Course Director: John P. Aris, PhD (johnaris@ufl.edu)

Offered: Even years

Minimum Number of Graduate Students: 4

Schedule:
Module 3 = Tuesday, March 25 – Tuesday, April 22 (9 class sessions)
Tuesday and Thursday, 1-3 pm (contact course director to discuss other times on T/R pm)

Overview:
The Protein Trafficking course focuses on the current state of knowledge regarding movement of proteins in cells. Emphasis will be placed on: (1) movement of proteins in the secretory and endocytic pathways, (2) targeting of proteins to organelles, and (3) localization of proteins within the cytoplasm. Molecular mechanisms that underlie and regulate targeting, and diseases related to protein targeting will be discussed.

Format:
Lecture, small group discussion, and/or student presentations. Usually, a faculty member gives a 30 to 45 minute presentation that reviews the topic area, and the remainder of the class time is used for either a group discussion or a student presentation of assigned reading.

Reading Assignments:
Reviews and papers from the original literature will be assigned.

Topic Area Examples:
Translocation of proteins across membranes
Membrane protein topogenesis
Secretory and endocytic pathways
Vesicular transport pathway mechanisms and regulation
Protein trafficking to organelles (e.g., mitochondria and peroxisomes)
Nuclear transport (overlaps Nucleus module, depends on student and faculty interest)
Protein trafficking and human disease

Student Evaluation:
Grades will be based on participation in group discussions, presentations, and/or an exam.

Grading:
A grading sheet is sent to faculty members after they finish their class(es). Faculty submit a grade (A, A-, B+, B, B-, C+, C, C-) for each student for each class based on the quantity / quality of participation. Examples of participation include answering questions correctly, providing coherent analyses and explanations, making constructive comments, asking good questions, and so forth. At the end of the module the submitted grades are averaged to arrive at a final grade. Missed classes are omitted from the calculation of the average.