Analytics and Data Science Public Pathways Program

We have partnered with Manchester Community College to offer a Pathways Program that allows you to smoothly transition to UNH Manchester. This curriculum map shows you the MCC course sequence you should follow for seamless transfer into our B.S. in Analytics and Data Science degree program.

<table>
<thead>
<tr>
<th>Students must take these courses at MCC…</th>
<th>To fulfill these UNH degree requirements…</th>
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</thead>
<tbody>
<tr>
<td>CIS 113 – Database Design and Management Using SQL¹</td>
<td>Elective credit</td>
</tr>
<tr>
<td>MATH 204 – Calculus 1</td>
<td>MATH 425 – Calculus I</td>
</tr>
<tr>
<td>BUS 110 – Introduction to Business</td>
<td>BUS 400 – Introduction to Business</td>
</tr>
<tr>
<td>FYE 101 – First Year Cornerstone</td>
<td>No transfer credit</td>
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<tr>
<td>ENGL 101 – College Composition I</td>
<td>Discovery writing skills course</td>
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<tr>
<td>ENGL 206 – Professional Communication</td>
<td>ENGL 502 – Technical Writing</td>
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<tr>
<td>MATH 214 – Calculus II</td>
<td>MATH 426 – Calculus II</td>
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<tr>
<td>CIS 118, 122, 126, 148, or 158 – Programming Language elective²</td>
<td>Elective credit</td>
</tr>
<tr>
<td>Discovery-approved social science course</td>
<td>Discovery social science course</td>
</tr>
<tr>
<td>CIS 220 – Object-Oriented Programming²</td>
<td>COMP 425 – Computing Fundamentals</td>
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<tr>
<td>CIS 233 – Oracle Database Administration¹</td>
<td>COMP 520 – Database Design and Development</td>
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<tr>
<td>Discovery-approved fine arts course</td>
<td>Discovery fine and performing arts course</td>
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<tr>
<td>ESCI – Introduction to Environmental Science</td>
<td>Discovery environment, technology and society course</td>
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<tr>
<td>MATH 202 – Probability and Statistics I</td>
<td>Discovery quantitative reasoning course</td>
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<td>MATH 212 – Probability and Statistics II</td>
<td>COMP 490 – Statistics in Computing and Engineering</td>
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<tr>
<td>DATA 210 – Introduction to Data Mining Analytics</td>
<td>DATA 557 – Introduction to Data Science and Analytics</td>
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<tr>
<td>Discovery-approved physical science</td>
<td>Discovery physical science course</td>
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<tr>
<td>Discovery-approved history course</td>
<td>Discovery historical perspectives course</td>
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<tr>
<td>MATH 218 – Linear Algebra</td>
<td>MATH 545 – Introduction to Linear Algebra or MATH 645 – Linear Algebra for Applications</td>
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<tr>
<td>Discovery-approved biological science</td>
<td>Discovery biological science course</td>
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<tr>
<td>DATA 215 – Applied Analytics</td>
<td>Elective credit</td>
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</tbody>
</table>

Note: See page 3 for information about UNH’s Discovery Program courses.

1. Major credit when paired with CIS 233 for COMP 520. Students must earn a grade of C or better in both CIS 113 and CIS 233 to earn credit for COMP 520.
2. Major credit when paired with CIS 220 for COMP 425. Students must earn a grade of C or better in both the selected elective and CIS 220 to earn credit for COMP 425.

Course titles, names and/or sequencing are subject to change.
If you are enrolled in the NH Dual Admission Program and/or plan to finish your associate degree at MCC, complete the following requirements at UNH Manchester to receive your bachelor’s degree.

<table>
<thead>
<tr>
<th>Major Course Requirements:</th>
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</thead>
<tbody>
<tr>
<td>MATH 739 – Applied Regression</td>
</tr>
<tr>
<td>COMP 430 – System Fundamentals</td>
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<tr>
<td>COMP 525 – Data Structures Fundamentals</td>
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<tr>
<td>DATA 674 – Predictive and Prescriptive Analytics I</td>
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<tr>
<td>DATA 675 – Predictive and Prescriptive Analytics II</td>
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<tr>
<td>DATA 757 – Big Data</td>
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<tr>
<td>BUS 453 – Leadership for Managers</td>
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<tr>
<td>BUS 620 – Organizational Behavior</td>
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<tr>
<td>USMT 599 – Professional Development Seminar (1 credit)</td>
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<tr>
<td>DATA 690 – Internship Experience (4 credits)</td>
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<td>DATA 790 – Capstone Project</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Discovery Program* Course Requirements:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discovery humanities course</td>
</tr>
<tr>
<td>Discovery world cultures course</td>
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<table>
<thead>
<tr>
<th>University Degree Requirements:</th>
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</thead>
<tbody>
<tr>
<td>Elective courses to fill remainder of credits required for bachelor's degree (128 total)</td>
</tr>
<tr>
<td>University writing requirement**</td>
</tr>
</tbody>
</table>

* See page 3 for information about UNH’s Discovery program.

