

 Bournemouth University Faculty of Media and Communication	Coursework Assignment Brief		2019-2020
	MSc Computer Animation and Visual Effects		Level 7
	Unit Title: Simulation and Rendering		
	Title of Brief: Simulation Assignment	This assignment is a sub/formal element of coursework worth 50% of the overall unit mark (Each piece of coursework may vary according to the unit)	

THE BRIEF

This assignment, which focuses on simulation techniques, will form 50% the formal assessment for “Simulation and Rendering” in addition to the parallel assignment which focuses on rendering techniques. For this assignment, your task is to conduct a research in a selected topic which falls in the category of simulation techniques and their usage in computer animation.

Related Learning Outcomes

ILO2. demonstrate an advanced understanding of the mathematics and physics used in modern simulation and rendering systems

ILO3. demonstrate the ability to solve complex simulation and rendering problems through the synthesis of current research and industry practice.

Your hand-in will include a written report (approx. 800 words) outlining the implementation details and critical analysis for the simulation of a chosen topic. Attention to the implementation details is important. You should implement at least one related technique among your choices and provide a short video of final artefact you have created. You should reference works and research in the area based on published academic papers where relevant. This report should be submitted to Brightspace.

You should not select the same research topics and area as you implemented in CGI project, unless you can demonstrate and justify the new understanding and knowledge which make your research significantly different from the CGI one.

Assessment Criteria (100%)

- Related background knowledge; (10%)
- Use of appropriate mathematics and physical laws; (20%)
- Depth and broadness of knowledge into the related area; (20%)
- Critical analysis and reflection of methods and implementation approach; (30%)
- Selection of appropriate tools/software, completeness of the implementation and quality of the artefact; (20%)

You must acknowledge your source every time you refer to others' work, using the Harvard System. Failure to do so amounts to plagiarism which is against University regulations. Please refer to www.bournemouth.ac.uk/library for the University's guide to citation in the Harvard style. For citing other's code please read the code citation guide here <http://nccastaff.bmth.ac.uk/jmacey/NCCACodingStandard/Citation.html>

Some sample project ideas can be as follows but you are encouraged to explore other relevant topics:

- Deformation techniques;
- Advanced collision handling;
- Fracture, cracks growth and damage;
- Explosion, smoke and fire simulation;
- Fluid simulation, melting and phase changing;
- Partial differential equations based geometric processing;

SUBMISSION DETAILS

You should submit using Brightspace(Large/Multiple File Submission):

- **A writing report approx. 800 words;**
- **A short video of artefacts (about 1 min) created with your own implementation;**
- **Original scene files and source codes;**

For a Large/Multiple File Submission:

Submit via the assignment submission link in the navigation bar in the appropriate unit on Brightspace.

Please be aware of the following restrictions.

- Individual files (including zipped folders) must be less than 1 GB.
(If any individual files within a submission are likely to be over 1GB please contact the Programme Support Team)

DEADLINE

12:00 (noon), 22 May, 2020

Please note that this is the final time you can submit – not the time to submit!

Your feedback and mark for this assignment will be provided on [12 June, 2020] online. If you fail your assignment or need further clarification on your feedback please make an appointment to see your tutor.

HELP AND SUPPORT

If there are any questions arising from this assignment-brief, please feel free to contact Jian Chang jchang@bournemouth.ac.uk.

- **Plagiarism and Self-Plagiarism:** You must acknowledge your source every time you refer to others' work or work that you have previously submitted and been assessed on, using the **Harvard Referencing** system (Author/Date method). Failure to do so amounts to plagiarism or self-plagiarism which is against University regulations.
Please refer to <http://libguides.bournemouth.ac.uk/study-skills-referencing-plagiarism> for further details of this and to <https://www1.bournemouth.ac.uk/discover/library/using-library/how-guides/how-cite-references> for the University's guide to citation in the Harvard style.
Students must ensure that they do not commit any type of Academic Offence. For further information please see: <https://www1.bournemouth.ac.uk/discover/library/using-library/how-guides/how-avoid-academic-offences>
- Plagiarism regulations extend to audio visual materials and work in other media. Archive or other material not generated by yourself or crew must be appropriately captioned when on screen and an acknowledgement to the source of the material included in the end credits or equivalent part of any online material. Failure to do so amounts to plagiarism or self-plagiarism, which is against University regulations.
- Students with **Additional Learning Needs** may contact Learning Support on <http://studentportal.bournemouth.ac.uk/learning/als/index.html>
- General **academic support** is available via the Study Skills community on Brightspace.
- **Additional support** for Faculty of Media and Communication students only is provided by a small team of Learning Development Tutors. Please contact FMCLearningDevelopment@bournemouth.ac.uk to make an appointment.
- If you have any valid **exceptional circumstances** that mean you cannot meet an assignment submission deadline and you wish to request an extension, you will need to complete and submit the Exceptional Circumstances Form for consideration to your Administrator together with appropriate supporting evidence (e.g., GP note) normally before the coursework deadline. Further details on the procedure and the mitigating circumstances form can be found at www.bournemouth.ac.uk/student/mitigating. *Please make sure you read these documents carefully before submitting anything for consideration.*
- Please be mindful that certain actions carry risk which should be adequately assessed before undertaking the activity. Please refer to University/Faculty guidance for clarification.

Disclaimer: The information provided in this assignment brief is correct at time of publication. In the unlikely event that any changes are deemed necessary, they will be communicated clearly via e-mail and via the VLE and a new version of this assignment brief will be circulated.

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