

# Graduate Degree Plan

## PhD in Chemical, Physical, & Structural Biology

Students Starting Academic Year: 2022-2023

### General Degree Requirements:

- Completion of at least 180 term hours
- At least 30 of those term hours must be in Didactic courses
- Completion of at least three terms of Research Rotation before appointing a major advisor
- Students must maintain satisfactory academic progress as detailed in the Student Handbook

### Year One Requirements:

|         |            |                                     |  |               |
|---------|------------|-------------------------------------|--|---------------|
| Term 1: | GS-GS-6600 | Foundations A: Molecules to Systems | 3 (Didactic)<br><i>(two-term course)</i> | Total to Date |
|         | GS-GS-6400 | Foundations B: Biostatistics        | 2 (Didactic)<br><i>(two-term course)</i> |               |
|         | GS-GS-5101 | Responsible Conduct of Research 1   | 1  |               |
|         | GS-CP-6304 | Molecular Biophysics 1              | 3 (Didactic)                             |               |
|         | GS-CP-5101 | Thinking Like a Scientist 1         | 1  |               |
|         | GS-CP-5100 | Student Research Seminar            | 1  |               |
|         | GS-CP-5030 | Research Rotation                   | 1  |               |
|         | Total:     |                                     |  |               |
| Term 2: | GS-GS-6600 | Foundations A: Molecules to Systems | 3 (Didactic)<br><i>(two-term course)</i> | Total to Date |
|         | GS-GS-6400 | Foundations B: Biostatistics        | 2 (Didactic)<br><i>(two-term course)</i> |               |
|         | GS-CP-6202 | Thinking Like a Scientist 2         | 2 (Didactic)                             |               |
|         | GS-CP-5100 | Student Research Seminar            | 1  |               |
|         |            | Research Rotation/Elective Courses  | 4  |               |
|         | Total:     |                                     |  |               |
| Term 3: | GS-CP-6306 | Thinking Like a Scientist 3         | 3 (Didactic)                             | Total to Date |
|         | GS-CP-5100 | Student Research Seminar            | 1  |               |
|         |            | Research Rotation/Elective Courses  | 8  |               |
|         | Total:     |                                     |  |               |
| Term 4: | GS-CP-6307 | Thinking Like a Scientist 4         | 3 (Didactic)                             | Total to Date |
|         | GS-CP-5100 | Student Research Seminar            | 1  |               |
|         |            | Research Hours/Elective Courses     | 8  |               |
|         | Total:     |                                     |  |               |
| Term 5: |            | Research Hours/Elective Courses     | 12                                       | Total to Date |
|         | Total:     |                                     |  |               |

## Year Two Requirements:

|         |            |                                   |    |               |
|---------|------------|-----------------------------------|----|---------------|
| Term 1: | GS-CP-5100 | Student Research Seminar          | 1  | Total to Date |
|         |            | Research Hours/Elective Courses   | 11 |               |
|         | Total:     |                                   | 12 |               |
| Term 2: | GS-GS-5102 | Responsible Conduct of Research 2 | 1  | Total to Date |
|         | GS-CP-5100 | Student Research Seminar          | 1  |               |
|         |            | Research Hours/Elective Courses   | 10 |               |
|         | Total:     |                                   | 12 |               |
| Term 3: | GS-CP-5100 | Student Research Seminar          | 1  | Total to Date |
|         |            | Research Hours/Elective Courses   | 11 |               |
|         | Total:     |                                   | 12 |               |

*Student's Thesis Advisory Committee must be appointed by the end of Term 3 in the student's second year of enrollment.*

|         |            |                                 |    |               |
|---------|------------|---------------------------------|----|---------------|
| Term 4: | GS-CP-5100 | Student Research Seminar        | 1  | Total to Date |
|         |            | Research Hours/Elective Courses | 11 |               |
|         | Total:     |                                 | 12 |               |
| Term 5: |            | Research Hours/Elective Courses | 12 | Total to Date |
|         |            |                                 | 12 | 120 (21)      |

*Nine additional didactic hours are required for a total of thirty (30)*

### Qualifying Exam Requirement:

- Must be taken by the end of the second year of enrollment
- Student must complete all prerequisite activities defined by their program before taking the exam

### Course Requirements beyond Year Two:

|                 |            |                                   |   |
|-----------------|------------|-----------------------------------|---|
| Year 3, Term 3: | GS-GS-5103 | Responsible Conduct of Research 3 | 1 |
| Year 4, Term 3: | GS-GS-5104 | Responsible Conduct of Research 4 | 1 |

