

The MI extra credit pack

Four items you can do on your own time, in any order, for real points

Medical Interventions runs 77 class days and had 77 lessons bound to them. There was no spare day anywhere in the semester, so the only way to teach more laboratory technique was to move something else off the calendar. These four are what moved. Three of them are worth more to you than the day they lost, and this pack says which one is not.

SELF-PACED

SUBMIT ANY DAY

NO DEADLINE INSIDE THE WINDOW

POINT VALUE ANNOUNCED WHEN IT OPENS

Why these four are here

Not because they are the leftovers. Because the calendar was full and something had to give, and these four are the ones you can finish well on your own.

Every one of them is a piece of work you assemble from data you already have. Nothing here needs a bench, a culture, a plate or a 24 hour incubation. That is exactly why they can live outside the class period: the part that needed a room full of equipment and a teacher standing next to you already happened. What is left is the thinking and the writing, and you can do that anywhere.

WHAT WENT ONTO THE CALENDAR IN THEIR PLACE

- **Aseptic technique** is now a full class block on 29 September, two class days before you streak your own plates on 1 October. It used to be only 25 minutes of homework the night before the lab. You were being asked to work sterile on the strength of a worksheet. That reading is still set the night before 1 October, where it now works as a refresher rather than as the whole instruction.
- **How sequencing reads an organism** is now a full block on 10 September, ahead of the BLAST lab, with the 25 minute reading still set the night before it.
- **From a human gene to a protein medicine** is now a full block on 19 November, ahead of the cloning work rather than crammed against it.
- **How a column separates one protein** is now a full block on 2 December, the class day before you run the column, instead of being only an evening's reading.

All four of those are laboratory technique. Three of the four items in this pack are the write-ups those techniques produce.

What the state exam actually measures, and why it is in this pack at all

Medical Interventions is assessed by Ohio WebXam **072130 Genetics of Disease**. Four domains, and every one of them is laboratory practice:

DOMAIN	SHARE OF THE EXAM	WHAT IT IS ASKING ABOUT
Bio-Molecular Technology	57.73 percent	DNA and protein techniques and their data. Sequencing and BLAST, PCR, gels, microarrays, ELISA, cloning and transformation, chromatography.
Culturing	16.49 percent	Growing and reading living cultures. Aseptic technique, media and plates, streaking, incubation, colony counting, contamination control.
Laboratory Standard Operational Procedures	14.43 percent	Doing it properly. Safety and protective equipment, documentation, controls, purity and quality checks, waste.
Biotechnology Research and Experiments	11.34 percent	Experimental reasoning. Design, controls as a design choice, error, and defending a conclusion from your own data.

THERE IS NO ETHICS STRAND ON THIS EXAM, AND THAT IS NOT AN ARGUMENT AGAINST ETHICS

072130 has four domains and none of them is bioethics, careers, or clinical decision making. Our Monday debates score zero on it. They are staying exactly where they are, guest speakers and all, because the exam is one thing this course owes you and it is not the only thing. This pack keeps the two questions apart on purpose: what an item is worth to you, and whether the state happens to measure it, are different questions and the table on each item answers both.

The four items

ITEM	WHAT YOU PRODUCE	ROUGHLY HOW LONG	DOES THE WEBXAM MEASURE IT
EC1 Pathogen identification report Activity 1.1.3	A report defending your BLAST identification with match quality numbers, a control, and a stated limitation.	60 to 90 minutes, one sitting	Yes, heavily. Bio-Molecular Technology at 57.73 percent, plus Biotechnology Research and Experiments at 11.34 percent.
EC2 Antibiotics report Lesson 1.2, Activities 1.2.1 to 1.2.4	A report turning your zone of inhibition measurements into a recommendation, with resistance and stewardship reasoning.	60 to 90 minutes, one sitting	Yes. Culturing at 16.49 percent, because zone data is plate data, plus Biotechnology Research and Experiments.
EC3 Protein purification lab report Activities 4.1.3 and 4.1.4	A full lab report: methods, fraction results, purity estimate from your gel, and a quality control verdict.	90 minutes to two hours, often two sittings	Yes, heavily. Bio-Molecular Technology at 57.73 percent, plus Laboratory Standard Operational Procedures at 14.43 percent for the purity and quality control half.
EC4 Replacement parts	A three way comparison of engineered tissue, mechanical devices and donor organs, ending in a recommendation for one patient.	45 to 60 minutes, one sitting	No. Nothing in it lands on any of the four 072130 domains. It is in this pack because it is worth doing, not because it is worth points on the state exam.

ITEM	WHAT YOU PRODUCE	ROUGHLY HOW LONG	DOES THE WEBXAM MEASURE IT
comparison Activity 4.4.1			

ABOUT EC4, SAID PLAINLY

Three of these four items help you on the WebXam and one does not. EC4 is a comparison of the ways medicine replaces a body part that has failed, and it is the item most likely to change how you think about the whole course. It is also the one the state exam does not measure at all. Both of those are true at once and you should know both before you choose.

If you are picking on exam value, do EC1 and EC3 first. If you are picking on what you will still be thinking about in five years, do EC4.

How the pack works

WHERE THE WORK GOES AND WHEN

- **Where it goes.** The same place as everything else. Your class form on the portal, or handed to Mr. Mendoza in person. Nothing about extra credit needs a different route.
- **What to hand in.** Your written pages, plus photographs of anything the handout asks you to photograph. Photographs of handwritten pages are fine. A photograph you cannot read is not.
- **Put your name and period on every page and every photograph filename.** Unlabelled work cannot be credited and it is the single most common way points get lost.
- **When.** Any day after the pack opens, right up to the last week of the semester. There is no deadline inside that window and no penalty for going slowly.
- **Feedback.** You get it back with a note. If a piece is short of full credit you may fix the named thing and resubmit once.

WHAT EXTRA CREDIT IS HERE, AND WHAT IT IS NOT

- It is **real points on a real gradebook**, announced with its value, open to every student. It is not a favour and you do not have to ask for it.
- It is **on top of class work, not instead of it.** Extra credit cannot replace a missing assignment. If you have missing work, do that first. It is worth more.
- It is **capped per semester.** The cap is printed on the portal beside the point values. Check it before you start a fourth item, so you do not spend two hours on something that cannot be credited.
- **Every item needs data you collected in class.** Three of the four are write-ups of your own results. If you were absent for the lab, come and see Mr. Mendoza and you will get a class dataset to work from. That is a normal request, not a favour.

WHY THE CALENDAR COULD NOT JUST FIND ROOM

Every other course in the pathway has slack days built into its semester. MI has none. Seventy seven school days, seventy seven lessons, no catch-up day anywhere. That is why this pack exists and why it is four items rather than nine: four is the number of days that could honestly be traded. Go Hornets.