

Medical Interventions (MI-PLTW) Course Syllabus 2017-2018

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Support: Tu, Th after school

Prerequisites: -Successful completion of Biology and Chemistry

-Successful completion of PBS and HBS (unless special approval is given)

Course Description

UNIT ONE: HOW TO FIGHT INFECTION

Students are introduced to Sue Smith, the eighteen-year-old daughter of Mr. and Mrs. Smith. Sue is a college freshman who is presenting symptoms of an unknown infectious disease. Sue survives the infection but is left with hearing impairment. Through this case, students will explore the diagnostic process used to identify an unknown infection, the use of antibiotics as a treatment, how bacteria develop antibiotic resistance, how hearing impairment is assessed and treated, and how vaccinations are developed and used to prevent infection.

UNIT TWO: HOW TO SCREEN WHAT'S IN YOUR GENES

Students are introduced to Mr. and Mrs. Smith, the head of the Smith family. Mr. and Mrs. Smith are very excited because they just found out they are expecting a new baby. Because the couple is in their early 40s, the doctor has suggested genetic screening and testing. Through this case, students will explore how to screen and evaluate the code in our DNA, the value of good prenatal care, and the future of genetic technology.

UNIT THREE: HOW TO CONQUER CANCER

Students are introduced to Mike Smith, the sixteen-year-old son of Mr. and Mrs. Smith. Mike is diagnosed with osteosarcoma, a type of bone cancer that often affects teenagers. Mike's treatments put him into remission; in order to remove all of the cancerous tissue, he had to have most of his arm amputated and he needs a prosthesis. Through this case, students will explore the diagnostic process used to determine the presence of cancerous cells, the risk factors and prevention of cancer, rehabilitation after disease or injury, and the design process for new medications, prosthetics, and nanotechnology.

UNIT FOUR: HOW TO PREVAIL WHEN ORGANS FAIL

Students are introduced to Mrs. Jones, the forty-four-year-old sister of Mrs. Smith. Mrs. Jones has been struggling with Type 1 Diabetes Mellitus for twenty years. Over the years, Mrs. Jones did not take good care of herself or properly control her diabetes. She eventually began using an insulin pump and changed her lifestyle to regulate her blood sugar levels, but the damage had already been done. Mrs. Jones is now dealing with end stage renal failure and needs a kidney transplant. Through this case, students will explore protein production, blood sugar regulation, dialysis, organ donation and transplantation, non-invasive surgery techniques, as well as creation of a bionic human.

Required Materials

- *Binder
- *Pen (blue or black ink)
- *Composition notebook
- *Agenda/Planner
- *Pencils
- *Flash drive

Grading Policy

Students will be given several opportunities to demonstrate their mastery of the content in this course. Each semester is divided into two 9-week grading periods. A student's semester grade in the course is determined by examining the evidence of their growth toward meeting each standard.

Students will complete two types of assignments: Preparation and Performance.

Students will be assigned preparation activities on a regular basis which are designed to move students towards achievement of the course standards. It is important to complete preparation activities because the feedback will help the student progress toward mastery. Preparation work and activities are an expected component of the course. Preparation activities cannot be revised or redone.

Performance assignments are how students demonstrate their level of mastery of the course standards. Performance assignments will require students to apply the skills they have gained from completing the preparation activities. These performance activities could be tests, quizzes, essays, projects, or some other demonstration of understanding. The final grade will be the comprehensive pattern of student achievement of all the submitted performance work. Performance tasks may address multiple standards at a time. Students may re-attempt (review-revise-redo) a performance activity on a case-by-case basis after meeting with their teacher outside of class.

