

Transfer Agreement
 Oklahoma City Community College: A.S. - Computer Science
 And
 University of Central Oklahoma: B.S.- Software Engineering

To comply with this agreement, students must complete the associate degree with the major listed above and include the specific courses listed below.

Oklahoma City Community College (OCCC)	University of Central Oklahoma (UCO)
An Associate in Science (A.S.) or Associate in Art (AA) degree from an accredited Oklahoma institution that includes the OSRHE minimum requirements will satisfy the UCO University Core.	<ul style="list-style-type: none"> • Written and Oral Communication • Quantitative Reasoning/Scientific Method with Lab • Critical Inquiry and Aesthetic Analysis
See the program requirements for the associate degree on the OCCC website. Credited courses completed as part of the A.A. or A.S. that do not apply to the general education at OCCC or the UCO major transfer to UCO as electives.	<ul style="list-style-type: none"> • American Historical and Political Analysis • Cultural and Language Analysis • Social and Behavioral Analysis • Life Skills
Hours required for the A.S. or A.A. degree/major at OCCC62-64	Remaining hours in UCO University Core.....0

OCCC courses	UCO courses
^CS 1143 Beginning Programming	^CMSC 1513 Beginning Programming
^MATH 1533 Pre-Calculus	^MATH 1533 Precalculus-Algebra
^MATH 1613 Trigonometry	^MATH 1593 Plane Trigonometry
CS 2163 JAVA	CMSC 1613 Programming I
CS 2363 C++	CMSC 2613 Programming II
MATH 2104 Calculus and Analytic Geometry I and	MATH 2313 Calculus 1 and
MATH 2214 Calculus and Analytic Geometry II	MATH 2323 Calculus 2

^UCO lists the following for this program: Students majoring in Software Engineering are encouraged to complete the following courses in high school: Advanced Placement High School Programming Course OR CMSC 1513 Beginning Programming. MATH 1533 Precalculus-Algebra OR Placement Score AND MATH 1593 Plane Trigonometry OR Placement Score.

*For physical science requirements in the OCCC degree, consult the UCO list on page 2 of this agreement and note appropriate course selections offered at OCCC that meet the requirements at UCO: CHEM 1115, CHEM 1215, PHYS 1114, PHYS 1214, PHYS 2014, PHYS 2114.

Total at Oklahoma City Community College.....62-64

To be taken at the University of Central Oklahoma.....60-66

(May be taken at OCCC.) This signifies that a UCO course requirement can be met with the equivalent OCCC course (found on the UCO website). To take these courses at OCCC, students should confirm with their advisors that the course/s will fit into the associate degree without exceeding the requirements. A minimum of 60 hours must be taken at a baccalaureate granting institution. Exceeding 64 credit hours at the community college means the student will be required to take more than the minimum of 124 credit hour total. A minimum of 40 hours of 3/4000 level courses is required for the baccalaureate. Courses from community colleges are 1/2000 level.

Major Requirements

Software Engineering	66
Required.....	43
^CMSC 1621	Programming I Laboratory
^CMSC 2123	Discrete Structures
^CMSC 2621	Programming II Laboratory
^CMSC 2833	Computer Organization and Architecture I
^SE 3103	Object Oriented Software Design and Construction
^CMSC 3613	Data Structures and Algorithms
^CMSC 3621	Data Structures and Algorithms Lab
^CMSC 4003	Applications of Database Management Systems
^CMSC 4083	Cybersecurity
^SE 4283	Software Engineering I
^CMSC 4401	Ethics in Computing
^SE 4423	Software Engineering II
^SE 4433	Software Architecture and Design
^SE 4513	Software Engineering Senior Project *
^MATH 2333	Calculus 3 (May be taken at OCCC.)
^MATH 3143	Linear Algebra
^STAT 2113	Statistical Methods (May be taken at OCCC.) OR
^STAT 2103	Introduction to Statistics for Sciences OR
^STAT 4113	Mathematical Statistics 1

^ A grade of 'C' or better must be earned in all required CMSC, SE, MATH and STAT courses.

* SE 4513 is recommended to be taken in the last semester prior to graduation.

Elective Science/Math courses.....8-11 (May be taken at OCCC.)

Select a minimum of eight (8) hours including at least one of the CHEM or PHY lab courses:

CHEM 1103	General Chemistry I
CHEM 1112	General Chemistry I Recitation/Laboratory
CHEM 1223	General Chemistry II
CHEM 1232	General Chemistry II Recitation/Laboratory
PHY 1114	General Physics I and Laboratory
PHY 1214	General Physics II and Laboratory
PHY 2014	Physics for Science & Engineering I and Lab
PHY 2114	Physics for Science & Engineering II and Lab

Any non-required 2/3/4000 level MATH or STAT courses with the following exceptions: MATH 2013, 2053, 2113, 2123, 2133, 2153, 2743, 3323, or 4843.

Elective Courses 9

Choose nine (9) hours from one of the three application areas:

Application Development

CMSC 3413	Enterprise Programming
CMSC 4133	Concepts of Artificial Intelligence
CMSC 4143	Algorithms for Machine Learning
CMSC 4303	Mobile Apps Programming

- CMSC 4313 Internet of Things
- CMSC 4373 Cloud Web Apps Development
- Cybersecurity **
- CMSC 4163 Secure Systems Administration and Certification
- CMSC 4323 Network Security
- CMSC 4333 Incident Analysis and Response I
- CMSC 4343 Cyber Operations
- CMSC 4353 Incident Analysis and Response II

** Students who choose the Cybersecurity application area are recommended to take CMSC 4063 Computer Networks and/or CMSC 4153 Operating Systems as prerequisites. CMSC 4063 and 4153 can be counted in the "Elective CMSC or SE courses" section.

System Development

- CMSC 4023 Programming Languages
- CMSC 4063 Computer Networks
- CMSC 4153 Operating Systems
- CMSC 4173 Translator Design
- CMSC 4193 Introduction to Robotics
- CMSC 4223 Cyber Infrastructure and Cloud Computing

Elective CMSC or SE Courses 6

Any 2/3/4000 level CMSC or SE courses except CMSC 4513

No more than three (3) hours of Internship and Individual Study combined may be used to satisfy the CMSC or SE elective requirement.

Credit cannot be received for both CMSC 3303 and SE 4283.

Electives to bring total to.....124

Average in (a) all college course work, (b) course work at UCO, and (c) major courses..... 2.00

Students must meet all bachelor degree requirements at UCO to include minimums of:

- 40 hours of upper division coursework
- 30 hours in residence at UCO
- 15 of the last 30 hours must be taken in residence at UCO
- 60 hours from baccalaureate granting institutions

Program-to-Program Transfer policies are available in the Introduction for Program-to-Program Agreements on the UCO website at the top of the list of transfer agreements. This agreement does not include all possible variations for transfer with these programs/majors. The Academic Advisors along with the information in the official catalogs at both institutions are critical to the understanding of the specifics of degree completion.