

## Course Recommendations for Bachelor of Science, **DATA SCIENCE** majors

### **Who can Use this Guide:**

- Students who took their first college class in September 2013 or later
- Students who do NOT plan to complete an Associate of Arts or Associate of Science degree at MATC

If you plan to complete the full Associate of Arts or Associate of Science degree, the only applicable sections are highlighted in neon green.

If you took any college class before 09/2013, consult a UWM admissions counselor at [let-sci@uwm.edu](mailto:let-sci@uwm.edu).

### **Introduction**

Many students start at MATC and continue their education at UWM. This guide outlines recommended course selections for MATC students who intend to earn a Bachelor of Science (BS) at UWM with a Data Science major.

Note: This guide does not replace the advice of an advisor who can provide personalized guidance based on your particular circumstances and background.

Students planning to complete the Associate's degree at MATC may be required to take additional classes that may or may not transfer to UWM. There may also be some UWM required courses that are not offered at MATC and can only be taken at UWM.

### **UWM Admissions Requirements**

MATC students seeking admission to a major that leads to a bachelor's degree in the College of Letters & Science will present the strongest application packet by meeting the following criteria:

- evidence of high school graduation (diploma or GED)
- a minimum cumulative GPA of 2.0 in all college classes
- completion of at least 12 credits of transferable college coursework

Students with a college cumulative GPA below a 2.0 who have not been enrolled in classes for at least 2 years, or who have extenuating circumstances, will also be considered for admission if additional information is presented that indicates potential for success.

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## Goal

While at MATC, students can complete the following UWM requirements on a pathway towards a UWM BS in Data Science:

- ✓ Arts Requirement (3 credits can be completed at MATC)
- ✓ English Requirement (Part A can be completed at MATC; Part B must be completed at UWM as part of the major)
- ✓ Math Requirement (Parts A and B can be completed at MATC)
- ✓ Natural Science Requirement (all 6 required credits can be completed at MATC)
- ✓ Humanities Requirement (3 of the 6 required credits can be completed at MATC; the other 3 credits can be taken at UWM as part of the major)
- ✓ Social Science Requirement (all 6 credits can be completed at MATC)
- ✓ Cultural Diversity Requirement (3 credits can be completed at MATC)
- ✓ World Language Requirement (2 years of high school or 2 semesters of college)
- ✓ Data Science major requirements (Some of the introductory math but none of the introductory computer science courses can be completed at MATC. None of the 39 core classes in the major can be completed at MATC.)

## Course Recommendations and Transferability:

### Arts (choose one)

MATC			UWM will accept it as			Meets UWM BS Requirement
Course	Title	Cr.	Course	Title	Cr.	
ART 201	Understanding Art	3	ART 106	Art Survey	3	✓ Arts
ENG 207	Creative Writing	3	ENGLISH 233	Intro to Creative Writing	3	✓ Arts
SPEECH 212	Intro to Theater	3	THEATRE 100	Intro to Theatre	3	✓ Arts
MUSIC 205	Music Appreciation	3	MUSIC 108	The Concert Experience	3	✓ Arts

### English (complete all)

MATC			UWM will accept it as:			Meets UWM BS Requirement
Course	Title	Cr.	Course	Title	Cr.	
ENG 201	English 1	3	ENGLISH 101	Intro to College Writing	3	
ENG 202	English 2	3 (must earn a C or higher)	ENGLISH 102	College Writing and Research	3	✓ English Part A

### Math (complete all)

MATC			UWM will accept it as:			Meets UWM BS Requirement
Course	Title	Cr.	Course	Title	Cr.	
MATH 231	Analytic Geometry and Calculus 1	4	MATH 231	Calculus and Analytic Geometry 1	4	✓ Math Part B, Natural Science, Formal Reasoning and major
MATH 232	Analytic Geometry and Calculus 2	4	MATH 232	Calculus and Analytic Geometry 2	4	✓ Major prep
MATH 233	Analytic Geometry and Calculus 3	4	MATH 233	Calculus and Analytic Geometry 3	4	✓ Major prep
MATH 260	Basic Statistics	3	MTHSTAT 215	Elementary Statistical Analysis	3	✓ Major prep

### World Language

The Bachelor of Science with a Data Science major requires world language through the 2nd level. If you took two years of the same language in high school, you have satisfied the requirement and no further coursework is needed. If you did not take two years of a world language in high school, see the requirements on page 2 and plan to take the appropriate number of language courses either at MATC or at UWM.

