

Graphics Depth Exam Requirements in Computer Science

Effective January 1, 2022, the following is the new procedure for passing the depth exam for PhD students in Graphics.

Overview. The Graphics doctoral comprehensive subject exam (*aka* Graphics depth exam) is intended for those students who plan to pursue a PhD in topics associated with Computer Graphics. It is designed to test whether students have a sufficiently comprehensive and nuanced understanding of the field to do PhD-level research. Each student takes their exam in **two subfields** specified by their advisor. Note that the department requires that the depth exam is completed on a certain schedule, See:

<http://www.bu.edu/cs/phd-program/phd-program-milestones/>

Requirements. A student passes the depth exam for a subfield if they satisfy **any one** of the following requirements:

Option 1: Receives an “A” grade in the graduate course corresponding to their subfield.

Option 2: Receives an “A” grade on the final exam of the course (option for students who do not want to take the course).

Option 3: Passes a separate depth exam scheduled by their advisor(s).

Please see below for more details about options 2 and 3.

In our department Graphics consists of the following subfields:

1st subfield (required):

- **Computer Graphics:** Options 1/2 can be satisfied with GRS CS 680 Introduction to Computer Graphics.

2nd subfield (choose 1 with approval from research advisor):

- **Computational Fabrication:** Option 1 with CAS CS 581 Computational Fabrication, or Option 3.
- **Geometry Processing:** Option 1 with CAS CS 582 Geometry Processing, or Option 3
- **Computer Vision:** Options 1/2 with CAS CS 585 Image and Video Computing (graduate version)
- **Machine Learning:** Options 1/2 with CAS CS 542 Machine Learning (graduate version)
- **Optimization:** Options 1/2 with CAS CS 531 Advanced Optimization Algorithms

Prof. Emily Whiting

Prof. Edward Chien

Option 2: Finals Only

This option can only be used if the student has already taken an equivalent, very similar course at another institution, and does not want to retake the entire course at BU. Note that an "A" in equivalent courses taken at other institutions **cannot** be substituted for options 1-3 above. It is the student's responsibility to arrange taking the exam with the course instructor ahead of time.

Option 3: Separate Exam

This option is available for students who failed to receive an "A" in either of their two sub-area courses, or were not able to take one or more of the courses/exams for scheduling reasons, or for sub-areas where only option 3 is available. Please consult with your thesis advisor(s) regarding eligibility and scheduling of this option.

Exam Format

The exam may be oral or written. The written form is typically given once a year as a three-hour, in-class exam. The oral exam is a two-hour exam, held with two faculty members, where problems are discussed at a whiteboard.

You must arrange the time, date and location of the exam with your advisor. The written exam is open book unless specified otherwise.

Exam Topics

Please consult your advisor for a list of subjects and readings covered by each subfield. Students are expected to study everything that is covered in the exam's bibliography, and questions may touch on any topics covered in the readings.