



Medical Interventions
Course Syllabus 2021-2022 – Mr. Weeks
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Course Description

In PLTW Medical Interventions (MI), students follow the life of a fictitious family as they investigate how to prevent, diagnose, and treat disease. Students explore how to detect and fight infection; screen and evaluate the code in human DNA; evaluate cancer treatment options; and prevail when the organs of the body begin to fail. Through real-world cases, students are exposed to a range of interventions related to immunology, surgery, genetics, pharmacology, medical devices, and diagnostics.

Goals for Student Learning

In the Medical Interventions course, students will investigate a variety of interventions involved in the prevention, diagnosis and treatment of disease as you follow the lives of a fictitious family. Each family case scenario introduces multiple types of interventions and reinforces concepts learned in the previous two courses, as well as presenting new content. Interventions may range from simple diagnostic tests to treatment of complex diseases and disorders. These interventions are showcased across the generations of the family and provide a look at the past, present and future of biomedical science. Lifestyle choices and preventive measures are emphasized throughout the course as well as the important roles scientific thinking and engineering design play in the development of interventions of the future.

Textbook and Materials

Our curriculum for MI is exclusively online. For this course, you need the following:

- A notebook for only MI or a dedicated section of your notebook for MI
- A pen or pencil
- Lined Paper
- A box of gloves labeled with your name
- A strong work ethic and sense of curiosity

Course Outline

This is a general overview of the concepts and topics for the year:

Unit One: How to Fight Infection

- 1.1: *The Mystery Infection*
- 1.2: *Antibiotic Treatment*
- 1.3: *Aftermath: Hearing Loss*
- 1.4: *Vaccination*

Unit Two: How to Screen Your Genes

- 2.1: *Genetic Testing and Screening*
- 2.2: *Our Genetic Future*

Unit Three: How to Conquer Cancer

- 3.1: *Detecting Cancer*
- 3.2: *Reducing Cancer Risk*
- 3.3: *Treating Cancer*
- 3.4: *Building a Better Cancer Treatment*

Unit Four: How to Prevail When Organs Fail

- 4.1: *Manufacturing Human Proteins*
- 4.2: *Organ Failure*
- 4.3: *Transplant*
- 4.4: *Building a Better Body*

Lab Expectations

CLOSED TOED SHOES ARE REQUIRED FOR ALL LABS! If you don't have closed toed shoes on a lab day you cannot participate in the lab! Long hair should be pulled back and sleeves should be up as well!

HCPS Grading Policy

Examples of Product, Process, and Practice		
PRODUCT (50%) <i>Culminating Demonstration of Knowledge</i>	PROCESS (30%) <i>Addressing Specific Short-Term Learning Outcomes</i>	PRACTICE (20%) <i>Building Attitudes, Habits, and Skills</i>
Does it measure how well students achieved specific learning goals, standards, and/or competencies?	Does it provide feedback to students regarding growth towards the attainment of specific learning goals, standards and competencies?	Does it allow students to practice skills and/or reinforce content learning?
<ul style="list-style-type: none"> Primarily completed in presence of teacher Rubric aligned to standards Accuracy graded 	<ul style="list-style-type: none"> Primarily completed in presence of teacher Rubric aligned to standards Accuracy graded 	<ul style="list-style-type: none"> Graded for completion and participation

****Extra credit will not be given for non-academic purposes****

Absent Work Policy

All assignments should be submitted on time. Students will be given the number of class periods equal to the number of lawful class periods absent to turn in completed make up assignments without penalty.

Late Work Policy

All assignments should be submitted on time in order to earn full credit. Any assignment, (*product, process, or practice*) will be allowed to be turned in late for one letter grade deduction from the grade a student earns on the assignment. In order to earn credit for late assignments, students must submit assignments by the end of the day on Wednesday (except for the last week of the quarter) following the designated HAC update. Students are only able to submit assignments that have an established due date within the grading window before the designated HAC update. Assignment that are turned in for late credit will be identified by a footnote in HAC to include a statement about the deduction of a letter grade due to the lateness of the assignment.

