The graduate program in Biochemistry, Biophysics, & Structural Biology provides outstanding graduate training in a highly collaborative research environment. Students and faculty are engaged by a plethora of biological questions, employing creative approaches to seek detailed, mechanistic answers. The program includes such diverse topics as host-pathogen interactions, cancer-related biochemical pathways, membrane protein function, and nucleic acid metabolism. Courses are designed to equip students with an ability to critically appraise current and future research, to conduct mechanistic studies of molecular processes, and to relate reductionist findings to overall biological function.

**Research Environment**

The Biochemistry, Biophysics & Structural Biology program offers many opportunities to carry out cutting-edge research in an interdisciplinary environment.

**Research areas include:**
- DNA repair, replication and recombination
- Enzymology and allostery
- Mechanisms of neural degeneration
- Molecular signaling
- Biochemistry of host-pathogen interactions
- Mechanisms of microbial immune evasion
- Intrinsically disordered proteins
- Protein-nucleic acid interactions
- Cell cycle regulation
- Computational biophysics
- Cellular transport and trafficking
- Nanotechnology and chemical biology
- Membrane protein biophysics

**Research approaches include:**
- Cryo-electron microscopy
- X-ray Crystallography
- Solution and solid state NMR
- Mass spectrometry
- Synthetic chemistry
- Molecular modeling
- Advanced cellular imaging
- Single-molecule microscopy
- Kinetic and thermodynamic analysis
**SCIENCE IS FOR EVERYONE.**

We invite all students to apply, especially those from backgrounds historically underrepresented in the sciences, such as African, Latin, and Native Americans, those with disabilities, and individuals from low-income backgrounds.

**learn more:** tinyurl.com/dbbsdiversity

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**BIOCHEMISTRY, BIOPHYSICS, & STRUCTURAL BIOLOGY**

Program Details and Faculty Research: tinyurl.com/dbbs-bbsbfaculty

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**REQUIRED COURSES**

- Chemistry & Physics of Biological Molecules
- Macromolecular Interactions
- Ethics & Research Science
- Biochemistry, Biophysics, & Structural Biology Seminar
- Three (3) Journal Clubs
- Graduate Research Fundamentals

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**ADVANCED ELECTIVES**

*Popular Elective Courses:*

- Fundamentals of Molecular Cell Biology
- Immunology
- Nucleic Acids & Protein Biosynthesis
- Statistical Computation
- Statistical Thermodynamics
- Cellular Neurobiology
- Computational Molecular Biology
- Genomics

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**PROGRAM BENEFITS & SUPPORT**

Full tuition funding and benefits*, including:

**GENEROUS STIPEND**

**PROFESSIONAL DEVELOPMENT FUNDS**

**HEALTH COVERAGE**

**CITY METRO U-PASS & MORE**

*guaranteed, provided that satisfactory progress towards completion of degree requirements is met

Opportunities to obtain nationally competitive fellowships, awards, and grants

Robust & supportive peer community interest groups for personal and professional development

Access to all university educational, entertainment, and recreational resources

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**APPLICATION DEADLINE:**

**DECEMBER 1**

dbbs-info@email.wustl.edu  
@WUSTLdbbs  
facebook.com/wustldbbs

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explore & apply: tinyurl.com/dbbstour