Course Syllabus CAPS 301 Human Physiology

CAPS 301 - Human Physiology:
Welcome to CAPS 301, a comprehensive overview of human physiology. At the end of this course you will have a broad understanding of the principles and mechanisms of most physiologic systems, and how this relates to your everyday life experience.

This is a team-taught course with each faculty member teaching their area of expertise. While we have coordinated our approach, there will be subtle variation in style by each of your teachers. We will ensure that all of our faculty are available regularly to answer questions you may have, or to guide your learning. There will be scheduled office hours.

Course Director:
Dr. Barry Mason
Life Science Centre Rm. 1382
barry.mason@ubc.ca, 604-822-7253

Teaching Team: Drs. Mason, Moukles, Accili, Hull, Osborne, Kindler, Johnson

Format:
This is a 6-credit, two-term course* with a blend of synchronous classes and asynchronous modules. For W2020 academic session, we meet online 3 times each week, Monday, Wednesday and Friday from 11:00-11:50am PST. For some sections (e.g. Neurophysiology) there will be some days allocated to asynchronous modules but most classes will be synchronous each week.

All course material and communication will occur through the UBC Learning Management System (LMS) Canvas.

Please ensure you have good Wi-Fi connectivity and you come prepared to participate and learn and enjoy physiology.

*Both Term-1 and Term-2 must be taken during the same academic year. Please consult course director and UBC Calendar for prerequisites

Text book:
MindTap Course Key: MTPN-M7PN-JQX3
Assessment:

Grades in CAPS 301 will be determined via a combination of quizzes/assignments and exams. These will all be accessed via CANVAS

Mark Distribution
Quizzes and Assignments (10 @ 5% each) 50%
Exams (Dec and April @ 25% each) 50%

Quizzes and Assignments  Will be hosted on Canvas and are designed to test your understanding of concepts and details within each section (neuro, muscle, cardiophysiology, etc.) of the course. Formats include Multiple Choice Questions (MCQ), True/False and short answer questions. Some Faculty may offer a take-home assignment, with a specified due date, in lieu of an online quiz.

Exams These will take place during the UBC examination period and will cover all material from the term. Exams will be hosted on Canvas and have a time-window for completion (e.g. 2 hour time-limited exam to be completed within a 24-hour window).

Academic Concession
Academic concessions are not guaranteed and made at the discretion of the course director.

Missed Classes
Attendance at classes will help you understand the course material. Attendance is strongly advised but not mandatory. Recordings of synchronous sessions will be available via Canvas.

Missed Quiz
Students can request concession to miss one quiz/assignment, without penalty, for valid medical and compassionate grounds only. Students will not be granted concession for conflicting responsibilities. Missed quizzes will receive a mark of zero.

Missed Midterm Exam
Students may request academic concession from the course coordinator along with supporting documentation for valid medical and compassionate grounds only. If concession is granted, the midterm exam must be completed within the academic session (W2020-2021). Be aware that students are not granted concession for conflicting responsibilities for this course. Students must resolve such conflicting matters in advance of the midterm examination. Missed exams that are not granted concession will receive a mark of zero.
**Statement of Academic Integrity**

The academic enterprise is founded on honesty, civility, and integrity. As members of this enterprise, all students are expected to know, understand, and follow the codes of conduct regarding academic integrity. At the most basic level, this means submitting only original work done by you and acknowledging all sources of information or ideas and attributing them to others as required. This also means you should not cheat, copy, or mislead others about what is your work. Violations of academic integrity (i.e., misconduct) lead to the breakdown of the academic enterprise, and therefore serious consequences arise and harsh sanctions are imposed. For example, incidences of plagiarism or cheating may result in a mark of zero on the assignment or exam and more serious consequences may apply if the matter is referred to the President’s Advisory Committee on Student Discipline. Careful records are kept in order to monitor and prevent recurrences.

