ENVIRONMENTAL PHYSIOLOGY
Biology 3640/OCSC3640  Winter 2018

Professor: Dr. Iain McGaw  Office OSC 4005 (Ocean Sciences, Logy Bay)

Phone: Biology Office: 864-7498  McGaw Office: 864-3272
Email: imcgaw@mun.ca (address email as “Biology 3640”)

Lecture: Chemistry 2033  Tues, Thurs 9am-10.15am

Office Hours: By appointment

Text: Recommended text: Environmental Physiology of Animals by Willmer, Stone and Johnston
2nd Edition Blackwell Publishing

Course learning/Outcome objectives
Upon completion of Environmental Physiology students should have a comprehensive understanding of basic physiological principles, the environmental parameters affecting their change and the different types of environment and the physiological adaptations animals use to survive in these habitats. A review of the topics covered is listed in the schedule section.

Assessment: Assessment of the course will be in the form of three exams in the lecture session (dates given in exam section) which will contain multiple choice, fill in the blanks and written answers. In addition there will also be a take home exam that will account for 15% of your overall grade.

Schedule: This is a tentative schedule, certain topics may overlap these dates, or we may cover others in less time, so you will need to attend all lectures. If you miss a lecture for any reason you are responsible for getting the notes for that period. I do not provide notes for the lecture, please get these from one of your colleagues.

<table>
<thead>
<tr>
<th>DATE</th>
<th>SUBJECT</th>
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<tbody>
<tr>
<td>Thu 04 Jan</td>
<td>Introduction/Environmental Physiology</td>
</tr>
<tr>
<td>Tue 09 Jan</td>
<td>Water and Ions</td>
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<tr>
<td>Thu 11 Jan</td>
<td>Osmotic and ionic regulation</td>
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<tr>
<td>Tue 16 Jan</td>
<td>Gases and respiration</td>
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<td>Thu 18 Jan</td>
<td>Acid base balance</td>
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<td>Tue 23 Jan</td>
<td>Temperature and its effects</td>
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<td>Thu 25 Jan</td>
<td>Locomotion</td>
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<tr>
<td>Tue 30 Jan</td>
<td><strong>Exam 1</strong></td>
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<tr>
<td>Thu 01 Feb</td>
<td>Open Oceans</td>
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<tr>
<td>Tue 06 Feb</td>
<td>Open Oceans</td>
</tr>
<tr>
<td>Thu 18 Feb</td>
<td>Deep Sea</td>
</tr>
<tr>
<td>Tue 13 Feb</td>
<td>Coasts - Intertidal zone</td>
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Thu 15 Feb  Coasts - rockpools
Tue 20 Feb  Winter break - no class
Thu 22 Feb  Winter break - no class
Tue 27 Feb  Coasts - Estuaries
Thu 01 Mar  Coasts - Estuaries
Tue 06 Mar  Diving Physiology
Thu 08 Mar  Exam 2 (paper title give at this time)
Tue 13 Mar  Polar zones
Thu 15 Mar  Polar zones
Tue 20 Mar  Hibernation
Thu 22 Mar  Deserts
Tue 27 Mar  Deserts
Thu 29 Mar  Deserts
Tue 03 Apr  High altitude physiology
Thu 05 Apr  High altitude physiology
TBA        Final exam (Comprehensive)

Exams
The exams are on the following dates, in addition the laboratory section makes up a percentage. The
exams will include all material we have covered in class prior to that exam.

<table>
<thead>
<tr>
<th>Exam</th>
<th>Date</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Exam 1</td>
<td>(Tue 30 Jan)</td>
<td>25%</td>
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<tr>
<td>Exam 2</td>
<td>(Thu 08 Mar)</td>
<td>25%</td>
</tr>
<tr>
<td>Final</td>
<td>(TBA)</td>
<td>35%</td>
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<tr>
<td>Paper</td>
<td>(Due Thu 29 Mar)</td>
<td>15%</td>
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The exams are challenging, and during the lectures you will be introduced to many new terms and
concepts. It is therefore, essential that you keep up with the work. Quite often I will give examples
or words not included in your textbook, so you must attend all lectures. The course schedule is
tentative, in some cases we may cover material is a lesser or greater time than specified. If you miss
a lecture get the notes from a colleague. Most exam questions will come from my lecture notes, but
you will also need to read through your textbooks to review sections as some material will come
from information not necessarily covered in lecture.

