Majors in ICS

CSE — Computer Science and Engineering (w/ Engr.)
CS — Computer Science (with specializations)
CGS — Computer Game Science
DS — Data Science
SE — Software Engineering
Infx — Informatics (with specializations in Human-Computer Interaction (HCI), Organizations and Info Tech (OIT), Health Informatics)
BIM — Business Info Management (w/ Business)
ICS — Individual study (apply to create your own)

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So many choices! How to pick?

- Take your best guess to start with; changing later is easy
- Nearly all the first-year classes are the same for all ICS majors (and it’s no tragedy if you take a course or two that end up not counting towards your ultimate major)
- The programs overlap some, even in the upper division
- Course enrollment isn’t limited to specific ICS majors
- Careers are not tied to specific majors
- 60% of UCI students change majors at least once outside of their original school
- Major ≠ Marriage
Very Brief Characterizations

CSE — Hardware/software interface; devices

CS — Smaller, faster, cheaper, more capable, more predictable, “better” computers and IT systems

CGS — CS with focus on game systems and design

DS — Analyzing “big data” (focus on analysis)

SE — Building large-scale software systems

Infx — HCI: Making IT more convenient, efficient, effective for (human) users. OIT: Determining IT needs of organizations (teams to society) and the effects IT will have. HI: Healthcare IT

BIM — Analyzing “big data” (focus on making business decisions)
CS Specializations
(Mostly upper division; no decisions needed now)

- Algorithms
- Architecture and embedded systems
- Bioinformatics
- Information
- Intelligent Systems
- Networked Systems
- Systems and Software
- Visual Computing
- (General Computer Science)
Using Questions to Identify Areas of Interest

Nearly any subject has some connection to IT.

People with different interests might ask different questions about the same subject.

The questions *you* think are interesting might guide you towards a particular major.
Questions about Google:

- Who can find out what I ask about in Google? Who *should* be able to find out? (Infx OIT)
- Why do Google and Yahoo look different? Is one easier or faster than the other? (Infx HCI)
- How can I build a tool that uses Google to search for specialized info (e.g., recipes or art)? (SE)
- How does Google know what’s on the web and then find the best matches for my queries? (CS)
- How does Google make 100,000 standard PCs work together to answer queries? (CS/CSE)
- How does Google handle machine failures and keep the PCs from overheating? (CSE)
Questions about autism:

• My autism web site gets 10,000 hits a day and logs each visitor’s activities on the site. How can I use that information to provide better content?  (BIM)

• How can I use that log information to help users find what they want more easily?  (Infx HCI)

• How can I build an application that will help children with autism learn appropriate social cues?  (CGS)

• Can I build a system that encourages appropriate behavior and adapts as its user improves?  (CS)

• Can I build a device that works unobtrusively in real time to help people with autism interact with others?  (CSE)
So, relax!

- You don’t have to decide now
- The decision isn’t final
- The choice doesn’t close many doors

- Explore
- Take a broad range of classes (outside ICS, too)
- Be curious
- Look for things you find intriguing

- In 6/9/12 months, meet with a counselor in the SAO to discuss your options