BLOOD, GASTROINTESTINAL & IMMUNE SYSTEM PHYSIOLOGY
PHGY 313
Winter 2018 COURSE SCHEDULE

Lecturers: Dr. Judith Mandl, (coordinator), Bellini building, Room 335, 398-3149, judith.mandl@mcgill.ca

Dr. Volker Blank, Lady Davis Institute, 514-340-8260 x24984, volker.blank@mcgill.ca
Dr. Daniel Garcia dos Santos, Lady Davis Institute, 514-340-8260 x24666, daniel.santos@ladydavis.ca
Dr. François Mercier, Lady Davis Institute, 514-340-8260 x27850, francois.mercier@mcgill.ca
Dr. Maia Kokoeva, Royal Victoria Hospital, Room H5-42, maia.kokoeva.mcgill.ca
Dr. Jörg Fritz, McGill Life Sciences Complex, Room 371, (514) 398-1707 jorg.fritz@mcgill.ca
Dr. Alexander Orthwein, Lady Davis Institute, 514-340-8222 x24252. alexandre.orthwein@mcgill.ca
Dr. Daniela Quail, Goodman Cancer Center, McGill Life Sciences Complex, Room 417, (514) 398-2659, daniela.quail@mcgill.ca
Dr. Anastasia Nijnik, McGill Life Sciences Complex, Room 368, 514-398-5567, anastasia.nijnik@mcgill.ca
Dr. Melissa Vollrath, Room 1234, McIntyre Bldg, 514-398-2410 melissa.vollrath@mcgill.ca

Location: Leacock 219 Monday-Wednesday-Friday, 9:35 am-10:25 am

Date	*Day*	*Lecture Title*	*Lecture*	*Lecturer*
Jan. 8	M	INTRODUCTION		J.M.
10	W	Blood - overview	1	V.B.
12	F	Stem cells	2	V.B.
15	M	Regulation of hematopoietic differentiation	3	V.B.
17	W	Erythroid cells	4	V.B.
19	F	Hemoglobin structure and function	5	D.S.
22	M	Iron metabolism	6	D.S.
24	W	Regulation of hemoglobin synthesis	7	D.S.
26	F	Erythroid cell disorders	8	F.M.
29	M	Granulopoiesis	9	A.N.
31	W	Blood tutorial		V.B.,D.S,
Feb 2	F	Overview of the digestive system	10	M.V.
Feb. 5	**M**	**TEST #1 – Blood (No class)- 7:30 pm - 9:00 pm, Room 522 Please bring your I.D cards to the exam**		
7	W	Stomach Physiology **Distribution of term paper assignment via myCourses starting at 11:00 am. One assignment per student.**	11	M.V.
9	F	Exocrine functions of the GI tract I	12	M.V.
12	M	Exocrine functions of the GI tract II	13	M.V.
14	W	Intestine Biology I	14	M.V.
16	F	Intestine Biology II	15	M.V.
19	M	Regulation of energy homeostasis: Hypothalamic control of food intake	16	M.K.
21	W	Brainstem and reward circuits in energy balance control	17	M.K.

23	F	GI Tutorial		M.V.
Date		*Lecture Title*	*Lecture*	*Lecturer*
26	M	**Test #2 – GI (no class) - 7:30 pm - 9:00 pm, Room 522** **Please bring your I.D cards to the exam**		
28	W	Organization and structure of the Immune System	18	J.M.
Mar 2	F	Innate immunity 1: Pattern Recognition Receptors and how your immune system recognizes danger	19	D.Q.
Mar 5 – Mar 9		**READING WEEK**		
12	M	Innate immunity 2: Complement and Antigen presenting cells (APCs)	20	D.Q.
14	W	Adaptive Immunity 1: B cell development and generation of diversity	21	A.O.
16	F	Adaptive Immunity 2: The B cell immune response: Antibody production	22	A.O.
19	M	Adaptive Immunity 3: T cell development and Self/Non-self discrimination	23	J.M.
21	W	Adaptive Immunity 4: The T cell immune response: activation and effector functions	24	J.M.
23	F	Immunity in viral infections	25	J.M.
26	M	Immunity in parasitic diseases	26	J.M.
28	W	Immunity in Cancer	27	D.Q.
30		**Good Friday**		
Apr 2		**Easter Monday**		
4	W	Manipulation of the immune system	28	J.M.
6	F	When the immune system over-reacts: Allergy and hypersensitivity	29	J.M.
9	M	When self-tolerance fails: Autoimmune disease Assignment is due today by 4:00 pm in the General Office, Room 1021	30	J.M.
11	W	Immunology of the GI system I	31	J.F
13	F	Immunology of the GI system II	32	J.F
16	M	Immunology of the GI system III	33	J.F.
		Immunology Tutorial		J.M.

