UPSA
Undergraduate Physiology Students' Association

UAlberta Physiology

Pathways in the Physiology Program (PIPP)

UNIVERSITY OF ALBERTA

Introduction to PHYSL 461 PHYSL 467 PHYSL 468 & 469

Course Coordinators
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Introduction

- **PHYSL 461** is a one term (3 credits) course
- **PHYSL 467** is a two term (6 credits) course
- **PHYSL 468** is a one term (6 credits) fall course designed to be followed by **PHYSL 469** (6 credits) in the winter term
- **PHYSL 463** is a one term (3 credits) fall READING course designed to be followed by **PHYSL 464** (3 credits) in the winter term (course coordinator, Dr. Smith)
- Get a taste of academic research and see if you like it!

Expectations

- You are expected to dedicate a minimum of 8 hours per week and per term in the laboratory (PHYSL 461/467) or 16 hours per week and per term (PHYSL 468/469)

- You will be expected to **regularly keep a detailed and up-to-date notebook** (10% of your MARK!)

- You are expected to **understand** and **be involved** in your research project. This includes reading the scientific literature related to their research project and be proactive in the experimental design.

Supervision & Co-Supervision

- You will work on a research project under the supervision of a Physiology professor for ONE or TWO terms.

- Working with Professors from other Departments is possible, provided that a supervisor from the Department of Physiology is identified. In this case, it is the responsibility of the student and the hosting Professor to identify a Department member who will act as "*Supervisor*". The hosting professor will be listed as "*Co-supervisor*", even if the research project is conducted in his/her laboratory.

- Because this is a PHYSIOLOGY RESEARCH PROJECT, the research project must be dealing with a PHYSIOLOGICAL QUESTION/HYPOTHESIS TO BE TESTED

PHYSL 461

- This course is not a requirement for your Honors program but can be selected as a science option or can be taken towards the minimum “Physiology” course requirement.

- You will work on a research project under the supervision of Physiology professor for a term (Fall or Winter).

- At the end of the term (December/ April) you will give an oral presentation (20min presentation – 20 min questions – feedback on presentation) and write a **10 pages written report.**

PHYSL 467

- Prior to September- registration
- September - start work on the research project
- November - **RESEARCH PROPOSAL (**20min presentation – 20min questions – feedback on presentation) - 15% of your mark
- January/February – follow up one on one meeting with course coordinator
- April - **10 page written report** (to be handed to your committee 1 week before your oral examination) & FINAL ORAL EXAMINATION (20min presentation – 20min questions – feedback on presentation)

PHYSL 468/PHYSL 469

- Prior to September – registration
- September - start work on the research project.
- November – 10 page written research proposal and oral **RESEARCH PROPOSAL** (20min presentation – 20min questions – feedback on presentation)
- - January/February – follow up one on one meeting with coordinator
- April - **20 page written report** (to be handed to your committee 1 week before your oral examination) & FINAL ORAL EXAMINATION (20min presentation – 20min questions – feedback on presentation)

What's next

- Consider what course you want to take
- Consider what kind of research project/ physiology subject/ techniques you would like to learn & work on
- Contact potential supervisors and make arrangements for next year (it is best to start early in order to secure a spot in the lab you are interested in).
- Discuss with coordinators before final registration
- Register for the course before September (complete registration form, send it to Drs. Cordat/Pagliardini for approval & Beartracks registration via the PHYSL office)

What to discuss with a potential supervisor?

- Your expectations and your research interests and how they fit with the supervisor's research interests
- Supervisors' expectations for your work and your project
- Is the supervisor actively involved in research in the Physiology field? Are there research ethics in place for the project? Is there funding in place for the project?
- What is his/her availability (will you be supervised on a daily basis? Is there alternate staff – students/postdocs/techs- available to train and supervise you through the project?)

To consider…

- Start planning your research position in the Spring/Summer – if possible contact potential supervisors in April or May so that you don't risk of not having a placement in the lab of your choice.

- Are you considering a summer research project and a Honor's research project in the same lab?

- Are you considering taking PHYSL 461,467 in third year and then taking PHYSL 468/469 in fourth year?

Literature-based Courses

Course Coordinator: Kyla Smith, PhD
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PHYSL 463/464
PHYSL 466

PHYSL463

- **PHYSL463**
  - Fall term; 3*
  - Classes Tuesday/Thursday 2:00-3:20pm
  - This course must be taken along with PHYSL464 in the winter term.
- Students will work with 1 of the course lecturers and write term papers based on their subject area
- A list of assigned articles will be provided to students at the start of the course. One article per class session. Students are expected to have read the assigned article prior to the scheduled class, and to be competently familiar with the background, hypotheses, data, methods, and conceptual issues presented in the paper.
- At the start of each class, the instructor will pick one student, at random, to introduce the article; this should take approx. 10 minutes and should include the relevant background and main hypotheses addressed by the article. Slides are not required but may be used at the discretion of the student. After the introduction, the discussion will commence, involving all students. The instructor's role will be to steer the discussion towards specific areas, but only when necessary. Students are expected to constructively drive the discussion forward.

PHYSL463

- **PHYSL463**
  - Performance evaluation: 50% class participation; 50% 2 term papers (25% each)
  - Topics (2023):
    - Cell Physiology (Dr. K Smith)
    - Homeostasis and Reproductive Physiology (Dr. S Hamza)
    - STRA6 and Cellular Uptake of Vitamin A (Dr. R Clugston)
    - Pregnancy (Dr. M Riddell)

PHYSL464

- **PHYSL464**
  - Taken with PHYSL463
  - Winter term; 3*
  - No class time
  - Students will further develop critical reading and writing skills to attain in-depth knowledge of a specific area of current physiological research. Students will apply what they learned in PHYSL463 to pursue a self-directed reading program that critically reviews recent literature in one specific field of Physiology.
  - Students will continue to work with the same lecturer from PHYSL463
  - Performance evaluation: 60% 2 term papers (30% each); 40% oral presentation (20 mins; 30% presentation and 10% question period)

PHYSL466

- **PHYSL466**
  - *3; either term
  - Individual study. Students will select a faculty member within the Department of Physiology who will guide them through a course of reading at an advanced level on a specialized topic.
  - Performance evaluation: 50% 2 term papers (25% each); 50% oral presentation
  - Essays will be evaluated by the supervisor and a second examiner; both the supervisor and a second examiner will attend the oral presentation (20 – 25 min)

QUESTIONS?



Questions?

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