• SCIENCE EDUCATION

Requirements for the B.S. Degree (BSB, BSC, BSY): In addition to the courses listed below, students must complete "Preliminary Requirements for Students entering Teacher Education Programs."

Prerequisites (State Mandated Common Prerequisites): These prerequisites must be met by transfer students as well as USF students. A grade of "C-" is the minimum acceptable grade.

EDF 2005 Introduction to Education
EDG 2701 Teaching Diverse Populations
EME 2040 Introduction to Educational Technology

- Nine (9) hours of Mathematics (to include College Algebra or above and Geometry)*
- Twelve (12) hours of Social Science (to include American History and General Psychology)
- Nine (9) hours of Natural Science (to include an Earth Science course, a Life Science course and a Physical Science course)
- One (1) Natural Science Course must have a lab component
- Six (6) hours of International or Multicultural Focus
- Nine (9) hours of English (to include Writing, Literature and Speech)
- Six (6) hours Humanities (to include Philosophy and Fine Arts)

*Only courses with the prefixes MGF, MTG, MAC, and STA will qualify for the courses in mathematics. MGF 1106 Liberal Arts Mathematics I meets the intent of the program approval rule with respect to the inclusion of geometry in the mathematics requirement.

For Biology Teacher Education -
Biology with Lab 8
Chemistry with Lab or Physics with Lab 8
Electives in Science 6

For Chemistry Teacher Education -
Chemistry with Lab 8
Biology with Lab or Physics with Lab 8
Electives in Science 6

For Physics Teacher Education -
Physics with Lab 8
Biology with Lab or Chemistry with Lab 8
Electives in Science 6

Professional Education Core for all Tracks (29 credit hours):
The required courses in the professional education core are as follows:
EDF 3214 Human Development and Learning 3
EDF 3604 Social Foundations of Education (Exit) 3
EDF 4430 Measurement for Teachers 3
EEX 4070 Integrating Exceptional Students in the Regular Classroom 2
FLE 4365 ESOL Competencies and Strategies 3
SCE 4936 Senior Seminar in Science Education 2
SCE 4940 Internship: Science Education 10
Classroom Management Course 3

Biology Education
Prerequisites (38 credit hours):
BSC 2010 Biology I* 3
BSC 2010L Biology I Lab* 1
BSC 211 Biology II* 3
BSC 211L Biology II Lab* 1
CHM 2045, 2045L General Chemistry I and Lab* and
CHM 2046, 2046L General Chemistry II and Lab 8
or
PHY 2048, 2048L General Physics I and Lab (with Calculus)

or
PHY 2049, 2049L General Physics II and Lab* (with Calculus) 8
or
PHY 2053, 2053L General Physics and Lab* and
PHY 2054, 2054L General Physics and Lab 8
Science Elective (Earth Science Only) 3
CHM 2046 General Chemistry II with lab 4
PHY 2054 General Physics II with lab 4

Specialization (33 credit hours):
Human Anatomy Physiology Course 3
PCB 3063 General Genetics 3
PCB 3023, 3023L Cell Biology and Lab 4
PCB 3043, 3043L Principles of Ecology and Lab 4
PCB 4674 Organic Evolution 3
MCB 3030C Introduction to Microbiology 4
BSC 4057 Environmental Issues (Exit) 3
SCE 4320 Teaching Methods in Middle Grades Science 3
SCE 4330 Teaching Methods in Secondary School Science 3
EDE 4909 Directed Studies 3
SCE 4236 Science, Technology, Society Interaction 3
or
CHM 4070 Historical Perspectives in Chemistry 3
or
PHY 4031 Great Themes in Physics 3

Additional Requirements
MAC 2281 Engineering Calculus I 4

Chemistry Education
Prerequisites (39 credit hours):
CHM 2045 General Chemistry I* 3
CHM 2045L General Chemistry Lab* 1
CHM 2046 General Chemistry II* 3
CHM 2046L General Chemistry II Lab* 1
BSC 2010, 2010L Biology I and Lab* and
BSC 2011, 2011L Biology II and Lab* 8
or
PHY 2048, 2048L Physics I and Lab* (with Calculus)
and
PHY 2049, 2049L Physics II and Lab* (with Calculus) 8
or
PHY 2053, 2053L Physics and Lab* and
PHY 2054, 2054L Physics and Lab* 8
Science Elective (Earth Science Only) 3

Specialization (32 credit hours):
CHM 2210, 2210L Organic Chemistry I and Lab 45
CHM 3120C Elementary Analytical Chemistry 3
CHM 3400 Elementary Physical Chemistry I 3
CHM 3610, 3610L Intermediate Inorganic Chemistry and Lab 4
CHM 4070 Historical Perspectives in Chemistry 3
BCH 3023 Introductory Biochemistry 3
SCE 4320 Teaching Methods in Middle Grades Science 3
SCE 4330 Teaching Methods in Secondary School Science 3
EDG 4909 Directed Studies 3
SCE 4236 Science, Technology, Science Interaction 3
or
BSC 4057 Environmental Issues 3
or
PHY 4031 Great Themes in Physics 3
Physics Education

Prerequisites (33 credit hours):

- BSC 2010, 2010L Biology I and Lab*
  and
  BSC 2011, 2011L Biology II and Lab* 8

- or
  CHM 2045, 2045L General Chemistry I and Lab*
  and
  CHM 2046, 2046L Chemistry II and Lab* 8
  PHY 2048, 2048L General Physics I and Lab* (with Calculus)
  and
  PHY 2049, 2049L General Physics II and Lab* (with Calculus) 8

- or
  PHY 2053, 2053L General Physics I and Lab*
  and
  PHY 2054, 2054L General Physics II and Lab* 8
  Science Elective (Earth Science Only) 3

Specialization (30 credit hours):

- PHY 2020 Conceptual Physics 3
- PHY 3101 Modern Physics 3
- PHY 3221 Mechanics I 3
- PHY 3323C Electricity and Magnetism 3
- PHY 4031 Great Themes in Physics 3
- Physics Electives (Select from PHY3 to PHY5, PHZ3 to PHZ5)
  Computer Applications in Physics 3
  SCE 4320 Teaching Methods in Middle Grade Science 3
  SCE 4330 Teaching Methods in Secondary School Science 3
  EDG 4909 Directed Studies 3
  SCE 4236 Science, Technology, Society Interaction 3
  or
  CHM 4070 Historical Perspectives in Chemistry 3
  or
  BSC 4057 Environmental Issues 3

*May be part of General Education Requirements