## Transfer Agreement Oklahoma City Community College: AS - Engineering

University of Central Oklahoma: BS - Mechanical Engineering - Mechanical Engineering

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

Courses listed here are required for the agreement. Credited courses completed as part of the AA or AS that do not apply to the general education at OCCC or the UCO major transfer to UCO as electives.

Oklahoma City Community College (OCCC)	University of Central Oklahoma (UCO)
General Education requirements	University Core completed with AA or AS
*PHIL 1213 Introduction to Ethics	PHIL 1123 Contemporary Moral Problems
CHEM 1415 Chemistry for Engineers	CHEM 1315 Chemistry for Engineering and Lab
ENGR 2243 Statics	ENGR 2033 Statics
ENGR 2523 Dynamics	ENGR 2043 Dynamics
ENGR 2143 Strength of Materials	ENGR 2143 Strength of Materials
ENGR 2613 Electrical Science	ENGR 2303 Electrical Science
*MATH 2104 Calculus and Analytic Geometry I	
*MATH 2214 Calculus and Analytic Geometry II	MATH 2313, 2323, 2333, and 2343 Calculus 1
MATH 2314 Calculus and Analytic Geometry III	through Calculus 4
*PHYS 2014 Engineering Physics I	PHY 2014 Physics for Science/Engr I and Lab
*PHYS 2114 Engineering Physics II	PHY 2114 Physics for Science/Engr II and Lab

<sup>\*</sup> In General Education Courses section of degree at OCCC

This degree requires additional course work, including the general education, as stated in the OCCC Catalog. Other OCCC courses may or may not apply to the UCO major. That specific information can be found on the UCO website under the Online Transfer Guides.

(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.

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Support Courses ......6
  FCON
          1103
                Introduction to Economics (May be taken at OCCC.)
  FMKT
          2323
                Global Protocol and Diversity
                 (or Foreign Language) (May be taken at OCCC.)
Successful completion of the courses listed in the above table satisfies the requirement for the following
Support Courses.
 *MATH
          1533
                 Algebra for STEM AND (May be taken at OCCC.)
 *MATH
         1593
                 Plane Trigonometry (May be taken at OCCC.)
  One year of high school physics OR
            1003 Introduction to Physics (May be taken at OCCC.)
Mechanical Engineering......57
Required courses:
  PHY
          3883 Mathematical Physics I
Engineering .......45
 Required courses:
  ENGR
          1112 Introduction to Engineering and Laboratory
  ENGR
          1213
                Engineering and Computing and Laboratory
  ENGR
          2151
                Strength of Materials Lab
  ENGR
          2311
                Electrical Science Laboratory
  ENGR
         2203
                Thermodynamics
  ENGR
          3211
                Thermal Engineering Laboratory
  ENGR
          3303
                 Engineering Probability and Statistics
 #ENGR
          3323
                 Signals and Systems
  ENGR
          3331
                 Signals and Systems Laboratory
          3363
                 Mechanical Engineering Design
 #ENGR
 #ENGR
          3413
                 Materials Science
 #ENGR
          3443
                Fluid Mechanics
 #ENGR
          3451
                Fluid Mechanics Lab
  ENGR
         3703
                Computational Methods in Engineering
#*ENGR
          4123
                Heat Transfer
                Heat Transfer Lab
 #ENGR
#*ENGR
          4533
                 Thermal Systems Design
#*ENGR
          4803
                 Mechatronics & Laboratory
 #ENGR
          4862
                 ME Senior Engineering Design I
          4892
 #ENGR
                 Senior Engineering Design II
Mathematics ...... 3
 Required course:
  MATH
         3103
                Differential Equations
Guided Physics or Engineering Electives ......6
 Selected from the following:
  ENGR
         3153
                Machine Dynamics
  ENGR
          3223
                 Digital Logic Design and Laboratory
  ENGR
          3803
                Electrical Power Systems
  ENGR
         4103
                Finite Element Analysis
  ENGR
         4153
                Vibration
          4203
  ENGR
                Refrigeration and Air Conditioning
          4303
  ENGR
                Control Systems
  ENGR
          4313
                Fluid Dynamics
  BME
          4343
                Biomechanics
          4163
                 Analytical Mechanics
*Students in the Accelerated BS/MS program in Engineering Physics must enroll in the graduate level versions of this course.
# Admission into Engineering and Physics Upper Division is required.
*The number of credits needed to meet degree requirements may exceed 124 hours and will vary according to course selection.
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## Minimum Grade Requirements

- 1. Average in (a) all college course work, and (b) course work at UCO......2.00
- 2. A minimum grade of "C" must be earned in all courses in the major to count toward meeting degree requirements.

Students must meet all bachelor's 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 agreements. Links to the agreements can be found on the Academic Affairs or Transfer Student Support web pages.

Admission into Engineering and Physics Upper Division

Students seeking the B.S. in Biomedical Engineering, Engineering Physics – Electrical Engineering, Engineering Physics – Mechanical Engineering, and Engineering Physics – Physics are required to make formal application to the Chairperson of the Department of Engineering and Physics for admission into the upper division of each of these majors. Applications must be submitted to the Department of Engineering and Physics on or before the last Monday of January for Fall admission and the last Monday of August for Spring admission.

Upper division admission is open to students meeting Engineering and Physics upper division admission requirements. To be admitted into upper division, the student must have:

A minimum retention grade point average (GPA) of 2.00 in all course work completed by the time the student is formally admitted into upper division.

Completed 60 semester credit hours by the time the student is formally admitted into upper division.

Completed the following courses or their equivalent with a minimum grade of "C" by the time the student is formally admitted into upper division:

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MATH
         2313
                Calculus 1
MATH
         2323 Calculus 2
         2333 Calculus 3
MATH
         2343 Calculus 4
MATH
MATH
         3103 Differential Equations (Recommended)
PHY 2014 Physics for Science & Engineering I & Lab
PHY 2114 Physics for Science & Engineering II & Lab
ENGR
         1112 Introduction to Engineering & Lab
ENGR
         1213
               Engineering Computing & Lab
ENGR
         2033
               Statics
         2303 Electrical Science
ENGR
ENGR
         2311 Electrical Science Lab
         3303
                Engineering Probability and Statistics
ENGR
                 (Recommended)
CHEM
         1112
                General Chemistry I Recitation/Lab AND (for Biomedical Engineering)
CHEM
         1103
                General Chemistry I OR (for Biomedical Engineering)
CHEM
         1315
                Chemistry for Engineering and Lab (for Engineering Physics-Electrical Systems,
         Mechanical Systems, and Physics)
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Formal approval by the department Faculty Advisor and Department Chair is required for admission. Preference is given to University of Central Oklahoma students. The student may enroll in no more than nine (9) hours of 3000 and 4000 level courses in the major prior to admission into upper division unless they secure formal approval from the Department of Engineering and Physics.