UCF Degree Programs

Biomedical Sciences - Preprofessional Concentration (B.S.)
College of Medicine
Burnett School of Biomedical Sciences
Health and Public Affairs II, Room: 335
http://www.biomed.ucf.edu
Email: bsbsadvising@ucf.edu
Dr. Griffith Parks, Director
Phone: 407-823-5932

Students seeking admission to professional schools (medical, dental, optometry, veterinary, podiatry, and pharmacy) will meet all the admission requirements for those programs while obtaining a Biomedical Sciences degree.

Admission Requirements
- None

Degree Requirements
- Students who change degree programs and select this major must adopt the most current catalog.
- Students should complete the General Education Program before transferring within the Florida College System or State University System.
- Grades below “C” in Common Program Prerequisites, Core Requirements and Restricted Electives will not be accepted.
- Students should consult with a BSBS academic advisor and the Office of Pre-Health and Pre-Law Advising at least once per semester.

1. UCF General Education Program (GEP) (37 hrs)
   - Note: Certain courses must be selected in GEP for this major, bringing the total GEP hours to more than 36.

   A: Communication Foundations (9 hrs)
   - Required ENC 1101 Composition I 3 hrs
   - Required ENC 1102 Composition II 3 hrs
   - Prefer SPC 1603C Fundamentals of Technical Presentations 3 hrs

   B: Cultural & Historical Foundations (9 hrs)
   - Required MAC 2311 Calculus with Analytic Geometry I 4 hrs
   - Required STA 2023 Statistical Methods I 3 hrs

   C: Mathematical Foundations (7 hrs)
   - Required BSC 2010C Biology I 4 hrs
   - Required CHM 2045C Chemistry Fundamentals I 4 hrs

   D: Social Foundations (6 hrs)
   - Required BSC 2010C Biology I 4 hrs
   - Required CHM 2045C Chemistry Fundamentals I 4 hrs

2. Common Program Prerequisites (CPP) (16 hrs)
   - See “Common Prerequisites” in the Transfer and Transitions Services section for more information.
   - BSC 2010C Biology I 4 hrs
   - CHM 2045C Chemistry Fundamentals I 4 hrs
   - MAC 2311C Calculus with Analytic Geometry I 4 hrs

   Select one of the following sequences of courses:
   - PHY 2053C College Physics I and 4 hrs
   - PHY 2054C College Physics II 4 hrs
   - or
   - PHY 2048C General Physics Using Calculus I and 4 hrs
   - PHY 2049C General Physics Using Calculus II 4 hrs

   1 See Transfer Notes for possible substitutions

3. Core Requirements: Basic Level (10 hrs)
   - Life Sciences: Basic
     - SLS 2311C Overview of Select Medical Careers 2 hrs
   - Math and Statistics
     - STA 2023 Statistical Methods I GEP
     - MAC 2311 Calculus with Analytic Geometry I GEP
   - Chemistry
     - Take all of the following: 8 hrs
       - CHM 2210 Organic Chemistry I and 3 hrs
       - CHM 2211 Organic Chemistry II and 3 hrs
       - CHM 2211L Organic Laboratory Techniques I 2 hrs

4. Core Requirements: Advanced Level (25 hrs)
   - Life Sciences: Advanced
     - MCB 3202C General Microbiology 5 hrs
     - PCB 3522 Molecular Biology I 3 hrs
     - PCB 4524 Molecular Biology II 3 hrs
     - BSC 3403C Quantitative Biological Methods 4 hrs

   Select one of the following sequences of courses:
   - PCB 4280 Molecular Immunology and 3 hrs
     - PCB 3233L Immunology Laboratory 1 hr
   - or
   - PCB 3233 Immunology and 3 hrs
   - PCB 3233L Immunology Laboratory 1 hr

   Select 1: 3 hrs
   - MCB 4414 Microbial Metabolism or 3 hrs
   - MCB 4410 Cellular Metabolism 3 hrs

