

## **Pathology 582, Fall 2015**

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### **Course outline**

The objective of this course is to introduce students to the latest developments within the general areas of Cell and Molecular Basis of Disease. We hope to develop the student's oral presentations skills and their critical thinking ability, in a non-threatening environment. The topics can be quite varied and will also be a reflection of the interest of the faculty. In terms of content, there should be some connection to the introductory lecture course, Path 581.

There will be 4 topic sessions, taught by 4 faculty members. The sessions will consist of an introductory lecture and two assigned papers. The student presentations will form the core of the course. The idea being that students will present a paper, much like a journal club, that they have chosen from a list of papers submitted by the faculty member. The student will then present and discuss the paper with the rest of the class.

I will sit in on all the presentation (unless I am out of town), together with the faculty member of that session, and we will try and stimulate the discussion and provide an expert point of view. The students who are not presenting will be expected to read and know the papers and hand in the paper critique forms after each class. They should also participate by asking relevant questions, providing new points of discussion, challenging the data. Remember, the presenter does not need to "defend" the paper, feel free to point out all the flaws.

The last session will focus on grant writing skills in preparation for the Pathology pre-lim exam.

Students will be graded on their presentations, their critiques, and their participation in the general discussions.

## **Guide to Student Presentations:**

Provide a short introduction. Explain methods that are complex or unique. Place the paper in to context. The following outline is a guide to what I am looking for:

### 1-Background and significance of the question

- why is this being done?
- what is the major question being asked in this study
- is it important?
- how does this issue relate to biomedical science in general?

### 2-Experimental Design

- why did they chose the methods?
- are the controls appropriate?
- what else could have been done?

### 3-Critical analysis of the results

- are the data sound?
- are the data statistically significant, are there enough samples?
- do the authors gloss over certain data points?

### 4- Critical appraisal of the major conclusions

- do the conclusions follow from the data presented?
- have they answered the questions raised?
- are there alternative conclusions that are not discussed?

### 5- Contribution to the field

- how does this alter the field?
- does the paper contradict or agree with previous papers?

### 6- What would you do next

- if this was your lab, what would need to be done now?

Presentations should use Powerpoint. PLEASE, DO NOT JUST REPEAT WHAT IS IN THE PAPER. I am looking for critical analyses, alternative views, identifying problems in the data or interpretation.

## 582 Schedule, Fall 2015

### September

- 9 W no class
- 14 M Introduction to the Scientific Literature, how to read and write papers - Dr. Dressler
- 16 W Module -1, Dr. Dressler, Polyglutamine expansion disease and neurodegeneration
- 21 M Paper 1
- 22 W Paper 2
- 28 M Module 2, Dr. Muntean, Epigenetic Pathways in Cancer
- 30 W Paper 3

### October

- 5 M Paper 4
- 7 W Module 3, Dr. Carson,
- 12 M Paper 5
- 14 W Paper 6
- 19 M Study Break
- 21 W Module 4 Dr. Nikolovska-Coleska, Chemical biology and Drug discovery
- 26 M Paper 7
- 28 W Paper 8

### November

- 2 M Introduction to Grant Writing – Dr. Dressler
- 4 W Presentation and discussion of Pre-lim topics - Dr. Dressler
- 9 M Pre-lim abstract due
- 11 W Open class for discussion of experimental design, methods, rationale, etc. - Dr. Dressler
- 16 M Additional discussion time if needed - Dr. Dressler

### December

- 7 M Written Pre-lims due
- 14-18 Pre-lim Exam Week

