**description of continuous assessment**

**OFFICE OF ACADEMIC AFFAIRS**

Reference No. : XMUM.OAA - 100/2/8-V3.0

Effective Date : 1 JUNE 2023



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| Course Code | CST305 |
| Course Name | **Computer Graphics** |
| Lecturer | Dr Burra Venkata Durga Kumar |
| Academic Session | 2024/09 |
| Assessment Title | Final Project |

1. **Introduction/ Situation/ Background Information**

This is an advanced course in computer graphics with emphasis on rendering, polygonal meshes, bezier curves and surfaces, shading, lighting, and texture algorithms.

1. **Course Learning Outcomes (CLO) covered**

At the end of this assessment, students are able to:

CLO2: Integrate relevant mathematics algorithms into computer programs to generate elementary computer graphics.

CLO3: Analyze the principles and commonly used paradigms and techniques of computer graphics.

CLO4: Illustrate the application of computer graphic concepts in the development of multimedia, computer games, information visualization, and VR/AR platforms.

1. **University Policy on Academic Misconduct**
2. Academic misconduct is a serious offense in Xiamen University Malaysia. It can be defined as any of the following:
3. **Plagiarism** is submitting or presenting someone else’s work, words, ideas, data or information as your own intentionally or unintentionally. This includes incorporating published and unpublished material, whether in manuscript, printed or electronic form into your work without acknowledging the source (the person and the work).
4. **Collusion** is two or more people collaborating on a piece of work (in part or whole) which is intended to be wholly Group (2 students) and passed it off as any one of group work.
5. **Cheating** is an act of dishonesty or fraud in order to gain an unfair advantage in an assessment. This includes using or attempting to use, or assisting another to use materials that are prohibited or inappropriate, commissioning work from a third party, falsifying data, or breaching any examination rules.
6. All the assessment submitted must be the outcome of the student. Any form of academic misconduct is a serious offense which will be penalised by being given a zero mark for the entire assessment in question or part of the assessment in question. If there is more than one guilty party as in the case of collusion, both you and your collusion partner(s) will be subjected to the same penalty.
7. **Instruction to Students**

This is groupproject **(3 students)** work.

Follow the report template format in Moodle to write your report.

Submit to Moodle before published due date in Moodle. Submissions after the deadline without good reason will be penalized as described above.

Moodle will calculate the late submissions, so please avoid submitting to Teams or email.

Your work should use the following formats:

* Font size: 12 points
* Font: Times New Roman
* Line spacing: 1.5 lines
* Alignment: Justified
* Page length: As per code and output screens

**Important notice:** Plagiarism will be penalized by granting a zero mark for the entire Assignment. No copying among peers (regardless of in part or whole) is allowed. If plagiarism is found among students, all parties to the offence will get zero mark.

* **Deadline**: **Submission week-15 Wednesday 9.00AM-6.00PM (**Kuala Lumpur time zone)  **(Submit to Moodle (Word document file & OpenGL code file with student Number**) Late submission through email will not be accepted.

1. **Evaluation Breakdown**

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| **No.** | **Component Title** | **Percentage (%)** |
|  | **Design: CLO2**  Integrate algorithms to design is excellent, in terms of detail of design and its arrangement, appropriate color choice, effects and entity combination. | **15%** |
|  | **Creativity: CLO2**  View idea is original, creative, and interesting. Students work to create something unique. Exceptional effort was invested by the student to generate concepts or potential solutions. Integrate | **15%** |
|  | **Objects: CLO3**  Explore excellent Objects in the view that give a concrete form and personality to the ideas presented by developers | **10%** |
|  | **Animation**: **CLO3**  Analyze an excellent and appropriate animation effects. | **15%** |
|  | **Complexity: CLO3**  Analyze an appropriate, excellent design techniques using OpenGl | **15%** |
|  | **Presentation (Individual Assessment): CLO4**  Demonstrateproficiency in explaining concept, the codes, full of confidences, clear and easy to understand. Also, the design has a great quality of graphics | 15% |
|  | **Document: CLO4**  Introduction, methods, assumptions, output, conclusion | 15% |
|  | **TOTAL** | **100%** |

