Prerequisite Evaluation Guide

These course descriptions were derived from the statewide numbering system and/or USF

**English Composition or Literature**

Feeder school course numbers: ENC 1101

*Courses acceptable for this requirement would be courses in English composition OR English Literature*

**English Composition** - This course introduces the student to the purpose, elements, and qualities of good writing.

- Rhetoric focuses more on the art of effective writing, taking the student through drafting, revision and the final stages of writing an essay.
  - Grammar and Mechanics
  - Genres of writing to include essays, compare/contrast, persuasive, etc
- Research concentrates on introducing the student to various sources of information, how to document sources, and the strategies of acquiring information outside of the internet and physical library.
- Reading – comprehension and analysis of content

**English Literature** – This course introduces the student to the process of reading, understanding and analyzing different genres of literature

- Topics include genres of literature to include poetry, plays, fiction, non-fiction, technical reports, etc.
- Understanding plot, theme, setting, characterization, climax, resolution
- Increasing critical thought through synthesis of material and written papers

➤ Gordon Rule classes do not fill the requirement.

**Life Science Calculus (preferred)**

Feeder school course numbers: MAC 2241

This course provides students with a working knowledge of first-semester calculus. Topics include

- Limits
- Derivatives
- Indefinite integrals
- Applications with algebraic, trigonometric, exponential, and logarithmic functions

**Statistics, Business Statistics, Research Methods for Social or Behavioral Sciences**

Feeder school course numbers: STA 1022

This course covers the basic philosophy of statistical thinking, acquisition of data, techniques for organizing and presenting statistical data.

- Sample mean, variance and standard deviation.
- Statistical decisions—estimation and hypothesis testing.
- Design of experiments, linear associations and prediction.
General Chemistry 1 (3 credits)
Feeder school course numbers: CHM 2045
This course covers principles and applications of chemistry including
- Properties of substances and reactions, thermochemistry
- Atomic-molecular structure and bonding,
- Periodic properties of elements and compounds.

General Chemistry Lab 1 (1 credit)
Feeder school course numbers: CHM 2045L
This course is an introduction to laboratory techniques.
- Study of properties of elements and compounds
- Synthesis and analysis of natural and commercial materials

General Chemistry 2 (3 credits)
Feeder school course numbers: CHM 2046
This is the second semester of a two-semester course that offers an introduction to the science of chemistry.
- Stoichiometry
- Properties of solutions
- Spontaneity of chemical processes; entropy and free energy
- Kinetics: rates and mechanisms of chemical reactions
- Chemical equilibrium
- Aqueous acid-based equilibria
- Applications of aqueous equilibria
- Electron transfer reactions, redox and electrochemistry
- Nuclear chemistry and radiochemistry.

General Chemistry Lab 2 (1 credit)
Feeder school course numbers: CHM 2046L
Continuation of Chemistry Lab 1

Organic Chemistry I (3 credits)
Feeder school course numbers: CHM 2210 1
This is the first semester of a two semester course that offers an introduction to organic chemistry. The following should be covered:
- Structure and properties of organic molecules
- the study of chemical reactions,
- Structure and stereochemistry of alkanes
- Reactions of Alkenes
- Alkynes
- Infrared spectroscopy and mass spectrometry
- Nuclear magnetic resonance spectroscopy

**Organic Chem Lab 1 (1 credit)**

Feeder school course numbers: CHM 2210L

*Fundamental organic chemistry principles will be covered;*
- Structure, nomenclature, properties, preparation
- Reactions of hydrocarbons, alkyl halides, alcohol, phenols, ethers, sulfur analogs, and other compounds.

**Organic Chemistry 2 (3 credits)**

Feeder school course numbers: CHM 2211

*This is the second semester of a two semester course that offers an introduction to organic chemistry. The following should be covered:*
- Structure and synthesis if alcohols
- Reactions of alcohols
- Ethers, epoxides and sulfides
- Conjugated systems, orbital symmetry and ultraviolet spectroscopy
- Aromatic compounds, reactions of aromatic compounds
- Aldehydes and ketones, amines, carboxylic acids and derivatives
- Condensation and alpha substitutions of carbonyl compound

**Organic Chemistry Lab 2 (1 credit)**

Feeder school course numbers: CHM 2211L

*Continuation of Organic Chemistry Lab (I)*

**Physics I**

Feeder school course numbers: PHY 2053

*This course should cover the following:*
- Mechanics
- Heat, wave motion
- Sound, electricity, magnetism
- Optics and modern physics

**Biology I, Cellular Processes, Cellular Biology (3 credits)**

Feeder school course numbers: BSC 2010

*An analysis of biological systems at the cellular and subcellular levels*
- Introduction to biochemistry
- Cell structure and function
- Enzymes
- Respiration
- Photosynthesis
- Mitosis and meiosis
- Genetics and gene expression.
- Stem cells and cancer

**Biology I - Lab (1 credit)**
Feeder school course numbers: BSC 2010L
Laboratory portion of Biology I focuses on cellular processes relating to cellular and subcellular structure and function.
- Mitosis, meiosis and mendelian genetics

**Biology II - (3 credits)**
Feeder school course numbers: BSC 2011
An analysis of biological systems at the organismal level
- Introduction to evolutionary theory
- Evolution of populations
- Origin of species
- Origins of life; prokaryotes
- Protists
- Plant Diversity
- Fungi
- Invertebrate diversity
- Introduction to ecology; population and community ecology

**Biology II Lab (1 credit)**
Feeder school course numbers: BSC 2011L
The laboratory portion of Biology II covers organismal structure and function. Microscopy, as well as, plant and animal development will be covered. Introduction to immunology and cellular respiration should also be covered.

