

**College of Engineering & Physical Sciences**  
**Assignment Brief**

CS2420 Computer  
Animation

Coursework

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**Assignment Brief/ Coursework Content:**

The core of the CS2420 Computer Animation coursework is to model and animate an object that you predict exists in 2050 using the Blender software.  
The coursework submission has two distinct parts: 1) the Blender model with accompanying video and 2) a workbook that describes the modelling and animation work. The overall mark is computed as follows: **Model/animation 70%, workbook 30%**.  
The modelled object should be animated and have moving or deformable components. You can model and animate any object you like: an innovative device, a fancy car, a spaceship, an astronaut, etc.

**Descriptive details of Assignment:**

*Animation*

You have complete freedom over what you want to create to meet the specification given above. The marks that are being awarded will reflect the complexity of and time spent on constructing and animating the object.

Note that to reach a first-class mark ( $\geq 70\%$ ), it is expected that the submitted work goes beyond those techniques and methods covered in the lab sessions.

A detailed marking schema is given below.

The total animation (and video) duration should be around 1-3 minutes.

*Workbook*

In addition to the model/animation, you are to put together a workbook that describes your modelling work. For each modelling, and for each animation technique that you used in your coursework the workbook should list the following:

- Used for: What part of your work is this technique used for?
- Purpose: What is the goal of using this technique?
- Part of Blender labs?: <yes/no>
- Related module content: What content was discussed in class is this technique related to?
- Advantages: List advantages of using this technique
- Disadvantages: List disadvantages of using this technique
- Alternatives: How else could the same goal have been achieved?

**Please download the template “Workbook template.docx” from Blackboard.**

The length of the workbook will depend on the complexity and range of techniques used to create the coursework. However, the workbook should not exceed **5 A4 pages**.

The workbook has to be submitted in **PDF format**.

### *Intellectual property*

All submitted work must be your own (although you are allowed to import parts of your model. See 3<sup>rd</sup> party resources).

You must not collaborate with anyone on this piece of work although you may discuss high-level issues as laid down in the Computer Science Assessed Work Guidelines. There is no good reason for two models/animations to look similar and cases, where they are, will be investigated.

This also relates to the text in your workbook, which must be your own.

### *3<sup>rd</sup> party resources*

If necessary, you can import parts of your model from external sources, but you must make sure that you reference these in the workbook in the section “3<sup>rd</sup> party Assets used in the coursework”. The reference to the assets must include a URL to the resource. No marks will be awarded for these, although they might contribute to the overall complexity/originality/aesthetics of the model. Equally, no marks will be awarded for work that 1:1 duplicated exercises taken from the lab sessions.

The best models/animations might be put on Blackboard as sample student work for prospective students to inspect and get an idea of what they will be able to do during their studies.

### Key Dates:

<b>28 February</b>	<b>Coursework set</b>
<b>13 April, 12:00</b>	<b>Submission deadline</b>
<b>4 weeks</b>	<b>Expected feedback time</b>

### Submission Details:

#### *What to submit*

- Blender file(s) of your project. Include all extra files that are needed to render the model in Blender *if they are not included in the Blender file itself*. (you can test this by opening the file on a VDI/lab PC).
- A video file of the rendered animation. The length should be **1-3 minutes**.
- The workbook in **PDF format** (submission in other formats will not be considered), **max length 5 pages A4**.
- Late submission will be penalised 10% per working day for the first 5 days; after 5 days (i.e., one week) the work will not be considered.

#### *How to submit*

Create one .zip archive which contains all files and name it according to the following scheme: **studentno\_lastname\_firstname.zip** and upload this file on Blackboard. Be aware that transmission of large files might take a while and hence make sure to upload your submission in good time to avoid a lateness penalty. Make sure to

retain a backup of all your files at least until after the coursework has been returned to you.

**Marking Rubric:**

The workbook weight is 30% and the model/animation weight is 70%. The workbook will be graded according to the detailedness and completeness of the provided information. To achieve the highest grades for the workbook, each technique needs to be well explained and justified.

The 100 points for the model/animation are assessed as per the table below:

<b><i>Criterion</i></b>	<b><i>Max points</i></b>
<b>Modelling</b>	<b>30</b>
Overall complexity	10
Novel techniques	10
Materials/texturing	10
<b>Animation</b>	<b>60</b>
For each animation technique	
Quality and complexity	15
Bonus if not covered in labs	5
<b>Quality</b>	<b>10</b>
Postproduction and sound	10
Attention to detail	10
Originality	10

***Comment***

The Modelling and Quality criteria are graded overall based on the listed aspects. The maximum points for those criteria are capped at 30 and 10, respectively.

The Animation criterion is graded for each applied technique individually.

Example: A well-executed technique that was covered in the labs will be given a maximum of 15 points. Hence four of those techniques have to be applied to get 60 points. If the techniques are not covered in the labs, a bonus of 5 points is awarded. Hence three novel techniques need to be well executed to achieve the 60 points.