

**GBSC 739 – Basic and Translational Science in Heart Failure**

2 Credit Hours | Fall 2019 | August 28 – December 4, 2018 | Wednesdays 3-5 pm | Hefner Library  
(Tinsley Harrison Tower 311)

**Course Director:** Dr. Sumanth Prabhu | sprabhu@uabmc.edu | 205-934-3624

**Course Manager:** Dr. Martin Young | martinyoung@uabmc.edu

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**GBS Vision Statement:**

“Demonstrating world-class excellence in all areas of biomedical research through the achievements of our students.”

**GBS Mission Statement:**

“Driving biomedical discovery through interdisciplinary training and innovative research.”

**GBS Core Competencies:**

GBS offers a wide array of courses, seminars, journal clubs, research opportunities, and professional development that are designed to support the growth and development of our students. The following list consists of desirable competencies for our students to achieve while in this course:

- Content-Specific Conceptual Knowledge
- Critical Thinking and Data Evaluation
- Quantitative Analysis
- Research-Skill Development
- Communication Skills
- Professionalism
- Responsible Conduct of Research

**Course Objectives:**

The purpose of this course is to provide students with foundational knowledge on basic, clinical, and epidemiological aspects of heart failure. During the course, students will be exposed to in depth insights regarding the pathogenesis, diagnosis, prevention/treatment, and epidemiology of heart failure.

**Required Textbooks/Additional Course Readings:**

The delivery format of each topic will include a one hour lecture, followed immediately by a one hour team based learning exercise designed to reinforce concepts presented in the preceding lecture. Twelve topics will be covered during the course (please see below), which will take place over a twelve week period. The faculty, who were identified based on their unique expertise in studying basic, clinical, and epidemiological aspects of heart failure, have all agreed to participate.

*Thematic Connections to the Literature:* Throughout the course, cutting edge information will be provided to students. This will include specific recently published studies. Students will be provided with references to these studies, and during the class, questions such as the following will be addressed: What question existed in the literature prior to this study? How did this study answer the question? What are the impacts of this finding and the next steps?

**Grading:**

Grading for this course (which is not an advanced elective) will be Pass/Fail, based on participation. A

pass grade will be given if the enrolled student attends 70% or more classes; a fail grade will be given if the enrolled student attends 69.9% or less classes.

**Course Outline:**

DATE	SESSION TOPICS/ACTIVITIES	LECTURER
8/28/2019	Epidemiological and Clinical Aspects of Heart Failure	Salpy Pamboukian, MD
9/4/2019	Study Designs for Population & Clinical Studies	George Howard, DrPH
9/11/2019	Pathological Cardiac Remodeling During Heart Failure	Louis Dell'Italia, MD, PhD
9/18/2019	Cardiometabolic Alterations During Heart Failure	Martin Young, DPhil
9/25/2019	Medical Therapies for Heart Failure	Sumanth Prabhu, MD
10/2/2019	Surgical Management of Heart Failure	Jim Kirklin, MD
10/9/2019	Animal Models of Heart Failure and Study Design	Adam Wende, PhD/Tariq Hamid, PhD
10/16/2019	Electrophysiological Changes and Arrhythmias During Heart Failure	Lufang Zhou, PhD
10/23/19	Cardiac Diagnostics and Imaging	Steven Lloyd, MD, PhD
10/30/2019	Stem Cells and Tissue Engineering	Gangjian Qin, PhD
11/6/2019	Extracardiac Manifestations of Heart Failure	Min Xie, MD, PhD
11/13/2019	Big Data and Bioinformatics	Emily Levitan, PhD/Ryan Irvin, PhD

**Disability Support Services:**

UAB is committed to providing an accessible learning experience for all students. If you are a student with a disability that qualifies under Americans with Disabilities Act (ADA) and Section 504 of the Rehabilitation Act, and you require accommodations, please contact Disability Support Services for information on accommodations, registration and procedures. Requests for reasonable accommodations involve an interactive process and consist of a collaborative effort among the student, DSS, faculty and staff. If you are registered with Disability Support Services, please contact the course director to discuss accommodations that may be necessary in this course. If you have a disability, but have not contacted Disability Support Services, please call (205) 934-4205 or visit <http://www.uab.edu/dss>.