

# BIOMOLECULAR SCIENCE (BMS-GY)

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**BMS-GY 8011 ADVANCED MOLECULAR BIOLOGY LAB (1.5 Credits)**

*Typically offered not typically offered*

Laboratory course covering advanced techniques employed in molecular biology, including gel electrophoresis, chromatography, PCR, blotting, microarrays, restrictions and sequencing of genes. Practical work in this course illustrates and complements the lectures in BMS-GY 8013. |

Corequisite: BMS-GY 8013. This course is not open to students who have taken BMS-UY 4324.

**Grading:** Grad Poly Graded

**Repeatable for additional credit:** No

**BMS-GY 8013 ADVANCED MOLECULAR BIOLOGY (3 Credits)**

*Typically offered not typically offered*

Understanding the complex and dynamic interactions of cellular function.

Topics include classical molecular biology (DNA, RNA and protein biosynthesis), recombinant DNA and genetic engineering, interactions of macromolecules and regulation of biologic systems. | Prerequisite:

Instructor's permission. This course is not open to students who have taken BMS-UY 4342

**Grading:** Grad Poly Graded

**Repeatable for additional credit:** No

**BMS-GY 8021 ADVANCED CELL BIOLOGY LABORATORY (1.5 Credits)**

*Typically offered occasionally*

Provides students with practical experience in some key cell and molecular biology techniques, including analysis of different cell types, cell differentiation, PCR, transformations and selection of cell lines with particular features. The course covers proper data handling and reporting techniques. | Co-requisite: BMS-GY 8023. This course is not open to students who have taken BMS-UY 3314.

**Grading:** Grad Poly Graded

**Repeatable for additional credit:** No

**BMS-GY 8023 ADVANCED CELL BIOLOGY (3 Credits)**

*Typically offered occasionally*

Understanding cell biology through the biochemistry of the cell, with emphasis on the structure and function of the cell and its organelles.

Advanced theories of cytoskeletal proteins, cell junctions and matrix, protein signaling and cell death will be covered. | Prerequisite: Instructor's consent. This course is not open to students who have taken BMS-UY 3314.

**Grading:** Grad Poly Graded

**Repeatable for additional credit:** No