Applying to Computer Science Degree Programs
Spring 2020 Orientation Session

Prof. Benjamin Marlin
Undergraduate Program Director
Computer Science Programs
Computer Science Undergraduate Programs

- Bachelor of Science in Computer Science
- Bachelor of Arts in Computer Science
- Computer Science Departmental Honors
- Minor in Computer Science

Informatics Major

Talk to Fabienne Boisson, Informatics Advisor (fboisson@umass.edu or informatics@cics.umass.edu)
See http://cics.umass.edu/informatics
Bachelor of Science in Computer Science (BS)

Comprehensive training in Computer Science

Goals

● Prepare for Entry-Level Technical Positions in Computing/Software Industry
● Prepare for Graduate Study in CS

Course Requirements

● 14 Computer Science courses
● 4 Math courses
● 2 Majors-Level Lab Science courses

See https://www.cics.umass.edu/ugrad-education/bs-degree-requirements
BS Math and Science Details

Math:
● Two semesters of engineering-level calculus (MATH 131, MATH 132)
● Multivariate calculus (MATH 233) or Statistics I (STAT515)
● Linear algebra (MATH 235)

Science:
● Two majors-level lab science courses including
  ○ CHEM 111 (or 121), CHEM 112 (or 122)
  ○ PHYSICS 151 (or 181), PHYSICS 152 (or 182)
  ○ GEOLOGY 101/lab (or 103/131, 105/131)

Important Note: There are other levels of calculus and gen-ed science course that do not meet these requirements.
Example: On-Time CS/Math Major Progression

- **Fall Freshman Year**
  - COMPSCI 121
  - MATH 131

- **Spring Freshman Year**
  - COMPSCI 187
  - MATH 132

- **Fall Sophomore Year**
  - COMPSCI 220
  - COMPSCI 240
  - MATH 233/Stat 515

- **Spring Sophomore Year**
  - COMPSCI 230
  - COMPSCI 250
  - MATH 235

These courses are referred to as the “200-level CS cores”

This leaves 8 CS courses for Junior/Senior year.
Bachelor of Arts in Computer Science (BA)

Computing + X Degree in Computer Science

Goals:
- To apply sophisticated computing techniques to a second discipline.

Course Requirements:
- 10 Computer Science courses (3 of 4 200-level cores)
- 3 Math courses
- Foreign Language
- 4-Course Outside Concentration

See https://www.cics.umass.edu/ugrad-education/ba-degree-requirements
Other Computer Science Requirements (BA/BS)

General Education:

UMass Requirements

Integrative Experience (COMPSCI 320 or 326)

Writing:

Junior Year Writing (CICS 305)
Computer Science Departmental Honors (BA/BS)

Goals:

- Provides Honors Advanced Study Within CS major

Course Requirements:

- 1 CS Honors course any level
- 1 CS Honors course at the 300+ level
- Honors 499Y and 499T/P within computer science

See [https://www.cics.umass.edu/ugrad-education/honors-track](https://www.cics.umass.edu/ugrad-education/honors-track)
Minor in Computer Science

Goals:

Add CS background to your primary discipline.

Course Requirements:

- 2 entry-level computer science (COMPSCI 121, 187)
- 2 200-level computer science cores (COMPSCI 220, 230, 240, 250)
- 1 additional 200-level computer science core or 1 computer science 300+ majors course

Note: Math Computing, CS Engineering, Comp Linguistics not eligible due to the University’s multiple credentials policy. See: https://www.cics.umass.edu/ugrad-education/cs-minor
People You Should Know

Prof. Benjamin Marlin
CS Undergraduate Program Director

Darlene Fahey
CS Undergraduate Program Manager

Prof. Philip Thomas
CS Honors Program Director

Greg Boisseau and Ben Conrick
CICS Exploratory Track Advisors

CICS Advising
Peer Advising
https://www.cics.umass.edu/content/undergraduate-peer-advising
The CS Major Admission Process
The goal of the CS Major admission process is to identify students who are highly likely to be capable of completing the CS major while graduating on time.
Scaling of the CS Major

CS Major Enrollment by Year
CS Major Admission Process

- **Step 1:** Become an applicant on contract
  - Be eligible to apply to become a CS major
  - Submit an application

- **Step 2:** Obtain and Complete Contract
  - Obtain and understand your admission contract
  - Meet your contract requirements

**Important Note:** The information in your contract supersedes any other general advising or information from other sources.
Example: CS Major Admission Timeline