   Biochemistry - Select 1
   - BCH 4024 Medical Biochemistry or 4 hrs
   - BCH 4053 Biochemistry I 3 hrs

5. Restricted Electives
   - 7 courses minimum
   - Seven (7) courses from below, from which at least two must be a laboratory course. No more than two may be MLS courses. Enrollment in some MLS courses is restricted. Check with advisor before enrolling. Only three hours of Honors thesis will count towards restricted elective requirement.
   - Students cannot choose more than two (2) of the following restricted electives: BCH 4054, BCH 4103L, BOT 4850, PCB 3063, PCB 4402, PCB 4514, PCB 4678, PCB 4683, ZOO 4513, ZOO 4603C.
   - As an alternative to one of these listed electives, students can take part in a GEAR course, the PURE program, the PILOT course, or carry out an HIM thesis. Any one of these courses or programs will substitute for a restricted elective course, including elective laboratory courses.
   - BCH 4054 Biochemistry II 3 hrs
   - BOT 4850 Medicinal Botany 3 hrs
   - MCB 3202 Principles of Infectious Disease 3 hrs
   - MCB 3203 Pathogenic Microbiology 3 hrs
   - MCB 4207 Infectious Processes 3 hrs
   - MCB 4276 Epidemiology of Infectious Diseases 3 hrs
   - MCB 4312 Molecular Biotechnology 3 hrs
   - MCB 4404 Bacterial Genetics and Physiology 3 hrs
   - MCB 4503C Virology 3 hrs
   - MCB 4653 Applied Industrial Microbiology 3 hrs
   - MCB 4970H Honors Undergraduate Thesis II 3 hrs
   - MLS 3305 Hematology 3 hrs
   - MLS 4334 Hemostasis 3 hrs
   - MLS 4430C Clinical Parasitology 3 hrs
   - MLS 4505C Immunodiagnostics 3 hrs
   - PCB 3063 Genetics 3 hrs
   - PCB 3703C Human Physiology 4 hrs
   - PCB 4028 Molecular and Cellular Pharmacology 3 hrs
   - PCB 4234 Cancer Biology 3 hrs
   - PCB 4550 Pharmacology 3 hrs
   - PCB 4584 Cellular and Molecular Basis of Brain Functions 3 hrs
   - PCB 4533 Advanced Human Physiology 3 hrs
6. Capstone Requirements
- None

7. Foreign Language Requirements
- Admissions:
  - Two years of one foreign language in high school, or one year of one foreign language in college (or equivalent proficiency exam) prior to graduation.

- Graduation:
  - None

8. Electives
- Variable

9. Additional Requirements
- None

10. Required Minors
- None

11. Departmental Exit Requirements
- Student must complete all coursework in the baccalaureate curriculum as shown, and, earn a GPA of at least 2.0 for all coursework in the Prerequisites, Core and Restricted Electives.
- Independent study, directed research, or similar credit may not be used as a Restricted Elective.
- Minimum of 20 hours must be taken at UCF in the department of the major.
- Students will be required to take a comprehensive test during their last semester.

12. University Minimum Exit Requirements
- A 2.0 UCF GPA
- 60 semester hours earned after CLEP awarded
- 48 semester hours of upper division credit completed
- 30 of the last 39 hours of course work must be completed in residency at UCF.
- A maximum of 45 hours of extension, correspondence, CLEP, Credit by Exam, and Armed Forces credits permitted.
- Complete the General Education Program, the Gordon Rule, and nine hours of Summer credit.

