Analytics and Data Science Public Pathways Program

We have partnered with Nashua Community College to offer a Pathways Program that allows you to smoothly transition to UNH Manchester. This curriculum map shows you the NCC 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 NCC…</th>
<th>To fulfill these UNH degree requirements…</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101 – College Composition</td>
<td>Discovery writing skills course</td>
</tr>
<tr>
<td>CSCI 106 – Introduction to Software</td>
<td>Elective credit</td>
</tr>
<tr>
<td>MATH 106 – Statistics I</td>
<td>Discovery quantitative reasoning</td>
</tr>
<tr>
<td>CSCI 161 – Introduction to Programming</td>
<td>Elective credit</td>
</tr>
<tr>
<td>CSCI 175 – Programming in C++</td>
<td>COMP 425 – Computing Fundamentals</td>
</tr>
<tr>
<td>CSCI 140 – Essentials of Systems Analysis</td>
<td>Elective credit</td>
</tr>
<tr>
<td>MATH 206 – Statistics II</td>
<td>COMP 490 – Statistics in Computing and Engineering</td>
</tr>
<tr>
<td>Discovery-approved physical science course</td>
<td>Discovery physical science/DLAB course</td>
</tr>
<tr>
<td>BUS 101 – Introduction to Business</td>
<td>BUS 400 – Introduction to Business</td>
</tr>
<tr>
<td>MATH 210 – Calculus I</td>
<td>MATH 425 – Calculus I</td>
</tr>
<tr>
<td>CSCI 207 – Database Design &amp; Management</td>
<td>COMP 520 – Database Design &amp; Management</td>
</tr>
<tr>
<td>CSCI 230 – Advanced Programming Using C++</td>
<td>Elective credit</td>
</tr>
<tr>
<td>ENGL 122 – Technical Writing</td>
<td>ENG 502 – Technical Writing</td>
</tr>
<tr>
<td>Discovery-approved social science course</td>
<td>Discovery social science course</td>
</tr>
<tr>
<td>MATH 211 – Calculus II</td>
<td>MATH 426 – Calculus II</td>
</tr>
<tr>
<td>CSCI 278 – Data Structures Using C++</td>
<td>COMP 525 – Data Structures Fundamentals</td>
</tr>
<tr>
<td>Discovery-approved humanities or fine arts course</td>
<td>Discovery humanities or fine and performing arts course</td>
</tr>
<tr>
<td>MATH 215 – Linear Algebra</td>
<td>MATH 545 – Introduction to Linear Algebra or MATH 645 – Linear Algebra for Applications</td>
</tr>
</tbody>
</table>

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

1. Major credit when paired with MATH 206 for COMP 490. Students must earn a grade of C or better in both MATH 106 and MATH 206 to earn credit for COMP 490.
2. Major credit when paired with CSCI 207 for COMP 520. Students must earn a grade of C or better in both CSCI 140 and CSCI 207 to earn credit for COMP 520.
3. Major credit when paired with CSCI 278 for COMP 525. Students must earn a grade of C or better in both CSCI 230 and CSCI 278 to earn credit for COMP 525.

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 NCC, complete the following requirements at UNH Manchester to receive your bachelor’s degree.

### Major Course Requirements:

- MATH 739 – Applied Regression
- COMP 430 – System Fundamentals
- COMP 525 – Data Structures Fundamentals
- DATA 674 – Predictive and Prescriptive Analytics I
- DATA 675 – Predictive and Prescriptive Analytics II
- DATA 757 – Big Data
- BUS 453 – Leadership for Managers
- BUS 620 – Organizational Behavior
- USMT 599 – Professional Development Seminar (1 credit)
- DATA 690 – Internship Experience (4 credits)
- DATA 790 – Capstone Project

### Discovery Program* Course Requirements:

- Discovery biological science course
- Discovery environment, technology and society course
- Discovery historical perspectives course
- Discovery world cultures course
- Discovery humanities or fine and performing arts course

### University Degree Requirements:

- Elective courses to fill remaining credits required for bachelor’s degree (128 total)
- University writing requirement**

---

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 NCC to be eligible for dual enrollment at UNH Manchester.