MATC			UWM will accept it as:			Meets UWM BS Requirement
Course	Title	Cr.	Course	Title	Cr.	
FLANG 202	Spanish 1	4	SPANISH 103	First-semester Spanish	4	✓ World Language
FLANG 205	Spanish 2	4	SPANISH 104	Second-semester Spanish	4	✓ World Language
FLANG 221	French 1	4	FRENCH 103	First semester French	4	✓ World Language

FLANG 222	French 2	4	FRENCH 104	Second semester French	4	✓ World Language
FLANG 262	Arabic 1	4	ARABIC 101	First Semester Arabic	4	✓ World Language
FLANG 263	Arabic 2	4	ARABIC 102	Second Semester Arabic	4	✓ World Language

## Humanities and Cultural Diversity (Choose one)

MATC			UWM will accept it as:			Meets UWM BS Requirement
Course	Title	Cr	Course	Title	Cr	
ART 203	Ancient to Medieval Art & Architecture	3	ARTHIST 101	Ancient and Medieval Art and Architecture	3	✓ Humanities and International
ART 202	Renaissance to Modern Art	3	ARTHIST 102	Renaissance to Modern Art and Architecture	3	✓ Humanities and International
ENG 213	American Literature to 1865	3	ENGLISH 223	American Writers to 1900	3	✓ Humanities
ENG 214	American Literature since 1865	3	ENGLISH 224	Amer Writers: 1900 to present	3	✓ Humanities
ENG 215	Contemporary Literature	3	ENGLISH 248	Literature and Contemporary Life	3	✓ Humanities
ENG 218	African American Literature 1	3	AFRIC 102	Survey African Am Literature	3	✓ Humanities and Cultural Diversity
ENG 219	African American Literature 2	3	AFRIC 210	The African American Novel	3	✓ Humanities and Cultural Diversity
ENG 220	Native American Literature	3	ENGLISH 276	Intro to American Indian Literature	3	✓ Humanities and Cultural Diversity
ENG 223	African Am Literature By/About Women	3	ENGLISH 277	Intro Ethnic Minority Literature	3	✓ Humanities and Cultural Diversity
ENG 222	Images of Women in Lit.	3	ENGLISH 243	Intro to Literature by Women	3	✓ Humanities
ENG 235	Utopian and Science Fiction Lit	3	CLASSIC 260	Classical Utopias	3	✓ Humanities
ENG 240	Intro to Modern Cinema	3	ENGLISH 290	Intro to Film Studies	3	✓ Humanities
HIST 203	Western Civilization from Ancient Times to 1776	3	HIST 101	Western Civilization: Ancient World to 1500	3	✓ Humanities and International
HIST 204	Western Civilization 1776 to Present	3	HIST 102	Western Civilization 1500 to Present	3	✓ Humanities and International
HIST 210	Women in American History	3	HIST 243	Women in American History	3	✓ Humanities
HIST 214	African American History	3	AFRIC 111	Intro Afr-Am History to 1865	3	✓ Humanities and Cultural Diversity
HIST 215	African American History and Culture	3	AFRIC 112	Intro Afr-Am History 1865 to present	3	✓ Humanities and Cultural Diversity
HIST 228	World History to 1500	3	HIST 131	World History to 1500	3	✓ Humanities and International
HIST 229	World History since 1500	3	HIST 132	World History since 1500	3	✓ Humanities and International
SOCSOCI 149	Ethics for Professions	3		Philosophy elective	3	✓ Humanities
SOCSOCI 166	Moral Problems in Contemporary Life	3	PHILOS 241	Introductory Ethics	3	✓ Humanities
OR						
SOCSOCI 200	Intro to Ethical Issues					
SOCSOCI 250	Intro Philosophy	3	PHILOS 101	Intro Philosophy	3	✓ Humanities
SPEECH 201	Elements of Speech	3	COMMUN 103	Public Speaking	3	✓ Humanities

## Social Sciences and Cultural Diversity (Choose two)

MATC			UWM will accept it as:			Meets UWM BS Requirement
Course	Title	Cr.	Course	Title	Cr.	
ECON 195	Economics	3	ECON 100	Introductory Economics	3	✓ Social Science
ECON 201	Principles of Microeconomics	3	ECON 103	Principles of Microeconomics	3	✓ Social Science
ECON 202	Principles of Macroeconomics	3	ECON 104	Principles of Microeconomics	3	✓ Social Science
ECON 223	Ecological Economics	3	GLOBAL 201	Economics and the Environment	3	✓ Social Science
ENG 196	Oral and Interpersonal Communication	3	COMMUN 105	Business and Professional Communication	3	✓ Social Science
OR						
SPEECH 209	Business and Professional Communication					
HIST 211	American Through 1877	3	HIST 151	American History 1607 to 1877	3	✓ Social Science
HIST 212	America Since 1877	3	HIST 152	American History: 1877 to Present	3	✓ Social Science
HIST 216	History of American Minorities	3		History elective	3	✓ Social Science and Cultural Diversity
HIST 217	Contemporary Civil Rights	3		History elective	3	✓ Social Science and Cultural Diversity
HIST 218	Native American History and Culture	3	HIST 263	North American Indian History Since 1887	3	✓ Social Science and Cultural Diversity
HIST 219	Wisconsin Indians	3	HIST 262	North American Indian History to 1887	3	✓ Social Science and Cultural Diversity
HIST 231	Latin American History	3	HIST 180	Latin American Society and Culture	3	✓ Social Science and International
HIST 236	The Vietnam Years	3	HIST 287	The Vietnam War	3	✓ Social Science and International
PSYCH 188	Developmental Psychology	3	PSYCH 260	Child Psychology	3	✓ Social Science
OR						
PSYCH 237	Child Psychology					
OR						
PSYCH 238	Life Span Psychology					
PSYCH 198	Introduction to Psychology	3	PSYCH 101	Introduction to Psychology	3	✓ Social Science
OR						
PSYCH 231	Introductory Psychology					
PSYCH 199	Psychology of Human Relations	3		Psychology elective	3	✓ Social Science
PSYCH 232	Abnormal Psychology	3	PSYCH 412	Abnormal Psychology	3	✓ Social Science
PSYCH 233	Social Psychology	3	PSYCH 230	Social Psychology	3	✓ Social Science

