

Graduation Checklist for B.S. in Data Science

Name _____ Email _____ Student # _____

Core Impact: Institution (4hrs)			
Course	Grade	Sem/Yr	Hrs
¹ INQR 200X			
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¹ Recommended: INQR 2001 & 2003 developed for Data Science

Core Impact: Mathematics (3 hrs)			
Course	Grade	Sem/Yr	Hrs
MATH 1111 or 1112 or 1113			3

Core Impact: Citizenship (6 hrs)			
Course	Grade	Sem/Yr	Hrs
POLS 1101			3
HIST 2111 or 2112			3

Core Impact: Humanities (6 hrs)			
Course	Grade	Sem/Yr	Hrs
ENGL 2111, 2112, or 2113			3
²			3

² Choose one course from: Foreign language preferred. or ART 1100; COMM 1100, 1110; DANC 1500; MDIA 2000, MUSC 1100, 1110, 1120, 1130; PHIL 2010, 2020; REL 2020; THEA 1100; WGST 2010

Core Impact: Writing (6 hrs)			
Course	Grade	Sem/Yr	Hrs
ENGL 1101			3
ENGL 1102			3

Core Impact: STEM (11 hrs)			
Course	Grade	Sem/Yr	Hrs
Lab Science course I			4
Lab Science course II			4
MATH 1401			3

Core Impact: Social Sciences (6 hrs)			
Course	Grade	Sem/Yr	Hrs
³			3
³			3

³ Choose two courses from: AFAM/WGST 2020; ANTH 1102; ECON 1500, 2105; GEOG 1100,1101,1102, 1103; HIST 1011, 1012, 1013; MKTG 1500; POLS 2101, 2401, 2501; PSYC 1101; SOCI 1101, 1160

Core Impact: Field of Study Courses (18 hrs)			
Course	Grade	Sem/Yr	Hrs
ACED 1100 or BUSA 1105 (Introduction to Business)			3
DATA 2600 (Foundations of Data Science)			3
MATH 1261 (Survey of Calculus I) or Math 2261 (Analytic Geometry & Calculus I)			3
MATH 1262 (Survey of Calculus II) or Math 2262 (Analytic Geometry & Calculus II)			3
CS 1301 (Principles of Programming I)			4
MATH 2900 (Discrete Math) or CS 2620 (Discrete Structures)			2

Courses Required for the Major (30 hrs)			
Course	Grade	Sem/Yr	Hrs
MATH 3600 (Probability & Statistics)			3
DATA 3700 (Statistical Computing)			3
DATA 3801 (Programming for Data Science)			3
⁴ DATA 3502 (Data Architecture)			3
⁴ DATA 3505 (Data Management)			3
⁴ DATA 3508 (Data-Driven Decision Making)			3
⁴ DATA 3355 (Data Mining)			3
DATA 4610 (Statistical Machine Learning I)			3
⁵			3
DATA 4905 (Data Science Capstone)			3

⁴ Online online, available through USG eCampus

⁵ Choose one course from: MATH 3900 (Theory of Interest); DATA 3701 (Time Series Forecasting Techniques); DATA 4750 (Data Visualization); DATA 4990 (Special Topics in Data Science)

Supporting Courses (3 hrs)			
MATH 2150 (Introduction to Linear Algebra)			3

General Electives (8-9 hrs)			
			3
			3
			3

Choose from on of the following Concentrations
Computational Science & Engineering
Supply Chain & Logistics
Business Analytics

Computational Science & Engineering Concentration			
Guided Electives (19 hrs)			
Course	Grade	Sem/Yr	Hrs
CS 1302 (Principles of Programming II)			4
CS 3200 (Security and Ethics in Computing)			3
ENGT 3530 (Introduction to Manuf Systems)			3
ENGT 4110 (Industrial Automation)			3
*			3
*			3

* Choose 2 courses from: CS 3101 (Computer Organization), CS 3410 (Data Structures), CS 4731 (Introduction to Big Data and Machine Learning), CS 4820 (Artificial Intelligence), ENGT 3130 (Industrial Cost Control), ENGT 4120 (Project Management), DATA 4990 (Special Topics in Data Science)

Supply Chain & Logistics Concentration			
Guided Electives (18 hrs)			
Course	Grade	Sem/Yr	Hrs
ENGT 3100 (Six Sigma and Lean Manufacturing)			3
ENGT 3140 (Simulation Modeling of Industrial Systems)			3
ENGT 3150 (Supply Chain and Logistics Concepts)			3
DATA/MATH 4901 (Operations Research)			3
*			3
*			3

* Choose 2 courses from: ENGT 3130 (Industrial Cost Control), ENGT 4110 (Industrial Automation), ENGT 4120 (Project Management), DATA 3701 (Time Series Forecasting Techniques), DATA 4990 (Special Topics in Data Science)

Business Analytics Concentration			
Guided Electives (18 hrs)			
Course	Grade	Sem/Yr	Hrs
DATA/MATH 4901 (Operations Research)			3
DATA 3701 (Time Series Forecasting Techn)			3
ENGT 4120 (Project Management)			3
ACCT 2101 (Principles of Accounting I)			3
*			3
*			3

* Choose 2 courses from: ACCT 3000 (Data Analytics in Accounting), BUSA 3450 (Management Information Systems), DATA 4750 (Data Visualization), DATA 4990 (Special Topics in Data Science)

C or better is required for all MATH, CS, and DATA courses