



# Biotechnology in the World of Medicine

## ABOUT THE COURSE

Biomedical science is an applied science discipline that studies the development and function of the human body at a molecular, cellular and whole body level, and focuses on diseases, drugs and research related to human health. This discipline offers a variety of career options at all educational levels for those who have obtained at least a high school diploma.

High school juniors and seniors will explore technologies used in the biomedical field. The Grand Challenges in Human Health, a project funded by the Bill and Melinda Gates Foundation, will be utilized as a framework. This project is focused on one unifying purpose: to create new tools that can radically improve human health, especially in the developing world.

Solutions to the Grand Challenges depend on an understanding of molecular biology and the incorporation of biotechnology. Through technical lectures, laboratory work and presentations from guest speakers, students will have the opportunity to acquire knowledge and scientific skills that focus on the study of DNA, RNA and proteins in a real-world, problem-centered context. Students will research ways to prevent, diagnose and treat human disease. In addition students will engage with the professional community of biomedical engineers and explore associated career pathways.

## CLASSES\*

WHEN: Tuesday Nights (9/18/18-1/15/19)

TIME: 4:15-7 p.m.

LOCATION:

Biopharmaceutical Technology Center

5445 East Cheryl Parkway, Madison, 53711

\*Pre-requisites:

- ◆ High School Junior or Senior
- ◆ Have taken Biology or Biotechnology



**This course will emphasize the development of professional career and technical lab skills:**

- ◆ DNA, RNA NUCLEIC ACIDS AND PROTIENS
- ◆ ELISA, WESTERN BLOT
- ◆ PCR REACTIONS
- ◆ GEL ELECTROPHORESIS AND ANALYSIS
- ◆ FUNCTIONAL PROTIENS
- ◆ PROTIEN PURIFICATION
- ◆ HYDROPHOBIC INTERACTION CHROMATOGRAPHY
- ◆ DNA ISOLATION



For more information or to sign up, contact your School-to-Career Coordinator or call the Dane County School Consortium at 608-316-1358. [www.dcsc.org](http://www.dcsc.org)