

ARTIFICIAL INTELLIGENCE MAJOR

Program Tracking Sheet

Effective for students entering AY 2026-2027

Name:	Class Year:
Advisor:	2 nd Major:

NOTES: Minimum total academic credit = 15 units

Residency Req.: Min. of 8 units must be completed at WPI

HUMANITIES AND ARTS (6/3 units)

All 5 HUA courses must be completed before beginning the Inquiry Seminar or Practicum. The Humanities and Arts Department will accept a maximum of 1/3 unit of AP credit towards the Humanities and Arts requirement.

Depth Component				
Students must complete at least three thematically-related courses prior to the culminating Inquiry Seminar or Practicum in the same thematic area. At least one of the three courses should be at the 2000-level or above.				
	Course	Term	Grade	Units
1				1/3
2				1/3
3				1/3
4	HU 3900 or HU 3910			1/3
Breadth Component				
Students must take at least one course outside the grouping in which they complete their depth component. To identify breadth, courses are grouped in the following manner.				
i. art/art history, drama/theatre, and music (AR, TH, MU);				
ii. modern languages (AB, CN, ISE, GN, SP);				
iii. literature and writing rhetoric (EN, WR);				
iv. history, humanities, and international and global studies (HI, HU, INTL);				
v. philosophy and religion (PY, RE).				
Exception: May take all six courses in a modern language.				
5				1/3
Humanities Elective				
6				1/3

WELLNESS AND PHYSICAL EDUCATION (4 WPE classes = 1/3 unit)

7				1/12
				1/12
				1/12
				1/12

SOCIAL SCIENCE (2/3 unit) ECON, ENV, GOV, PSY, SD, SOC, SS, STS and ID2050

8				1/3
9				1/3

THE INTERACTIVE QUALIFYING PROJECT (3/3 unit)

10				1/3
11				1/3
12				1/3

FREE ELECTIVES (3/3 unit)

13				1/3
14				1/3
15				1/3

FOUNDATION COURSES (8/3 units)

COMPUTER SCIENCE (3/3 unit)

16	Intro Programming (CS 1004, 1005, 1101, or 1102)			1/3
17	Object-oriented Design (CS 2102, 2103, or 2119)			1/3
18	Algorithms (CS 2223)			1/3

MATHEMATICAL SCIENCES (5/3 unit)

19	Calculus I (MA 1021 or 1020)			1/3
20	Calculus II (MA 1022 or 1120)			1/3
21	Applied Stats I (MA 2611)			1/3
22	Applied Stats II (MA 2612)			1/3
23	Matrices and Linear Algebra (MA 2071 or 2072)			1/3

AI CORE COURSES (8/3 units) (Note 1)

AI FOUNDATIONS (3/3 units)

24	DS 1010			1/3
25	DS 2010			1/3
26	DS 3010			1/3

AI OVERVIEW (1/3 unit)

Chosen from CS 4341, RBE 4701

27				1/3
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MACHINE LEARNING (1/3 unit)

Chosen from CS 4445, CS 4342, DS/MA 4635, ECE 3405, CS/DS4433, RBE 4744, CS/DS 4343

28				1/3
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INTERACTION AND REASONING (1/3 unit)

Chosen from CS 3041, RBE 4601, IMGD/CS 4100, CS/DS 4344, CS/DS 4345

29				1/3
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ADDITIONAL AI CORE (2/3 units)

Choose two additional courses from the AI Core above.

30				1/3
31				1/3

AI ETHICS & SOCIAL IMPLICATIONS (1/3 unit) (Note 2)

Chosen from CS/SS 3043, ENV 2720, GOV 2302, GOV 2313, PY 2713, PY/RE 2731, RBE 3100, SS 1700, SS/PSY 2413, IMGD 2000, IMGD 2002.

32				1/3
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DISCIPLINARY ELECTIVES (2/3 units) (Note 3)

33				1/3
34				1/3

CONCENTRATION (6/3 unit) – Six distinct courses from the list of disciplinary courses in **one concentration** of the BS in AI degree. Must not include courses taken for other requirements.

See next page or course catalog for list of concentrations and courses.

35				1/3
36				1/3
37				1/3
38				1/3
39				1/3
40				1/3

NATURAL & ENGINEERING SCIENCE (2/3 unit) - Courses with prefixes AE, AREN, BB, BCB, BME, CE, CH, CHE, ECE, ES, GE, ME, NEU, PH or RBE count.

41				1/3
42				1/3

MQP (3/3 unit) (Note 4)

43				1/3
44				1/3
45				1/3

Note 1: AI core courses must include at least 2/3 units at the 4000-level or above.

Note 2: Students are encouraged to select a course that covers ethics related to AI.

Note 3: Can be chosen from any concentration or from the AI core courses. See next page or course catalog for list of concentrations and courses.

Note 4: Artificial Intelligence MQP projects must apply AI knowledge and techniques within the student's chosen concentration. Needs Advisor(s) with AI appointment and within the respective concentration appointment – it can be the same person, or two separate people.

Note 5: At least 4/3 units of the courses must be at the 4000-level and above. These 4000-level courses can be satisfied by any aspect of the distribution requirements (core, concentration, etc.)