**Detailed Schedule below:**
<table>
<thead>
<tr>
<th>Topic</th>
<th>HOURS</th>
<th>DATES</th>
<th>Faculty</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TERM 1: 2020</strong></td>
<td></td>
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</tr>
<tr>
<td>Neurophysiology</td>
<td>7</td>
<td>Sept. 9, 11, 14, 16, 18, 21, 23</td>
<td>Mason</td>
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<tr>
<td>CNS</td>
<td>12</td>
<td>Sept. 25, 28, 30, Oct. 2, 5, 7, 9, 14, 16, 19, 21, 23</td>
<td>Mason</td>
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<tr>
<td><strong>Midterm 1</strong></td>
<td></td>
<td>Oct 26</td>
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<tr>
<td>Muscle</td>
<td>4</td>
<td>Oct. 28, 30, Nov 2, 4</td>
<td>Mouthless</td>
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<tr>
<td>Body Fluids/Blood</td>
<td>5</td>
<td>Nov. 6, 9, 13, 16</td>
<td>Hull</td>
</tr>
<tr>
<td>Cardiovascular</td>
<td>7</td>
<td>Nov. 18, 20, 23, 25, 27, 30, Dec. 2</td>
<td>Acilli</td>
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<td><strong>TERM 2: 2021</strong></td>
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<tr>
<td>Pulmonary</td>
<td>8</td>
<td>Jan. 4, 6, 8, 11, 13, 15, 18, 20</td>
<td>Osborne</td>
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<tr>
<td>Renal</td>
<td>8</td>
<td>Jan. 22, 25, 27, 29 Feb. 1, 3, 5, 8</td>
<td>Hull</td>
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<td><strong>Midterm 2</strong></td>
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<td>Feb. 12</td>
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<tr>
<td>Gastrointestinal</td>
<td>7</td>
<td>Feb. 22, 24, 26 Mar. 1, 3, 5, 8</td>
<td>Mason</td>
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<tr>
<td>Endocrinology I</td>
<td>5</td>
<td>Mar. 10, 12, 15, 17, 19</td>
<td>Kindler</td>
</tr>
<tr>
<td>Endocrinology II</td>
<td>3</td>
<td>Mar. 22, 24, 26</td>
<td>Johnson</td>
</tr>
<tr>
<td>Reproduction</td>
<td>3</td>
<td>Mar. 29, 31, Apr. 7</td>
<td>Kindler</td>
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<td><strong>IMPORTANT DATES:</strong></td>
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<tr>
<td>W1 2020</td>
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<td></td>
<td>W2 2021</td>
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<tr>
<td>Sept. 8</td>
<td>First day of Term I</td>
<td>Jan. 4</td>
<td>First day of Term II</td>
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<tr>
<td>Oct. 12</td>
<td>Thanksgiving</td>
<td>Feb 12</td>
<td>Midterm 2</td>
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<tr>
<td>Oct 26</td>
<td>Midterm I</td>
<td>Feb. 15</td>
<td>Family Day</td>
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<td>Nov. 11</td>
<td>Remembrance Day</td>
<td>Feb. 15 – 19</td>
<td>Winter Break</td>
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<td>Dec. 03</td>
<td>Last day of Classes</td>
<td>Apr. 8</td>
<td>Last day of Classes</td>
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<tr>
<td>Dec. 7–22</td>
<td>Examination Period</td>
<td>Apr. 12 – 27</td>
<td>Examination period</td>
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CAPS 301: COURSE OUTLINE.

Term 1

Neurophysiology
Ionic basis of resting potentials, Nernst equation. Voltage-gated ion channels and the action potential. Refractoriness. Myelination and saltatory conduction. Electrical and chemical synapses. Ligand-gated ion channels. EPSPs and IPSPs. The neuromuscular junction. Overview of the autonomic nervous system and autonomic reflexes.

CNS and Special Senses

Muscle

Body fluids/Blood

Cardiovascular Physiology

Term 2

Pulmonary Physiology

Renal Physiology

Gastrointestinal Physiology
Functional anatomy of digestive tract. Functions of various GI polypeptides. Neuronal and hormonal control of exocrine secretions of salivary, gastric, pancreatic and intestinal glands. Functions of the Liver and the formation of bile. Regulation of bile secretion and its functions. Functions and control of GI motility. Digestion and absorption of nutrients, including sugars, carbohydrates and fats, in the GIT. Distribution and functions of intestinal microbiota.

Endocrine

Reproduction

UBC provides resources to support student learning and to maintain healthy lifestyles but recognizes that sometimes crises arise and so there are additional resources to access including those for survivors of sexual violence. UBC values respect for the person and ideas of all members of the academic community. Harassment and discrimination are not tolerated nor is suppression of academic freedom. UBC provides appropriate accommodation for students with disabilities and for religious and cultural observances. UBC values academic honesty and students are expected to acknowledge the ideas generated by others and to uphold the highest academic standards in all of their actions. Details of the policies and how to access support are available here (https://senate.ubc.ca/policies-resources-support-student-success)