

Bachelor of Science in Mathematics-Data Science Concentration

Wright State Core – 40 hours

Element 1 Communications

ENG 1100 Academic Writing and Reading
ENG 2100 Research and Argument

Element 2 Mathematics

MTH 2300 Calculus I

Element 3 Global Traditions

Choose one interdisciplinary course:

AFS 2000 (IW, MC)	CST 2430 (IW, MC)	RST 2620 (IW, MC)
ATH 2500	CST 2510 (IW, MC)	RST 2710 (IW, MC)
CS 1000	EC 2100	RST 2810 (IW, MC)
CST 2210 (IW, MC)	EC 2500 (IW, MC)	RST 2910 (IW, MC)
CST 2310 (IW, MC)	EC 2900 (IW, MC)	RST 2920 (IW, MC)
CST 2320 (IW, MC)	ED 2100 (MC)	URS 2000 (IW, MC)
CST 2410 (MC)	ML 2030	
CST 2420 (IW, MC)	RST 2610 (IW, MC)	

Choose one History course:

CLS 1500 HST 1100 HST 1200

Element 4 Arts/Humanities

Choose one course:

ART 2140	ENG 2050 (IW, MC)	PHL 2040 (IW)
CLS 2040 (IW)	MP 1310	PHL 2100
CST 2310 (IW)	MUS 1210	REL 2040 (IW)
CST 2420 (IW)	MUS 2140	TH 2140
ENG 2040 (IW)	MUS 2900 (IW, MC)	UH 2010 (IW)

Element 5 Social Science

Choose two (2) courses from different disciplines:

ATH 2200	EC 2500 (IW,MC)	SOC 2000 (IW)
EC 2000 (IW)	EC 2900 (IW,MC)	SW 2720 (IW,MC)
EC 2040	FIN 2050	UH 2020 (IW)
EC 2050	PLS 2000	WMS 2000(IW,MC)
EC 2100	PSY 1010	

Element 6 Natural Science

Choose two courses:

ATH 2100	CHM 1060	PHY 1060/1060L
BIO 1050	CHM 1210/1210L	PHY 2400/2400L
BIO 1060	EES 1060	PHY 2410/2410L
BIO 1070	EES 1070	SM 1010 (IW)
BIO 1120	HPR 2500	
BIO 1150	PHY 1050/1050L	

Additional Core Courses

MTH 2310 Calculus II

One additional approved Wright State Core course from any of the Elements

Multicultural Competence

Two Multicultural Competence (MC) courses from the Wright State Core, Study Abroad, or Service Learning courses

Writing Across the Curriculum

Two Integrated Writing (IW) courses from the Wright State Core.

Departmental Requirements – 44-47 hours

Required Core Courses (17-18 hrs.)

MTH 2001 Orientation Seminar in Math & Stat (1 hour)
MTH 2320 Calculus III (4 hours)
MTH 2330 Differential Equations (3 hours) OR
MTH 2350 Differential Equations with
Matrix Algebra (4 hours)
MTH 2530 Elementary Linear Algebra (3 hours)
MTH 2800 Writing Mathematical Proofs (3 hours)
MTH 4310 Real Variables I (3 hours)

Concentration Requirements (27-29 hrs.)

MTH 3060 Mathematical Modeling (3 hours)
STT 3600 Applied Statistics I (3 hours)
STT 3610 Applied Statistics II (3 hours)
STT 4640 Machine Learning (3 hours)
Five Department Approved Elective Courses*

Related Course Requirements – 8 hours

CS 1160 Introduction to Computer Programming (4 hours)
CS 1180 Computer Science I (4 hours) OR
Choose the following sequence
CS 1180 Computer Science I (4 hours)
CS 1181 Computer Science II (4 hours)

General Elective – 25-28 hours

Choose from the Wright State University Undergraduate Catalog to attain 120 total credit hours for the degree
CS 1300 Data Science for Everyone (3hrs.), recommended

***Department Approved Elective Courses**

MTH 2570 Discrete Mathematics for Computing (4 hours)
MTH 3260 Numerical Methods (3 hours)
MTH 3320 Complex Variables (3 hours)
MTH 4070 Optimization Techniques (3 hours)
MTH 4150 Scientific Computation (3 hours)
MTH 4260 Matrix Computations (3 hours)
MTH 4510 Modern Algebra I (3 hours)
MTH 4550 Advanced Linear Algebra (3 hours)
MTH 4570 Combinatorics & Graph Theory (4 hours)
STT 4110 Applied Time Series (3 hours)
STT 4310 Statistical Methods for Clinical Trials (3 hours)
STT 4610 Theory of Statistics I (4 hours)
STT 4660 Statistical Methods I (4 hours)
STT 4670 Statistical Methods II (4 hours)