Georgia Tech College of Computing

Georgia Tech Online Master of Science in Computer Science

Abstract

Georgia Tech's online Master of Science in Computer Science (OMS CS) represents the first attempt by an accredited U.S. university to offer an advanced degree program exclusively through the massive-online delivery format. Created in 2013 in collaboration with Udacity and AT&T, the OMS CS program is intended to greatly expand access to elite computing education through both its delivery mechanism and its greatly reduced price—less than $7,000 for most students. The first OMS CS students began coursework in January 2014, and Georgia Tech intends to grow the program gradually until it becomes financially self-sustaining from revenues generated both by degree-seeking students and others seeking non-credit certificates. Overall, OMS CS represents a collaboration among leaders in education, MOOCs and industry to apply the disruptive power of massive-online teaching to widen the pipeline of high-quality, educated talent needed in computer science fields.

OMS CS: Because we can, because we should

- Moving from MOOCs (massive open online courses) to 'MODs'—massive online degrees
- First up: Master of Science in Computer Science
- Delivered online using Udacity's MOOC platform
- Fully equivalent in rigor to the on-campus MS CS
- Cost of roughly $6,600 (instead of $42,000 for on-campus)
- Made possible through $2M initial gift from AT&T
- Launched Jan. 15, 2014

The students

- 2,361 applicants in 21 days
- 77 countries represented & all 50 U.S. states
- 85% domestic applications—inverse of on-campus MS CS
- 380 enrollments in first cohort (plus ~500 admitted for later terms)
- Average age: 34.8 years old (11 years older than on-campus)
- Vast majority are degree-holders working in computing/IT
- Creating their own communities
- On-campus MS CS applications are up 30%

Just the Facts About OMS CS

Name: MS in Computer Science

Requirements: 36 hours of coursework (most courses 3 hours each)

Admission criteria: Undergrad degree in CS or related field with 3.0 GPA or higher

Cost: $6,600 for most students

Specializations:

- Computational Perception & Robotics
- Databases & Software Engineering
- High-Performance Computing
- Interactive Intelligence
- Machine Learning
- Networking
- Social Computing
- Systems

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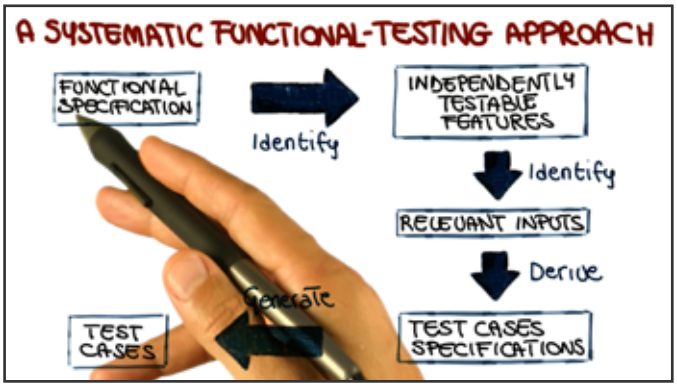
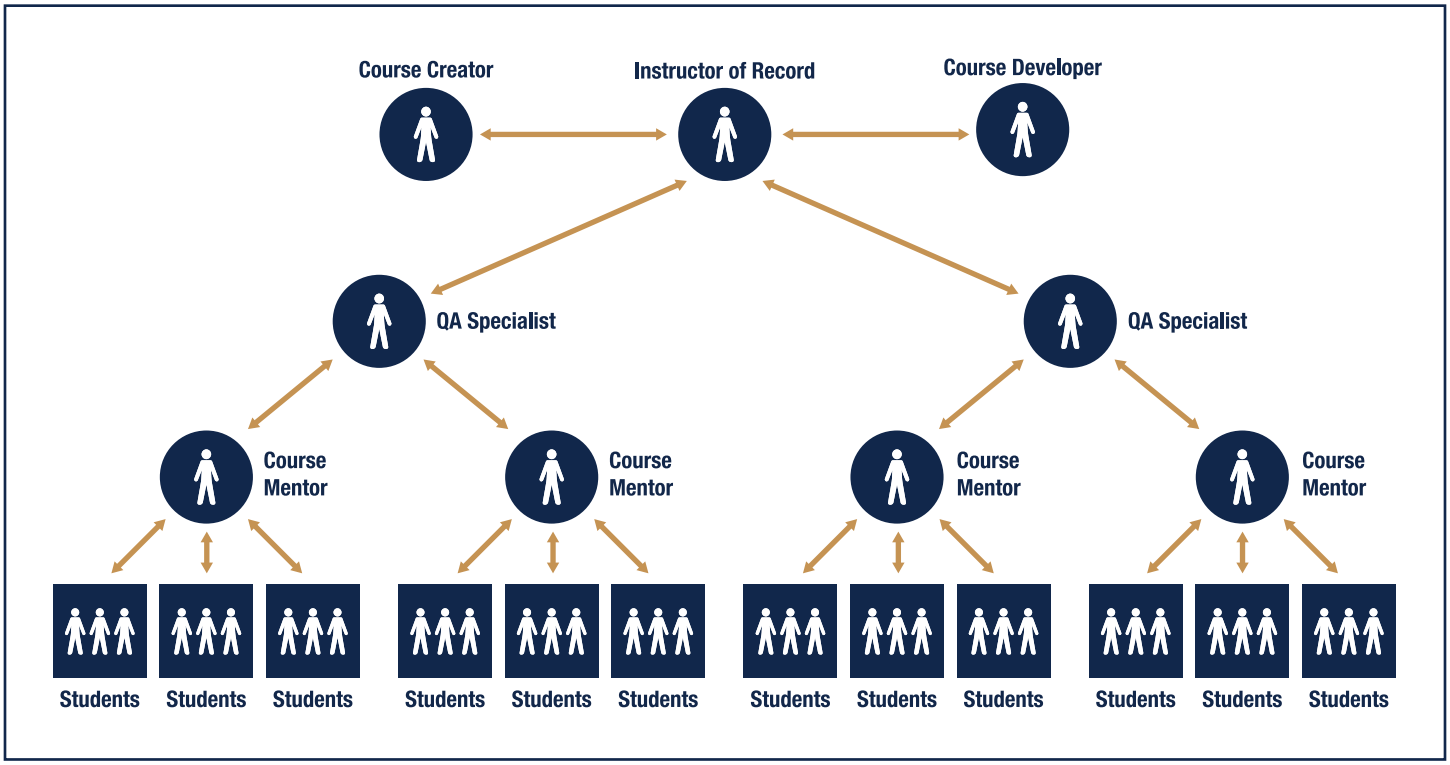


Screenshot from the OMS CS "Software Development Process" course

Lots of lessons learned

- **Expectations**: mismatched (MS or Executive MS?)
- **Scalability**: teaching, helping (yes); grading (challenge)
- **Opportunities**: new teaching styles
- **Pace**: startup vs. university (and our people feel it)
- **Roles**: often quite different from traditional programs
  - ***faculty***: new teaching styles & technologies
  - ***students***: must be self-motivated (much more so than on-campus)
  - ***staff***: must coordinate with new colleagues and make up new processes on the fly, while keeping stakeholders in the loop
  - ***administrators***: everything works differently (e.g., different accounting methods)
  - ***accreditors***: this is a whole new world
  - ***industry partners***: need to understand GT admission standards, possibly modify tuition reimbursement policy

OMS CS Course Infastructure ("MOOC 2.0")



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