**** Students are responsible for checking *MyCourses* for course notes/slides and any updates****

EVALUATION

1. **Class Tests** – (20% each)

There are 2 class tests. The first class test is on **Monday, February 5** and will cover the Blood section of the course (Lectures 1-9). Test #1 will be held at 7:30pm-9:00pm (TBD). The second class test is on **Monday, February 26** and will cover the GI section of the course (Lectures 10-17). Test #2 will be held from 7:30pm-9:00pm also in (TBA) Class tests are usually, but not always, multiple-choice type questions and may have a component that is short answer or essay. Please note that multiple versions of exams will be administered in order to reduce any temptation for copying a more "correct" answer. Once the tests have been graded, an **Exam Viewing** will be scheduled.

Medical Notes

Students who miss a test due to a medical or other acceptable reason, must provide a note to the Course Secretary (McIntyre, Room 1021) **within two weeks of the missed test.** The value of the final exam will then be increased proportionally A mark of zero will be given to students with no note. There are no makeup tests.

2. **Assignment** – (20%)

Students are to submit an individual written term paper assignment based on a case study related to GI, immune, or blood cell physiology. Topics will be assigned to students *randomly* via MyCourses on **Wednesday, February 7**.

The assignments should be no more than 5 typewritten pages, 1.5 line-spaced (excluding cover page), Times New Roman font (12 point), with 2 cm page margins. Students are permitted (but not required) to include one (1) additional page containing figures. References are to be included at the end of the document (there is no page limit for references). The assignment is due on **Monday, April 9, by 4:00 pm** in the General Office, Room 1021. Marks will be deducted for late submissions (5% per day late, including weekends). All assignments are of similar difficulty and grades will be normalized (up or down) so that they are fair and comparable for each section.

3. **Final Exam** – (40%)

The Final exam is usually but not always "multiple choice" type questions and may have a component that is short answer or essay. All three sections of the course will be covered, with more emphasis on the last section, so that all three sections are evaluated equally. Please note that multiple versions of exams will be administered in order to reduce any temptation for copying a more "correct" answer. **Supplemental/Deferred** and **Religious Conflict** exams **will differ** from the final exam. They may consist of multiple choice, short answer or only essay type questions.

MARKING SCHEME

In summary, the 2 class tests count for 20% each; the written assignment counts for 20%; and the final exam is worth 40%, totaling 100% of the final grade.

Grading

The Department of Physiology will **NOT** revise/upgrade marks except on sound academic grounds. Once computed, the marks in this course will **NOT** be altered/increased arbitrarily. Decimal points will be "rounded off" as follows: if the final aggregate mark is computed to be 79.5%, the mark will be reported as 80% (an A-); a final aggregate mark of 79.4% will be reported as 79% (B+). These marks are **FINAL and NON-negotiable**."

CONTACT INFORMATION

Professors may arrange special tutorials and/or office meetings with students who require more specific directions for the assignment and/or class tests.

TUTORIAL SERVICE

Student Services provides an additional tutorial service: Brown Building, Suite 4200, 398-6011.

COURSE EVALUATIONS

Course evaluations will be available through Minerva at the end of term.

SUPPLEMENTARY REFERENCES

Blood

Recommended Reading:
Wintrobe's Clinical Hematology, Twelfth Edition (Greer JP et al., eds.) Lippincott, Williams & Wilkins, 2009. Pages: 79-125, 170-213, 468-489, 810-834.

G. I.

Required textbook
Smith-Morten. The Digestive System, Basic Science and Clinical Conditions. Elsevier Publishing. 2005.

Supplementary textbook
Guyton, Arthur and Hall, John. E. Textbook of Medical Physiology. 12th e. Saunders

Immunology

The notes in this section represent a mixture of original material, material excerpted from the recommended textbooks (below) and material copied from various web pages. The material is for use in Physiology 313 ONLY and may not be copied, distributed, or posted electronically for use outside this course.

Murphy, Kenneth M., et al. Janeway's Immunobiology. 7th e. Garland Publishing Inc. 2008.

Kindt, Thomas J., et al. Kuby Immunology. 6th e. W.H. Freeman & Company. 2007.

McGill University values academic integrity. Therefore all students must understand the meaning and consequences of cheating, plagiarism and other academic offences under the Code of Student Conduct and Disciplinary Procedures (see http://www.mcgill.ca/srr/honest for more information)
Every student has the right to write term papers, examinations, and theses in English or French, except in courses where knowledge of the language is one of the objectives of the course.
In the event of extraordinary circumstances beyond the University's control, the content and/or evaluation scheme in this course is subject to change.