INTERDISCIPLINARY NATURAL SCIENCES

COLLEGE: ARTS AND SCIENCES
SCHOOL: NONE
DEGREE: BACHELOR OF ARTS
OPTION/TRACK: NONE
LIMITED ACCESS PROGRAM: NO

CAMPUS(ES) WHERE OFFERED/CONTACT:
TAMPA only / Coordinator of Advising, Arts and Sciences, (813) 974-2503

Program of Study at a Florida Community/Junior College or SUS School for Students Planning to Transfer to USF
(State Mandated Common Prerequisites)
Students wishing to transfer to USF should complete the A.A. degree at the community college. Some courses required for the major may also meet General Education Requirements thereby transferring maximum hours to the university. A minimum of 60 semester hours must be completed at the university unless prior approval is secured. If students transfer without an A.A. degree and have fewer than 60 semester hours of acceptable credit, the students must meet the university's entering freshman requirements including ACT or SAT test scores, GPA, and course requirements.

There are no State Mandated Common Prerequisites for this degree program.

Students are encouraged to complete the following prerequisites, or major, support, or elective courses if available, during the program of study at the community college, and when feasible in General Education/Gordon Rule courses. Unless stated otherwise, a grade of "C" is the minimum acceptable grade.

One year each, if offered, of:
Biology I (BSC 2010, 2010L) and Biology II (BSC 2011, 2011L) (8)
Calculus (MAC 2233 and MAC 2234 or MAC 2311 and MAC 2312) (6-8)
General Chemistry (CHM 2041, CHM 2045L, and CHM 2046, CHM 2046L) (8)
General Physics (PHY 2053, 2053L, 2054, 2054L or PHY 2048, 2048L, 2049, 2049L) (8)
Introduction to Physical Geology (GLY 2010, GLY 2010L) and History of the Earth and Life (GLY 2100, GLY 2100L) (8)

Admission Requirements to the University Program of Study
Please be aware of the immunization, foreign language, and continuous enrollment policies of the university. This is a non-limited access program with the above courses recommended.

Requirements for the B.A. in Interdisciplinary Natural Sciences
Concentrations exist in Interdisciplinary Natural Sciences-Biology (INB), Interdisciplinary Natural Sciences-Chemistry (INC), Interdisciplinary Natural Sciences-Geology (ING), Interdisciplinary Natural Sciences-Mathematics (INM), and Interdisciplinary Natural Sciences-Physics (INP).

For Science Education and Mathematics Education Majors, only completion of a major consisting of a minimum of 45 hours in natural sciences courses applicable to majors in the natural sciences. In these emphases, there must be a minimum of 24 credit hours in a discipline of major concentration and a minimum of 16 credit hours in supporting courses outside the discipline of major concentration selected from natural science courses. At least two of the supporting courses must be at the 3000 level or above. The student must earn a grade of "C" or better in each course in the major concentration and in each supporting course.

For Biology (INB), Chemistry (INC), Geology (ING), Mathematics (INM), and Physics (INP) concentrations, there must be a minimum of 24 credit hours in a discipline of major concentration and a minimum core of supporting courses comprising a calculus sequence and the introductory science sequence from each of the following departments:

- BSC 2010C Biology I - Cellular Processes (4)
- BSC 2011C Biology II - Diversity (4)
- CHM 2041 General Chemistry I (3)
- CHM 2045L General Chemistry I Laboratory (1)
- CHM 2046 General Chemistry II (3)
- CHM 2046L General Chemistry II Laboratory (1)
- GLY 2010 Dynamic Earth: Introduction to Physical Geology (3)
- GLY 2010L Dynamic Earth Laboratory (1)
- GLY 2100 History of the Earth and Life (3)
- GLY 2100L Earth History Laboratory (1)
- MAC 2233 Elementary Calculus I (4)
- MAC 2234 Elementary Calculus II (4)
- MAC 2311 Calculus I (4)
- MAC 2312 Calculus II (4)
- MAC 2281 Engineering Calculus I (3)
- MAC 2282 Engineering Calculus II (3)
- PHY 2053 General Physics (3)
- PHY 2053L General Physics Laboratory (1)
- PHY 2054 General Physics (3)
- PHY 2054L General Physics Laboratory (1)
- PHY 2048 General Physics (3)
- PHY 2048L General Physics Laboratory (1)
- PHY 2049 General Physics (3)
- PHY 2049L General Physics Laboratory (1)

The student must earn a grade of "C" or better in the major concentration and in each supporting course. Unstructured courses are not counted to fulfill the major requirements.

