

## UCF Degree Programs

### Biomedical Sciences - Neuroscience Track (B.S.)

#### College of Medicine

#### Burnett School of Biomedical Sciences

#### Health and Public Affairs II, Room: 335

<https://med.ucf.edu/biomed/>

Email: [bsbsadvising@ucf.edu](mailto:bsbsadvising@ucf.edu)

Dr. Griffith Parks, Director, 407-823-5932

#### 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 CollegeSystem or State University System.

- Grades below "C" in Common Program

Prerequisites, Core Requirements and Restricted Electives will not be accepted.

- Students in the Neuroscience track must maintain a minimum Science GPA of 3.2. Students who are unable to maintain such GPA must revert back into the non-track Biomedical Sciences B.S.

- Students should consult with a BSBS academic advisor at least once a semester.

#### 1. UCF General Education Program (GEP)

##### A: Communication Foundations (9 hrs)

Required	ENC 1101	Composition I	3 hrs
Required	ENC 1102	Composition II	3 hrs
Required	SPC 1603C	Fundamentals of Technical Presentations	3 hrs

##### B: Cultural & Historical Foundations (9 hrs)

##### C: Mathematical Foundations (7 hrs)

Required	MAC 2311	Calculus with Analytic Geometry I	4 hrs
Required	STA 2023	Statistical Methods I	3 hrs

##### D: Social Foundations (6 hrs)

##### E: Science Foundations (8 hrs)

Required	BSC 2010C	Biology I	4 hrs
<sup>1</sup> Required	CHM 2045C	Chemistry Fundamentals I	4 hrs

<sup>1</sup> or CHM 2040 and CHM 2041

#### 2. Common Program Prerequisites (CPP)

- See "Common Prerequisites" in the Transfer and Transitions Services section for more information.

BSC 2010C	Biology I	GEP
CHM 2045C	Chemistry Fundamentals I	GEP
CHM 2046	Chemistry Fundamentals II	3 hrs
CHM 2046L	Chemistry Fundamentals Laboratory	1 hr
MAC 2311	Calculus with Analytic Geometry I	GEP

#### 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

#### 3. Core Requirements: Basic Level

##### Math and Statistics

MAC 2311	Calculus with Analytic Geometry I	GEP
STA 2023	Statistical Methods I	GEP

##### Chemistry

CHM 2210	Organic Chemistry I	3 hrs
CHM 2211	Organic Chemistry II	3 hrs
CHM 2211L	Organic Laboratory Techniques I	2 hrs

#### 4. Core Requirements: Advanced Level

BSC 3403C	Quantitative Biological Methods	4 hrs
MCB 3020C	General Microbiology	5 hrs
PCB 3522	Molecular Biology I	3 hrs
PCB 3233L	Immunology Laboratory	1 hr
PCB 4280	Molecular Immunology	3 hrs

PCB 4524	Molecular Biology II	3 hrs
MCB 4410	Cellular Metabolism	3 hrs

#### Select 1:

BCH 4024	Medical Biochemistry or	4 hrs
BCH 4053	Biochemistry I	3 hrs

#### Track Core Requirements

MCB 4224	Molecular Biology of Diseases	3 hrs
PCB 4843	Cellular and Molecular Neuroscience	3 hrs
ZOO 3744	Neurobiology	3 hrs
ZOO 4743C	Clinical Neuroanatomy and Neuroscience	4 hrs

#### 5. Restricted Electives

**Students must choose 3 courses. Two must come from the list below and the additional course can come from the broader list under the Biomedical Sciences (non-track). Two of these three courses must have a laboratory component.**

PCB 3703C	Human Physiology	4 hrs
PCB 4028	Molecular and Cellular Pharmacology	3 hrs
PCB 4135	Applied Molecular Cell Biology	3 hrs
PCB 4174	Foundation of Bio-Imaging Science	3 hrs
PCB 4234	Cancer Biology	3 hrs
PCB 4284	Immunobiology	3 hrs
PCB 4832	Cellular and Molecular Basis of Brain Functions	3 hrs
ZOO 4742	Advanced Neurobiology	3 hrs
ZOO 4747C	Clinical Neuroscience	4 hrs

**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.**

#### 6. Capstone Requirements

- None

#### 7. Foreign Language Requirements

##### Admissions

- Two years of one foreign language in high school, or one year of foreign language in college (or equivalent proficiency exam) prior to graduation.

