UMass CICS Departmental Honors Overview

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CICS Program and Honors

- Bachelor of Science in Computer Science (CS BS)
- Bachelor of Arts in Computer Science (CS BA)
- Bachelor of Science in Informatics (Info BS)
Honors Program Curriculum

- **General Studies**: Focuses on breadth of study through honors general education courses.

- **Advanced Scholarship**: Gives students a chance to conduct original research over two semesters under the supervision of a faculty member.
  - **Departmental Honors**: For students who wish to undertake advanced research within their major. CICS students (BS CS, BA CS, Info) complete **CS Departmental Honors**.
  - **Multidisciplinary Honors**: For students who want to design honors programs of study outside of their major or between their major and other disciplines.
## Honors Program Options

<table>
<thead>
<tr>
<th><strong>Departmental Honors (GS-DH)</strong></th>
<th><strong>Multidisciplinary Honors (GS-MH)</strong></th>
<th><strong>General Studies Honors Only (GS)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>One CS honors course at any level (excluding service courses). One CS honors course at the 300+ level. Can also use some 500/600.</td>
<td>2-3 Honors courses from more than one discipline.</td>
<td>5 General Studies Honors courses, including Honors Writing 112H.</td>
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<tr>
<td>Honors Thesis or Project advised by a CICS faculty member.</td>
<td>Honors Thesis or Project advised by a faculty member in a different department.</td>
<td>No honors thesis or project.</td>
</tr>
<tr>
<td><strong>Commonwealth Honors Scholar</strong> on diploma and transcript. <strong>Departmental Honors</strong> listed on transcript.</td>
<td><strong>Commonwealth Honors Scholar</strong> on diploma and transcript. <strong>Multidisciplinary Honors</strong> listed on transcript.</td>
<td><strong>General Studies Honors</strong> on transcript.</td>
</tr>
<tr>
<td>Apply using form on CS honors website.</td>
<td>All students are automatically enrolled as GS-MH</td>
<td>Meet with a CHC Advisor to opt out of advanced studies.</td>
</tr>
</tbody>
</table>

*Note: Only for students entering before Fall 2018.*
CS Honors Track: Research Requirements

• **Part 1 – Preparation**: Students spend one semester acquiring the background needed to do research in their desired area and developing a thesis/project proposal. Two options: individual (499Y) or course-based (691DD, Research Methods Seminar). Typically 3 credits.

• **Part 2 – Project/Thesis**: Students spend one semester performing research. The final deliverable is a written thesis document (499T) or a written project report (499P). Both require a project presentation. Typically 3 credits.
Timeline

• Freshman/Sophomore year: Gain admission to honors college, complete general studies requirements.

• Fall Junior Year:
  • Apply to departmental honors [online form].
  • Find research advisor.
  • Choose prep option.
    • 499Y: Submit proposal using CHC PATHS.
    • 691DD: Enroll successfully.

• Spring Junior Year:
  • Take 499Y or Research Methods. [Officially moved to GS-DH track]
  • Complete 499T/P proposal. Submit using CHC PATHS.

• Fall Senior Year:
  • Take 499T/P.
  • Submit thesis or project. Submit using CHC PATHS.
(Alternate) Timeline

- **Freshman/Sophomore year:** Gain admission to honors college, complete general studies requirements.

- **Fall Junior Year:**
  - Apply to departmental honors [online form].
  - Find research advisor.
  - Choose prep option.
    - 499Y: Submit proposal using CHC PATHS.
    - 691DD: Enroll successfully.

- **Spring Junior Year:**
  - Take 499Y or Research Methods. [Officially moved to GS-DH track]
  - Complete 499T/P proposal. Submit using CHC PATHS.

- **Fall Senior Year:**
  - Take 499T/P.
  - Submit thesis or project. Submit using CHC PATHS.

- **Spring Senior Year:**

- **In extreme cases, you can skip 499Y/691DD and take 499T/P for 6 credits in one semester.**
Applying to Departmental Honors

- **Course Requirement**: Students must have completed the sophomore-level requirements for their degree type to be admitted to the track.
  - CS BS: 220, 230, 240, 250
  - CS BA: Three out of 220, 230, 240, 250
  - Info: (INFO 150 or COMPSCI 250), (CMPSCI 186 or COMPSCI 187), INFO 203, INFO 248

- **GPA Requirement**: The minimum GPA to be admitted to the track is 3.4.

