**JCV3065 ~~ Advanced Topics in Cardiovascular Sciences: Systems Biology**

**Course Director: Dr. Anthony Gramolini**

**Day/Time: Thursdays, 1:00-3:30 pm**

This course is one of a set of seven advanced seminar half-credit courses dealing with current research areas in the cardiovascular system. Specifically, JCV3065H will provide a ‘systems’ level perspective on Cardiovascular Medicine and highlight progress from new molecular-, network-, and informatics-level concepts of cardiac muscle in health and disease.

Areas that may be covered include:

* Clinical heart disease
* Mass spectrometry in heart disease
* Bioinformatics and systems biology in cardiovascular medicine and research
* Patient analysis, drug development and clinical trials
* Epidemiology and large patient trials
* Model organisms in cardiovascular biology
* Biotechnology, engineering, and chemical approaches in cardiovascular biology
* Phosphoproteomics and network biology
* Congenital heart disease and genomics

**Prerequisites:** None

**Maximum Enrolment:** 17

**Minimum Enrolment:** 10 registrants for the course to run

**Enrolment:** Graduate students interested in heart research. Preference will be given to students enrolled in the Cardiovascular Sciences Collaborative Specialization.

**Grading**: 50% oral presentation

10% written reports – midterm

25% written reports – final

15% participation in discussions