

**159709**  
**Computer Graphics**

**Course and Assessment Guide**

**Daniel Playne**  
**School of Natural and Computational**  
**Sciences**

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# The Course

## Prescription

Graphics devices. Interactive graphics systems. Drawing algorithms. Lines and polygons. Curves and surfaces. Representation of 3-D objects. Perspective. Techniques for visual realism. The course will include practical programming work.

## Expected Prior Learning

300-level programming knowledge is required.

## Learning outcomes

Students who successfully complete this course should be able to:

1. Apply formulae for 3-D visual perspective.
2. Demonstrate correct use of interactive graphical systems and devices.
3. Develop software using advanced graphics libraries.

## Study resources

Along with this Course and Assessment Guide, your study resources comprise of lectures (lecture material will be uploaded onto the stream site). There is an stream online learning environment where you can access additional study resources and interact with the class.

## Textbooks

There are no set textbooks for this course.

# Stream: Your online learning environment

Accessing Stream will assist you in the following ways

- 1. Lecturer-to-Student Communication:** Important notices will be uploaded to stream, instructions and additional readings that may arise will be added to the Stream site. Check Stream often to ensure you keep up to date with the course.
- 2. Assignments:** Assignment definitions will be uploaded onto the stream site (as well as handed out in class) and all assignments will be submitted through the stream site.

# How to approach your study

**Attending Lectures:** pay attention in lectures, try to follow the concepts presented and think about the implications of those ideas. Engage in discussions and try to answer questions. If you are struggling to understand something or don't follow an example - ask the lecturer to explain it.

**Assignments:** complete your assignments in a timely manner, don't just leave them to the last minute. Assignment questions in this course are often more complicated than they might initially seem. Unless explicitly stated otherwise, all assignment work **MUST** be your own. It's fine to discuss an assignment with your peers but do **NOT** copy code or give your code to another student.

## Semester 1, 2020

Date	Weeks	Topic
24 Feb	1	Introduction to Computer Graphics
2 March	2	3D Rendering Pipeline
9 March	3	Transformations
16 March	4	Lighting and Shading
23 March	5	Texture Mapping
30 March	6	Bump Mapping
	MID SEMESTER BREAK	
20 April	7	Orientation
27 April	8	Environment Mapping & Reflections
4 May	9	Tessellation
11 May	10	Framebuffers and Shadows
18 May	11	Instanced Rendering & Deferred Lighting
25 May	12	Screen-Space Ambient Occlusion
1 June	STUDY BREAK	
8 June	FINAL EXAMINATION PERIOD	

# Assessment

Assessment	Due Date	Weighting
Assignment 1	20 <sup>th</sup> March	10%
Assignment 2	24 <sup>th</sup> April	20%
Assignment 3	22 <sup>nd</sup> May	30%
Assignment 4	20 <sup>th</sup> June	40%

## Extensions and late assignment submission

Late submission of assignments will be penalised on a per-day-late basis unless an extension has already been granted at the discretion of the lecturer. Any request for an extension should be discussed with the lecturer prior to the submission deadline.

## Assignment submission

Please submit electronic versions of your assignments through Stream. Detailed instructions on how to do this will be provided in Stream closer to the submission dates. On submission into our Stream course all assignments may automatically go into Turnitin®, text matching software, to help deal with any academic integrity issues, such as plagiarism, that may arise. See the information under Academic Integrity later in this guide for more details.

# Academic integrity

It is mandatory that any assessment items that you submit during your University study are your own work. Massey University takes a firm stance on academic misconduct, such as plagiarism and any form of cheating.

Plagiarism is the copying or paraphrasing of another person's work, whether published or unpublished, without clearly acknowledging it. It includes copying the work of other students and reusing work previously submitted by yourself for another course.

Academic integrity breaches impact on students as it disadvantages honest students and undermines the credibility of your qualification. Massey has purchased a licence to utilise Turnitin®, a text matching web application to assist with the detection of copying. Assignments submitted to Turnitin will be compared with material available on the world wide web including electronic books, journals, news courses, cheat sites (or course mills), web pages and previously submitted assignments. Your lecturer will let you know if your assignments are going to be submitted to Turnitin.

Plagiarism, and cheating in tests and exams will be penalised; it is likely to lead to loss of marks for that item of assessment and may lead to an automatic failing grade for the course and/or exclusion from reenrolment at the University.

Please see the *Academic Integrity Guide for Students* on the University website for more information. The Guide steps you through the University Academic Integrity Policy and Procedures. For example you will find definitions of academic integrity misconduct, such as plagiarism; how misconduct is determined and managed; and where to find resources and assistance to help develop the skills of academic writing, exam preparation and time management. These skills will help you approach university study with academic integrity.

## **Conditions for aegrotat pass and impaired performance**

If you are prevented by illness, injury or serious crisis from attending a compulsory learning experience, an examination or completing an element of assessment (worth 10% or more) by the due date, or if you consider that your performance has been seriously impaired by such circumstances, you may apply for aegrotat or impaired performance consideration. You must apply on the Aegrotat & Impaired Performance Application form available from the Massey University website. The completed form must be accompanied by a certificate signed by a health professional, and/or corroborating evidence.

## **Queries about final grades**

Each qualification is managed by a Programme Committee and the Chair of the Programme Committee, the Programme Director/Leader, is the chief examiner for that qualification. Although each Course Coordinator is the examiner for the course they coordinate, overall responsibility is with the Programme Director. The Programme Director/Leader ensures the processes have been followed, but accomplishes this through the examinations section of our Student Administration Unit. If you are not happy with the grade you are given, then you should, in the first instance, contact Student Administration about that. They will then ensure your complaint is followed up and a response provided.

## **Grievance procedures**

A student who claims that he/she has sustained academic disadvantage as a result of the actions of a University staff member should use the University Grievance Procedures. Students, whenever practicable, should in the first instance approach the University staff member concerned. If the grievance is unresolved with the staff member concerned, the student should then contact the relevant Head of Institute/School/Department or College office for further information on the procedures. The procedures can be found on the University website in the University Calendar.