

CSC317H1 F

Computer Graphics

Fall 2024 Syllabus

Course Meetings

CSC317H1 F

Section	Day & Time	Delivery Mode & Location
LEC0101	Monday, 11:00 AM - 1:00 PM	In Person: BA 1180
	Wednesday, 11:00 AM - 12:00 PM	In Person: BA 1180
LEC0201	Monday, 1:00 PM - 3:00 PM	In Person: BA 1190
	Wednesday, 1:00 PM - 2:00 PM	In Person: BA 1190
LEC2001	Monday, 11:00 AM - 1:00 PM	In Person: BA 1180
	Wednesday, 11:00 AM - 12:00 PM	In Person: BA 1180
LEC2101	Monday, 1:00 PM - 3:00 PM	In Person: BA 1190
	Wednesday, 1:00 PM - 2:00 PM	In Person: BA 1190

Refer to ACORN for the most up-to-date information about the location of the course meetings.

Course Contacts

Course Website: <https://github.com/dilevin/computer-graphics-csc317/>

Instructor: Professor David Levin

Email: diwlevin@cs.toronto.edu

Phone: 6475736147

Office Hours and Location: By appointment, BA5268

Course Overview

Identification and characterization of the objects manipulated in computer graphics, the operations possible on these objects, efficient algorithms to perform these operations, and interfaces to transform one type of object to another. Display devices, display data structures and procedures, graphical input, object modelling, transformations, illumination models, primary and secondary light effects; graphics packages and systems. Students, individually or in teams, implement graphical algorithms or entire graphics systems.

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Course Learning Outcomes

By the end of the course students will have a comprehensive understanding of the basics algorithms of computer graphics, including those involved in modelling, rendering, animation and simulation.

Prerequisites: MAT235Y1/ MAT237Y1/ MAT257Y1/ [MAT291H1](#)/ [MAT292H1](#)/ [MAT294H1](#)/ (MAT232H5/ MAT233H5, MAT236H5)/ (MATB41H3, MATB42H3); MAT223H1/ MAT240H1/ MAT223H5/ MATA22H3/ [MAT185H1](#)/ [MAT188H1](#); CSC209H1/ CSC209H5/ CSCB09H3/ proficiency in C or C++/ [APS105H1](#)/ [ESC180H1](#)/ CSC180H1

Corequisites: None

Exclusions: CSC418H1, CSCD18H3. NOTE: Students not enrolled in the Computer Science Major or Specialist program at A&S, UTM, or UTSC, or the Data Science Specialist at A&S, are limited to a maximum of 1.5 credits in 300-/400-level CSC/ECE courses.

Recommended Preparation: MAT244H1

Credit Value: 0.5

None

Marking Scheme

Assessment	Percent	Details	Due Date
Assignments (best 8-of-9)	64%	Programming Assignments: 1. Raster Images 2. Ray Casting 3. Ray Tracing 4. Bounding Volume Hierarchy 5. Meshes 6. Shader Pipeline 7. Kinematics 8. Mass-Spring Systems See course website for details	2024-09-17,2024-09-24,2024-10-01,2024-10-08,2024-10-22,2024-11-05,2024-11-12,2024-11-19,2024-11-26
Quizzes (4)	12%	Administered online via Quercus	2024-09-26,2024-10-10,2024-11-07,2024-11-21
In-Class Written Test	12%		2024-10-16
In-Class Test	12%		2024-12-03

Assignment grade based on best 8-of-9 assignments

Late Assessment Submissions Policy

Every student is given ten (10) late days which are automatically applied, starting at midnight on the due date. Weekends count as late days. If you plan on not submitting an assignment (to take advantage of the best 8-of-9 policy) please let us know so late days aren't applied.

Policies & Statements

Late/Missed Assignments

This item is listed here to remind you to include your late/missed assignment policy; if you have late penalties, you are required to publish them in your syllabus. Please see the [A&S Academic Handbook \(https://www.artsci.utoronto.ca/faculty-staff/teaching/academic-handbook\)](https://www.artsci.utoronto.ca/faculty-staff/teaching/academic-handbook) sections on missed term work (Section 4.7), late term work and extensions (section 4.8), and missed term tests (Section 5.3) for more information.

Academic Integrity

Academic honesty is a very serious matter and can result in very serious consequences. Note that academic offences may be discovered and handled retroactively, even after the semester in which the course was taken for credit. This is a challenging class aimed at teaching you the fundamentals of computer graphics. You won't learn much if you cheat but you might get a good grade if you get away with it. If all you want is a good grade take an easier class where you won't have to cheat!

For purposes of this class, academic dishonesty is defined as:

- Any attempt to pass off work on a test, quiz or assignment that didn't come straight out of your own head.
- Any collaboration on written or programming assignments (it's ok to share ideas on programming assignments but the code MUST be your own) in which the collaborating parties don't clearly and prominently explain exactly who did what, at turn-in time.
- Any activity that has the effect of significantly impairing the ability of another student to learn. Examples here might include destroying the work of others, interfering with their access to resources (e.g., digital cameras), or deliberately providing them with misleading information.

Academic Integrity

All suspected cases of academic dishonesty will be investigated following procedures outlined in the [Code of Behaviour on Academic Matters \(https://governingcouncil.utoronto.ca/secretariat/policies/code-behaviour-academic-matters-july-1-2019\)](https://governingcouncil.utoronto.ca/secretariat/policies/code-behaviour-academic-matters-july-1-2019). If you have questions or concerns about what constitutes appropriate academic behaviour or appropriate research and citation methods, please reach out to me. Note that you are expected to seek out additional information on academic integrity from me or from other institutional resources. For example, to learn more about how to cite and use source material appropriately and for other writing support, see the U of T writing support website at <http://www.writing.utoronto.ca>. Consult the Code of Behaviour on Academic Matters for a complete outline of the University's policy and expectations. For more information, please see [A&S Student Academic Integrity \(https://www.artsci.utoronto.ca/current/academic-advising-and-support/student-academic-integrity\)](https://www.artsci.utoronto.ca/current/academic-advising-and-support/student-academic-integrity) and the [University of Toronto Website on Academic Integrity \(https://www.academicintegrity.utoronto.ca\)](https://www.academicintegrity.utoronto.ca).