

# CSYE 7270

## Building Virtual Environments

### 3D Model Animation

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#### 3D Model Animation

Counts towards assignment score

#### Preparation

Download or create a rigged 3D model. See

<http://tf3dm.com/>

<http://www.creativecrash.com/>

<http://www.turbosquid.com/>

#### Part 1 – (50 Points) Animate your 3D Model using a Script

Animate your 3D model using a script. The script must: a) set at least 5 key frames, b) translate c) rotate, d) scale, and e) move the camera.

#### Part 2 – (50 Points) Animate a movement cycle

Animate a movement cycle such as a walk cycle, fly cycle, kick cycle, etc. You can download a rigged model for this assignment but must reference where you got the model. The movement cycle must: a) set at least 5 key poses, b) have contrapposto c) complete a full cycle

#### Scoring Rubric

100 points possible

Requirement	Points
script key frames	10

script translate	10
script rotate	10
script scale	10
script camera movement	10
5 key poses	10
contrapposto	10
full cycle	10
movement cycle animation quality	20

## Submission

You will submit your assignment via BlackBoard. Upload to the week that you do the assignment. If you submit this in week 4 upload to assignment 4, if you submit this in week 5 upload to assignment 5, etc.

Click the title of assignment (blackboard -> assignment -> <Title of Assignment>), to go to the submission page.

## 3D Animation Resources

Maya Essentials 2: Polygonal Modeling Techniques with George Maestri

<http://www.lynda.com/Maya-tutorials/Maya-Essentials-2-Polygonal-Modeling-Techniques/96715-2.html>

Game Character Creation in Maya with Chris Reilly

<http://www.lynda.com/tutorials/Game-Character-Creation-in-Maya/83095-2.html>

Modeling Vehicles in Maya with Ryan Kittleson

<http://www.lynda.com/Maya-tutorials/Modeling-Vehicles-Maya/114004-2.html>

Character Animation Fundamentals with Maya with George Maestri

<http://www.lynda.com/Maya-tutorials/Character-Animation-Fundamentals-with-Maya/54994-2.html>

Working with HumanIK Rigs in Maya with Adam Crespi

<http://www.lynda.com/Maya-tutorials/Working-Human-IK-rigs-Maya/122440-2.html>

Maya Essentials 5: Animation Tools with George Maestri

<http://www.lynda.com/Maya-tutorials/Maya-Essentials-5-Animation-Tools/96719-2.html>

Facial Modeling Timelapse <http://www.sergicaballer.com/facial-modeling-timelapse/>

*Nice sources of 3D Models*

<http://rigging101.com/>

<http://tf3dm.com/>

<http://www.creativecrash.com/>

<http://www.turbosquid.com/>

[http://www.turbosquid.com/Search/?keyword=ufo&sort\\_column=A5&sort\\_order=asc](http://www.turbosquid.com/Search/?keyword=ufo&sort_column=A5&sort_order=asc)

[http://www.turbosquid.com/Search/Index.cfm?keyword=rocket&sort\\_column=A5&sort\\_order=asc](http://www.turbosquid.com/Search/Index.cfm?keyword=rocket&sort_column=A5&sort_order=asc)

[http://www.turbosquid.com/Search/Index.cfm?keyword=robot&sort\\_column=A5&sort\\_order=asc](http://www.turbosquid.com/Search/Index.cfm?keyword=robot&sort_column=A5&sort_order=asc)

*SpringerLink Books*

Understanding 3D Animation Using Maya

Authors: John Edgar Park <http://link.springer.com/book/10.1007/b138279>

Principles of Computer Graphics Theory and Practice Using OpenGL and Maya®

Authors: Shalini Govil-Pai

<http://link.springer.com/book/10.1007/b135398>