CS 78.1B Course Outline as of Spring 2019

CATALOG INFORMATION

Dept and Nbr: CS 78.1B Title: DESIGN IT 3D PRINTING
Full Title: Design It for 3D Printing
Last Reviewed: 9/24/2018

Units		Course Hours per Week		Nbr of Weeks	Course Hours Total	
Maximum	1.50	Lecture Scheduled	3.00	8	Lecture Scheduled	24.00
Minimum	1.50	Lab Scheduled	1.00	4	Lab Scheduled	8.00
		Contact DHR	0		Contact DHR	0
		Contact Total	4.00		Contact Total	32.00
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 48.00 Total Student Learning Hours: 80.00

Title 5 Category:	AA Degree Applicable
Grading:	Grade or P/NP
Repeatability:	00 - Two Repeats if Grade was D, F, NC, or NP
Also Listed As:	
Formerly:	

Catalog Description:
Learn how to modify existing 3D models and create your own custom objects. Work with 3D modeling and slicing software to print these objects.

Prerequisites/Corequisites:
Course Completion of CS 78.1A

Recommended Preparation:
Eligibility for ENGL 100 or ESL 100

Limits on Enrollment:

Schedule of Classes Information:
Description: Learn how to modify existing 3D models and create your own custom objects. Work with 3D modeling and slicing software to print these objects. (Grade or P/NP)
Prerequisites/Corequisites: Course Completion of CS 78.1A
Recommended: Eligibility for ENGL 100 or ESL 100
Limits on Enrollment:
Transfer Credit: CSU;
Repeatability: Two Repeats if Grade was D, F, NC, or NP

ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:

AS Degree:	**Area**			Effective:	Inactive:
CSU GE:	**Transfer Area**			Effective:	Inactive:
IGETC:	**Transfer Area**			Effective:	Inactive:
CSU Transfer:	Transferable	Effective:	Spring 2019	Inactive:	
UC Transfer:		Effective:		Inactive:	

CID:

Certificate/Major Applicable:
Both Certificate and Major Applicable

Approval and Dates

Version:	01	Course Created/Approved:	9/24/2018
Version Created:	8/21/2018	Course Last Modified:	6/26/2023
Submitter:	Donald Laird	Course last full review:	9/24/2018
Version Status:	Approved New Course (First Version)	Prereq Created/Approved:	9/24/2018
Version Status Date:	9/24/2018	Semester Last Taught:	
Version Term Effective:	Spring 2019	Term Inactive:	

COURSE CONTENT

Student Learning Outcomes:
At the conclusion of this course, the student should be able to:
1. Manipulate basic objects in a 3D environment.
2. Create and print basic 3D objects.

Objectives:
At the conclusion of this course, the student should be able to:
1. Create basic 3D models using at least three basic modeling shapes.
2. Modify 3D models using at least three basic editing tools.
3. Manipulate camera controls in order to see models from different angles.
4. Import existing 3D models and add to existing projects.
5. Print 3D objects.

Topics and Scope:

I. Understanding 3D Terminology
II. Basic 3D Model Creation
  A. Lines, rectangles, circles, and arcs
  B. Pushing and pulling faces and edges
  C. Selecting objects and object components
III. Editing 3D Models
  A. Scaling and rotating objects
  B. Combining primitive shapes

IV. Printing Custom 3D Objects

All topics are covered in the lecture and lab portions of the course.

Assignment:

Lecture-Related Assignments:
1. Weekly projects (1 - 5)
2. Final exam

Methods of Evaluation/Basis of Grade:

Writing: Assessment tools that demonstrate writing skills and/or require students to select, organize and explain ideas in writing.

None, This is a degree applicable course but assessment tools based on writing are not included because problem solving assessments are more appropriate for this course.	Writing 0 - 0%

Problem Solving: Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.

Weekly projects	Problem solving 60 - 70%

Skill Demonstrations: All skill-based and physical demonstrations used for assessment purposes including skill performance exams.

None	Skill Demonstrations 0 - 0%

Exams: All forms of formal testing, other than skill performance exams.

Final exam	Exams 20 - 30%

Other: Includes any assessment tools that do not logically fit into the above categories.

Attendance and participation	Other Category 0 - 10%

Representative Textbooks and Materials:
3D Printing Projects. DK. DK Children. 2017

OTHER REQUIRED ELEMENTS

STUDENT PREPARATION

Matric Assessment Required:	E	Requires English Assessment
Prerequisites-generate description:	A	Auto-Generated Text
Advisories-generate description:	A	Auto-Generated Text
Prereq-provisional:	N	NO
Prereq/coreq-registration check:	Y	Prerequisite Rules Exist
Requires instructor signature:	N	Instructor's Signature Not Required

BASIC INFORMATION, HOURS/UNITS & REPEATABILITY

Method of instruction:	02	Lecture
	04	Laboratory
Area department:	CS	Computer Studies
Division:	72	Arts & Humanities
Special topic course:	N	Not a Special Topic Course
Program status:	1	Both Certificate and Major Applicable
Repeatability:	00	Two Repeats if Grade was D, F, NC, or NP
Repeat group id:		

SCHEDULING

Audit allowed:	Y	Auditable
Open entry/exit:	N	Not Open Entry/Open Exit
Credit by exam:	N	Credit by examination not allowed
Budget code: Program:	0000	Unrestricted
Budget code: Activity:	0701	Computer & Information Science

OTHER CODES

Discipline:	Computer Information Systems	
Basic skills:	N	Not a Basic Skills Course
Level below transfer:	Y	Not Applicable
CVU/CVC status:	N	Not Distance Ed
Distance Ed Approved:	N	
Emergency Distance Ed Approved:	N	None
Credit for Prior Learning:	N	Agency Exam
	N	CBE
	N	Industry Credentials
	N	Portfolio
Non-credit category:	Y	Not Applicable, Credit Course
Classification:	Y	Career-Technical Education
SAM classification:	C	Clearly Occupational
TOP code:	0702.00	Computer Information Systems
Work-based learning:	N	Does Not Include Work-Based Learning
DSPS course:	N	Not a DSPS Course
In-service:	N	Not an in-Service Course
Lab Tier:	21	Credit Lab - Tier 1