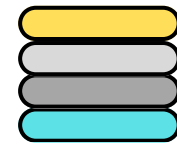




BS Data Science



Business Technology Focus Area (Business IT Solutions Minor)

Year 1

Year 2

Year 3

Year 4

Fall

Spring

Fall

Spring

Fall

Spring

Fall

Spring

MA 1031(C) or MA 1032(C) or MA 1160(C) or MA 1161(C)

DATA 1201 and (CS 1121 or CS 1131 or CS 1111)

DATA 1202 & (CS 1122 or CS 1131) & (MA 2320 or MA 2330 or MA 2321)

DATA 1201
Data Science Programming I
2

DATA 1202
Data Science Programming II
3

DATA 2201
Foundations of Data Science
3

DATA
Communication, Context, and Ethics VIZ/UX
3

DATA 3801
Foundations of Machine Learning
3

DATA 3401
Data Engineering
3

DATA
Communication, Context, and Ethics
3

DATA 4891
Data Science Capstone
3

MA 1031(C) or MA 1032(C) or MA 1120(C)

CS 1121

(CS 1121 or CS 1131) & (MA 1135 or MA 1160 or MA 1161 or MA 1121 or MA 2160)

(CS 2311 or MA 3210) and CS 2321

CS 1121
Introduction to Programming I
3

CS 1122
Introduction to Programming II
3

CS 2311
Discrete Structures
3

CS 3425
Introduction to Database Systems
3

DATA
Elective
3

DATA
Elective
3

DATA
Elective
3

DATA
Elective Machine Learning or Artificial Intelligence
3

MA 1120 or Placement based on test scores

MA 1160 or MA 1161 or MA 1135 or MA 1121

CS 1122 or CS 1131

MIS 2000(C) or MIS 2100 or CS 1122 or CS 1131

CS 2311 or MA 3210 and CS 2321

MA 1160
Calculus I
3

MA 2320
Elementary Linear Algebra
3

CS 2321
Data Structures
3

MIS 2000
IS/IT Management
3

MIS 3100
Business Database Management
3

CS 4321
Introduction to Algorithms
3

MATH
Elective
3

Business
Technology Elective
3

(must be enrolled as Freshman)

MA 1160 or MA 1161 or MA 1135 or MA 1121

MA 1160 or MA 1161 or MA 1121 or MA 1135

MIS 2000(C) or MIS 2100(C) or CS 1122 or CS 1131

UN 1015
Composition
3

MA 2710
Intro to Statistical Analysis
3

MA 3720
Probability
3

Social and Ethical Reasoning CORE
3

Social and Behavioral Science HASS
3

MIS 3200
Systems Analysis and Design
3

Business
Technology Elective
3

General
Education Elective
3

(must be enrolled as Freshman)

DATA 1201
Critical and Creative Thinking HASS
3

UN 1025
Global Issues
3

Lab Science
4

Science
3

Communication/Composition
3

Humanities and Fine Arts
3

Free Elective
3

Free Elective
3

Co-Curricular
0.5 Credits

Co-Curricular
0.5 Credits

Co-Curricular
0.5 Credits

Co-Curricular
0.5 Credits

Co-Curricular
0.5 Credits

Co-Curricular
0.5 Credits



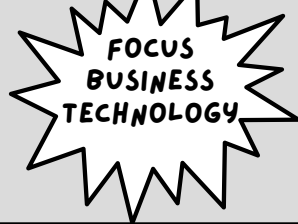
This is an example of one path toward your degree, but there are other options. Please check the link below to see more information and options. If you have any questions regarding this program please email the academic advisor for the program at swyeth@mtu.edu



https://bit.ly/MTU_DataScience



Total Academic Credits: 120
Total co-curricular: 3 credits



BS DATA SCIENCE 2023-2024

CORE REQUIREMENTS	55–57 Credits
<ul style="list-style-type: none"> • CS 1121 (3) and CS1122 (3) or CS 1131 (5) • CS 2311 (3) or MA 3210 (3) • CS 2321 (3) • CS 3425 (3) or SAT 3210 (3) • CS 4321 (3) • MA 1160 (4) • MA 2320 (2) or MA 2330 (3) • MA 2710 (3) • MA 3720 (3) • MA 3740 (3) or MA 4710 (3) or MA 4790 (3) • DATA 1201 (2) • DATA 1202 (3) • DATA 2201 (3) • DATA 3801 (3) • DATA 3401 (3) • DATA 4891 • HU 2645 (3) or MIS 3500 (3) or DATA 2600 • CS 3000 (3) or SAT 1700 (3) or DATA 3000 (3) 	

DATA SCIENCE ELECTIVES	12 credits
<p>Up to 6 credits in Data Science Electives can be 2000–3000 level Select one course from a list of Machine Learning/AI related topics:</p> <ul style="list-style-type: none"> • CS 4811 (3) • CS 4821 (3) or CS 5831 (3) • CS 5811 (3) • CS 5821 (3) • CS 5841 (3) • EET 4501 (3) <p>Select three remaining courses from below or any course above not already used: CS 3141, CS 4001, CS 4471, CS 4760, MA 2600, MA 3740, MA 4330, MA 4710, MA 4720, MA 4760, MA 4770, MA 4780/5780, MA 4790/5790, SAT 2711, SAT 3310, SAT 3812, SAT 4144, SAT 4283, SAT 5165, MIS 4000, MIS 4400</p>	

7 Credits Minimum	LAB SCIENCE REQUIREMENTS
<p>Complete two science courses in two different disciplines (BL, CH, KIP, FW, GE, PH, SS). At least one must include or be taken with the accompanying laboratory.</p>	

<p>Free Electives: 5 to 7 credits Any coursework is allowable, including –co–curricular and coursework below the 1000 level.</p>
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<p style="text-align: center;">Business Technology</p> <ul style="list-style-type: none"> • MIS 2000 • MIS 3100 • MIS 3200 <p>Pick two courses from one area: Usability and Human Factors in IT Design: MIS 2200, MIS 3500, HU 2642, HU 3120, HU 4628, HF 3850, HF 4015 or Systems Thinking for Design: MIS 3500, MIS 4000 or DATA and IT MIS 4400, MIS 4000, MA 2330, MA 3740</p>	<div style="border: 1px solid black; padding: 5px;">FOCUS AREA</div>
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Core Courses: 12 credits
<p>Year One _UN 1015 (3) _UN 1025 or upper level modern language(3)</p> <p>Year Two _ Critical and Creative Thinking _ Social Responsibility and Ethical Reasoning (3)</p> <p>HASS: 12 credits, 6 of the 12 must be at the 3000–4000 level _Communication/Composition (minimum 3 credits) _ Humanities and Fine Arts (minimum 3 credits) _ Social and Behavioral Sciences (minimum 3 credits) _ Any course from the General Education Core, HASS, or restricted HASS (0–3 credits) +Co–curricular Activities: 3 credits</p>
<div style="border: 1px solid black; padding: 5px;">GENERAL EDUCATION REQUIREMENTS</div>

<p>See course catalog for prerequisites</p>	<p>Connect with your advisor @ www.mtu.edu/computing/undergraduate/advising</p>
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