Grading Window	Designated HAC Update	Late Work Due Date
September 8- September 24	September 24	September 29
September 27- October 13	October 13	October 20
October 14- October 29	October 29	November 5 (Friday)
November 8- November 19	November 19	November 24
November 22- December 10	December 10	December 15
December 13- January 13	January 13	January 21 (Friday)
January 24- February 11	February 11	February 16
February 14- February 25	February 25	March 2
February 28- March 11	March 11	March 16
March 14- March 25	March 25	March 31 (Thursday)
April 1- April 22	April 22	April 27
April 25- May 6	May 6	May 11
May 11- May 20	May 20	May 25

Academic Integrity

Academic integrity is taking responsibility for the quality and completion of one's own work. Academic dishonesty is taking someone else's work and claiming it as one's own. Students at Bel Air High School are responsible for knowing what is considered to be Academic Dishonesty and the subsequent consequences. More information can be found in the BAHS Student Planner.

Cell Phone Policy

- Students will place their cellphones in a teacher designated area as they enter each classroom. Teachers will review with students the specific location for each room. The phones will remain in the teacher designated area unless teachers explicitly tell students to take out the phones for instructional use.
- Cellphones will remain in the teacher designated area during bathroom visits, assemblies and trips to the nurse/counseling office/main office.
- Cellphones will be retrieved from the teacher designated area at the end of class at the direction of the teacher.
- School-appropriate cellphone use is permitted during class changes and lunch. Students are not permitted to make phone calls during school hours.
- If the cell phone policy is violated, it is a referable offense.



Bel Air High School Digital Teaching and Learning (DTL) Virtual Learning Expectations and Norms

It is important to remember that the virtual classroom, while different from a face-to-face classroom setting, remains a classroom; subsequently, standards of professional behavior and expectations for polite interactions still exist.

“Good netiquette means conducting yourself in an online class with the same respect, politeness and professionalism that you would exhibit in a real-life classroom.” – Erin Lynch, Senior Educator at Test Innovators

All BAHS students are expected to adhere to the following expectations during online instruction.

Expectations for How to Communicate during Online Instruction

Remember: Human beings are on the other side of your written communication.

- ✓ **When communicating electronically, whether in the “chat,” through email, as part of a discussion post, in a shared document, or by some other method, your written words are read by real people, all deserving of respectful communication.**
 - Before you press "send" or "submit," pause and ask yourself, "Would I be okay with this if someone else had written it?" or “Would I be okay if someone said this to or about me?”
 - If your teacher incorporates a discussion board into a lesson, be cautious about attempts to use humor. Do not write anything that could be perceived as angry or sarcastic; without hearing the tone of your voice or being able to see your facial expressions, your peers might not realize you are joking.
 - Keep your posts appropriate to the assignment, polite, and kind.
 - Avoid posting anything in the “chat” during a Teams meeting unless directed to do so by your teacher.

- ✓ **Represent yourself professionally when communicating “verbally” (i.e. discussion boards, electronic chat, Socratic discussions, etc.).**
 - Know what you are talking about and state it clearly.
 - Be pleasant and polite.
 - Do not “YELL!!!” by using all caps or multiple exclamation marks, even if you disagree with what someone has written.
 - Be mindful of your use of emojis.
 - Check for spelling and grammar errors.

- ✓ **Present yourself professionally when communicating electronically.**
 - Make sure you are appropriately clothed.
 - Remember: Even though you are at home when participating online, you are still involved in a classroom setting and should therefore wear clothing appropriate for a school environment.
 - For example, it would be inappropriate for you to be on camera in a bathing suit, even if you happen to be sitting outside at a pool.
 - Rule of thumb: If what you are wearing is not something that would be appropriate for you to have on while interacting with your teacher during a normal school day, do not wear it while on camera.

