Applied AI and Data Analytics, B.S.

Degree Offered

- Bachelor of Science

Nature of the Program

Students in the Applied Artificial Intelligence and Data Analytics program gain the skills necessary to develop, deploy, maintain, and manage current and next-generation AI technology and systems that businesses and organizations need to remain competitive. Our students work with the technology that industry professionals encounter in everyday environments while gaining real-world experience before graduation. Professionals who complete this program acquire hands-on skills through collaboration with organizations and develop foundational abilities critical for understanding both the business and technical needs of these entities. Additionally, a required minor can be pursued anywhere in the university based on the student's interests.

Career opportunities are broad and include:

- Consulting
- Data Analyst
- Data Scientist
- AI Engineer
- and other emerging roles in this cutting-edge field

This program is excellent for students who enjoy technology, problem-solving, and engaging in hands-on projects across multiple sectors and fields.

Admissions for 2026-2027

For specific information regarding the admissions requirements for First Time Freshmen to the John Chambers College of Business and Economics, please visit Chambers admissions.

Students who are direct admitted to the major as first-time freshmen must possess an overall university GPA of at least 2.5 and have completed the course prerequisites listed in the table below with minimum grade of C-, unless otherwise noted, to be eligible to enroll in upper-division course work.

Students who are not direct admitted to the major (i.e. Business) will declare the major during the semester in which they satisfy the course prerequisites listed below. Applicants also must possess an overall GPA of at least 2.5 to be considered for admission to the major.

Code	Title	Hours
BCOR 121	Introduction to Business Applications	2
ENGL 101	Introduction to Composition and Rhetoric	3
ENGL 102	Composition, Rhetoric, and Research	3
ECON 201	Principles of Microeconomics	3
ECON 202	Principles of Macroeconomics	3
ECON 225	Elementary Business and Economics Statistics	3
MATH 150	Applied Calculus	3

General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. **(**http://registrar.wvu.edu/gef/**)**

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

Code	Title	Hours
General Education Foundations		
F1 - Composition & Rhetoric		3-6
ENGL 101 & ENGL 102	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research	
or ENGL 103	Accelerated Academic Writing	
F2A/F2B - Science & Technology		4-6
F3 - Math & Quantitative Reasoning		3-4
F4 - Society & Connections		3

F5 - Human Inquiry & the Past	3
F6 - The Arts & Creativity	3
F7 - Global Studies & Diversity	3
F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree)	9
Total Hours	31-37

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

Degree Requirements

Code	Title	Hours
University Requirements		28
Pre-Business Requirements		20
Business Core Requirements		9
Information Science Requirements		18
Major Requirements		45
Total Hours		120

University Requirements

Code	Title	Hours
General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits)		
Outstanding GEF Requirements 2, 5, 6, and 7		13
BCOR 191	First-Year Seminar	1
General Electives		14
Total Hours		28

Pre-Business Requirements

Code	Title	Hours
BCOR 121	Introduction to Business Applications (Minimum Grade of C-)	2
ENGL 101	Introduction to Composition and Rhetoric (Minimum Grade of C-)	3
ENGL 102	Composition, Rhetoric, and Research (Minimum Grade of C-)	3
ECON 201	Principles of Microeconomics (Minimum Grade of C-)	3
ECON 202	Principles of Macroeconomics (Minimum Grade of C-)	3
ECON 225	Elementary Business and Economics Statistics (Minimum Grade of C-)	3
MATH 150	Applied Calculus (Minimum Grade of C-)	3
Total Hours		20

Business Core Requirements

Code	Title	Hours
BCOR 199	Introduction to Business	3
BCOR 299	Business Communication	3
BCOR 330	Information Systems and Technology	3
Total Hours		9

Information Science Requirements

Code	Title	Hours
MIST 320	Managing Information Technology	3
MIST 351	Database Management Systems (Minimum Grade of C-)	3
MIST 352	Business Application Programming (Minimum Grade of C-)	3
MIST 353	Advanced Information Technology	3
MIST 460	Requirements Analysis and Design of Machine Learning and AI Based Systems (Minimum Grade of C-)	3

MIST 462	Development and Deployment of Machine Learning and AI Based Systems (Minimum Grade of C-)	3
Total Hours		18

Major Requirements

Code	Title	Hours
BUDA 450	Business Data Mining and Visualization (Minimum Grade of C-)	3
BUDA 451	Advanced Business Data Mining (Minimum Grade of C-)	3
BUDA 452	Business Simulation Modeling (Minimum Grade of C-)	3
BUDA 453	Advanced Simulation with AI (Minimum Grade of C-)	3
BUDA 455	Introduction to Business Intelligence and Artificial Intelligence (Minimum Grade of C-)	3
BUDA 460	Artificial Intelligence and Machine Learning for Business (Minimum Grade of C-)	3
BUDA 461	Generative AI-Concepts, Models, & Applications (Minimum Grade of C-)	3
BUDA 468	Introduction to Applied AI and Data Analytics in Practice (Minimum Grade of C-)	3
BUDA 470	Applied Artificial Intelligence and Data Analytics in Practice	3
MANG 426	Introduction to Decision Analysis	3
Required Minor or Double Major		15
Total Hours		45

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
BCOR 121	2	ENGL 101 (GEF 1)	3
BCOR 191	1	ECON 201	3
BCOR 199	3	MATH 150	3
MATH 124 (GEF 3)	3	GEF 2, 5, 6, or 7	3
GEF 2, 5, 6, or 7	3	General Elective	3
General Elective	3		
	15		15

Second Year

Fall	Hours	Spring	Hours
ENGL 102 (GEF 1)	3	BCOR 299	3
ECON 202	3	BCOR 330	3
ECON 225	3	BUDA 455	3
Minor	3	MIST 320	3
General Elective	3	MIST 351	3
	15		15

Third Year

Fall	Hours	Spring	Hours
BUDA 450	3	BUDA 451	3
BUDA 452	3	BUDA 453	3
MANG 426	3	MIST 353	3
MIST 352	3	BUDA 468	3
Minor	3	GEF 2, 5, 6, or 7	3
	15		15

Fourth Year

Fall	Hours	Spring	Hours
BUDA 460	3	BUDA 461	3
MIST 460	3	BUDA 470	3
GEF 2, 5, 6, or 7	3	MIST 462	3
Minor	3	Minor	3

Minor	3 GEF 2, 5, 6, or 7	3
	15	15

Total credit hours: 120

Major Learning Outcomes

APPLIED AI AND DATA ANALYTICS

- Competence in core technical areas associated with data analytics and applied artificial intelligence, such as programming, databases, and foundational mathematical, statistical, and data science models.
- Knowledge of the selection, implementation, and use of artificial intelligence and analytics tools in organizations.
- Competence in analyzing business problems and designing, building, deploying and maintaining appropriate artificial intelligence and analytics solutions to solve those problems.