

**DATA SCIENCE MAJOR**  
**Program Tracking Sheet**  
 Effective for students entering AY 2022-2023

Name:	Class Year:
Advisor:	2 <sup>nd</sup> 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.

**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, EN/TH, MU);
- ii. foreign languages (AB, CN, EN, GN, SP);
- iii. literature and writing rhetoric (EN, WR, RH);
- iv. history and international studies (HI, HU, INTL);
- v. philosophy and religion (PY, RE).

Exception: May take all six courses in a foreign language

5				1/3
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<b>Humanities Elective</b>				
6				1/3

**PHYSICAL EDUCATION (4 PE classes = 1/3 unit)**

				1/12
7				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

**DATA SCIENCE CORE (3/3 unit)**

16	DS 1010			1/3
17	DS 2010			1/3
18	DS 3010			1/3

**DISCIPLINARY FOUNDATION COURSES (10/3 units)**

**COMPUTER SCIENCE (3/3 unit) (Note 1)**

19	CS 2223			1/3
20				1/3
21				1/3

**MATHEMATICAL SCIENCES (5/3 unit) (Note 2)**

22	MA 2611			1/3
23	MA 2612			1/3
24	MA 2071 or 2072			1/3
25				1/3
26				1/3

**BUSINESS COURSES (2/3 unit) (Note 3)**

27	BUS 2080 or OIE 2081			1/3
28				1/3

**DISCIPLINARY ELECTIVE COURSES (11/3 units) (Note 4)**

29				1/3
30				1/3
31				1/3
32				1/3
33				1/3
34				1/3
35				1/3
36				1/3
37				1/3
38				1/3
39				1/3

**DATA PRIVACY AND ETHICS (1/3 unit)**

40				1/3
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**SCIENCE (2/3 unit)**

41				1/3
42				1/3

**MQP (3/3 unit)**

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

**Note 1:** Two of the courses must be chosen from CS 1004, CS 1101, CS 1102, CS 2102, CS 2103, CS 2119, or from CS electives listed in the course catalog.

**Note 2:** Two of the courses must be chosen from MA 1020, MA 1021, MA 1022, MA 1120, or from MA electives listed in the catalog.

**Note 3:** One of the courses must be chosen from OBC 1010, ETR1100, MIS 3010, or ETR 3633

**Note 4:** Disciplinary elective courses can be found in the catalog. DS 4099: Special Topics in Data Science is counted as a disciplinary elective course. Electives must include at least 4/3 at the 4000 level or higher and at least one course in each of the categories below:

- Databases (CS 3431, CS 4432, MIS 3720, CS 4433/DS 4433)
- Data mining/machine learning (CS 4445, CS 4342/DS 4342)
- Business modeling and prediction (MIS 4084, OIE 4430)

## DATA SCIENCE MAJOR PROGRAM CHART

UNIVERSITY REQUIREMENTS	
Minimum Academic Credit	15 Units
Residency	8 Units
Humanities and Arts	6/3 Units
Interactive Qualifying Project	3/3 Unit
Social Science	2/3 Unit
Physical Education	1/3 Unit
Free Electives	3/3 Unit

MAJOR-SPECIFIC REQUIREMENTS (10 UNITS)	
DS Core Courses*	3/3 Unit
Disciplinary Foundation Courses	10/3 Units
Disciplinary Electives Courses	11/3 Units
DS MQP	3/3 Unit
Data Privacy and Ethics	1/3 Unit
Sciences	2/3 Unit

(\*) DS core courses include DS 1010, DS 2010, DS 3010.

### DISCIPLINARY FOUNDATION COURSES (10/3 UNITS)

COMPUTER SCIENCE COURSES (3/3 Unit Required)	MATHEMATICS COURSES (5/3 Unit Required)	BUSINESS COURSES (2/3 Unit Required)
Two of CS 1004, CS 1101, CS 1102, CS 2102, CS 2103, CS 2119, or from CS electives below (**) <b>AND</b> One of CS 2223	Two of MA 1020, MA 1021, MA 1022, MA 1120, or from MA electives below <b>AND</b> Both MA 2611 and MA 2612 <b>AND</b> One of MA 2071 or MA 2072	One of OBC 1010, ETR1100, MIS 3010, ETR 3633 <b>AND</b> One of BUS 2080 or OIE 2081

(\*\*) At most 1/3 CS unit at the 1000 level.

### DISCIPLINARY ELECTIVE COURSES (11/3 UNITS)

COMPUTER SCIENCE COURSES	MATHEMATICS COURSES	BUSINESS COURSES
CS 2022      +CS 4341 CS 2301      CS 4120 CS 2303      +CS 4432 CS 3733      +CS 4445 CS 3041      +CS 4342 CS 3133      +CS 4804 +CS 3431    +CS 4433/DS4433 CS 4233      CS 4802/BCB4002 CS 4241      CS 4803/BCB4003	MA 1023      MA 3257 MA 1024      +MA 3627 MA 1033      +MA 3631 MA 1034      MA 4213 MA 2051      MA 4214 MA 2073      MA 4222 MA 2201      MA 4235 MA 2210      MA 4237 MA 2431      +MA 4603 +MA 2621      MA 4631 +MA 2631      MA 4632 MA 3231      +MA4635/DS4635 MA 3233	+MIS 3720 MKT 3650 OIE 3460 MIS 3787 +MIS 4084 MIS 4720 MIS 4741 +OIE 4430

Electives must include at least one course in each of the categories below:

- Databases (CS 3431, CS 4432, MIS 3720, CS 4433/DS 4433)
- Data mining/machine learning (CS 4445, CS 4342)
- Business modeling and prediction (MIS 4084, OIE 4430)

DS 4099: Special Topics in Data Science is counted as a disciplinary elective course.

Electives must include at least 4/3 at the 4000 level or above.

Students are encouraged to take electives marked with a "+".