

# College of Math and Science Minors

A minor is an optional component of a student's degree (unless otherwise stated) that, upon graduation, will be reflected on the student's transcript. A student may earn a minor or multiple minors in the same program, provided the minor differ at the major level. Minors may not be earned independently of a bachelor's degree granted by the University of Central Oklahoma. Minors may not be earned as a part of an associate degree. Minors do not appear on diplomas.

## Minimum Requirements for Minors

**Minimums for minors** unless otherwise specified:

<b>Total Hours</b> .....	<b>18</b>
<b>Upper Division Hours (3/4000 level)</b> .....	<b>6</b>
<b>Residency Hours</b> .....	<b>6</b>
<b>GPA</b> .....	<b>2.00</b>

## Biology

**Biology**.....**18-19**

Minor Code: 6019

Required courses:..... 12

BIO 1204	Biology for Majors: Principles
BIO 1225	Biology for Majors: Diversity
BIO 2203	Cell Biology

Elective Biology (upper division).....6-7

Select 2 courses from this list:

BIO 3054	Microbiology for Majors
BIO 3303	Genetics
BIO 3543	General Ecology
BIO 3703	Evolution

A grade of "C" or better is required in each course.

## Chemistry

**Chemistry** .....

Minor Code: 6079

Required courses..... 14

CHEM 1103	General Chemistry I
CHEM 1112	General Chemistry I-Recitation/Lab
CHEM 1223	General Chemistry II
CHEM 1232	General Chemistry II-Recitation/Lab
CHEM 2104	Quantitative Analysis and Lab

Elective Chemistry (3/4000 level) ..... 6

## Computer Science

**Computer Science** .....

Minor Code: 6119

Required courses..... 18

CMSC 1613	Programming I
CMSC 1621	Programming I Laboratory
CMSC 2123	Discrete Structures
CMSC 2613	Programming II
CMSC 2621	Programming II Laboratory
CMSC 2833	Computer Organization and Architecture I
CMSC 3613	Data Structures and Algorithms
CMSC 3621	Data Structures/Algorithms Lab

Elective CMSC or SE Courses (3/4000 level)..... 3

## Engineering Physics

**Engineering Physics** .....

Minor Code: 6259

Required courses..... 14-15

PHY 2014	Physics for Science and Engineering I and Lab
PHY 2114	Physics for Science and Engineering II and Lab
PHY 3103	Modern Physics
ENGR 2033	Statics <b>OR</b>
ENGR 2303	Electrical Science <b>AND</b>
ENGR 2311	Electrical Science Lab

Elective Physics and Engineering..... 3-4

Any 3000 or 4000 level ENGR course.

## Grief, Death, and Dying

**Grief, Death, and Dying**.....**18-19**

Minor Code: 6139

Required courses..... 9

FNRL 3483	Psychology of Grief
FNRL 3623	Thanatology and Unresolved Grief
FNRL 4183	Natural History of Bereavement

Elective courses ..... 9-10

Selected from the following:

FNRL 2313	Contemporary Funeral Service
FNRL 3304	Restorative Art
FNRL 3383	Funeral Service Statutory Law
FNRL 3393	Mortuary Jurisprudence
FNRL 3433	Introduction to Pathology
FNRL 3493	Funeral Service Communication
FNRL 3513	History of Funeral Directing

## Mathematics

**Mathematics** .....

Minor Code: 6179

Required courses..... 12

MATH 2313	Calculus 1
MATH 2323	Calculus 2
MATH 2333	Calculus 3
MATH 2343	Calculus 4

Elective Mathematics (3/4000 level) ..... 6

(May include three hours from a 3000 or 4000 level statistics course.)

## Science Education

**Science Education - Secondary Science Education**..... **18**

Minor Code: 6059

Required courses..... 18

PTE 4333	Meeting Secondary Students' Needs
PTE 4433	Designing Instruction for Secondary Students
PTE 4543	Managing Secondary Classrooms
PTE 4623	Secondary Class Assessment
BIO 4812	Teaching and Learning in Science Classrooms
BIO 4853	General Methods of Teaching Science and Lab

## *College of Math and Science Minors - continued*

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- \* BIO 4930 Individual Study in Biology (1 hour) **OR**
- PHY 4930 Individual Study in Physics (1 hour) **OR**
- CHEM 4930 Individual Study in Chemistry (1 hour)

\* Students will take the Individual Study from the Science Education coordinator within their content area.

A grade of "C" or better is required in each course.

### **Statistics**

**Statistics ..... 18**

Minor Code: 6178

Any 18 hours of Statistics (6 hours at 3/4000 level)