UMass CICS Departmental Honors Overview

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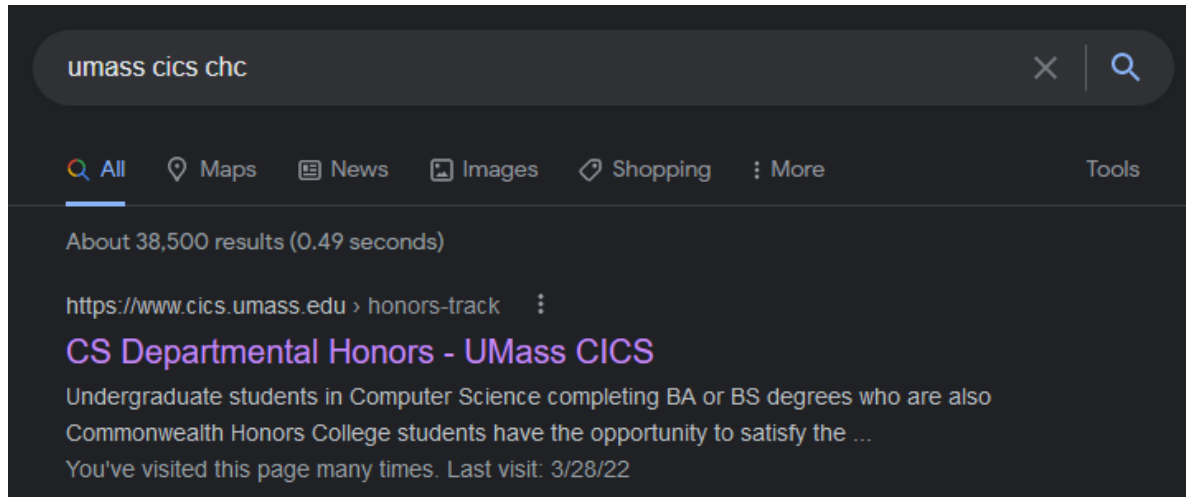
College of Information and Computer Sciences

UMass Amherst

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Finding These Slides

- https://www.cics.umass.edu/ugrad-education/honors-track

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)

- You cannot enroll in departmental honors unless you have already been admitted to the honors college (CHC).
- You *can* complete an honors thesis without being in the honors college.
  - You will not receive honors credentials when you graduate.

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**. *You must have a major in CICS, but it does **not** have to be your primary major if you are a dual major.
  - **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

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

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

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.
  - Consider asking 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
  - Section 1: Statement regarding the goal.
  - Section 2: Key Readings (at least 5).
  - Section 3: Communication Plan (at least 30 minutes per week with adviser).
  - Section 4: Specialized Training
  - Section 5: Methods or Agenda
  - Section 6: Timeline (use DD/MM/YY – Milestone_Description format)

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.

499T/P Proposal

- Introduction (2 pages)
- Significance
- Background (2-7 pages) [5-7 without preliminary findings]
- Methodology (2-3 pages)
- Preliminary findings (optional)
- Evaluation (how *you* will be evaluated)
- Communication (30 minutes per week with adviser)
- Timeline (use DD/MM/YY – Milestone_Description format)
- References

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.

CICS Templates

- Reminder: you **must** use CICS templates for:
  - 499T/P proposal
  - 499T/P manuscript
- If you would like to use a different format, e-mail askcshonors@cs.umass.edu for approval.

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.

- Gain insight into whether graduate school is right for you.

Miscellaneous

- Does the honors thesis satisfy the "one-semester independent study" requirement for the Bay State Fellowship?
  - Yes! (https://www.cics.umass.edu/content/bay-state-scholarship-program)
- How do I enroll in an honors add-on for a course?
  - Submit a CICS override form: https://www.cics.umass.edu/ugrad-education/overrides
- Can you enroll in departmental honors if you have a major in CICS but it is not your primary major?
  - Yes! Erroneous information was provided about this between 2018 and 2022. If you see any sources that still say your **primary** major (for dual majors) must be in CICS, please let us know at askcshonors@cs.umass.edu so that we can update the information.

More Information

- 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**.