The Clinical Laboratory Sciences emphasis is designed to prepare students for application to a clinical program in Medical Technology or Cytology following graduation or employment in a laboratory. Students planning to apply to clinical programs in Medical Technology need to include
a course in Immunology. Students contemplating graduate study should pursue a major in the discipline of their interest, such as Biology, Chemistry, or Microbiology. For the Clinical Laboratory Sciences emphasis, completion of a minimum of 54 credit hours in natural sciences with a "C" or higher in each major and supporting course.

Supporting Courses:
- BSC 2010, 2010L Biology I - Cellular Processes and Laboratory (3,1)
- BSC 2011, 2011L Biology II - Diversity and Laboratory (3,1)
- CHM 2041, 2045L General Chemistry I and Laboratory (3,1)
- CHM 2046, 2046L General Chemistry II and Laboratory (3,1)
- MAC 2233 Elementary Calculus I (4)
- STA 2023 Introductory Statistics I (4)

Major Courses:
- BCH 3023 Introductory Biochemistry (3)
- or
- CHS 4300 Fundamentals of Clinical Chemistry (3)
- CHM 2210, 2210L General Chemistry I and Laboratory (3,2)
- CHM 2211, 2211L General Chemistry II and Laboratory (3,2)
- MCB 3020C General Microbiology (4)

Two (2) Biology major electives including at least one with lab (min. 6 hours)
Select from the following list noting prerequisites where applicable:
- BOT 4434C Mycology (3)
- MCB 4115C Determinative Bacteriology (5)
- MCB 4404, 4404L Microbial Physiology & Genetics and Laboratory (4,1)
- PCB 3023, 3023L Cell Biology and Laboratory (3,1)
- PCB 3063, 3063L General Genetics and Laboratory (3,1)
- PCB 4064C Experimental Genetics (3)
- PCB 5235 Principles of Immunology (3)
- ZOO 4753C Histology (4)

Majors sciences electives in Biology, Chemistry, or Physics to total minimum of 54 hours. Select from the following list, noting prerequisites where applicable, and not duplicating courses used to meet the above requirements:
- BCH 3023 Introductory Biochemistry (3)
- BCH 3023L Basic Biochemistry Laboratory (2)
- BCH 4034 Advanced Biochemistry (3)
- BOT 4434C Mycology (3)
- CHM 3120C Elementary Analytical Chemistry (4)
- CHM 4060 Use of the Chemical Literature (1)
- CHS 4300 Fundamentals of Clinical Chemistry (3)
- MCB 4115C Determinative Bacteriology (5)
- MCB 4404 Microbial Physiology and Genetics (4)
- MCB 4404L Microbial Physiology and Genetics Laboratory (1)
- MCB 4502C Virology (3)
- MCB 5206 Public Health and Pathogenic Microbiology (3)
- MCB 5815 Medical Mycology (3)
- PCB 3023 Cell Biology (3)
- PCB 3023L Cell Biology Laboratory (1)
- PCB 3063 General Genetics (3)
- PCB 3063L Genetics Laboratory (1)
- PCB 4064C Experimental Genetics (3)
- PCB 4723 Animal Physiology (3)
- PCB 4723L Animal Physiology Laboratory (1)
- PCB 5235 Principles of Immunology (3)
- PCB 5525 Molecular Genetics (3)
- PHY 2053 General Physics (3)
- PHY 2053L General Physics Laboratory (1)
- PHY 2054 General Physics (3)
- PHY 2054L General Physics Laboratory (1)
- ZOO 4753C Histology (4)
- ZOO 5235 Parasitology (3)

NOTE: Transfer students with credit for two semesters of anatomy and physiology with laboratories may substitute these courses for BSC 2011, 2011L.
Computer competency is essential for work in a modern laboratory. Students lacking computer skills should take CGS 2060.