**Course Syllabus**

| **1** | **Course title** | Multimedia 3 (3D Modeling) | |
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| **2** | **Course number** | 2001372 | |
| **3** | **Credit hours** | 3 |  |
| **Contact hours (theory, practical)** | 6 | |
| **4** | **Prerequisites/corequisites** | (Multimedia 1) (Multimedia 2) | |
| **5** | **Program title** | Art and design | |
| **6** | **Program code** |  | |
| **7** | **Awarding institution** | University of Jordan | |
| **8** | **School** | Design and Art | |
| **9** | **Department** | Visual Art | |
| **10** | **Course level** | level 4 | |
| **11** | **Year of study and semester (s)** | first semester 2022/2023 | |
| **12** | **Other department (s) involved in teaching the course** |  | |
| **13** | **Main teaching language** | English | |
| **14** | **Delivery method** | Face to face learning | |
| **15** | **Online platforms(s)** | ☐Moodle ☐Microsoft Teams ☐Skype ☐Zoom  ☐Others………… | |
| **16** | **Issuing/Revision Date** | 16/11/2022 | |

**17 Course Coordinator:**

| Name: Mahmoud Altrad Contact hours: 11:00 am - 8:00 pm  Office number: Phone number:+962785202792  Email: mahmoudaltrad0@gmail.com |
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**19 Course Description:**

| This course teaches the principles and practice of 3D digital modeling, with some instruction on materials, textures, lighting and rendering. Students will gain a fundamental understanding of polygons, subdivision surfaces, NURBS and splines along with deformations and editing in order to create models using Maya’s 3D software. students will develop skills in 3D design and apply these in a series of assignments that will end in the creation of a full model complete with textures.  In addition to class time, you must spend a significant number of hours in the lab completing homework and gaining proficiency with the tools. |
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**20 Course aims and outcomes:**

| A- Aims:  -solid understanding of the principles and practice of 3D modeling.  -Know what makes a model "good", including a clean topology and edge flow, -project structure, and texture-mapping.  -Gain proficiency at the techniques of environment modeling, lighting and rendering.  -Gain comfort working in Maya software to create a model And texture  B- Students Learning Outcomes **(SLOs):**  Upon successful completion of this course, students will be able to:  The student will demonstrate knowledge of how to create complex three dimensional (3D) forms by:  1. Utilizing primitive shapes to model 3D forms.  2. Describing the difference between non-uniform rational B splines (NURBS), polygons and sub division surfaces and applying these techniques to create 3D forms.  3. Using Boolean functions and Maya polygonal modeling toolset (extrude, lattices etc.) to create 3D forms.  4. Manipulating points, vertices, edges and faces to create 3D forms.  5. Utilizing Mesh Topology at different mesh resolutions.  6. Demonstrate knowledge of polygon modeling.  7. Describing the differences between various rendering engines (e.g., Arnold).  8. Creating 3D cameras to produce depth of field, motion blur and exposure effects.  9. Creating a photorealistic render. |
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**21. Topic Outline and Schedule:**

