

Bates



Digital and Computational Studies

DCS

Requirements

Opportunities

Faculty

Suggested Year

Year 1

Year 1

Year 2

Year 2

Year 2

Year 2

Year 3/4

FAQs

Academics Digital and Computational Studies Requirements Timeline

Recommended Timeline

Requirements

Introduction to

Programming

Software

Development

Data Science &

Critical Digital

Human-Centered

Analysis

Studies

Design

JS	
100	
eth	
X	
S	

Additional Core Methods

Ves

Thesis

Community-**Engaged Learning*** Two 300-level

DCS Electives ++

Senior Design Capstone

Options

DCS 109{D,R,S,T} **DCS 111**

DCS 211

DCS 229

DCS 105, 204,

DCS 105, 106, 204,

212, 307, 375

DCS 106, 301C, 304, 305, 325, S31

206, 212, 301C, 305

DCS 106, 212, 301C, 304, 325

DCS 301C, 304, 305, 325

DCS 4XX (exact # TBA), W3

Year 4

- +For core methods courses, no course can count for more than 2 methods.
- *An approved CEL-tagged course outside DCS can be substituted with permission.
- ++Core methods courses may be used to complete this requirement. **Up to two Short Term courses (s20 or higher) can count towards the major, up to one elective
- may be a non-DCS Bates course with permission, and up to three electives may be taken external to Bates (e.g., study abroad, Roux) with prior approval.
- In addition to these requirements, all Bates graduates are required to complete the general education requirements for the catalog in which they have graduated. • It is the responsibility of the student to verify whether their +1 has any restrictions on
- double dipping requirements across majors or minors.







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Academics Digital and Computational Studies Requirements Courses

Courses

Modes of Inquiry: [QF]

DCS 109 Intro to Computer Science for Software Development (S)

This course is an introduction to computational thinking and problem solving via an introduction to computer programming, designed for students interested in broadly applying computing and software solutions across a range of disciplines. It considers computing as a discipline of study, exploring the representation and manipulation of data, fundamental algorithms, efficiency, and limits of computing. Students learn fundamentals of computer programming using Python, including basic data structures, flow control structures, functions, recursion, elementary object-oriented programming, and file I/O, as well as discussion of higher-level concepts including abstraction, modularity, reuse, testing, and debugging. By implementing programs in contexts such as image processing, voting algorithms, DNA sequence analysis, and simple games, students develop an understanding of computational problem solving and gain experience in broadly applicable software development skills. Not open to students who have received credit for DCS 109, 109D, 109R, 109T, or 111.

Writing Credit: None
GEC(s): None
Department/Program Attribute(s): (DCS: Programming & Theory)
Class Restriction: None
Cross-listed Course(s): None
Instructor: Lawson, Barry
Instructor Permission Required: No

DCS 109 Intro to Computer Science for Software Development (S)

109R Introduction to Computer Science Using Robots

course introduces computer science, computational thinking, and problem-solving in the context of s. Students learn about computing in terms of the representation and manipulation of data, amental algorithms, and societal implications of computing. They will learn the fundamentals of auter programming using Python, including conditional statements, iteration, abstraction, testing, alarity, and debugging. Students will gain an understanding of computational problem solving the menting programs to control robots and solve robotics problems. Not open to students who have d credit for DCS 109, 109D, 109S, 109T, or 111.

tment/Program Attribute(s): (DCS: Programming & Theory)
Restriction: None
listed Course(s): None
ctor: Ricci, Andy Elliot
ctor Permission Required: No

s of Inquiry: [QF]

ng Credit: None



Bates

Q Search

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