Total Semester Hours Required
- 120

**Honors in Major**
- Application and admission through the Department and the Burnett Honors College.
- Fulfill University requirements for Honors in the Major and maintain at least a 3.2 UCF GPA; 3.5 in the major; 3.2 cumulative average for graded upper division courses regardless of the institution.
- Complete the following with a grade of B or better (4 credits): BSC 3403C Honors Quantitative Biological Methods 4 hrs
- Complete the following with a grade of B or better and successfully complete the oral defense of the Honors Thesis (3 credits): MCB 4970H Honors Undergraduate Thesis II 1 hr

**Related Programs**
- Biology
- Biotechnology
- Chemistry
- Medical Laboratory Sciences

**Certificates**
- None

**Related Minors**
- Biology
- Chemistry

**Advising Notes**
- None

**Transfer Notes**
- Students who begin a two semester sequence course (e.g. General Chemistry) at a Florida College System institution are strongly encouraged to complete the sequence before transferring. If it will not be possible to complete the sequence before transferring, the student should postpone beginning the course until enrolling at UCF.
- Lower division courses do not substitute for upper division courses.

**Acceptable Substitutes for Transfer Courses**
- BSC 2011C Biology II 4 hrs
  - may be substituted with: BSC 3403C Chemistry Fundamentals I 4 hrs
- MCB 3020C General Microbiology 5 hrs
  - may be substituted with: MCB 4603C Clinical Neuroanatomy and Neuroscience 4 hrs
  - may be substituted with: CHM 2041 Organics I 4 hrs

**Freshman Year - Fall**
- ENC 1101 Composition I 3 hrs
- CHM 2045C Organic Chemistry I 3 hrs
- SLS 2311C Overview of Select Medical Careers 2 hrs
- STS 2311C General Biology I 3 hrs
- MAC 2311C Calculus I 4 hrs
- CHM 2210 Organic Chemistry I 3 hrs
- CHM 2045C Organic Chemistry II 3 hrs
- PCB 3522 Molecular Biology I 3 hrs
- MCB 3020C General Microbiology 3 hrs
- STA 2323 Statistical Methods I 3 hrs

**Sophomore Year - Fall**
- ENC 1102 Composition II 3 hrs
- CHM 2046C Organic Chemistry II 3 hrs
- BSC 3403C Quantitative Biological Methods 3 hrs
- MCB 3020C General Microbiology 3 hrs
- STA 2323 Statistical Methods I 3 hrs
- CHM 2211L Organic Laboratory Techniques I 2 hrs
- PCB 3522 Molecular Biology I 3 hrs
- MCB 4970H Honors Undergraduate Thesis II 1 hr

**Junior Year - Fall**
- PCB 3522 Molecular Biology I 3 hrs
- Select 1: 3 hrs
  - CHM 2211L Organic Laboratory Techniques I 2 hrs
  - PCB 4524 Molecular Biology II 3 hrs

**Junior Year - Spring**
- PCB 4524 Molecular Biology II 3 hrs
- Select 1: 4 hrs
  - PHY 2053C College Physics I or 4 hrs
  - PHY 2048C General Physics Using Calculus I 4 hrs

**Senior Year - Fall**
- PCB 3522 Molecular Biology I 3 hrs
- Select 1: 3 hrs
  - PHY 2053C College Physics I or 3 hrs

**Senior Year - Spring**
- PCB 3522 Molecular Biology I 3 hrs
- Select 1: 4 hrs
  - PHY 2048C General Physics Using Calculus I 4 hrs

**Undergraduate Catalog 2017-2018**
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<td>PCB 3233L and PCB 4280 Molecular Immunology or PCB 3233 or Restricted Elective</td>
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1 Students electing to enroll in the PHY2048/2049 sequence must plan to accommodate MAC 2311/2312 as prerequisites.

**Senior Year - Fall** 12 hrs

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<td>MCB 4414 Microbial Metabolism or BCH 4053 Biochemistry I</td>
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**Senior Year - Spring** 16 hrs

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**Program Academic Learning Compacts**

- Program Academic Learning Compacts (student learning outcomes) for undergraduate programs are located at: [http://www.oelas.ucf.edu/alc/academic_learning_compacts.htm](http://www.oelas.ucf.edu/alc/academic_learning_compacts.htm)

**Equipment Fees**

- Part-Time Student: $39 per term
- Full-Time Student: $78 per term