All students will be taking the course final assessments at the end of semesters 1 and 2. Students that have demonstrated proficiency (letter grade of 'B' or higher) in a course and have met the following criteria will be exempt from the final assessment for the course. The criteria for students to exempt from the Course Final Assessment are:

1. Must demonstrate proficiency (Letter grade of 'B' or higher)
2. Have 95% attendance or higher in the course (No more than 4 excused absences)
3. No unexcused absences
4. Off the Unfinished Business List (fees and fines)

Grade Entered into IC	Meaning of Grade
Advanced (AD)	<ul style="list-style-type: none"> • The student exhibits exceptional mastery of the course objective. • Means that you have a deep and rich understanding of complex concepts. • Exceeding grade level expectations.
Proficient (PR)	<ul style="list-style-type: none"> • The student provides evidence of mastery of the course objective. • Means that you have a solid conceptual understanding of the content. • Meeting grade level expectations.
Basic (BA)	<ul style="list-style-type: none"> • The student provides evidence of a beginning understanding of the course objective. • Means that you have an understanding of parts of the concept, but you still demonstrate errors in thinking. • Just below grade level expectations.
Minimal (MI)	<ul style="list-style-type: none"> • The student attempts the task but provides no evidence of mastery of the objective. • Means that you are still learning and make some major errors. • Far below grade level expectations.
No Evidence (O)	<ul style="list-style-type: none"> • There was no attempt or plagiarized. • Means that you were absent & didn't make up, refused to complete the assessment, or copied off someone else.

These ratings will be converted to a numeric value and translated into the traditional A, B, C, D, U grades for progress reports.

Standard Level	GPA Point Scale	% Represented in IC	Traditional Letter Grade
AD (Advanced)	4	100 (90-100)	A
PR (Proficient)	3	85 (70-89)	80-89=B 70-79=C
BA (Basic)	2	65 (51-69)	D
MI (Minimal)	1	50 (1-50)	U
O (No evidence)	0	0	U

Students may retake evidence and replace the original grade by completing the following steps:


1. Make corrections to the original evidence.
2. Make an appointment with Ms. Davis to review corrected evidence. Then, we will schedule the replacement evidence.
****Appointments are limited! Don't wait until the last minute!****
3. The deadline for all retakes and resubmits is one week prior to the close of grades for the quarter.

In addition to your academic grade, you will also receive a citizenship grade for this class. This grade is determined by your behavior in four areas: responsibility, respect, work ethic, and safety.

RUHS Citizenship Rubric

“Try your hardest, do your best and give your all.”

To earn a RESPECT CITIZENSHIP grade you must meet 3 or more criteria in one number band.

	Be <u>R</u> esponsible	Be Respe <u>ct</u> ful	<u>H</u> onor Academics	Be <u>S</u> afe
4	<i>Always</i> <ul style="list-style-type: none"> on time to class phones, electronics are off and unseen food and drinks are not present during class (except water) 	<i>Always</i> <ul style="list-style-type: none"> respectful of staff, students and school property uses appropriate language demonstrates appropriate school behavior 	<i>Always</i> <ul style="list-style-type: none"> prepared for class participates on task works to potential demonstrates academic integrity 	<i>Always</i> <ul style="list-style-type: none"> follows school and classroom rules follows staff directives secures personal belongings follows dress code
3	<i>Consistently</i> <ul style="list-style-type: none"> on time to class phones, electronics are off and unseen food and drinks are not present during class (except water) 	<i>Consistently</i> <ul style="list-style-type: none"> respectful of staff, students and school property uses appropriate language demonstrates appropriate school behavior 	<i>Consistently</i> <ul style="list-style-type: none"> prepared for class participates on task works to potential demonstrates academic integrity 	<i>Consistently</i> <ul style="list-style-type: none"> follows school and classroom rules follows staff directives secures personal belongings follows dress code
2	<i>Occasionally</i> <ul style="list-style-type: none"> on time to class phones, electronics are off and unseen food and drinks are not present during class (except water) 	<i>Occasionally</i> <ul style="list-style-type: none"> respectful of staff, students and school property uses appropriate language demonstrates appropriate school behavior 	<i>Occasionally</i> <ul style="list-style-type: none"> prepared for class participates on task works to potential demonstrates academic integrity 	<i>Occasionally</i> <ul style="list-style-type: none"> follows school and classroom rules follows staff directives secures personal belongings follows dress code
1	<i>Rarely</i> <ul style="list-style-type: none"> on time to class phones, electronics are off and unseen food and drinks are not present during class (except water) 	<i>Rarely</i> <ul style="list-style-type: none"> respectful of staff, students and school property uses appropriate language demonstrates appropriate school behavior 	<i>Rarely</i> <ul style="list-style-type: none"> prepared for class participates on task works to potential demonstrates academic integrity 	<i>Rarely</i> <ul style="list-style-type: none"> follows school and classroom rules follows staff directives secures personal belongings follows dress code

