MONASH University

Handbook

Unit

FIT1033 - ations of 3D

Overview

This unit is an introduction to the techniques, frameworks and processes comprising 3D modelling and 3D imaging. Foundations of 3D aims to give students an understanding of 3D modelling by developing skills in 3D model creation for a variety of contexts, including 3D prototyping, 3D visualisation and 3D modelling for games and animation. Students will communicate their knowledge of 3D theory through the production of designs that demonstrate geometrical modelling, texture mapping, virtual lighting techniques, camera positioning, and rendering procedures.

Faculty:
Faculty of Information Technology

Owning organisational unit:
Faculty of Information Technology

Study level:
Undergraduate

SCA band:
2

EFTSL:
0.125

Credit points:
6

Open to exchange or study abroad students?

Yes

Offerings

S2-01-CLAYTON-ON-(

Location: Clayton

Teaching period: Second semester

Attendance mode: On-campus

Requisites

Prohibition

→ DIS1911 6 CP

3D design and visualisation

Contacts

Chief Examiner(s)

Dr Thomas Chandler

Email: Tom.Chandler@monash.edu

Offering(s):

- Applies to all offerings

Learning outcomes

On successful completi  ould be able to:

1. Evaluate and ass in the 3D creation process;
2. Research, evaluate and implement 3D geometry, 3D texturing and 3D rendering techniques;
3. Develop and modify 3D models and 3D environments;
4. Design, create and detail 3D models and 3D scenes for diverse media.

Teaching approach

Peer assisted learning

Assessment summary

In-semester assessment: 100%

Assessment

Assignment 1

Value %: 20

Assignment 2

Value %: 20

Assignment 3

Value %: 30

Studio Tests

Value %: 30

Scheduled teaching activities

Applied sessions

Total hours: 36 hours

Offerings:

- Applies to all offerings

Seminars

Total hours: 12 hours

Offerings:

- Applies to all offerings

Workload requirements

Workload

Minimum total expected workload to achieve the learning outcomes for this unit is 144 hours per semester typically comprising a mixture of scheduled online and face to face learning activities and independent study. Independent study may include associated reading and preparation for scheduled teaching act

Learning reso

Required resources

Autodesk® Maya® 2020 software will be provided on campus lab computers, and students are encouraged to register with the Autodesk Education Community for their own educational trial version of Autodesk® Maya® 2018 and related Autodesk software under the company's terms and conditions. Please visit:
http://www.autodesk.com/education/home

Adobe Photoshop will be used in the labs for digital image and texture editing.

We will also be using Unity <https://unity3d.com/get-unity/download/archive> for all Major Assignments. A download link will be provided for Unity software later in the semester.

Recommended resources

The following titles are available on reserve or through a short term loan through the Monash library. Please note that though these mainly general references. There is also a considerable collection of books for specific 3D studies (3D characters, architecture, lighting and texturing) available at the Monash Caulfield library.

See also:

- The Art of 3-D : Computer Animation and Imaging / Isaac Victor Kerlow (various editions)
- The Art of 3-D : Computer Animation and Effects / Isaac Victor Kerlow (various editions)

Technology resources

Students may bring their own laptops to class, however they will need a copy of Autodesk® Maya® 2020 installed.

Students will be importing their Maya scene to Unity (using a supplied file) and exporting a build from Unity <https://unity3d.com/get-unity/download/archive> for their submission. Unity software is available in the labs and is also free to download as a student version.

Regularly check Moodle for announcements.

Availability of study

Digital humanities
Games design
Games development
Interactive media