

Middleton High School

Pre-Collegiate STEM Academy

Biomedical-Biotechnology Magnet (Scientific Research)



Biomedical Sciences is a Project Lead the Way (PLTW) program, which is a nationally recognized curriculum for engaging and preparing students for careers in medicine, healthcare, and scientific research. (www.pltw.org)

In the four Biomedical Sciences PLTW courses, students explore the concepts of human medicine and technologies, including mapping and analyzing DNA. Through activities such as dissecting a heart, students examine the processes, structures and interactions of the human body – often playing the role of biomedical professionals to solve mysteries.

Biotechnology is a field of applied biology that involves the use of living organisms and bioprocesses in engineering, technology, medicine, and other fields requiring bioproducts. Work in biotechnology includes genetic engineering as well as cell and tissue culture technologies.

Biomedical Science Students Will...

- Explore the prevention, diagnosis and treatment of disease.
- Work collaboratively to investigate and design innovative solutions for the health challenges of the 21st century such as fighting cancer with nanotechnology.
- Receive honors credit for all four Biomedical Science PLTW courses
- Participate in HOSA (Health Occupations Students of America), a co-curricular student organization that offers competitions related to the health field - at the regional, state and national levels (www.hosa.org), and
- Have access to a nationwide support network through PLTW that includes postsecondary institutions, state education officials, business and industry partners and professional associations.
- Certification in Laboratory Technology through University of Florida, JR. Year (BACE)

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Course Sequence (Biomedical-Biotechnology)

(Standard Magnet Track)

	Grade 9	Grade 10
ELA	English I Honors	English II Honors
Math	Geometry Honors	Algebra II Honors
Sci	Biology Honors or AP Biology	Chemistry Honors
Soc	AP Human Geography	AP World History
BIO	Principles of Biomedical Sciences Honors	Human Body Systems Honors
BIO	Computer Fundamentals/ Drafting 1	Biotechnology II
Elec	World Language	World Language
Elec	Elective	Elective

	Grade 11	Grade 12
ELA	AP English Lang & Comp	AP English Literature & Comp
Math	Pre-Calculus Honors	AP Calculus AB or BC
Sci	AP Chemistry	AP Biology or AP Physics 1
Soc	AP United States History	AP Economics Elective
BIO	Medical Interventions Honors	Biomedical Innovation Honors
BIO	Biotechnology III	Science Elective
Elec	HOPE	Elective or USF/HCC Dual Enrollment
Elec	Elective	Elective

* Prerequisite: Teacher and Administrator Approval

All courses at **Middleton Magnet High School** are taught on a two-day rotation cycle. Students attend four 95-minute periods each day. This schedule enables students to complete eight courses per year, rather than the traditional seven courses at most HCPS high schools. The addition of an 8th period allows students to include popular electives such as Band, Orchestra, Chorus, JROTC, Building Construction, Art, Agriculture or courses in another magnet program.



<http://middleton.mysdhc.org>
MHS Magnet Office: 813-233-3360 Ext. 234



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