PHARMACOLOGY AND
PHYSIOLOGICAL SCIENCE
(PH)

PH 0303 - Pharmacology Self-Designed Career Exploration
Credit(s): 1-2 Credits

PH 0408 - Microsurgery
Credit(s): 2-12 Credits
This is an elective for highly motivated students who wish to improve
their manual dexterity by practicing microsurgery using a dissecting
microscope. Students will learn procedures for suturing tissues using
excised blood vessels. Arteries will be transected then sutured (repaired).
Students may also create vascular anastomosis. This is an independent
exercise that will help students identify and improve microsurgical skills.

PH 0409 - Cardiovascular Effects of Cocaine and Behavioral Stress
Credit(s): 2-12 Credits
Studies will be undertaken to describe the cardiovascular effects of
cocaine and of behavioral stress. We have noted that rats do not respond
similarly such that some are more prone to adverse cardiovascular
outcomes with cocaine or stress. We will study regional hemodynamics,
sympathetic nerve responses and cardiac function in rats. The CNS
pathways and neurotransmitters responsible for response variability will
be examined. The student will conduct experiments on rats, analyze data
and prepare a summary of the findings.

PH 0410 - Role of Afferent Nerves in Cardiovascular Disease
Credit(s): 2-12 Credits
Studies will be undertaken to describe the effects of selective renal
deafferentation on the development of cardiovascular disease. Renal
denervation in humans ameliorates hypertension, heart failure and renal
failure by unknown mechanisms. We will examine whether renal afferent
nerves are responsible for these positive results in rat models. We will
study experimental models of hypertension and heart failure and we
will use electrophysiological techniques to identify how renal afferent
nerves play a role in elevating sympathetic activity. Students will assist
in performing experiments, analyze data and prepare a summary of the
findings.