INFORMATION SCIENCE MAJOR

Program Directors: Pamela Duffy (College Park), Galina Madjaroff Reitz (Shady Grove)

The field of information science, particularly in the iSchool, is a field concerned with the intersections of information, people, and technology. Information science is an interdisciplinary field, drawing from other areas of study such as computer science, management, social science, education, and the humanities, but with a focus on individual and institutional users of information and their information needs. In our program students gain the knowledge and the skills for creating information systems, resources, and services that help address society’s pressing needs in a variety of contexts and in a variety of private and public sector positions, ranging from financial services to healthcare; from information technology to consulting; and from education to cultural institutions.

Restriction: Students are not permitted to double-major or double-degree with the Bachelor of Arts in Technology and Information Design.

Admission to the Major

Students who are accepted to the university and list Information Science (InfoSci) as their preferred major will start directly in our program. Students currently in the university who are interested in declaring Information Science must complete our Change of Major process. For more information please visit the InfoSci website (https://ischool.umd.edu/academics/bachelors-programs/bachelor-of-science-in-information-science-college-park/) or email InfoSci@umd.edu.

Program Objectives

InfoSci students gain the knowledge and the skills for creating information systems, resources, and services that help address society’s greatest needs. Through coursework, internships, extracurricular projects, and networking, InfoSci students build careers that will place them in leadership roles in information management, information technology, user-centered design, and data analytics.

Program Learning Outcomes

At the completion of this program, students will be able to:

1. Articulate, discuss and critically analyze information design and management: the interrelationships among information consumers or creators, information content, and the conduits through which information flows.
2. Apply basic principles to the design, development and management of information to meet the needs of diverse users.
3. Assess the impact of existing or emerging technologies on information practices and the flow of information.
4. Employ state-of-the-art tools and techniques to create, manage, and analyze information.
5. Articulate, discuss and critically analyze critical issues including the security, privacy, authenticity, and integrity of information.
6. Explain and discuss how information technologies, processes, and practices are situated in, and may reflect, reenact and reinforce broader social and organizational structures, and the ethics, diversity, equity, and inclusion issues engendered by those structures.
7. Critically evaluate information technologies, processes, and practices to identify biases they involve, and design technologies and processes that minimize those biases.

REQUIREMENTS

Students must earn a “C-” or better in all major requirements and an overall average of 2.0.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>INST201</td>
<td>Introduction to Information Science</td>
<td>3</td>
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<tr>
<td>INST311</td>
<td>Information Organization</td>
<td>3</td>
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<td>INST314</td>
<td>Statistics for Information Science</td>
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<td>INST326</td>
<td>Object-Oriented Programming for Information Science</td>
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<td>INST327</td>
<td>Database Design and Modeling</td>
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<td>INST335</td>
<td>Organizations, Management and Teamwork</td>
<td>3</td>
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<td>INST346</td>
<td>Technologies, Infrastructure and Architecture</td>
<td>3</td>
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<tr>
<td>INST352</td>
<td>Information User Needs and Assessment</td>
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<tr>
<td>INST362</td>
<td>User-Centered Design</td>
<td>3</td>
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<tr>
<td>INST490</td>
<td>Integrated Capstone for Information Science</td>
<td>3</td>
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Major Elective Requirements

Select ONE of the following options:

1. Complete at least 15 credits of INST-coded major electives
2. InfoSci Cognate Area: Data Science, Cybersecurity and Privacy, Digital Curation, and Health Information (See below for more information)

Total Credits 57

Data Science Cognate Area

The original cognate area in the InfoSci program allows students to develop understanding and skills for managing, manipulating, and mobilizing data to develop insight, create value, and achieve organizational goals in a wide range of sectors. The two career streams students aim for after completing this cognate area are data analysts - focusing on analyzing and reporting data - and data stewards - focusing on extracting, manipulating, and preparing data for quicker and more efficient analysis.

Cybersecurity and Privacy Cognate Area

This cognate area is based on the perspective that a comprehensive and effective understanding of issues surrounding cybersecurity should encompass both technological and human aspects. This cognate area helps students equip themselves with human-centered cybersecurity skills and perspectives, and prepare to launch careers in...
the cybersecurity field with particular emphasis on management, policy, and governance-related functions.

**Digital Curation Cognate Area**
This cognate area prepares students for jobs where they collect, digitize, appraise, curate, and disseminate information assets effectively and efficiently. Information is at the heart of our society's ability to learn, conduct business, recreate, and manage complex scientific, technological, industrial, and information infrastructures. Students focusing in this cognate area will play critical roles in preserving a vast and varied body of information for posterity.

**Health Information Cognate Area**
This cognate area teaches students about the ways data informs the decisions made by health professionals, patients, and policy makers. Students focusing in this cognate area will learn about designing patient-centered technologies, health informatics for patients and consumers, and health data analytics.

**GRADUATION PLANS**
Click [here](https://ischool.umd.edu/academics/student-services/undergraduate-college-park/four-year-plans/) for roadmaps for graduation plans in the College of Information.

Additional information on developing a graduation plan can be found on the following pages:

- [http://4yearplans.umd.edu](http://4yearplans.umd.edu)
- [the Student Academic Success-Degree Completion Policy](https://academiccatalog.umd.edu/undergraduate/registration-academic-requirements-regulations/academic-advising/#success) section of this catalog