Accelerated Masters in Data Science

The accelerated Masters in Data Science program is open to all high achieving undergraduate students at Michigan Tech. It allows students to double count up to six course credits toward both the Bachelor’s and MS degree. The Appendix provides a list of courses that can be double counted. Students who are accepted to the accelerated MS in Data Science program are considered to be graduate students upon completion of their bachelor’s degree. All graduate students must adhere to the continuous enrollment policy, along with all other Graduate School and University policies.

Admission Requirements

1. All bachelor's degree seeking students from Michigan Tech with a cumulative graduating GPA of 3.0 or higher are eligible to enter the accelerated MS in Data Science program.
2. Students with an overall GPA of 3.0 or higher can apply for admission to the accelerated MS in Data Science program any time upon attaining junior class standing, but must apply prior to being awarded their bachelor's degree.
3. Students already enrolled in a graduate program may not retroactively enroll in the accelerated MS in Data Science program.
4. The standard Graduate School and MS in Data Science program admissions process applies: Two letters of reference, resume, non-Michigan Transcripts (if applicable) and student statements.
5. Upon acceptance, each student must meet with the data science graduate program director to document the specific double-counted courses and allowed senior rule courses.

Program Requirements

1. The accelerated MS in Data Science requires 30 credits of approved coursework.
2. A cumulative GPA of 3.0 or higher is required for graduation.
3. All coursework must be completed within 5 years from admission to the Michigan Tech Graduate School and the accelerated MS in Data Science program.
4. Under Senior Rule, a student may take up to 10 credit hours of the credits toward the accelerated MS in Data Science degree while an undergraduate. Senior rule credits are independent of double-counted credits.
5. All courses counted under the senior rule and all double-counted courses applied to the accelerated MS in Data Science degree must have a grade of B or higher. See the Appendix for a list of courses that can be double counted or used under the Senior rule.

Updated 8/6/2018
Appendix

Up to six credits (typically two of the following courses) can double count towards a bachelor’s degree and an accelerated MS in Data Science degree. Additionally, under Senior Rule, students may take up to 10 credit (typically three of the following courses) towards the MS in Data Science degree while an undergraduate.

BA 5200—Information Systems and management
BA 5610—Business Process Management
BA 5740—Managing Innovation & Technology
BA 5800—Marketing, Technology, and Globalization
BE 5550—Biostatistics for Health Research
BL 4470—Analysis of Biological Data
CE 4750/SSE 4750—Risk Analysis
CE 4760/SSE 4760—Optimization and Decision-making
CE 5710—Modeling and Simulation Applications
CE 5740—System Identification
CH 4610—Introduction to Polymer Science
CH 5410—Advanced Organic Chemistry: Reaction Mechanisms
CH 5420—Advanced Organic Chemistry: Synthesis
CH 5509—Transport and Transformation of Organic Pollutants
CH 5515—Atmospheric Chemistry
CH 5516—Aerosol and Cloud Chemistry
CH 5560—Computational Chemistry
CS 3425—Database
CS 4425—Data Management System Design
CS 4471—Computer Security
CS 4811—Artificial Intelligence
CS 4821—Data Mining
CS 5321—Advanced Algorithms
CS 5331—Parallel Algorithm
CS 5441—Distributed System
CS 5471—Advanced Topics in Computer Security
CS 5496/EE 5496—GPU and Multi-core Programming
CS 5631—Data Visualizations
CS 5760—HCI Usability Testing
CS 5811—Advanced Artificial Intelligence
CS 5821/EE 5821—Computational Intelligence
CS 5841/EE 5841—Machine Learning
EC 4200—Econometrics
EE 5500—Probability and Stochastic Processes
EE 5521—Detection & Estimation Theory
EE 5726—Embedded Sensor Networks
FW 5083—Bioinformatics Programming and Skills
FW 5084—Data Analysis and Graphics Using R
FW 5089—Tools of Bioinformatics
FW 5411—Applied Regression Analysis
FW 5412—Regression with the R Environment for Statistical Computing
FW 5540—Advanced Terrestrial Remote Sensing
FW 5550—Geographic Information Systems for Resource Management
FW 5555—Advanced GIS Concepts and Analysis
FW 5556—GIS Project Management
FW 5560—Digital Image Processing: A Remote Sensing Perspective
GE 5150—Advanced Natural Hazards
GE 5195—Volcano Seismology
GE 5250—Advanced Computational Geosciences
GE 5600—Advanced Reflection Seismology
GE 5670—Aquatic Remote Sensing
GE 5870—Geostatistics & Data Analysis
MA 3710—Engineering Statistics
MA 3715—Biostatistics
MA 3740—Statistical Programming and Analysis
MA 4330—Linear Algebra
MA 4710—Regression Analysis
MA 4720—Design and Analysis of Experiments
MA 5201—Combinatorial Algorithms
MA 5221—Graph Theory
MA 5401—Real Analysis
MA 5627—Numerical Linear Algebra
MA 5630—Numerical Optimization
MA 5701—Statistical Methods
MA 5741—Multivariate Statistical Methods
MA 5750—Statistical Genetics
MA 5761—Computational Statistics
MA 5781—Time Series Analysis and Forecasting
MA 5790—Predictive Modelling
MA 5791—Categorical Data Analysis
MIS 3100—Business Database Management
MIS 3400—Business Intelligence
MKT 3600—Marketing Research
PH 4390—Computational Methods in Physics
PH 4395—Computer Simulation in Physics
PSY 5210—Advanced Statistical Analysis and Design I
UN 5390—Scientific Computing
UN 5550—Introduction to Data Science