- Be mindful of messaging on clothing, hats, or headwear.
 - We will adhere to HCPS specifications and BAHS expectations in this matter. Displaying language, images, symbols, or messaging that does not follow HCPS guidelines or meet BAHS's standards of professionalism as specified in our *Habits of Success* will not be allowed.
- ✓ **Be aware of your physical surroundings (i.e. your environment) when communicating electronically.**
 - Think about what is on your walls and/or in your background. Displaying language, images, symbols, or messaging that does not follow HCPS guidelines will not be allowed.
 - Let other people in the household know when you are online and communicating with your camera and/or mic on. You do not want to inadvertently catch someone off guard.
 - Eliminate environmental distractions.
 - Turn off or mute your cell phone.
 - Turn off the TV and/or radio to minimize background noise.
 - Clear the room of noisy pets.
 - Keep your mic muted unless directed by your teacher to participate verbally.
 - Try to find a space such as a kitchen table, a countertop, or a desk from which to work; avoid having your camera on while lying in bed.

Expectations to Meet when Submitting Work Electronically

- ✓ **Teachers will be evaluating and assessing many pieces of students' work, so be sure to adhere to the submission guidelines set by each of your teachers, including**
 - where completed work should be submitted.
 - Ex. If a teacher directs you to submit an assignment via Itslearning, do not send it as an attachment in an email.
 - the type of document to submit.
 - Ex. If a teacher asks for a power-point, do not submit a word document.
 - the naming conventions as specified in the assignment.
 - Ex. If a teacher directs you to name an assignment "DBQ #1," do not submit an assignment saved as "My Work."
 - Work that does not follow submission guidelines may require resubmission to meet the assignment's specifications, which can cause a delay in assessing, grading, and providing feedback.

Expectations to Meet when Communicating Electronically with School Personnel (teachers, counselors, support staff, administrators)

- ✓ **Use HCPS Student Email Only**
 - When it is necessary to send an email, email directly through your HCPS-student account. Students should not initiate communication with teachers via personal emails.
- ✓ **Include Course/Period (Ex: English 10/2A) in the subject line of the message.**
 - Failing to use your HCPS account and/or include **Course/Period** in the subject line may delay or prevent a response.
- ✓ **Adhere to the following writing standards**
 - Begin all email correspondence with an appropriate greeting/salutation.
 - Ex: *Hi, Ms. Jones,*

- Tone is easily misunderstood in electronic exchanges; skipping this step can make your email sound unintentionally rude.
- Provide some context for the purpose of your email.
 - Ex: *I'm emailing you because I can't remember how to submit my assignment on Itslearning.*
 - Teachers will need this context to provide you a specific response.
- Make sure that your questions are direct but politely worded.
 - Ex: *Can you please remind me where I can find these directions?*
 - If your questions are too vague, your teacher will not be able to determine how to help you.
- End your email with an appropriate closing.
 - Ex: *Thank you for your help.*
 - Skipping this step can make your email sound too curt or demanding.
- Include your name after the closing.
 - Ex: *John Doe*
 - Proofread and spell check before you hit "send."

Sending an email with multiple typos is unprofessional and can interfere with the clarity of your message, as can use of abbreviations and slang. Email communication with school personnel is not synonymous with posts on social media such as Twitter or Snapchat. Punctuation matters. Capitalization matters. Formal language matters. Use these writing conventions consistently and purposefully, just as if you were communicating with your boss in a workplace setting.

Reminders about Your Digital Footprint

- ✓ Remember: Your account can be traced back to you easily, even if you post under an alias or a made-up handle. You leave data footprints whenever you are online. HCPS's Office of Technology can identify when you log on and off, when you access or open a folder or document, and when you submit an item. This data is all stored and can be retrieved.

Reminder about Academic Integrity

- ✓ Academic integrity is of the utmost importance whether you are learning in a traditional face-to-face environment or learning virtually. Please see the full BAHS student handbook for our academic integrity policy.