##### Graduation

- None

#### 8. Electives

- Variable. Students are encouraged to participate in undergraduate research if interested in pursuing graduate or professional education.

#### 9. Additional Requirements

- None

#### 10. Required Minors

- None

#### 11. Departmental Exit Requirements

- Students must complete all coursework in the baccalaureate curriculum as shown and earn a GPA of at least 3.20 for all coursework in the sciences.

- Independent study, directed research or similar credit may not be used as a restricted elective.

- A 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.

## UCF Degree Programs

### Total Semester Hours Required

- 120

### Honors In Major

- Application and admissions through the Department and the Burnett Honors College.
- Fulfill University requirements for Honors in the Major and maintain 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 course with a grade of

#### B or better.

<sup>1</sup> BSC 3403C Quantitative Biological Methods 4 hrs

<sup>1</sup> Honors section

### Complete the following with a grade of B or better and successfully complete the oral defense of the Honors Thesis.

MCB 4970H Honors Undergraduate Thesis II 1 hr

### Related Programs

- Biology
- Biotechnology
- Medical Laboratory Sciences
- Chemistry - Biochemistry Track

### 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

- CHM 2040 and CHM 2041 substitute CHM 2045C

### Plan of Study

#### Freshman Year - Fall 14 hrs

ENC 1101 Composition I 3 hrs  
 CHM 2045C Chemistry Fundamentals I 4 hrs  
 MAC 2311 Calculus with Analytic Geometry I 4 hrs  
 General Education Program Course 3 hrs

#### Freshman Year - Spring 14 hrs

BSC 2010C Biology I 4 hrs  
 CHM 2046 Chemistry Fundamentals II 3 hrs  
 CHM 2046L Chemistry Fundamentals Laboratory 1 hr  
 ENC 1102 Composition II 3 hrs  
 General Education Program Course 3 hrs

#### Sophomore Year - Fall 14 hrs

CHM 2210 Organic Chemistry I 3 hrs  
 MCB 3020C General Microbiology 5 hrs  
 STA 2023 Statistical Methods I 3 hrs  
 General Education Program Course 3 hrs

#### Sophomore Year - Spring 15 hrs

CHM 2211 Organic Chemistry II 3 hrs  
 BSC 3403C Quantitative Biological Methods 4 hrs  
 ZOO 3744 Neurobiology 3 hrs  
 General Education Program Course 3 hrs

#### Select 1:

CHM 2211L Organic Laboratory Techniques I or 2 hrs  
 Elective 3 hrs

#### Sophomore Year - Summer 9 hrs

#### Select 1:

CHM 2211L Organic Laboratory Techniques I or 2 hrs  
 Elective 3 hrs  
 Elective 3 hrs  
 Elective 3 hrs

### Junior Year - Fall

PCB 3522 Molecular Biology I 3 hrs  
 Restricted Elective 4 hrs

#### Select 1:

PHY 2053C College Physics I or 4 hrs  
 PHY 2048C General Physics Using Calculus I 4 hrs  
 General Education Program Course 3 hrs

### Junior Year - Spring

PCB 4524 Molecular Biology II 3 hrs  
 PCB 4843 Cellular and Molecular Neuroscience 3 hrs  
 PCB 4280 Molecular Immunology 3 hrs  
 PCB 3233L Immunology Laboratory 1 hr

#### Select 1:

PHY 2054C College Physics II or 4 hrs  
 PHY 2049C General Physics Using Calculus II 4 hrs

### Senior Year - Fall

ZOO 4743C Clinical Neuroanatomy and Neuroscience 4 hrs  
 BCH 4053 Biochemistry I 3 hrs  
 Restricted Elective 3 hrs  
 Elective 3 hrs

### Senior Year - Spring

MCB 4224 Molecular Biology of Diseases 3 hrs  
 MCB 4410 Cellular Metabolism 3 hrs  
 Restricted Elective 4 hrs  
 Elective 3 hrs

### Program Academic Learning Compacts

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