Semester N
- Take COMPSCI 121
- Take Math 131

Semester N+1
- Take COMPSCI 121 with B or better. Pass MATH 131 with C or better.
- Attend AOC Meeting
- Submit Application
- Obtain Contract. Become AOC.
- Meet Contract. Admitted to CS major.
Step 1: Be Eligible to Apply (Part 1)

- Attend an orientation session in the semester you plan to apply.
- Be currently registered in at least COMPSCI 187 and MATH 131.
  - If you have completed these courses already (with C or better), you need to be in more advanced CS/Math courses (e.g., 200-level CS courses, MATH 132, etc.)
- Be no further into the CS curriculum than the first half of the CS 200-level core courses.
Step 1: Be Eligible to Apply (Part 2)

- Must be possible to be admitted by your 4th semester
  - Students in their 5th and later full-time semesters are not eligible to apply.
  - Students who would need two semesters to complete the admission process are not eligible to apply in their 4th or later full-time semesters.
- Must be possible to achieve a cumulative GPA above 3.0 at the end of the application semester.
- Must not have exceeded 2-application limit.
- Must not be pursuing a contract for entry to another CICS major.
Step 1: Submit an Application

Two Application Deadlines per Year: October 1 and March 1

Applications are available from the CS major change site after Add/Drop ends. [https://www.cics.umass.edu/ugrad-education/major-change-cs](https://www.cics.umass.edu/ugrad-education/major-change-cs)

How to Submit:

- **EMAIL:** pdf to [CSapply@cs.umass.edu](mailto:CSapply@cs.umass.edu) (until 11:59 PM deadline)

- **PAPER FORM:** to CICS Main Office (M-F 8:30-5:00 PM), 100 CS Bldg

Email will be sent within 1 week to confirm receipt of application. Contact [csapply@cs.umass.edu](mailto:csapply@cs.umass.edu) if confirmation is not received.
Step 1: When should I apply?

Apply as soon as you are eligible!
Step 1: Application Decisions

There are two outcomes for the application process:

- **Application Denied**: Transcript does not include required courses, or otherwise not eligible to apply. Transcript reflects a pattern that does not provide evidence for success as a CS Major.

- **Application Accepted**: Step 1 complete. Go to Step 2.

Important Note: Having your application accepted does not mean you are a CS Major. You are a CS applicant on contract (AOC).
Step 2: Obtain and Understand Your Contract

- Successful applicants will be offered an admission contract.
- Since students can come into the application process at different points, all contracts are individually tailored.
- A typical contract requires demonstrating proficiency in programming and math within the contract semester by completing “predictor courses.”
- Students must also meet a minimum grade requirement across all courses, a minimum cumulative GPA requirement, a minimum credit requirement, and a residency requirement.

Important Note: The information in your contract supersedes any other general advising or information from other sources.
Step 2: Predictor Courses

Standard Predictor Courses:

- COMPSCI 187: Programming with Data Structures
- MATH 132: Calculus II

Additional Predictor Courses:

- COMPSCI 220/230
- COMPSCI 240/250
Step 2: Contract Structure

- Students must take two predictor courses at UMass Amherst.
- Students must take two predictor courses (one programming-focused and one math-focused) within the contract semester.
- Courses taken during the summer and courses that are successfully repeated (e.g., due to a first grade below C), do not counted as predictors.
- Math or CS courses beyond the standard predictors may be required if contract requirements can not be met otherwise.
- Tip: Don’t overload your contract semester!
Example: A Typical First Contract

A typical contract would require the student to meet the following requirements within the application semester:

- Grade of B or better in COMPSCI 187 Programming with Data Structures
- Grade of B or better in MATH 132 Calculus II
- No grade below C in any course taken in contract semester
- Cumulative GPA of 3.0 or higher at the end of the contract semester
- Minimum of 12 letter-graded credits
- Both contract courses taken at UMass Amherst

The programming and math courses noted on a contract are referred to as the “contract courses.”
Step 2: Meet Your Contract Requirements

If you meet all of your contract requirements, you will be admitted to the CS major.
Notification of Admission to the Major

Applicants are notified of all decisions via @umass email.

After a contract term and after grades are posted you will be notified:

- **You are accepted into the CS major.** At that point you must respond to your acceptance email for a CS major change to be completed. Failure to do so in a timely manner will forfeit your opportunity for a major change.

