



Course: Biology 12

Text: *Inquiry Into Life* 10th Ed. (S. Mader)

Tuesdays, Thursdays 5:30-8:30

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Course Outline

The course outline is designed to give you an idea of the course content and as a general timeline and order of events for the course. *Class content will not be dependent on this schedule.* Likely, as the class progresses, the schedule will be rearranged to accommodate our learning.

Introduction to Course	Day 1	Chemistry Review
<u>Biochemistry</u>		
Compounds/Molecules	Day 2	Water and acids
	Day 3	Carbs, lipids, proteins and amino acids
	Day 4	Function and structure of nucleic acids
Protein Synthesis	Day 5	Protein Synthesis
	Day 6	DNA Replication
	Day 7	DNA mutations and mutagens
Enzymes	Day 8	Roles, structures and biological processes
<u>The Cell</u>		
Cell Structure	Day 9	Component structure and function
	Day 10	Cellular respiration and compartmentalization
Cell Membrane	Day 11	Transportation
<u>Human Biology</u>		
Digestive system	Day 12	Inter-relationships of digestive structures
	Day 13	Processes and digestive actions
Circulatory System	Day 14	The heart
	Day 15	Heart rate and blood pressure
	Day 16	Circulatory vessels and blood
	Day 16	Lymphatic system
Respiratory System	Day 17	Structures, breathing, and respiration
Nervous System	Day 18	Nerve components and structures
	Day 19	Nerve impulse process
	Day 20	The brain
	Day 21	Hormone release and state
Urinary System	Day 22	Structures and functions
	Day 23	Kidney function
	Day 24	Waste production processes
Reproductive System	Day 25	Male reproductive system
	Day 26	Female reproductive system

Shape of the Day

Day-to-day activity is dependent on the unit and material we are covering. Some days may be lecture-centred while others are more hands-on practice. Expect the beginning of class to be primarily a time of review. This might include review questions, reading/previous class summaries, or quizzes. The bulk of the class will be devoted to lecture and practice. At about 6:45, we will take a 10 minute break for dinner and then continue until 8:00-8:10. The last 20-30 minutes will be used for tutorial but times may fluctuate if we are not at an appropriate stopping point. *Tutorials are not mandatory.*

Evaluation *

Summative	16%	Projects
	30%	Midterm Exams
	25%	Final
Formative	8%	Weekly Quizzes
	8%	Weekly Assignments
	8%	Presentations
	5%	Participation
	5%	(Bonus) Portfolio

Midterm Exam Dates: _____, _____, _____, _____

* Marks will be kept updated on a weekly basis using www.checkmymark.com. You will be given a user name and password in a few weeks, if you don't already have one from last semester.

Participation

This course moves fast. While most Biology 12 classes are an hour long, three times a week, we have 2 sessions a week for 3 hours. This means missing a class is equivalent to missing a week of school in any other circumstance. If a student is consistently absent from class (2-3 classes in a row), s/he may be asked to withdraw. Since learning is just as much a social event as it is a personal one and we want to make sure all of our ideas and questions are shared, part of your mark will be dedicated to the degree in which you take part in the class. Taking part in the class would also involve staying caught up in the class; in particular, staying caught up with class readings. Warmup questions will be asked at the beginning of class as an opportunity to share what you read.

Quizzes

While quizzes are helpful as assessment *OF* your learning, they are also vital as assessment *FOR* your learning. Take quizzes as an opportunity to discover what you know. Because I am more concerned with *what* you know than *when* you know it, quizzes can be rewritten, with the expectation that the rewrite *will* be your mark, even if the mark is lower. Rewrites may also require more demanding responses.

Assignments

Assignments are opportunities to acquire information and expand your learning. These assignments may be done in partners but they must be handed in individually. It would be of greater value for you to work independently first and then compare responses with a partner. Assignments will almost always be given as homework.

Projects

Projects are often designed to personally assist your learning. While the project mark is not associated with your exam mark, the effort you put in will likely be reflected in your exam success. Make your projects personal, include information that is relevant to you.

Presentations

Presentations, unlike projects, are designed to not only complement *your* learning in class but also the *learning of others*. Therefore, when you design your presentation you should be doing it with an audience in mind. Be engaging, thorough and creative in the way you represent your knowledge.

