5-Year Plan for Assessment of Program Learning Outcomes

AAS Degree

I. Program Information

Division:

Business and Information Technology

Name of Program:

Computer-Aided Technology

Certificates Embedded in Program:

Computer-Aided Technology—Computer-Aided Design Computer-Aided Technology—Unmanned Aerial Systems

Assessment Plan for Following Five Years:

FY 2020 – FY 2024 (July 1, 2019 – June 30, 2024)

Faculty Who Prepared Plan:

Program Chair: John Helton Faculty: John Helton

Date Submitted by Faculty:

November 16, 2018 – first version submitted for Academic Outcomes Assessment Committee April 19, 2019 – revised version submitted to division dean for review

Division Dean:

John Claybon

Date Submitted by Dean:

May 3, 2019

II. Institutional Mission or End Statement Reference:

Institutional Mission:
OCCC provides broad access to learning that empowers students to complete a certificate or degree and that enriches the lives of everyone in our community.

ENDS
- Access: Our community has broad access to valuable certificate and degree programs, and non-credit educational opportunities and events.

- Student Success: Our students successfully complete their academic courses, persist in college and earn certificates or degrees at OCCC or another institution.

- Workforce Development: Our graduates earn higher-level degrees or are successful in technical and professional careers.

- Community Development: Our community's quality of life is enriched through our educational, artistic and recreational programs and events.

III. Program Learning Outcomes:

List all program learning outcomes for the program designated above. There should be 5-10 program learning outcomes total.

Under each outcome, list the measures. There should be at least 1 measure per outcome, but there can be up to 3 measures per outcome.

Indicate which outcome(s) will be assessed in each year of this plan. Only 1-3 outcome(s) should be assessed in a particular year.

All learning outcomes for this program will be assessed over the five-year cycle of this plan. Annual reports will evaluate only the outcome(s) designated for that year. The program review (or accreditation process for programs with external accreditation) will report on all program learning outcomes.

Outcome 1 (required):

Apply mathematical and scientific concepts to solve design problems.

Measure 1 (required): Students will prepare an algorithm to calculate area and volume of a 3-dimensional object in Programming assignment 3. 70% of the students will score 70% or higher on the assignment.	☒Direct ☐Indirect (required)	Anticipated Target (required): Students enrolled in CAT 2163

Year Outcome 1 will be assessed (required):

2020

Outcome 2 (required):

Extract and analyze data from drawings, maps or models.

Measure 1 (required): 70% of the students will score 70% or better on Part 2 of Exam 2.	☒Direct ☐Indirect (required)	Anticipated Target (required): Students enrolled in CAT 1214.
Measure 2: Students will score 70% or better on Assignment 4-3 – Anchor Base	☒Direct ☐Indirect	Anticipated Target: Students enrolled in CAT 1043.

Year Outcome 2 will be assessed (required):

2021

Outcome 3 (required):

Create industry specific drawings, maps or models by applying design software.

Measure 1 (required): Students will develop drawings for the drawing portion of the final project. 70% of the students will score 70% or higher on the project.	☒Direct ☐Indirect (required)	Anticipated Target (required): Students enrolled in CAT 1214.
Measure 2: Students will average a 3 or above out of 5 on the Presentation Evaluation survey of the Design Project Capstone Presentation.	☐Direct ☒Indirect	Anticipated Target: Students enrolled in the capstone course CAT 2924

Year Outcome 3 will be assessed (required):

2022

Outcome 4 (required):

Apply computer programming or scripting to automate processes.

Measure 1 (required): Students will create script files using AutoCAD to automate a process. 70% of the students will score 70% or higher on the assignment.	☒Direct ☐Indirect (required)	Anticipated Target (required): Students enrolled in CAT 2163
Measure 2: Students will manipulate the AutoCAD database using Visual LISP programming language to automate AutoCAD. 70% of the students will score 70% or higher on the assignment.	☒Direct ☐Indirect	Anticipated Target: Students enrolled in CAT 2163

Year Outcome 4 will be assessed (required):

2023

Outcome 5 (required):

Create a portfolio to assemble projects of major classes in their degree.

Measure 1 (required): Students will assemble AutoCAD projects in their portfolio. 70% of the students will score 70% or higher on the assignment.	☒Direct ☐Indirect (required)	Anticipated Target (required): Students enrolled in CAT 1214.
Measure 2: Students will create a portfolio to include their major assignments of their major courses in their degree. 70% of the students will score 70% or higher on the assignment.	☐Direct ☒Indirect	Anticipated Target: Students enrolled in the capstone course CAT 2924.

Year Outcome 5 will be assessed (required):

2024

IV. Program Learning Outcomes and Courses

Please check the program learning outcome associated with the courses in the program.

All core courses must address at least 1 program learning outcome.

Support courses should address outcomes. Some support courses are required by a university for transfer. Please list and check any support courses applicable to the outcome.

Program Learning Outcomes:	O1	O 2	O 3	O 4	O 5
Core Courses:					
CAT-1043 Engineering Principles	X	X	X		
CAT-1053 Manufacturing Materials & Processes	X				
CAT-1113 UVS	X	X	X		
CAT-1123 UVS Operations	X	X	X		
CAT-1133 Airspace & Regulations	X				
CAT-1214 CAD	X	X	X	X	X
CAT-1253 3D Modeling	X	X	X	X	
CAT-1313 Intro to GIS	X	X	X		X
CAT-1323 Intro to Spatial Tech		X	X	X	X
CAT-2023 Design Mechanics	X		X		
CAT-2123 Digital Fabrication	X	X	X		
CAT-2163 CAD Automation	X	X	X	X	
CAT-2313 Spatial Analysis	X	X	X	X	X
CAT-2543 Application in CAD	X	X	X		
CAT-2703 Practicum	X	X	X		
CAT-2924 Design Project	X	X	X	X	X
CS-1143 Beginning Programming	X			X	
Support Courses:					
MATH-1613	X				