- **You did not make your contract.** At that point you should review the application eligibility requirements to determine if you are still eligible to submit another application.
Ways to not meet your contract requirements

- Not meeting a required grade in a contract course
- Withdrawing from a contract course (or having an unresolved INC)
- Electing pass/fail grading on a contract course or a course that is a CS major requirement (e.g., lab science)
- Not meeting the C threshold in any non-contract course
- Withdrawing from non-contract courses or electing pass/fail, resulting in a total of less than 12 letter graded credits completed.
- Not meeting the required overall GPA threshold

Important Note: You must email upd@cs.umass.edu before making any course changes in your contract semester to avoid voiding your contract.
Re-Application Process

If you do not meet all of your contract requirements, you may be eligible for a second contract **in some cases**. The following requirements must be satisfied:

- Obtained grades of C or higher in all classes (no INC/W grades allowed).
- Second application must be in the semester immediately following the first application (e.g., consecutive applications).
- All eligibility requirements specified in Step 1 must also still hold.

**Important Note:** If you are ineligible for re-application, your status as an AOC will end. You will not be eligible for seats in majors-only CS courses.
Example: A Typical Second Contract

A typical second contract would require the student to meet the following requirements within the application semester:

- Grade of B or better in COMPSCI 220
- Grade of B or better in COMPSCI 240
- No grade below C in any course taken in contract semester
- Cumulative GPA of 3.0 or higher at the end of the contract semester
- Minimum of 12 letter-graded credits
- Both contract courses taken at UMass Amherst
Failing to meet a second contract

If you were eligible for a second contract and don’t meet its requirements:

- You will not be admitted to the major
- Your status as an AOC ends
- You are not eligible for a further contract
- You are not eligible to take further majors-only classes (unless required by your existing major -- e.g., Math Computing)
FAQ: Failing to meet a second contract

Q: Will I really be denied entry to the major for a B- in a contract course?

Q: Will I really be denied entry to the major for a C- in a non-contract course?

Q: Will I really be denied entry to the major for dropping down to 11 letter-graded credits?

Q: Will a really be denied entry to the major for a cumulative GPA of 2.99?

A: Yes

Important Note: Apart from the extenuating circumstances process described on the next slide, there are no exceptions to the application limit and the requirement that all contract requirements be met.
Excluding Circumstances

- The application process makes allowances for extenuating circumstances such as significant illness or death in the family resulting in the inability to complete coursework leading to INCs or late withdrawals.
- In such cases, students must make sure they are in contact with their Academic Dean to ensure that extenuating circumstances are appropriately documented in advising notes.
- Students should also contact upd@cs.umass.edu. This will ensure that CS program staff are aware of the issues and are in a position to work with students to consider a second contract.
Navigating CS Programs as an AOC
Getting Into Courses

- Overrides are needed to enroll in CS courses that are restricted to majors.
- If you meet prerequisites, make sure that you request overrides through the online form for the upcoming semester (when link is available).
- [https://www.cs.umass.edu/overrides](https://www.cs.umass.edu/overrides)
- Register for courses in light of your contract requirements.
Example: CS Major Admission Timeline

**Semester N**
- Take COMPSCI 121
- Take Math 131

**Semester N+1**
- Take COMPSCI 187
- Take Math 132

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- Pass COMPSCI 121 with B or better. Pass MATH 131 with C or better.
- Attend AOC Meeting
- Submit Application
- Obtain Contract. Become AOC.
- Meet Contract. Admitted to CS major.
Example: CS Major Admission Timeline

Semester N
- Take COMPSCI 121
- Take Math 131

Pass COMPSCI 121 with B or better. Pass MATH 131 with C or better.
- Request Override for COMPSCI 187

Semester N+1
- Attend AOC Meeting

Submit Application
- Obtain Contract. Become AOC.
- Request 200-level Overrides

Take COMPSCI 187
- Take Math 132

Meet Contract. Admitted to CS major.
- Submit Application
- Obtain Contract. Become AOC.
- Request 200-level Overrides
- Meet Contract. Admitted to CS major.
Advising for AOCs

- **AOCs are not CS Majors** until the contract is met and paperwork is processed to change your major to CS.
- **Continue to follow the advising protocol** of your current primary major (we will not remove your registration holds if you are not a CICS student).
- **For CS Advising help and general questions**, visit the CS UG Advising Center in LGRC A243. Bring your contract email and identify yourself as an AOC.
- If you have additional questions that were not answered, email the Undergraduate Program Director (upd@cs.umass.edu) and be sure to say you are an AOC.
Application Process and Contract Standards

- The CS Undergraduate Program Committee (UPC) sets the application process rules and contract standards for AOCs.
- **The application processes and contract standards may change in future semesters.**
- They have changed previously and there is now a lot of out-of-date and inaccurate information available on the web (e.g., r/umass).
- Make sure you have up-to-date information when you plan to submit an application.
Good Luck!

https://www.cics.umass.edu/ugrad-education/major-change/cs