Data Science Major with Sociology Cognate Requirements  
Catalog Year: 2015-16  
Degree: Bachelor of Science  
Credit Hours: 69+  

“PR” indicates a pre-requisite. “CO” indicates a co-requisite.

Courses within this major may also satisfy general education requirements. Please consult http://registrar.cofc.edu/general-edu for more information.

**Required Courses**

- DATA 101 Introduction to Data Science (3) **PR: None**
- DATA 210 Dataset Organization and Management (3) **PR: None**
- DATA 495 Data Science Capstone (3) **PR: DATA 210, CSCI 470, and MATH 441**

**Math Requirement**

- MATH 120 Introductory Calculus (4) **PR: Placement or C- or better in MATH 111**
- MATH 203 Linear Algebra (3) **PR: MATH 120 or instructor permission**
- MATH 207 Discrete Structures I (3) **PR: MATH 105, MATH 111, or MATH 120**
- MATH 220 Calculus II (4) **PR: MATH 120 or HONS 115**
- MATH 250 Statistical Methods I (3) **PR: MATH 111 or MATH 120 or instructor permission**
- MATH 350 Statistical Methods II (3) **PR: MATH 120, MATH 250**
- MATH 440 Statistical Learning I (3) **PR: MATH 203, MATH 220, MATH 350**
- MATH 441 Statistical Learning II (3) **PR: MATH 440**

**Computer Science Requirement**

- CSCI 220 Computer Programming I (3) **PR: CSCI 120 or CSCI 180 or MATH 111 or higher or department permission; CO: CSCI 220L**
- CSCI 220L Computer Programming Lab I (1) **CO: CSCI 220**
- CSCI 221 Computer Programming II (3) **PR: CSCI 220 with a C- or better, CSCI 220L with a C- or better; CO or PR: MATH 207**
- CSCI 230 Data Structures and Algorithms (3) **PR: CSCI 221 with a C- or better, MATH 207**
- CSCI 310 Advanced Algorithms (3) **PR: CSCI 230 with a C- or better, MATH 207**
- CSCI 334 Data Mining (3) **PR: CSCI 221 with a C- or better, MATH 207, MATH 250**
- CSCI 470 Principles of Artificial Intelligence (3) **PR: CSCI 230 with a C- or better**

Select a cognate from the following: Accounting, Biomechanics, Customer Relationship Management, e-Commerce, Economics, Exercise Physiology, Finance, Geoinformatics, Molecular Biology, Organismal Biology, Physics and Astronomy, Psychology, Sociology or Supply Chain Management.

**Sociology Cognate Requirements (15 credit hours)**

- SOCY 101 Introduction to Sociology (3) **PR: None**
- OR SOCY 102 Contemporary Social Issues (3) **PR: None**

AND
Select one course from the following in consultation with the cognate director:

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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prerequisites</th>
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<tr>
<td>SOCY 366</td>
<td>Race and Ethnic Relations (3) PR: SOCY 101 or HONS 167 or SOCY 102</td>
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<td>SOCY 369</td>
<td>Special Topics in Social Inequality (3) PR: SOCY 101 or HONS 167 or SOCY 102</td>
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<td>SOCY 390</td>
<td>Senior Seminar (3) PR: SOCY 101 or SOCY 102, SOCY 260, SOCY 271, SOCY 272, and 18 credit hours in the SOCY major, or instructor permission</td>
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<td>Select 3 credit hours from the following in consultation with the cognate director:</td>
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<td>SOCY 381</td>
<td>Internship (1-6) PR: SOCY 101 or HONS 167 or SOCY 102; junior standing; declared sociology majors only; B average in sociology and overall average of C+; 12 credit hours in sociology or instructor permission</td>
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<td>SOCY 382</td>
<td>Student Research Apprenticeship in Sociology (1-6) PR: SOCY 101 or HONS 167 or SOCY 102</td>
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<td>SOCY 399</td>
<td>Tutorial (3, Repeatable up to 12) PR: Junior standing, tutor permission, department chair permission</td>
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<td>SOCY 490</td>
<td>Independent Study (1-6) PR: SOCY 101 or HONS 167 or SOCY 102; junior standing, overall SOCY GPA of at least 3.000, overall GPA of at least 2.50, instructor permission</td>
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<td>SOCY 499</td>
<td>Bachelor’s Essay (6) PR: SOCY 101 or HONS 167 or SOCY 102; a project proposal must be submitted in writing and approved by the department prior to registration for the course</td>
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