- **Conditional Admission**: Admission to the track is conditional on submitting a 499Y contract and semester plan.
Finding an Adviser

• You can start this process any time!
• Read faculty webpages, email showing interest.
  • Ask to volunteer (assisting graduate students)
  • Ask what courses you should take to be able to volunteer
  • Ask if they have projects that would be a good fit for an honors thesis
  • You may not be able to work with your top choices / top areas of interest
499Y Proposal

• 499Y contract and semester plan are prepared using CHC PATHS.
• Due at the end of the semester prior to starting 499Y.
• 2-3 pages.
• See online instructions! [link]
  • CICS requirements build on CHC requirements
Go through 499Y Proposal Instructions [Link]
499T/P Proposal

• 499T/P contract and proposals are prepared using CHC PATHS.
• Even if you take the 691DD route, you must submit a 499T/P proposal
• Due by last day of classes in 499Y semester.
• ~10 pages.
• See online instructions! [Link]
  • CICS requirements build on CHC requirements.
  • You must use the CICS template!
• Research != Course Project
  • Your thesis adviser will know what is and is not considered research in their area.
Go through 499T/P Proposal Instructions [Link]
Thesis or Project Manuscript

• **Deliverables**: Final deliverable for honors research is a thesis or project document describing the work, submitted through CHC PATHS.
  - ~20 pages
  - Students must give an oral presentation of their work. Schedule this presentation with your thesis/project adviser.
  - The written requirements are identical for a “thesis” and “project”.
  - See online instructions! [Link]
  - You **must** use the CICS template!

• **Major Credit**: CS majors allow for up to 3 credits from 499T/P or independent studies to count towards the major.
Go through 499T/P Manuscript Instructions [Link]
CICS Templates

• Reminder: you **must** use CICS templates for:
  • 499T/P proposal
  • 499T/P manuscript
Credits

- 3 credits = 9 hours per week
- 6 credits = 18 hours per week
- If you select 6 credits for any course, you **must** justify this choice and your adviser must leave a comment explaining why 6 credits is justified.
500-Level Courses for Honors Credit

• Combined enrollment of at most 25 students
• 3 or more credits
• Graduate level
  • Must have a graduate student enrolled
  • Faculty must confirm graduate level
• Must submit a petition through CHC PATHs
600-Level Courses for Honors Credit

• Automatic – you do not need to petition for 600-level courses to count for honors credit.
• Generally significantly more work than other courses (doctoral students take one or two total per semester).
Independent Study Honors (ISH)

• Must have a written graded component.
• Cannot have multiple students performing the same project. Projects must be divided into separate parts for each student with separate grading.
Deadlines and Progress Tracking

• Often listed on CHC PATHS homepage.
• Up to you to remember!
  • Your adviser will not remember
  • You may not get any reminders
• Double check each step.
  • Example: Was your 499T/P proposal returned to you for revisions?
What are the benefits of honors research?

• Get a chance to work directly under a faculty member and alongside graduate students.
• Get a chance to contribute new knowledge to a sub-field of computing by publishing your research.
• Increase the competitiveness of your graduate school and/or job applications.
• Improve your critical thinking, problem solving, time management, programming, and written and oral communication skills.
Tips for finding a thesis adviser

• Cast a wide net / do not focus on a single potential adviser or lab.
• Express interest in the topic, not a need to complete a thesis.
• Offer to assist with ongoing projects, don’t force your own project.
More Information

- [https://www.cics.umass.edu/ugrad-education/honors-track](https://www.cics.umass.edu/ugrad-education/honors-track)

CS DEPARTMENTAL HONORS

Undergraduate students in Computer Science completing BA or BS degrees who are also Commonwealth Honors College students have the opportunity to satisfy the Advanced Scholarship requirement of their honors degree by completing the Computer Science Departmental Honors (DH) track. The core of the DH track is the Honors Thesis or Project (previously called the Capstone Project), which gives students the chance to work one-on-one with our faculty to complete a year-long, in-depth research project. The DH track is fantastic preparation for both graduate school and jobs in the high-tech industry.

The links below provide more information about admission to the CS Departmental Honors track, the program requirements, and the recommended time line and steps for completing the track. A listing of potential faculty advisors is provided and will be updated each semester. A link to the forms that must be filed with the Honors College to complete each step of the Departmental Honors track is also provided.

- Advising Meeting Slides, Instructions and Templates
- Admission Information and Applications
- Program Requirements
- CS Honors Courses
- Recommended Timeline and Steps

Any questions about the CS Departmental Honors track can be sent to the Honors Program Director at askCSHonors@cs.umass.edu. The current CS Honors Program Director is Prof. Philip Thomas.