| | **Week** | **Lecture** | **Topic** | **Student Learning Outcome** | **Learning Methods (Face to Face/Blended/ Fully Online)** | **Platform** | **Synchronous / Asynchronous Lecturing** | **Evaluation Methods** | **Resources** | | --- | --- | --- | --- | --- | --- | --- | --- | --- | | 1 |  | -Introduction to course  -Introducing examples of 3D works (rendered Images) | -Gained basic concepts and understanding of tools related to 3D production | face to face | Autodesk Maya 3D |  | - |  | |  | Maya Interface | -Understanding Menus, Icons, Dialog Boxes, and the Maya Interface | face to face | Autodesk Maya 3D |  | - |  | |  | -Understanding Cameras & Basic Modeling | -Using Maya's viewport to work with Cameras  -understanding the basics of the modeling tools. | face to face | Autodesk Maya 3D |  | In class practicing |  | | 2-6 |  | Maya 3D practicing | Understanding polygon and surfaces and their options (Components Tools-Vertex, Edge, Face). | face to face | Autodesk Maya 3D |  | Assignment 1 |  | |  | Maya 3D practicing | View & Shading Menu) Image Plan and Reference BG. (Layer Editor). Reference Image using layers) Practicing Modeling Technique. | face to face | Autodesk Maya 3D |  | In class practicing |  | |  | project 1 | objects modeling | face to face | Autodesk Maya 3D |  | project 1  (3D mesh topology ) |  | | **Week** | **Lecture** | **Topic** | **Student Learning Outcome** | **Learning Methods (Face to Face/Blended/ Fully Online)** | **Platform** | **Synchronous / Asynchronous Lecturing** | **Evaluation Methods** | **Resources** | | 6-10 |  | - Maya 3D practicing | Working with modeling technique and complex geometry Example | face to face | Autodesk Maya 3D |  | In class practicing |  | | 6-10 |  | -Maya 3D practicing  -Curve Menu/Curve Component. | Exploring the most important tools from the curves Menu.  Surfaces Menu (Revolve, Loft, Planner, Extrude, Birail, Boundary, Bevel, Bevel Plus). (Convert from nurbs to polygon) from Modify Menu. | face to face | Autodesk Maya 3D |  | In class practicing |  | | 6-10 |  | Practicing Modeling Technique | Working with modeling technique and complex geometry Example | face to face | Autodesk Maya 3D |  | project 2 |  | | 10-15 |  | Practicing Modeling Technique | Exploring Sculpting Shelf (Sculpt geometry tools)  Deform Menu (Nonlinear Deformation Tools).  Practicing (Working with modeling technique/complex geometry Example). | face to face | Autodesk Maya 3D |  |  |  | |  | Introducing Final Project: | - Doing research during class and  -collect information/references about the final project. Presenting final concepts/ideas in front of class (PDF Version) | face to face | Autodesk Maya 3D |  | Final project  PHASE 1 |  | | 10-15 |  | Working on the Second phase of the final project. Evaluating/Grading the Second phase of the final project. | ـــــــــــــــــ | face to face | Autodesk Maya 3D |  | Final project  PHASE 2 |  | | 15 |  | Working on the Third phase of the final project. Evaluating/Grading the Third phase of the final project. | ـــــــــــــــــ | face to face | Autodesk Maya 3D |  | Final project  PHASE 3 |  | |  | **Final Project Submission: Class Time** | ـــــــــــــــــ | face to face | Autodesk Maya 3D |  | **Final Project Submission** |  | |
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**22 Evaluation Methods:**

| Opportunities to demonstrate achievement of the SLOs are provided through the following assessment methods and requirements:   | **Evaluation Activity** | **Mark** | **Topic(s)** | **SLOs** | **Period (Week)** | **Platform** | | --- | --- | --- | --- | --- | --- | | Assignment \_1 | 5% | Simple 3D model |  | Week 2 |  | | In class Attitude and attendance | 5% | Practicing and attendance |  |  |  | | Project 1 | 20% | 3D composition with at least three objects |  | Week 2-6 |  | | project 2 | 20% | 3d composition with simple texture |  | Week 6-10 |  | | project 3 | 40% | Conceptual 3d composition with simple texture |  | Week 10-15 |  | | Neatness of submissions  Effort & Participation | 10% | ـــــــــــــــــ |  | Week 1-15 |  | |
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**23 Course Requirements**

| **students should have a computer, internet connection,, account on (Autodesk education)** |
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**24 Course Policies:**

| projects: There are one assignment , First project, Second project, and final project.  • Cheating is not tolerated and against the university rules. Cheating will result in failing the course and reporting the incident to the dean of the college of Art and design.  • Attendance is obligatory; the allowable absence is 10% of the contact time.  • Submission of Assignments  • All work must be submitted on time.  • Late submissions will not be accepted and will not be evaluated.  • All projects should be individually developed. There will be no "team"projects.  • Assignments are normally to be submitted before the next course assignment starts.  • Each project builds on the previous one, so in case of not submitting a project on time, it will be the student's responsibility to catch up and finish the upgrade project to continue for the new assignment.  • Participation is highly appreciated and encouraged |
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**25 References:**

| -Prof Sham Tickoo Purdue Univ, Autodesk Maya 2018: A Comprehensive Guide | ASIN: B0757MNZRJ | Publication Date: August 2017 | Edition: 10 Edition  -Paul Naas, How to Cheat in Maya 2017 | ISBN-10: 1498797083| ISBN-13: 978-1498797085 | Publication Date: October 2018 | Edition: First Edition  -Michael O’Rourke, Principles of Three Dimensional Animation | ISBN-10: 0393730832 | ISBN-13: 978-0393730838 | Publication Date: January 2003 | Edition: Third Edition |
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**26 Additional information:**

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Name of Course Coordinator: -----------------------------------Signature: ----------------------- Date: -------------------

Head of Curriculum Committee/Department: ---------------------------- Signature: ------------------------------------

Head of Department: ------------------------------------------------------------ Signature: ------------------------------

Head of Curriculum Committee/Faculty: ---------------------------------------- Signature: ---------------------------

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