SOCSCI 172 OR SOCSCI 217	Intro to Diversity Studies Valuing Diversity	3	SOCIOL 224	Race and Ethnicity in the US	3	✓ Social Science and Cultural Diversity
SOCSCI 197	Contemporary American Society	3	SOCIOL 102	Solving Social Problems	3	✓ Social Science
SOCSCI 203	Intro to Sociology	3	SOCIOL 101	Intro to Sociology	3	✓ Social Science
SOCSCI 204	Marriage & Family	3	SOCIOL 260	Family & Intimate Relationships	3	✓ Social Science
SOCSCI 206	Intro Cultural Anthropology	3	ANTHRO 102	Intro Anthropology: Culture and Society	3	✓ Social Science
SOCSCI 207	Intro Criminology	3	SOCIOL 241	Criminology	3	✓ Social Science
SOCSCI 208	Global Cultures	3	GLOBAL 101	Intro Global Studies: People & Politics	3	✓ Social Science and International
SOCSCI 209	Sociology of Religion	3	SOCIOL 215	Religion and Society	3	✓ Social Science
SOCSCI 211	Intro Women's Studies	3	WGS 200	Intro to Women's and Gender Studies	3	✓ Social Science
SOCSCI 214	Gender and Society	3	SOCIOL 250	Sex and Gender	3	✓ Social Science
SOCSCI 221	American Government and Politics Today	3	POLI SCI 103	Intro to American Gov't & Politics	3	✓ Social Science
SOCSCI 222	American State and Local Government	3	POLI SCI 104	State Politics	3	✓ Social Science
SOCSCI 236	Juvenile Delinquency	3	SOCIOL 246	Juvenile Delinquency	3	✓ Social Science
SOCSCI 242	African American Social Thought	3		African and African Diaspora Studies elective	3	✓ Social Science and Cultural Diversity
SOCSCI 246	Human Sexuality	3		Letters and Science elective	3	✓ Social Science
SPEECH 203	Interpersonal Communication	3	COMMUN 101	Interpersonal Communication	3	✓ Social Science

### Natural Science with lab (Choose one)

MATC			UWM will accept it as:			Meets UWM BS Requirement
Course	Title	Cr.	Course	Title	Cr.	
BIOSCI 197	Microbiology	4	BIO SCI 101	General Survey of Microbiology	4	✓ Natural Science + Lab
BIOSCI 236	General Biology	5	BIO SCI 102	Elements of Biology	5	✓ Natural Science + Lab
BIOSCI 257	Biology for Majors 1	4	BIO SCI 150	Foundations of Biology I	4	✓ Natural Science + Lab
BIOSCI 258	Biology for Majors 2	4	BIO SCI 152	Foundations of Biology II	4	✓ Natural Science + Lab
CHEM 110	Basic Chemistry	4	CHEM 100	Chemical Science	4	✓ Natural Science + Lab
CHEM 186	Intro to Biochemistry	4	CHEM 103	Survey of Biochemistry	4	✓ Natural Science + Lab
CHEM 207	General Chemistry	4	CHEM 101	Chemical Science	4	✓ Natural Science + Lab
CHEM 208	Survey of Biochemistry	4	CHEM 103	Survey of Biochemistry	4	✓ Natural Science + Lab
CHEM 211	Chemistry 1	5	CHEM 102	General Chemistry	5	✓ Natural Science + Lab

GEOSCI 232 and GEOSCI 234  OR GEOSCI 245	Earth Science and Lab  General Geology	4	GEOSCI 100	Introduction to the Earth	4	✓ Natural Science + Lab
PHYS 221	College Physics 1	4	PHYSICS 120/121	General Physics I with Lab	4	✓ Natural Science + Lab
PHYS 222	College Physics 2	4	PHYSICS 122/123	General Physics II with Lab	4	✓ Natural Science + Lab
PHYS 225	Intro Astronomy	3	ASTRON 103	Survey of Astronomy	3	✓ Natural Science
PHYS 226	Observational Astronomy	1	ASTRON 104	Astronomy Lab	1	✓ Natural Science + Lab

For questions about transferring to UWM for a Data Science major, please contact an admissions counselor in the College of Letters & Science: [Let-sci@uwm.edu](mailto:Let-sci@uwm.edu)