# Course Requirement Checklist
# PhD in Chemical, Physical, & Structural Biology

## Students Starting Academic Year: **2025-2026**

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

# Graduate Degree Plan
# PhD in Chemical, Physical, & Structural Biology

## Students Starting Academic Year: 2025-2026

### 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) *(two-term course)* | |
| | GS-GS-6400 | Foundations B: Biostatistics | 2 (Didactic) *(two-term course)* | |
| | GS-GS-5101 | Responsible Conduct of Research 1 | 1 | |
| | GS-CP-6304 | Molecular Biophysics 1 | 3 (Didactic) | |
| | GS-CP-5101 | Scientific Thinking 1: Research Principles & Practices | 1 | |
| | GS-CP-5100 | Student Research Seminar | 1 | |
| | GS-CP-5030 | Research Rotation | 3 | Total to Date |
| | | Total: | 14 (8) | 14 (8) |
| Term 2: | GS-GS-6600 | Foundations A: Molecules to Systems | 3 (Didactic) *(two-term course)* | |
| | GS-GS-6400 | Foundations B: Biostatistics | 2 (Didactic) *(two-term course)* | |
| | GS-CP-6202 | Scientific Thinking 2: Critical Literature Analysis | 2 (Didactic) | |
| | GS-CP-5100 | Student Research Seminar | 1 | |
| | | Research Rotation/Elective Courses | 4 | Total to Date |
| | | Total: | 12 (7) | 26 (15) |
| Term 3: | GS-CP-6306 | Scientific Thinking 3: Writing & Defending Proposals I | 3 (Didactic) | |
| | GS-CP-5100 | Student Research Seminar | 1 | |
| | | Research Rotation/Elective Courses | 8 | Total to Date |
| | | Total: | 12 (3) | 38 (18) |
| Term 4: | GS-CP-6307 | Scientific Thinking 4: Writing & Defending Proposals II | 3 (Didactic) | |
| | GS-CP-5100 | Student Research Seminar | 1 | |
| | | Research Hours/Elective Courses | 8 | Total to Date |
| | | Total: | 12 (3) | 50 (21) |
| Term 5: | | Research Hours/Elective Courses | 12 | |
| | | Total: | 12 | 62 (21) |

### Year Two Requirements:

| | | | | |
|---|---|---|---|---|
| Term 1: | GS-CP-5100 | Student Research Seminar | 1 | |
| | | Research Hours/Elective Courses | 11 | Total to Date |
| | | Total: | 12 | 74 (21) |

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|---|---|---|---|---|
| Term 2: | GS-GS-5102 | Responsible Conduct of Research 2 | 1 | |
| | GS-CP-5100 | Student Research Seminar | 1 | |
| | | Research Hours/Elective Courses | 10 | Total to Date |
| | | Total: | 12 | 86 (21) |
| Term 3: | GS-CP-5100 | Student Research Seminar | 1 | |
| | | Research Hours/Elective Courses | 11 | Total to Date |
| | | Total: | 12 | 98 (21) |
| *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 | |
| | | Research Hours/Elective Courses | 11 | Total to Date |
| | | Total: | 12 | 110 (21) |
| Term 5: | | Research Hours/Elective Courses | 12 | Total to Date |
| | | | 12 | 122 (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:

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|---|---|
| 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-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 Graduate School Bulletin*