

Path 310 \* /0.5 Pathology and Molecular Medicine 3L/T

Updated: 2016 July 04

An introduction to pathology and molecular medicine. The course will be organized around a specific set of diseases, designed to illuminate basic concepts in the molecular biology, biochemistry and pathology of human disease.

Prerequisite: MBIO 218\*.

Recommended: ANAT 215\*, ANAT216\* and PHGY212

**Overall Goals:**

The goal of this course is to provide an introduction to Pathology and Molecular Medicine by presenting a series of model diseases – and illustrating the span from genetics through biochemistry to pathology for each. In each week of the course, lectures will focus on a specific disease, with content spanning genetic and biochemical, through the pathology and clinical aspects of the disease. Each week will feature two individuals, representing the molecular and clinical perspectives on each disease. One of the main goals of presenting this course will be to introduce students to the current transdisciplinary nature of many biomedical studies today.

The second key component of the course will involve a series of small group Independent Learning Modules (ILMs). While the lecture material will focus on specific diseases, the ILMs will focus on general concepts around diagnostic pathology and basic scientific approaches to appraising and designing research studies. Each ILM will run over the course of 4 weeks, and involve a series of specific questions and issues to be considered; a Teaching Assistant will help to guide your discussions. The expectation is that you will spend 2-4 hours/week exploring these issues, roughly evenly split between independent and group work. For each ILM, you will be required to submit either 1 or 2 small individual assignments. Each learning module will be worth 10% of your final course mark. A portion of the final examination will involve questions that require you to apply the principles you explored in the ILMs to specific or hypothetical diseases.

**The overall objectives of the course are:**

*Objective 1 : Integrate underlying genetic and biochemical factors with resultant pathologic processes and disease states.*

*Objective 2: Contrast the roles of genetics and environmental factors contributing to disease.*

*Objective 3: Relate the molecular basis of disease to diagnosis and therapy.*

*Objective 4: Illustrate how pathology and molecular medicine impacts larger social, moral and ethical issues.*