Exams

Exams will be given at the end of each unit, with the exception of the human biology unit which will include at least 2 exams. Exam dates will be finalized within the first few classes and will occur every 3-4 weeks. *Last minute cram sessions are not an effective way to study*; be sure to stay on top of the material and study as the class proceeds.

Portfolio

The portfolio assignment is an accumulation of evidence exhibiting what you have learned this semester and your progress through the course. It is your opportunity to prove to me that your marked should be bumped up, instead of staying where it is. Your portfolio must include *at least include 8 pieces of evidence*. This might include: quizzes, notes of interest, flashcards, study tools, exams, projects, etc. Anything that helped you learn. This isn't a "show me how smart you are" assignment so don't just show me all your highest marks. Include something that made you work harder, think differently, or just piqued your interest. *Included with each piece of evidence should be a paragraph explaining why you chose that piece*. This assignment is simply a pass/fail, depending on whether I think you proved your case (that you actually learnt something about yourself and the material). Portfolios will be handed in at the end of the semester when you write your final but do not wait until the last week to beginning working on this. Adding to your portfolio only takes 10 minutes a week and will be a lot more relevant to you at that moment.

What I expect from you

This is a grade 12 course, the next step after this is university level courses. As such I expect you take this course seriously. I expect you to come to class on time, with all supplies, and prepared to learn and participate. Because of the extensive terminology and large content of this course I highly recommend that you work with the material on a daily basis to ensure your understanding. The first and most important thing you should learn in this course is how to learn in this course (metacognition). Use flashcards, highlighters, flowcharts, online material, etc, find out what works for you

Late and/or Missing Assignments

Handing in material on time is part of your participation in this class and thus no one should get in a habit of turning in late work. With that said, late assignments will occur and will be accepted as long as I have not marked and returned the assignments to the rest of the class (note: I mark quickly!). If the assignment is not completed because of unusual circumstances (ie illness, family emergency, etc) I will have it omitted. Presentations/projects and exams must be completed/handed in upon student's return (no omissions).

Cheating

Cheating includes, but not restricted to, the use of cheat sheets, electronic devices, looking at another student's work, allowing another student to look on your exam, or talking with another student during

the exam. In any of these cases, the student's exam will be confiscated and s/he will receive a zero. If the student is caught a second time, they will be removed from the class with an explanation of their removal added to their academic record.

Plagiarism

Plagiarizing may include, but not restricted to, copying and pasting from internet sources without citation and/or quotation, turning in another student's work as your own, and/or giving incorrect information about the source. Plagiarism is a major offense and in the literary world, can be grounds for a lawsuit. Within the academic world, it is grounds for expulsion and retribution on your academic record. However, most plagiarism can be avoided by simply citing your sources. I will not expect perfect MLA or APA references but I do expect you cite the author, source and date.

How to Succeed

1. Attend ALL classes: This gives you a good idea of what is considered the most important. It also allows you to learn by hearing and seeing simultaneously, which is much more effective than either one of these alone.
2. Use tutorials to go over questions you have, or test your own understanding by explaining material back to another student or teacher. It is always better not to be an anonymous face in a crowd. Get to know your teacher.
3. Come to class prepared by having read and outlined the assigned pages ahead of time. This will help you make more sense of the lecture as you listen to it and this, in turn, will help you to.
4. Engage your brain in the lecture. Don't allow yourself to become a note-taking automaton. Think! Be critical! Be skeptical! Ask questions! If you are shy, ask questions after class or during break.
5. Put proper closure on each lecture. Within 24 hours of each lecture: (1) ask yourself what the lecture was about without using your notes, and (2) write your answer in the form of a concept map. This is the best time to spot points of confusion or discrepancies between text and notes, which you should write down and follow-up on.
6. Pay attention to the figures in your text, especially the summary figures. Figures are expensive to produce and publishers try to use them sparingly in order to reinforce main points.
7. Budget your time. There is such a huge amount of material to be mastered that studying cannot be put off into an all-night cram session before tests. This is a time-tested recipe for failure; if not failure of the test itself, then failure to understand biology. You have a cumulative final. What is your plan for keeping material from the beginning of the semester fresh and in mind?
8. Don't be a hermit. Once you have studied a good bit on your own, get together with a few others who are interested in understanding biology in order to bounce questions off each other, compare concept maps, create sample test questions, explain concepts to each other, and to be able to answer your colleagues' questions regarding those same explanations.