

To: Faculty and Students
PHOL 519 Course, *Integrated approach to cardio-respiratory research*
Spring Semester, 2021

From: Peter M. MacFarlane, Course Director

Re: Topics and schedule for PHOL 519

This course is intended to utilize various clinical scenarios related to cardiorespiratory morbidities as a teaching tool to educate students in the process of research methods, scientific practice, critical thinking, and presentation skills. Prior knowledge in these areas is not essential, but beneficial. Grading will be based primarily on participation. Attached is the topic list and schedule for PHOL 519 (*Integrated Approach to Cardio-Respiratory Research*), which will be taught Tuesdays and Thursdays from 3:30–5:00 PM. The course will be conducted remotely via Zoom.

The course will be conducted in the following way*:

1. At the beginning of each set of lectures by a particular faculty member, the faculty member will give a brief (15–30 minute) overview of the topic.
2. One *week* before a set of lectures begin, the faculty member will provide the students with a list of papers related to the topic. From this list, the students will choose a paper to present during class. Faculty may also ask the students to choose a paper from the current literature. The faculty member will also provide a list of key issues that the presenting student should be sure to cover when presenting the paper.
3. During the classes, the assigned student will present one or more papers per scheduled class. The student is responsible for making sure that all key issues identified by the faculty member are covered. **All** students are expected to read the paper(s) before class and be prepared for active discussion.
4. Each faculty member will grade the performance of the students based on their class discussions and presentations. A standardized grading template will be provided.
5. The student's grade in the class will be totally determined by the quality of their presentations, class discussions, and ability to demonstrate improvements in presentation skills. Dr. MacFarlane will keep a running record of how many presentations each student has been responsible for.

* Some faculty members on occasion will choose to implement their own subtle variation of the above format. For example, instead of presenting a paper, students will be required to work in groups to prepare a presentation related to the material, as per the instructions of the faculty member.

Tuesdays and Thursdays, 3:30–5:00 PM

<i>#</i>	<i>Date</i>	<i>Topic</i>	<i>Faculty</i>
1	Tu 2/2	Rhythmogenesis: Current Thought	T. Dick
2	Th 2/4	Rhythmogenesis: Networks & Transmitters	T. Dick
3	Tu 2/9	Circuit & Cellular Properties Generating Breathing	T. Dick
4	Th 2/11	Circuit & Cellular Properties Generating Breathing	Y.-H. Hsieh
5	Tu 2/16	Circuit & Cellular Properties Generating Breathing	Y.-H. Hsieh
6	Th 2/18	Cardiovascular control	S. Lewis
7	Tu 2/23	Cardiovascular control	S. Lewis
8	Th 2/25	Physics of gas exchange	P. MacFarlane
9	Tu 3/2	Physics of gas exchange	P. MacFarlane
10	Th 3/4	Clinical research strategies	J. Di Fiore
11	Tu 3/9	Clinical research strategies	J. Di Fiore
12	Th 3/11	Clinical research strategies	J. Di Fiore
13	Tu 3/16	Cardiovascular complications in prematurity	T. Raffay
14	Th 3/18	Cardiovascular complications in prematurity	T. Raffay
15	Tu 3/23	Sickle Cell Disease	Y. Fortenberry
16	Th 3/25	Sickle Cell Disease	Y. Fortenberry
*17	Tu 3/30	Sudden Infant Death Syndrome	P. MacFarlane
*18	Th 4/1	Sudden Infant Death Syndrome	P. MacFarlane
19	Tu 4/6	Cardiovascular control in disease	S. Lewis

20	Th 4/8	Cardiovascular control in disease	S. Lewis
21	Tu 4/13	Pulmonary Vascular Development & Disease	R. Schilz
22	Th 4/15	Pulmonary Vascular Development & Disease	R. Schilz
23	Tu 4/20	Pulmonary Vascular Development & Disease	R. Schilz
24	Th 4/22	Cardio-respiratory Transitions at Birth	R. Martin
25	Tu 4/27	Cardio-respiratory Transitions at Birth	R. Martin
26	Th 4/29	Pulmonary Matrix Physiology	R. Ryan
27	Tu 5/4	Pulmonary Matrix Physiology	R. Ryan
28	Th 5/6	Pulmonary Matrix Physiology	R. Ryan

**no spring break due to Covid.*