

**DATA SCIENCE MAJOR**  
**Program Tracking Sheet**  
 Effective for students entering AY 2019-2020

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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**Humanities Elective**

6				1/3
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**PHYSICAL EDUCATION (4 PE 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

**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			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 BUS 1010, ETR1100, BUS 3010, or ETR 3633

**Note 4:** Disciplinary elective courses can be found in the catalog. 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, DS 4433)
- Data mining/machine learning (CS 4445, CS 4342/DS 4342)
- Business modeling and prediction (MIS 4084, OIE 4420)

## DATA SCIENCE MAJOR PROGRAM CHART

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

MAJOR-SPECIFIC REQUIREMENTS (10 UNITS)	
DS Core Courses*	1 Unit
Disciplinary Foundation Courses	10/3 Units
Disciplinary Electives	11/3 Units
DS MQP	1 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 (**)	Two of MA 1020, MA 1021, MA 1022, MA 1120, or from MA electives below	One of BUS 1010, ETR1100, BUS 3010, ETR 3633
One of CS 2223	Both MA 2611, MA 2612	One of BUS 2080
	One of MA 2071, MA 2072	

(\*\*) 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/DS4342 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 4235 MA 2201      MA 4237 MA 2210      +MA 4603 MA 2431      MA 4631 +MA 2621      MA 4632 +MA 2631      +MA4635/DS4635 MA 3231	+MIS 3720 MKT 3650 OIE 3460 +MIS 4084 MIS 4720 MIS 4741 +OIE 4420

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

- Databases (CS 3431, CS 4432, MIS 3720, DS 4433)
- Data mining/machine learning (CS 4445, CS 4342/DS4342)
- Business modeling and prediction (MIS 4084, OIE 4420)

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

Students are encouraged to take electives with a prefix (+)