For every week of lectures, you should be putting in at least 2-3 hours on your own; reading
through the text and revising your notes. If you find that you are having problems "see me", in this
way we can make an attempt to try and overcome them.

For each test you should start looking through the material and familiarizing yourself with it, at least a week beforehand. In most cases you will not be able to get away with a few hours work the night before and attain a satisfactory grade.
**Grading and Exam Policy**

Grades will be assigned both numerically and as a letter grade. No curve will be employed in the assignment of a final grade. There is no extra credit given, so do not ask for it! All points toward the grade will come from the above listed examinations.

There will be no makeup exams given without a valid excuse. (Oversleeping or forgetfulness are not valid excuses!) These include family tragedy, or severe illness. You must contact me, or get someone else to contact me by 9am the following day, if you miss an exam for any reason. If I am not in my office, or outside of working hours a message can be left at the biology front desk, or biology office phone (709 864 7498). Any make-up exams given will consist of essay type questions. If a make-up is given it will need to be taken **as soon as you return to school** and I shall arrange the dates and times, not you. Failure to turn up for a make-up will result in an F for that exam. Make a note of the exam dates, if you have travel tickets booked or social events booked for these dates unbook them now. Exams are scheduled to begin promptly when the class is scheduled to start, if you arrive more than ten minutes late, for whatever reason, you will be given an essay make-up exam.

**Statement on Holidays**

It shall be the responsibility of the student to notify the instructor no later than the last day of late registration of their intention to participate in religious holidays which do not fall on State holidays or periods of class recess. This policy shall not apply in the event that administering the test or examination at an alternative time would impose an undue hardship on the instructor or University that could not have been reasonably avoided.

**Student Conduct**

During my last few years teaching, students have discussed things with me, that distract/disturb them during lectures. Therefore the following policies are designed to provide a quiet environment with minimum distractions, where hopefully you will be able to assimilate and learn the material effectively.

1. There is to be no talking during the lecture, if you do not understand something please raise your hand before you ask a question. Whilst I answer a students question please remain quiet so that the student and other class members can hear the reply.

2. Lectures start promptly at 9am. As you expect me to be there on time to start the lecture, I also expect you to be ready at 9am. If for an unforseen reason you arrive late, please seat yourself quietly in a place that will not disturb the other students. Likewise, I and some of your colleagues are distracted by people randomly wandering in and out of the room during the lecture, please avoid this unless absolutely necessary. Lecture finishes at 10.15am (on my watch), I would also be grateful if you remain seated quietly until I have finished talking, in this way you will avoid disturbing other class members before lecture is over.

3. Remember you are attending lectures to take notes and attempt to learn material, not to read your newspaper/magazine, go to sleep or distract the Professor or other students.
4. Please turn off all cellular phones before entering the lecture room.

5. MUN policy states that there is no food or drink to be consumed in either lecture rooms or laboratories.

6. If you are caught cheating you will be reported to the Chair of the Biology Dept. and expelled from Biology 3640/OCSC3640, you will receive an F for the course and may receive additional disciplinary action as outlined by the Memorial University document Rules and disciplinary procedures for members of the University community. For the purposes of Environmental Physiology tests are not to be removed from the testing facility or when they are posted. Anyone caught taking tests will automatically receive an F grade for the semester.

7. IF YOU HAVE A DOCUMENTED DISABILITY THAT MAY REQUIRE ASSISTANCE, YOU WILL NEED TO CONTACT THE DISABILITY RESOURCE CENTER FOR COORDINATION IN YOUR ACADEMIC ACCOMMODATIONS.