School-Wide Initiatives

In this class, we will be doing a few things consistently to support your overall academic development. Two things that will be implemented regularly are:

- Close-Reading with Annotation
- Writing use Claim, Evidence, and Reasoning model

Discipline Policy

Students are expected to follow the school and class rules at all times. Chronic or serious infractions will result in referral to an administrator and a parent contact. Minor infractions will result in:

1. A verbal warning
2. A time-out
3. A 15 minute conference to be served after school.
4. A parent contact
5. A 45 minute detention to be served after school.

Cell Phone Policy

1ST OFFENSE: VERBAL WARNING

2ND OFFENSE: PHONE TAKEN FOR CLASS PERIOD

3RD OFFENSE: PHONE TAKEN FOR THE DAY

4TH OFFENSE: PHONE GIVEN TO ADMINISTRATOR

HOMEWORK POLICY

Students will be assigned homework. Homework is an important part of the learning process that should be viewed as an opportunity for students to practice new skills and reinforce classroom lessons. Research has demonstrated that schools that require homework show higher student achievement than schools that make little use of it. Homework increases readiness to meet standards and results in higher grades. It also helps develop responsibility and self-reliance, which are needed to be successful in post-secondary education. Students should use their planner to record and monitor homework assignments.

COURSE EXPECTATIONS

Students are expected to be seated and ready to work **before** the bell rings to begin class.

Students are strongly encouraged to be in class every day. The interactive nature of a science class makes it difficult to make up after an absence.

Students who are late for class must present a legitimate pass. Students without a legitimate pass should expect a consequence.

Students are responsible for making up any work missed during an excused absence. Work missed during an unexcused absence cannot be made up.

Students will only be given a pass 3 times to leave class. All personal business, including using the restroom and going to lockers should be taken care of prior to class.

For safety reasons, students are not permitted to chew gum, eat or drink in science classrooms. Plastic water bottles are permitted.

Students are expected to abide by all laboratory safety rules. Failure to do so will result in removal from the lab. Student will not be permitted to make up the lab.

Electronic devices, including cell phones, MP3 players, etc. may not be used during class. Per Riverside policy, electronics will be confiscated if they are seen. If seen during a test, an automatic 0 is given with no chance of retakes.

During tests, all items (except writing utensils) must be put up in the front of the room.

What to Do if You've Been Absent

YOU ARE RESPONSIBLE FOR FINDING OUT WHAT YOU MISSED WHEN ABSENT!!!

1. Copy down the notes from the days you were absent from a reliable student. This should be taken care of either before or after class, not during class.
2. Check the website to see what assignments you missed. You will have three days from the day you return to get these completed.
3. Turn in any assignments that were due while you were absent.
4. Check the "Out Box" to see what papers were returned while you were gone.
5. Check the file folders for any handouts that were given in your absence.
6. Since ample notice is given of upcoming tests, you will be expected to take any test you missed on the day you return unless the absence has been extended.
7. Make an appointment to see Ms. Davis if you have any questions or need clarification on an assignment.

MEDICAL INTERVENTIONS SYLLABUS ACKNOWLEDGEMENT FORM

I have read the syllabus carefully and understand the policies in Ms. Davis' MI Course. I will abide by the policies and procedures put forth in this syllabus.

Student Name (print)

Student Signature

Date

Parent Name (print)

Parent Signature

Date

Parent Phone Number

cell
home

Parent E-mail