** Bachelor degree candidates are required to complete four writing-intensive courses, which must include: English 401 – First Year Writing (or equivalent transfer English composition course) and three additional writing-intensive courses, one in the student’s major and one at the 600-level or above.

An advisor at UNH Manchester will provide you with the best possible guidance for course selections each term.

Please also note:

- UNH Manchester accepts a maximum of 72 credits in transfer from 2-year institutions. Only courses completed with a grade of C or better will be accepted as transfer credits.
- Students must earn a minimum overall grade point average of 2.50 at MCC to be eligible for dual enrollment at UNH Manchester.

*Course titles, names and/or sequencing are subject to change.*
The Manchester Community College courses* listed below fulfill UNH Manchester’s Discovery Program course requirements:

**Writing Skills**
ENGL 110M – College Composition I

**Quantitative Reasoning**
CIS 118M – Visual Basic Net Programming  
CIS 148M – Java Programming  
CIS 158M – C# Programming  
MATH 170M – Discrete Mathematics  
MATH 200M – Finite Math  
MATH 202M – Probability & Statistics  
MATH 204M – Calculus I

**Biological Science**
BIOL 106M – Human Body  
BIOL 150M – Nutrition

**Biological Science/DLAB**
BIOL 101M – General Concepts in Biology  
BIOL 102M – Introduction to Botany  
BIOL 107M – Human Body Lab  
BIOL 108M – College Biology I  
BIOL 109M – College Biology II  
BIOL 110M – Human Anatomy & Physiology I  
BIOL 120M – Human Anatomy & Physiology II  
BIOL 151M – Nutrition Lab  
BIOL 201M – Principles of Genetics

**Physical Science**
PHYS 105M – Astronomy

**Physical Science/DLAB**
CHEM 115M – General Chemistry I  
CHEM 116M – General Chemistry II  
ESCI 110M – Earth Science  
PHYS 110M – Physical Science I  
PHYS 120M – Physical Science II  
PHYS 135M – College Physics I  
PHYS 136M – College Physics II  
PHYS 210M – University Physics I  
PHYS 220M – University Physics II

**Environment, Technology & Society**
ENVS 125M – Current Issues in the Environment

**Historical Perspectives**
HIST 120M – Western Civ. through 1500  
HIST 130M – Western Civ. 1500 to Present  
HIST 202M – US History to 1870  
HIST 204M – US History 1870 to Present  
HIST 205M – History of Russia

**World Culture**
ANTH 101M – Intro to Anthropology  
HIST 210M – History of China  
HIST 211M – Modern Middle Eastern History

**Fine and Performing Arts**
ARTS 117M – Art History I  
ARTS 123M – Drawing I  
ARTS 130M – Intro to Art  
ARTS 217M – Art History II  
ENGL 202M – Intro to Drama  
HUMA 105M – Intro to Music  
HUMA 106M – History of American Popular Music

**Social Science**
ANTH 102M – Intro to Archeology  
BUS 120M – Intro to Communications Media  
ECON 134M – Macroeconomics  
ECON 135M – Microeconomics  
GEOG 110M – Geography  
POLS 110M – American Government  
POLS 210M – Intro to Political Science  
PSYC 110M – Intro to Psychology  
PSYC 210M – Human Growth & Development  
SOCI 109M – Contemporary Social Problems  
SOCI 110M – Sociology  
SOCI 250M – Multiculturalism

**Humanities**
ENGL 200M – Topics in Literature  
ENGL 210M – Survey of Poetry  
ENGL 240M – Children’s Literature  
ENGL 207M – Intro to Literary Analysis  
ENGL 218M – Short Story  
ENGL 223M – British Literature I  
ENGL 224M – British Literature II  
ENGL 225M – Shakespeare  
ENGL 230M – American Literature I  
ENGL 235M – American Literature II  
HIST 215M – World Religions  
HUMA 126M – Intro to Film  
HUMA 200M – Film & American Culture  
HUMA 220M – Love in the Western Tradition  
PHIL 110M – Intro to Philosophy  
PHIL 240M – Ethics

**Writing Intensive**
ENGL 110M – College Composition I  
ENGL 120M – College Composition II  
ENGL 203M – Intro to Journalism  
ENGL 213M – Creative Writing  
ENGL 214M – Creative Nonfiction

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**UNH Manchester Bachelor Degree Requirements**

To graduate from UNH, students must fulfill course requirements in the following areas: major courses, University Discovery Program courses and electives, totaling 128 credits.

**Discovery Program Courses**

UNH’s Discovery Program builds each student’s foundation in general education. To fulfill the Discovery Program, students must take the following courses: one inquiry course* (or INQ attribute course); one course in writing skills; one course in quantitative reasoning; as well as one 400- to 600-level course from each of the following Discovery Program categories: Biological Science (BS); Physical Science (PS); Environment, Technology and Society (ETS); Fine and Performing Arts (FPA); Historical Perspectives (HP); Humanities (HUMA); Social Science (SS) and World Cultures (WC)*

1. The Inquiry requirement shall be waived for students with 26 or more transfer credits.
2. One of these two courses must have a lab component.
3. Also may be satisfied by approved study abroad component.

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* Course titles, names and/or sequencing are subject to change.

November 4, 2016