**BIOL 432/691: Clinical Applications in Human Physiology – Fall 2020**

**INSTRUCTORS:**

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**COURSE MATERIALS**

Lecture PowerPoints – available on Blackboard

Web-based Resources including, but not limited to:

American Family Physician

U.S. Preventive Task Force Guidelines

New England Journal of Medicine

**CORRESPONDENCE:**

When communicating with your instructor via email, only use your GMU email and please include the following in your email: full name and specific course number.

All instructors teach multiple courses, so this will make it easier for the instructor to address your concerns or questions.

**MASON Alert System**: This system serves to provide students with emergency information of various kinds. You may sign up for these alerts at <https://alert.gmu.edu>.

**EVALUATIONS**

3 Exams @ 100 points each – 300 points

Case Study Presentation – 50 points

Attendance/Participation – 25 points

TOTAL = 375 points

For graduate students (BIOL 691): An additional Case Study Presentation (50 points) is required. Total points = 425 points

**EXAMS**

Exams may include multiple choice, matching, fill in the blank, essay, problem-solving questions, and case study evaluation. There will be no bonus points on your exams.

**ODS (Office of Disability Services) ACCOMMODATIONS*:***

All accommodations must be verified by proper and current documentation by ODS.

It is required that you meet with your instructor to discuss your accommodations at the beginning of the semester to insure proper coordination with ODS, you and your instructor. Accommodations will not be provided retroactive of the date provided on the ODS documentation, and no variations in accommodations will be accepted without additional documentation from ODS.

**CASE STUDY PRESENTATIONS**

Case study presentation will utilize a SOAP Note Format.

Subjective – patient symptoms

Objective – patient signs; measurable parameters

Assessment – diagnosis with justification

Plan – clinical interventions with justification

Presentation will be evaluated based on the following grading criteria:

Subjective – 5 points

Objection – 5 points

Assessment – 20 points

Plan – 20 points

Case study will be orally presented to the class and instructor team, but points will be assigned based on written submission. Student case study presentations will be assigned at least two weeks prior to the presentation.

**GRADING SCALE: Final grades will be based on the following:**

A 90 – 100%

B 80 – 89%

C 70 – 79%

D 60 – 69%

F < 60%

**TOPIC AND EXAM SCHEDULE**

The proposed schedule for the order of topics is provided. Changes may be made to this schedule at the discretion of the instructors. The general format for the course will be as follows for each organ system selected:

Physiology review relevant to selected pathology

Selected pathology discussion

Selected pharmacological interventions

Case study presentation by instructors

**PUBLISHING/REDISTRIBUTION OF COURSE MATERIALS:**

Some lecture slides, notes, or exercises used in this course may be the property of the textbook publisher or other third parties. All other course material, including but not limited to slides developed by the instructor(s), the syllabus, assignments, course notes, course recordings (whether audio or video) and examinations or quizzes are the property of the University or of the individual instructor who developed them. Students are free to use this material for study and learning, and for discussion with others. Republishing or redistributing this material, including uploading it to web sites or linking to it through services like YouTube, violates the rights of the copyright holder and is prohibited. There are civil and criminal penalties for copyright violation. **Publishing or redistributing this material in a way that might give others an unfair advantage in this or future courses may subject you to penalties for academic misconduct.**

**HONOR CODE:**  
The Honor Code is an integral part of university life and will be vigorously adhered to in this course.  On the application for admission, students sign a statement agreeing to conform to and uphold the Honor Code. Students are responsible, therefore, for understanding the code’s provisions.  If you do not recall the provisions of this Code, see the excerpts below and/or review them in the GMU University Catalog – Student Rights and Responsibilities/Honor System and Code. If you ever have questions about what is and is not appropriate, be sure to ask for clarification.

**Honor Code:** To promote a stronger sense of mutual responsibility, respect, trust, and fairness among all members of the George Mason University community and with the desire for greater academic and personal achievement, we, the student members of the university community, have set forth this honor code: ***Student members of the George Mason University community pledge not to cheat, plagiarize, steal, or lie in matters related to academic work.***

**Student Responsibilities:** *Students should request an explanation of any aspect of the professor’s policies regarding the Honor Code that they do not fully understand. They also have an obligation not only to follow the code themselves, but also to encourage respect among their fellow students for the provisions of the code. This includes an obligation to report violations by other students to the Honor Committee.*

**Clinical Applications in Human Physiology Schedule– Fall 2020**

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| **WEEK**  **Dates** | **TOPIC** |
| **1**  Aug. 24  Aug. 26 | **Cardiovascular System**  Blood Pressure Regulation Review  Hypertension  CV - Case Study |
| **2**  Aug. 31  Sept. 2 | **No Class**  **Immune System**  Immunity Review  Pertussis vaccine  Rheumatoid arthritis; Lymphomas  Immune - Case Studies |
| **3**  Sept. 7  Sept. 9 | **Immune System** continued  *Student Case Study Presentation (#1 – Cardiovascular System)*  **Muscular System**  Skeletal Muscle Review  Myasthenia gravis; Bodybuilding  Muscular - Case Studies |
| **4**  **Sept. 14**  Sept. 16 | **EXAM #1 (Cardiovascular, Immune and Muscular Systems)**  *Student Case Study Presentation (#2 – Immune System)*  **Nervous System**  Neurotransmission Review  Addiction; Depression  Nervous – Case Studies |
| **5**  Sept. 21  Sept. 23 | *Student Case Study Presentation (#3 – Muscular System)*  **Nervous System** continued |
| **6**  Sept. 28  Sept. 30 | **Nervous System** continued |
| **7**  Oct. 5  Oct. 7 | *Student Case Study Presentation (#4 – Nervous System - Addiction)*  **Digestive System**  Stomach and Small Intestine Review  Ulcers; GERD; Celiac Disease  Digestive - Case Studies  *Student Case Study Presentation (#5 – Nervous System - Depression)*  **Digestive System** continued |
| **8**  Oct. 12 (Mon.)  Oct. 13 (Tues.)  Oct. 14 | **No Class; Monday classes meet Tuesday**  **Digestive System** continued |
| **9**  **Oct. 19**  Oct. 21 | **EXAM #2 (Nervous and Digestive Systems)**  *Student Case Study Presentation (#6 – Digestive System)*  **Endocrine System**  Regulation and Effects of Insulin and Thyroid Hormones Review  Diabetes Mellitus; Graves and Hashimoto’s Diseases  Endocrine - Case Studies |
| **10**  Oct. 26  Oct. 28 | *Student Case Study Presentation (#7 – Digestive System)*  **Endocrine System** continued |
| **11**  Nov. 2  Nov. 4 | **Endocrine System** continued |
| **12**  Nov. 9  Nov. 11 | *Student Case Study Presentation (#8 - Endocrine System – Diabetes)*  **Reproductive System**  Menstrual Cycle; Prostate Anatomy; Erection Reviews  Amenorrhea Evaluation  Oral Contraceptives  Benign Prostatic Hyperplasia (BPH)  Reproductive Case Studies |
| **13**  Nov. 16  Nov. 18 | *Student Case Study Presentation (#9 – Endocrine System – Thyroid Disease)*  **Reproductive System** continued  Principles of reproductive disease screening |
| **14**  **Nov. 23**  Nov. 25 | **EXAM #3 (Endocrine and Reproductive Systems)**  **No classes; Thanksgiving recess** |
| **15**  Nov. 30  Dec. 2 | Physiological Changes with Age Review  Beers List – Guidelines for Prescribing Medication to Geriatric Patients  Geriatric Case Study |