### Recurring requirements through Graduation:

|            |            |                          |              |
|------------|------------|--------------------------|--------------|
| Terms 1-4: | GS-CP-5100 | Student Research Seminar | As required* |
| Terms 1-5: | GS-CP-5050 | Dissertation             | As required* |

*\*Students shall enroll in the number of credits of Dissertation needed to be enrolled full-time (12 credits) each term through Graduation.*

### Research Course Work:

|            |                   |
|------------|-------------------|
| GS-CP-5010 | Readings          |
| GS-CP-5030 | Research Rotation |
| GS-CP-5040 | Special Projects  |
| GS-CP-5050 | Dissertation      |

### Suggested Electives\*

| Chemical Biology/Pharmacology Emphasis |   |   |
|--|---|---|
| GS-CP-6205                             | Chemical Biology                                      | 2 |
| GS-CP-6302                             | Chemical Concepts in Chemical Biology                 | 3 |
| GS-CP-6206                             | Drug Discovery: Bench to Bedside                      | 2 |
| GS-CP-6208                             | Pharmacology Concepts in Drug Discovery & Development | 2 |

### Suggested Electives\*

| Structural Biology/Biophysics Emphasis |                                |   |
|--|--------------------------------|---|
| GS-CP-6305                             | Molecular Biophysics 2         | 3 |
| GS-CP-6301                             | Advanced X-ray Crystallography | 3 |
| GS-CP-6207                             | Electron Cryomicroscopy        | 2 |

*\*Students may select electives from open course options in all graduate programs. Courses may be viewed in the [AY22 Graduate School Bulletin](#)*

# Course Requirement Checklist

## PhD in Chemical, Physical, & Structural Biology

Baylor  
College of  
Medicine

GRADUATE  
SCHOOL  
OF BIOMEDICAL SCIENCES

Students Starting Academic Year: 2022-2023

| <b>Foundations Courses (10 credits):</b>   |            |                                     |      |  |
|--|------------|-------------------------------------|------|--|
|  | GS-GS-6600 | Foundations A: Molecules to Systems | 6    |  |
|  | GS-GS-6400 | Foundations B: Biostatistics        | 4    |  |
| <b>Program Core Course (3 credits):</b>  |            |                                     |      |  |
|  | GS-CP-6301 | Molecular Biophysics 1              | 3    |  |
| <b>Didactic Elective Courses (at least 9 credits):</b>   |            |                                     |      |  |
|  |            |                                     |      |  |
|  |            |                                     |      |  |
|  |            |                                     |      |  |
|  |            |                                     |      |  |
| <b>Responsible Conduct of Research Courses (4 credits):</b>  |            |                                     |      |  |
|  | GS-GS-5101 | Responsible Conduct of Research 1   | 1    |  |
|  | GS-GS-5102 | Responsible Conduct of Research 2   | 1    |  |
|  | GS-GS-5103 | Responsible Conduct of Research 3   | 1    |  |
|  | GS-GS-5104 | Responsible Conduct of Research 4   | 1    |  |
| <b>Professional Development Courses (9 credits):</b>   |            |                                     |      |  |
|  | GS-CP-5101 | Thinking Like a Scientist 1         | 1    |  |
|  | GS-CP-6202 | Thinking Like a Scientist 2         | 2    |  |
|  | GS-CP-6306 | Thinking Like a Scientist 3         | 3    |  |
|  | GS-CP-6307 | Thinking Like a Scientist 4         | 3    |  |
| <b>Seminar/Journal Literature Courses:</b>   |            |                                     |      |  |
|  | GS-CP-5100 | Student Research Seminar            | 1    |  |
| <i>Required in terms 1-4 every year from matriculation through attainment of Permission-To-Write.</i>                        |            |                                     |      |  |
| <b>Research Hours:</b>   |            |                                     |      |  |
| In each term, students enroll in the number of credits [beyond other coursework] needed to be enrolled full-time (minimum 1) |            |                                     |      |  |
|  | GS-CP-5030 | Research Rotation                   | Var. |  |
| <i>Taken each term when a mentor is not appointed (minimum 3 terms)</i>  |            |                                     |      |  |
|  | GS-CP-5040 | Special Projects                    | Var. |  |
| <i>Taken each term after a mentor is appointed, and before candidacy is achieved.</i>  |            |                                     |      |  |
|  | GS-CP-5050 | Dissertation                        | Var. |  |
| <i>Taken each term after a mentor is appointed, and after candidacy is achieved.</i>   |            |                                     |      |  |