
MTH 201	Calculus I	3
MTH 202	Calculus II	3
MTH 203	Linear Algebra	3
MTH 204	Differential Equations	3
MTH 205	Probability and Statistics	3
MTH 206	Discrete Mathematics	3
MTH 207	Mathematical Modeling and Simulation	3
MTH 208	Numerical Methods and Computation	3
MTH 209	Data Science and Machine Learning	3
MTH 210	Optimization and Operations Research	3
MTH 211	Applied Cryptography and Security	3
MTH 212	Big Data Analytics and Statistical Computing	3
MTH 213	Complex Variables and Fourier Analysis	3
MTH 214	Mathematical Economics and Finance	3
MTH 215	Capstone: Applied Mathematics Research Project	3

Elective Courses (15 Credit Hours)

Course Code	Course Name	Credit Hours
ELEC 301	Mathematics in Theology and Philosophy	3
ELEC 302	Artificial Intelligence and Faith-Based Applications	3
ELEC 303	Computational Science for Humanitarian Efforts	3
ELEC 304	Statistical Research in Nonprofit Management	3
ELEC 305	Algorithmic Decision-Making and Ethical Concerns	3

Minor in Faith-Based Data Analysis and Research (15 Credit Hours)

Course Code	Course Name	Credit Hours
FDR 401	Faith-Based Research Methods and Ethics	3
FDR 402	Data Analysis for Faith-Based Organizations	3
FDR 403	Christian Perspectives in Statistical Decision-Making	3
FDR 404	Predictive Modeling for Social Impact	3
FDR 405	Faith-Based Research and Policy Development	3

Capstone Project (15 Credit Hours)

The capstone project in Applied Mathematics allows students to apply advanced mathematical techniques, data analysis, and faith-based research principles to a real-world problem. Students will:

- Develop a predictive analytics model for a faith-based nonprofit organization.
- Conduct research on ethical concerns in data science and AI from a Christian perspective.
- Create statistical reports to support decision-making in religious or humanitarian initiatives.
- Present their research findings and data models to faculty and industry professionals.

Program Outcomes

Graduates of this program will:
- Master applied mathematics, computational science, and statistical modeling.
- Integrate faith-based ethical considerations into data-driven research.

- Utilize data analysis to support nonprofit, faith-based, and social impact initiatives.
- Develop mathematical solutions for global challenges in economics, science, and technology.
- Lead faith-based research projects that contribute to ethical policy-making and social justice.

Career Outcomes and Potential Pay Scale

Career Path	Average Salary (Annual)
Data Scientist	$80,000 - $150,000
Faith-Based Research Analyst	$55,000 - $110,000
Quantitative Analyst	$70,000 - $130,000
Nonprofit Data Strategist	$60,000 - $120,000
Operations Research Analyst	$65,000 - $125,000