1. **Task 1: (Design, Creativity, Objects, Animation, Complexity as per the following question)**
2. Design 3D graphics that contains specified title and simply telling a quote, Construction, transferring knowledge, advertising a new product (for any industry like Medical/home/transport/Engineering/Interior Deco/ Agriculture/…), the idea of the title chosen is to be entirely determined by the students. However, students are not advised to create human, dinosaurs, creatures or any other complicated organic figure. Students are encouraged to create a new object.

* **The technical requirements are:**

1. Modeling should be at least at the level of what practiced in the class.
2. Lighting and Shadows should be good. Good means balanced, not too much lights and not very dark scene.
3. Create simple features in artistic way like nice combination of colors and texture mappings and lightings.
4. You should have at least one reasonably complex modelling in your design. (e.g. a furniture, etc.)
5. You can use any tool, any software, or combination of many software

* You will have to submit a relevant report about your project.
* The report should be in **word format** and the marking rubrics should be its last page.
* There is no limitation for your report but at least it should include the following sections:

**Task 2 Document details (6 +/- pages)**

1. 1.**Cover Page**
2. **2. Table of contents**

**Abstract (200 words)**

1. **3.Discussion** Its about objective of the product design, target users and background of the design.
2. 4. **Problems & objectives** Discussion of the problems you encountered in going through the project, and how you fixed them.
3. 5**Design** Any pre design and hand drawn sketches or concept. And a discussion about how the idea of this design comes to your mind.
4. 6. **Implementation** Summary of what objects you have created, what software’s you have used, and what features in each software you have applied into your 3d design. This section also can include screenshots and explanation about each object in your design.
5. **7. The screen layout (Final Render)** This will be a full page that just includes your final rendered design in it. Also, you can include any other version if you have rendered many times till you get the final product.
6. **8. References** Any resources that you have used specially link of the online resources and tutorials.

**9. Marking Rubrics**

**APPENDIX 1**

**Marking Rubrics**

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Component Title** |  | | | | | **Percentage (%)** | |  | | | | | |
| **Criteria/Task/Questions)** | **Score and Descriptors** | | | | | | | **Weight (%)** | | | **Marks** | | |
| **Excellent**  **(5)** | **Good**  **(4)** | **Average**  **(3)** | **Need Improvement**  **(2)** | **Poor**  **(1)** | |  | | |  | | |
| **Design: CLO2**  Apply an design is excellent, in terms of detail of design and its arrangement, appropriate color choice, effects and entity combination. |  |  |  |  |  | | **15%** | | |  | | |
| **Creativity: CLO2**  Apply a technique to view idea is original, creative, and interesting. Students work to create something unique. Exceptional effort was invested by the student to generate concepts or potential solutions. |  |  |  |  |  | | **15%** | | |  | | |
| **Objects: CLO3**  Demonstrate excellent Objects in the view that give a concrete form and personality to the ideas presented by developers |  |  |  |  |  | | **10%** | | |  | | |
| **Animation**: **CLO3**  Demonstrate an excellent and appropriate animation effects. |  |  |  |  |  | | **15%** | | |  | | |
| **Complexity: CLO3**  Analyze an appropriate, excellent design techniques using OpenGl |  |  |  |  |  | | **15%** | | |  | | |
| **Presentation (Individual Assessment): CLO4**  Demonstrateproficiency in explaining concept, the codes, full of confidences, clear and easy to understand. Also, the design has a great quality of graphics. |  |  |  |  |  | | 15% | | |  | | |
| **Document: CLO4**  Describe the following elements Introduction, methods, assumptions, output, conclusion. |  |  |  |  |  | | 15% | | |  | | |
| **TOTAL** | | | | | | | | | **100%** | | |  | | |

**Note**: Please attach this appendix together with the submission of coursework