**General Microbiology (3 credits)**
Feeder school course numbers: MCB 3020C
Genetics is recommended. (Not listed as prerequisite) This course is an introduction to the biology of microorganisms:
- Structure, physiology, and ecology of bacteria
- Algae viruses, rickettsiae, protozoa, and lower fungi.
- Preparation of culture media, staining, pure culture methodology, isolation of microbes from nature, enumeration techniques and resistance to infectious disease (covered in lab).

**Human Anatomy & Physiology I (4 credits)**
Feeder school course number: BSC 2093C
This course provides a basic overview of chemistry and biochemistry as it relates to biology, then delves into cell structure and function. Skin, bone, and muscle structure and function will then be covered. The nervous system is covered as well. Please note this course must be human, not animal.

- Basic biochemistry
- Cell structure and function
- Tissues
- Anatomical terminology
- Anatomy and physiology of the integumentary, skeletal, muscular and nervous systems.

### Human Anatomy & Physiology II (4 credits)
Feeder school course number: BSC 2094C
This is the second semester of a two semester course. The second semester starts out with the involuntary control systems of the body and endocrine system and moves on to cover:

- Autonomic
- Nervous
- Endocrine
- Circulatory
- Lymphatic
- Immune
- Respiratory
- Digestive
- Excretory
- Reproductive systems.

### Cell Biology (3 credits)
Feeder school course numbers: PCB 3023
Cell Biology is the study of living properties of cells and encompasses a broad area of the life sciences that include

- Cellular physiology and life cycle
- Organelle structure and function
- Biomolecular structure and function.

### Molecular Biology of the Cell
Feeder school course numbers: PCB 4024
This lecture based course will focus on advanced principles of molecular cell biology with emphasis on protein structure and function in key cellular pathways. This course will focus on the area of cell biology at the protein level.

- Protein domain structure and folding
- Protein trafficking
- Protein degradation
- Signal transduction.
Biochemistry

Feeder school course number BCH 3033 (FAU)
- The organic chemistry of biological compounds
- Carbohydrates
- Amino acids
- Peptides and proteins
- Nucleosides, nucleotides
- Nucleic acids, replication, transcription and translation
- Saponifiable lipids, steroids and terpenes.

General Genetics

Feeder school course number PCB 3063
This class will focus on classical Mendelian and modern molecular genetics. Major topics include:
- Mitosis
- Meiosis
- Genetics
- Linkage and chromosome mapping
- DNA structure
- analysis,
- DNA replication and synthesis,
- Genetic code transcription and proteins
- Gene expression, development, genetic basis of cancer
- Chromosome organization
- Human Genome project
- Population Genetics

Psychology

Feeder school course number: PSY 2012
This course is an introduction to the science of psychology. Additionally, students will learn to think critically about and recognize the diversity within human behavior and thought process. Topics include theories and methodologies of various areas of psychology including:
- Clinical
- Cognitive
- Developmental
- Health
- Industrial/organizational
- Social and neuropsychology
**Sociology**

Feeder school course number: SYG 2000

An introduction to sociological perspectives and methods and the basic areas of sociological interests such as socialization, gender, race, and ethnic relations, deviance, social control, and social stratification.

**Economic Principles I: Microeconomics**

Feeder school course number: Micro 2023

This course is an introduction to the theory of price determination. How an economy decides what to produce, how to produce, and how to distribute goods and services.

- Scarcity
- Resource allocation
- Choices facing consumers and producers
- Supply and demand
- Elasticity measurements and their uses
- Market structures

**Macroeconomics**

*Principles of Macroeconomics*

Feeder school course number: Macro 2013

The nature of economics, economic concepts and institutions

- Supply and demand
- Elasticity
- Unemployment and inflation
- Money and banking
- Economic stabilization policies
- Basic utility theory
- Discounting
- Risk aversion
- Policies affecting long-run economic growth
- Climate change
- Income distribution
- Medical insurance and spending
- Exchange rates and the international finance system

**Humanities and Arts and/or Social Sciences**

Please note this is not an exhaustive list; these are examples of acceptable courses;

- POS 2041 American Government 1
- HUM 2220 Humanities Greek/Roman
- HUM 2210 Intercultural Humanities
- HUM 2223 Late Roman and Medieval
• PHI 1010 Intro to Philosophy
• HSC 4631 Critical Issues in Public Health
• HAS 4011 Intro to Public Health
• ANT 2000 Anthropology
• AMH 2010 American History to 1865