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

---

June 5, 2017
The Nashua Community College courses* listed below fulfill UNH Manchester’s Discovery Program course requirements:

**Writing Skills**
- ENGL 101N – College Composition
- ENGL 100N – Honors Expository Writing

**Quantitative Reasoning**
- CSCI 161N – Intro to Programming Using Visual Basic
- CSCI 175N – Intermediate Programming Using C++
- MATH 106N – Statistics I
- MATH 107N – Honors Statistics I
- MATH 115N – Finite Mathematics
- MATH 170N – Discrete Mathematics
- MATH 206N – Statistics II
- MATH 210N – Calculus I
- MATH 214N – Honors Calculus I

**Biological Science/DLAB**
- BIOL 101N – Germs 101
- BIOL 105N – Biology in Focus I
- BIOL 106N – Biology in Focus II
- BIOL 107N – Principles of Biology I
- BIOL 108N – Principles of Biology II
- BIOL 111N – Basic Human Anatomy & Phys.
- BIOL 130N – Anatomy and Physiology I
- BIOL 131N – Anatomy and Physiology II
- BIOL 201N – Adv. Anatomy and Physiology I
- BIOL 202N – Adv. Anatomy and Physiology II
- BIOL 210N – Medical Microbiology

**Physical Science/DLAB**
- ENVS 105N – Earth Science
- CHEM 110N – Intro to Chemistry
- CHEM 130N – General Chemistry I
- CHEM 131N – General Chemistry II
- CHEM 135N – Honors Environment in Chemical Perspective
- PHYS 101N – Physical Science I
- PHYS 102N – Physical Science II
- PHYS 115N – Astronomy
- PHYS 116N – Meteorology
- PHYS 130N – Physics I
- PHYS 131N – Physics II
- PHYS 230N – Calculus-Based Physics I
- PHYS 231N – Calculus-Based Physics II

**Environment, Technology & Society**
- ENVN 101N – Environmental Science
- SOCI 215N – Sociology of Technology

**Historical Perspectives**
- HIST 101N – Western Civ. Ancient to 17 Century
- HIST 102N – Western Civ. Since French Revolution
- HIST 110N – Ancient Civ. of the World
- HIST 140N – US History Colonial to Reconstruction
- HIST 141N – US History since Reconstruction
- HIST 215N – New Hampshire History
- HIST 232N – History of Modern Asia
- HIST 241N – American Constitutional History
- HIST 246N – Modern America
- HIST 260N – History of Multiculturalism
- HIST 265N – Latin Amer. History from Independence to the Present

**World Culture**
- ANTH 110N – Cultural Anthropology
- ANTH 263N – Intro to Chinese Culture & Society
- GEOG 130N – Human Geography
- ENGL 215N – Literature by American Women
- ENGL 230N – British Literature I
- ENGL 232N – British Literature II
- ENGL 240N – American Literature I
- ENGL 241N – American Literature II
- ENGL 255N – Honors Humor in Literature and Other Media
- HIST 102N – American Gov't and Politics
- HIST 140N – World Relations
- HUMA 101N – Intro to the Humanities
- HUMA 107N – World Religions
- HUMA 120N – Jazz and Its Roots
- HUMA 130N – Honors Ancient Greek Philosophy
- HUMA 101N – Intro to Literature
- HUMA 140N – American Cinema
- HUMA 152N – American Popular Culture
- HUMA 101N – Intro to Theatre

**Fine and Performing Arts**
- ARTS 101N – Intro to Drawing
- HUMA 102N – Art Appreciation
- HUMA 103N – Music Appreciation
- HUMA 104N – Jazz and Its Roots
- HUMA 120N – Intro to Theatre

**Social Science**
- ANTH 108N – Intro to Archeology
- COMM 101N – Intro to Media Studies
- COMM 102N – Principles of Communication
- ECON 201N – Microeconomics
- ECON 202N – Macroeconomics
- PHYS 115N – Astronomy

**Writing Intensive**
- ENGL 101N – College Composition
- ENGL 102N – Writing About Literature
- ENGL 105N – Intro to Literature
- ENGL 235N – Poetry Workshop
- ENGL 250N – Honors Advance Creative Writing
- ENGL 106N – Statistics II
- MATH 170N – Discrete Mathematics
- MATH 210N – Calculus I
- MATH 214N – Honors Calculus I
- MATH 115N – Finite Mathematics
- MATH 107N – Honors Statistics I
- MATH 106N – Statistics I

---

**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 course1 (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)2.

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 programs.

---

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

---

October 28, 2016