CONCENTRATIONS (6/3 units)

ADVANCED AI METHODS AND TECHNOLOGIES CONCENTRATION	ELECTRICAL & COMPUTER ENGINEERING CONCENTRATION	LIFE SCIENCES & BIOTECHNOLOGY CONCENTRATION	ROBOTICS CONCENTRATION
<u>Choose at least three courses from:</u> CS 3733 DS/MA 4635 CS 3431 CS/DS 4343 CS 3041 CS 4341 CS 4445 CS 4432 CS 4342 CS/DS 4344 CS/DS 4433 CS/DS 4345 <u>Choose remaining courses from:</u> CS 2022 CS 4804 CS 2301* CS 4233 CS 2303* CS 4518 CS 4120 <u>Remaining courses can also be chosen from CS and DS graduate courses from the Core AI Bins of MS-AI degree.</u> Note (*): Only one of CS 2301 or CS 2303 may be used for the degree program requirements.	<u>Recommended to take first (required):</u> ECE 2010 <u>Choose at least two foundational courses from:</u> ECE 2029 ECE 2311 ECE 2039 ECE 2312 ECE 2049 <u>Choose remaining advanced courses from:</u> ECE 3012 ECE 3849 ECE 3405 ECE 4703 ECE 3829 ECE 4801	<u>At least one course at the 4000 level.</u> <u>Required:</u> BB 1101 BB 2550 BB 2920 <u>Choose three courses from:</u> BB 3010 BB 4260 BB 3080 BB 4050 BB 3003 BB 3920 CH 4210 BB 3950 BB 4001	<u>Choose one course in Electrical & Computer Engineering:</u> ECE 2010 <u>Choose one course in Controls:</u> ES 3011 <u>Choose one course in Embedded Systems:</u> RBE 2020 <u>Choose two courses in Robotics Fundamentals from:</u> RBE 1001 RBE 2002 RBE 2001 <u>Choose one course from:</u> RBE at the 3000-level or above (including graduate courses; RBE 3100 does not count towards this requirement)

SUSTAINABLE CHEMICAL PRODUCTION CONCENTRATION	BUILT & NATURAL ENVIRONMENT CONCENTRATION	BUSINESS APPLICATIONS CONCENTRATION	EXPERIENCE DESIGN CONCENTRATION
<u>Required (must take all three):</u> CHE 2011 CHE 2012 CHE 2013 <u>Choose two courses from:</u> CHE 3201 CHE 3501 ES 3002 ES 3003 ES 3004 <u>Choose one course from:</u> CHE 4401 CHE 4403	<u>Recommended to take first (required):</u> CE 2001 <u>Choose at least three foundational courses from:</u> CE 2002 ES 3004 CE 3010 CE 3041 CE 3050 CE 3051 CE 3059 CE 3020 AREN 3003 <u>Choose remaining advanced courses from:</u> CE 3006 CE 3008 CE 3060 CE 3070 CE 3074 CE 3061 CE 3062 CE 4061 CE 4044 CE 4600 AREN 3024 AREN 3002 AREN 3020	<u>Choose at least two courses in AI Applications in Business:</u> MIS 3730 MIS 3787 MIS 2300 <u>Choose at least one course in Business with AI or analytics content:</u> BUS 2080 or OIE 2081 FIN 3330 MIS 3720 MIS 4084 MIS 4741 MKT 3650 OIE 3420 OIE 3460 OIE 3510 OIE 4430 <u>Choose at least one course to develop business knowledge:</u> ACC 2060 OIE 2850 ETR 2900 BUS 2020 OIE 3405 MIS 3010 FIN 2070 OIE 4460 OBC 1010 ETR 1100 BUS 1020 OIE 3020 ETR 4930 FIN 1250 OIE 3410 MKT 4030 FIN 3300	<u>At least two courses must be at the 3000-level or higher.</u> <u>Choose one course in Foundations of Designing Interactive Experiences from:</u> IMGD 1000 IMGD 1001 IMGD 1002 <u>Choose two courses in Critical and Ethical Design from:</u> IMGD 2000 IMGD 2002 WR/IMGD 2200 <u>Choose three courses in Experience Design from:</u> IMGD 2500 IMGD 2900 CS 3041 IMGD 3100 IMGD 3900 IMGD 4100 IMGD 4200 IMGD 4600 IMGD 4700 IMGD 4900 IMGD 5100 IMGD 5300

OPTIMIZATION AND DECISION THEORY CONCENTRATION	SOCIAL SCIENCE AND POLICY CONCENTRATION	LIFE SCIENCES AND MOLECULAR BIOCHEMISTRY CONCENTRATION
<u>Required foundational courses (must take both) from:</u> MA 1024 Either 2621 or MA 2631 <u>Choose one course in Linear Programming or Decision Theory from:</u> MA 2210 MA 3231 <u>Choose two courses in Optimization and Tools of Decision Theory from:</u> MA 3233 MA 4235 MA 4237 <u>Choose one course from:</u> MA 2073 MA 4237 MA 4235 MA 2271 MA 2251 MA/DS 4635 MA 3231 MA 2273 MA 3257 MA 3233	<u>At least one course must be at the 4000/500 level.</u> <u>Required (must take both):</u> PSY 1500 SS/PSY 2503 <u>Choose at least three from:</u> PSY 1400 SD 1510 GOV 2100 GOV 2302 GOV 2313 PSY 2403 PSY 2411 ENV 2720 ENV 2900 PSY 3408 SS 3043 <u>Special Topics Course, when relevant:</u> ECON 1800 PSY 1800 ENV 2800 ECON 2800 PSY 2800 ENV 4800 ECON 3800 PSY 3800 ECON 4800 PSY 4800	<u>Required courses (must take all four):</u> CH 1030 CH 2310 CH 4110 CH 4210 <u>Choose two of the following courses:</u> CH 2320 CH 4120 CH 3520 CH 4130 CH 3550 CH 4140 To be prepared for this concentration, students are encouraged to take the introductory courses CH1010, CH1020 or equivalent (which serve as recommended background for CH1030). CH1010 and CH1020 may be used to fulfill the Natural or Engineering Sciences requirement, but cannot be counted towards the 6 courses specifically required for the concentration.