PHYSIOLOGY

William H. Dantzler, M.D., Ph.D., Head

Lura Hanekamp, Departmental Coordinator (626 7642)

PSIO 800A - Research
Dr. W. Dantzler & Faculty
3, 4 or 6 wks; maximum length of 6 wks; offered year round
Directly supervised/Non-patient care.
Maximum enrollment varies
Prerequisites: Consent of instructor and Departmental Electives Coordinator

Goals: This elective consists of involvement in a research project of special interest to the student.
Format: As arranged between student and instructor.
Evaluation Methods: As arranged.

PSIO 891A - Physiology
Dr. P. Hoyer
3 or 4 wks; maximum length of 12 wks; offered year round
Directly supervised/Non-patient care.
Maximum enrollment of 1
Prerequisites: Completion of biochemistry and physiology

Goals: To provide the student with an opportunity to participate in a preceptorship program at an approved basic science research facility in this country or abroad. Students seeking unique preceptorships in any aspect of Physiology must first consult with a member of the Department of Physiology. This faculty member, preferably, would be familiar with the student's area of interest and with the particular research facility in which the student desires the preceptorship. The student is responsible for furnishing the Student Records Office with the name and address of the preceptor at the outside institution.
Format: As determined by the preceptor.
Evaluation Methods: The form issued by the College of Medicine may be used; however, if the preceptor prefers to use the evaluation form of his/her school, this will be acceptable.

PSIO 696U/896U - Cardiovascular Pathophysiology
Dr. P. McDonagh & Faculty from the Departments of Surgery and Medicine
Offered April-May; TTh, 1-3 PM; 2 credits
Directly supervised/Non-patient care.
Maximum enrollment of 20, Minimum of 6
Prerequisites: Open to third and fourth-year medical students, **Registration Deadline - December 17**

Goals: This six week seminar course is designed to help medical students form a solid foundation of knowledge of diseases of the heart and circulation.
Format: The course will consist of lectures, readings, case presentations and demonstrations. The students will utilize *Pathophysiology of Heart Disease* by Leonard Lilly, M.D. as a primary source as well as selected readings from the instructors. Each two-hour seminar period will cover a specific topic. Included in each period will be a review of the underlying pathobiology and pathophysiology, signs and symptoms, special diagnostic techniques, pharmacologic and, when appropriate, surgical management of the cardiovascular disorder under discussion.
The topics will be:

1. Review of Cardiovascular Structure and Function
2. Heart Sounds, Murmurs and Physical Diagnosis
3. Diagnostic Cardiovascular Imaging
4. Atherosclerosis
5. Hypertension
6. Ischemic Heart Disease
7. Myocardial Infarction
8. Heart Failure
9. Peripheral Arterial Disease
10. Peripheral Venous Disease
11. Cardiovascular Pharmaceuticals
12. Cardiothoracic Surgery and Transplantation

Evaluation Methods: Students will be evaluated weekly by their demonstrated preparation for each seminar and by active participation in discussions. Students will also be required to select a specific topic, review recent literature in that area and write a report on "Current Concepts in the Etiology and Management of .....".

**Crosslisted with MED 696U/896U, MEDI 696U/896U and SURG 696U/896U*

PSIO 599/699/899 - Independent Study
Drs. P. Hoyer, D. Stuart, W. Dantzler, R. Gore, Koldovsky, G. Koshland, S. Wright & J. Burt
3, 4 or 6 wks; maximum length of 15 wks; offered year round
Directly supervised/Non-patient care.
Maximum enrollment of 10, minimum of 3
Prerequisites: Physiology 601/801 (Human Physiology)

Goals: The student will be exposed to current information and research techniques in a given area of Physiology. He/she would attain some degree of competence in designing, executing and interpreting the results of physiological experiments.
Format: Directed reading or laboratory research in the Department of Physiology with a faculty member. Topics are: Flow regulation in the microcirculation, R.W. Gore; Development of neuromuscular junction and pathophysiology of muscle, R.P. Gruener; Muscle and spinal cord reflexes, D.G. Stuart; Vascular responses and exchange processes in the microcirculation, R.W. Gore; Renal function, especially tubular transport of organic substances, W.H. Dantzler; Mechanisms of membrane transport; renal cellular physiology, S. Wright; Development of gastrointestinal functions; Effect of hormones and dietary factors; Digestion of carbohydrates, O. Koldovsky; Muscle receptors and the control of movement, G. Koshland; Mechanisms of Hormone Action; Endocrine Regulation of Ovarian Function, P. Hoyer; Cardiac tissue survival; Calcium fluxes in heart cells, J. Burt
Evaluation Methods: Students will be evaluated by their preceptors by means of frequent conferences in which readings, experimental results and future experiments will be discussed.