

LANEY COLLEGE COURSE OUTLINE

COLLEGE:		STATE APPROVAL DATE:	05/11/2018
ORIGINATOR:	Koina Freeman	STATE CONTROL NUMBER:	CCC00059 3389
		BOARD OF TRUSTEES APPROVAL DATE:	05/08/2018
		CURRICULUM COMMITTEE APPROVAL DATE:	03/16/2018
		CURRENT EFFECTIVE DATE:	08/01/2018

DIVISION/DEPARTMENT:

1. REQUESTED CREDIT CLASSIFICATION:

Credit - Degree Applicable
Course is not a basic skills course.
Program Applicable

2. DEPT/COURSE NO:

MEDIA 072

3. COURSE TITLE:

3D Modeling for AR/VR

4. COURSE: Laney New Course

TOP NO. 0699.00*

5. UNITS: 3.000

HRS/WK LEC: 2.00 Total: 35.00

HRS/WK LAB: 3.00 Total: 52.50

HRS/WK TBA:

6. NO. OF TIMES OFFERED AS SELETED TOPIC: AVERAGE ENROLLMENT:

7. JUSTIFICATION FOR COURSE:

Satisfies requirement for Certificate in AR and VR.

8. COURSE/CATALOG DESCRIPTION

3D Modeling for AR/VR: Principles and practices of low and high poly modeling for real time, and immersive design content in polygons, NURBS, and subdivision surfaces; applications of textures, materials, and lighting to models; rendering with appropriate materials.

9. OTHER CATALOG INFORMATION

- a. Modular: No If yes, how many modules:
- b. Open entry/open exit: No
- c. Grading Policy: Letter Grade Only
- d. Eligible for credit by Exam: No
- e. Repeatable according to state guidelines: No
- f. Required for degree/certificate (specify):
 AR/VR: Immersive Design
- g. Meets GE/Transfer requirements (specify):
- h. C-ID Number: Expiration Date:

i. Are there prerequisites/corequisites/recommended preparation for this course? No

10. LIST STUDENT PERFORMANCE OBJECTIVES (EXIT SKILLS): (Objectives must define the exit skills required of students and include criteria identified in Items 12, 14, and 15 - critical thinking, essay writing, problem solving, written/verbal communications, computational skills, working with others, workplace needs, SCANS competencies, all aspects of the industry, etc.)(See SCANS/All Aspects of Industry Worksheet.)

Students will be able to:

1. Research appropriate references to aid in conceptual design.

2. Adjust conceptual designs based on group critiques
3. Build low and high poly models appropriate for Augmented and Virtual Reality content.
4. Model backgrounds and props that support the look and feel of the project's characters and story elements.
5. Apply textures to models including UV texture mapping for characters.

11A. COURSE CONTENT: List major topics to be covered. This section must be more than listing chapter headings from a textbook. Outline the course content, including essential topics, major subdivisions, and supporting details. It should include enough information so that a faculty member from any institution will have a clear understanding of the material taught in the course and the approximate length of time devoted to each. There should be congruence among the catalog description, lecture and/or lab content, student performance objectives, and the student learning outcomes. List percent of time spent on each topic; ensure percentages total 100%.

LECTURE CONTENT:

- 10% Classroom participation in critiques
- 10% Conceptual visualizations
- 05% Conceptual Design adjustment
- 10% Analyzing storyboards and Character designs
- 10% Creating low and high poly hard surface polygonal models
- 10% Creating low and high poly organic models using NURB curves
- 10% Creating and editing models using subdivision surfaces
- 15% Application of Material and Textures including UV mapping
- 20% Design an environment that renders in real time immersive applications

11B. LAB CONTENT:

- 10% Lab assignments
- 10% Conceptual visualizations exercises
- 05% Conceptual Design adjustment assignments
- 10% Analyzing storyboards and Character designs projects
- 10% Creating low and high poly hard surface polygonal models
- 10% Creating low and high poly organic models using NURB curves
- 10% Creating and editing models using subdivision surfaces
- 15% Application of Material and Textures including UV mapping
- 20% Build an environment that renders in real time immersive applications

12. METHODS OF INSTRUCTION (List methods used to present course content.)

1. Lecture
2. Lab
3. Observation and Demonstration
4. Critique
5. Projects
6. Multimedia Content

7. Discussion

- 13. ASSIGNMENTS:** 4.00 hours/week (List all assignments, including library assignments. Requires two (2) hours of independent work outside of class for each unit/weekly lecture hour. Outside assignments are not required for lab-only courses, although they can be given.)
Out-of-class Assignments:
Design Research Project Development Presentation development

ASSIGNMENTS ARE: (See definition of college level):
Primarily College Level

- 14. STUDENT ASSESSMENT:** (Grades are based on):
NON-COMPUTATIONAL PROBLEM SOLVING (Critical thinking should be demonstrated by solving unfamiliar problems via various strategies.)
SKILL DEMONSTRATION
OTHER (Describe):
Completed Projects Final Presentation

Why "ESSAY" is not checked:

15. TEXTS, READINGS, AND MATERIALS

A. Textbooks:

Dariush Derakhshani. 2015. *Introducing Autodesk Maya 2016: Autodesk Official Press* 1st. Sybex

*Date is required: Transfer institutions require current publication date(s) within 5 years of outline addition/update.

B. Additional Resources:

Library/LRC Materials and Services:

The instructor, in consultation with a librarian, has reviewed the materials and services of the College Library/LRC in the subject areas related to the proposed new course

Are print materials adequate? Yes

Are nonprint materials adequate? Yes

Are electronic/online resources available? Yes

Are services adequate? Yes

Specific materials and/or services needed have been identified and discussed. Librarian comments:
Please provide a list of recent, recommended supplementary (non-textbook) titles to the acquisitions librarian.

C. Readings listed in A and B above are: (See definition of college level):

Primarily college level

16. DESIGNATE OCCUPATIONAL CODE:

B - Advance Occupational

17. LEVEL BELOW TRANSFER:

Y = Not Applicable

SUPPLEMENTAL PAGE

Use only if additional space is needed. (Type the item number which is to be continued, followed by "continued."
Show the page number in the blank at the bottom of the page. If the item being continued is on page 2 of the outline, the first supplemental page will be "2a." If additional supplemental pages are required for page 2, they are to be numbered as 2b, 2c, etc.)

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STUDENT LEARNING OUTCOMES

1. **Outcome:** Design and build models appropriate for AR and VR content from concept to final product.

This outcome maps to the following Institution Outcomes:

- Career Technical Education - Students will demonstrate technical skills in keeping with the demands of their field of study.
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Assessment: Instructor and class critique of final production model according to Rubric distributed and discussed in class.

2. **Outcome:** Collaborate effectively with production team.

This outcome maps to the following Institution Outcomes:

- Communication - Students will effectively express and exchange ideas through various modes of communication.

Assessment: Instructor evaluation of student activities during class projects.

3. **Outcome:** Adapt professional skills to most current Immersive Design and AR/VR technology industry standards

This outcome maps to the following Institution Outcomes:

- Personal and Professional Development - Students will develop their knowledge, skills and abilities for personal and/or professional growth, health and well being.

Assessment: Instructor evaluation of student competency in most current Immersive Design and AR/VR industry tools.

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