FLORIDA ATLANTIC UNIVERSITY™

Graduate Programs—COURSE CHANGE REQUEST

UGPC APPROVAL _____
UFS APPROVAL _____
SCNS SUBMITTAL _____
CONFIRMED _____
BANNER POSTED _____
CATALOG: _____

DEPARTMENT NAME: N/A	COLLEGE OF: MEDICINE
COURSE PREFIX & NUMBER: BMS 6162	CURRENT COURSE TITLE: Cardiovascular System

CHANGE(S) REQUESTED

SHOW "X" IN FRONT OF OPTION	SHOW "X" IN FRONT OF OPTION
CHANGE CREDITS FROM TO:	CHANGE PREFIX FROM TO:
CHANGE GRADING FROM REGULAR TO: S/U	CHANGE COURSE NO. FROM TO:
CHANGE PREREQUISITES TO:	CHANGE TITLE TO:
CHANGE MINIMUM GRADE TO:	CHANGE DESCRIPTION TO:
CHANGE COREQUISITES TO:	
CHANGE OTHER REGISTRATION CONTROLS TO:	
OTHER	

CHANGES TO BE EFFECTIVE *(TERM)*:

Attach syllabus for **ANY** changes to current course information.

Will the requested change(s) cause this course to overlap any other FAU course(s)? If yes, please list course(s).	Any other departments and/or colleges that might be affected by the change(s) must be consulted. List entities that have been consulted and attach written comments from each.
YES **NO**	N/A

TERMINATE COURSE, EFFECTIVE *(GIVE LAST TERM COURSE IS TO BE ACTIVE)*:

Faculty Contact, Email, Complete Phone Number:
Michelle Schwartz, MD; Assistant Professor of Clinical Biomedical Science; 561 997-2554; mschwartz@mdvip.com
Ira Gelb, MD; Professor of Clinical Biomedical Science; 561 297-2249; iigelb@fau.edu

SIGNATURES

Approved by:	*Date:*
Department Chair:	
College Curriculum Chair:	
College Dean:	
UGPC Chair:	
Dean of the Graduate College:	

SUPPORTING MATERIALS

Syllabus—must include all criteria as detailed in UGPC Guidelines.

Go to: *http://graduate.fau.edu/gpc/* to access Guidelines and to download this form.

Written Consent—required from all departments affected.

Email this form and syllabus to *diamond@fau.edu* and *eqirjo@fau.edu* one week ***before*** the University Graduate Programs Committee meeting so that materials may be viewed on the UGPC website by committee members prior to the meeting.

FAU COLLEGE OF MEDICINE

Syllabus :
1. **Course title** : Cardiovascular System **Course number**: BMS 6162 **Number of credit hours:** 8
Lecture Hours: up to 8 hrs/week in BC-126, unless otherwise specified. Small-group Hours: up to 6 hrs/week for PBL, location as assigned Other activity Hours: up to 4 hrs/week location as assigned

2. Course prerequisites:
Successful completion of the first year of MD program and promotion to the second year

3. Course logistics:
a. term: Fall 2012
b. not an online course
c. Biomedical Science Building room BC-126, simulation lab, anatomy lab, small group PBL rooms.

4. Instructor information:

Course Directors:	Michelle Schwartz, MD Assistant Professor of Clinical Biomedical Science 561 997-2554 mschwartz@mdvip.com	Ira Gelb, MD Professor of Clinical Biomedical Science 561 297-2249 ijgelb@fau.edu

Course support: Ms Mavis Brown
Curriculum Coordinator
BC-138
561-297-0899
mwbrown@fau.edu

Please note: Any official student communication from the director or curriculum coordinator will be sent via e-mail to students at their FAU e-mail addresses. *If students would like to meet with the course director, they must call or e-mail the course director to schedule an appointment.*

5. TA contact information:

N/A

6. Course description:

This Module will introduce students to the various cardiovascular diseases, many of which are common in the general population. Because many of these conditions are chronic and can impact other tissues and organs, it is important that students understand their pathophysiology and treatment.

There are several goals of this module: to introduce the cardiovascular diseases in terms of their basic pathophysiologic mechanisms; to discuss chest pain and other clinical features in the context of specific diseases; to incorporate pertinent laboratory tests and ancillary studies into clinical problem solving; and to provide a solid background and understanding of the pharmacologic agents and nonpharmacologic interventions used to treat cardiovascular disorders. There are four main sections in this module:

- Lipids/atherosclerosis/chest pain/angina and myocardial infarction
- Hypertension
- Congestive heart failure
- Rhythm disturbances

The module will also cover congenital heart disease, aneurysms, inflammatory disorders and cardiomyopathies.

7. Course objectives/student learning outcomes:

At the end of this module the student will be able to:

- Review the normal anatomy and physiology of the heart and cardiovascular system.
- Assess the signs and symptoms associated with chest pain and formulate a differential diagnosis.
- Describe the organization and classification of cardiovascular diseases.
- Incorporate laboratory data into the assessment of a patient with a cardiovascular disorder.
- Correlate radiographic, ECG and echocardiographic findings with specific cardiovascular disorders.
- Characterize the classic pathologic features of the cardiovascular disorders discussed in this module.
- Discuss the goals of therapy based on the underlying pathophysiological condition.
- Explain how the mechanisms of action of the cardiovascular drugs lead to their therapeutic effect.
- Identify the most common side effects and toxicities of each class of cardiovascular drugs.
- Identify special patient populations that, because of age, genetic differences or disease may require adjustments in the therapeutic treatment plan.
- Analyze scientific data from clinical trials and identify potential flaws or biases in the study design.

8. Course evaluation method:

Exam Composition: All examination questions will be multiple-choice. Clinical vignettes will be used for many questions, and images will be incorporated as appropriate. *Approximately* 1-2 questions per lecture hour, 1-2 questions per PBL case hour and 1-2 questions per laboratory hour will be used.

Exams will be delivered electronically via student laptops.

During the exams, students are required to follow the examination protocol presented by the proctors. No specific questions regarding an exam item will be answered during any exam.

Examination Scoring: *Scoring will be based solely on the answers recorded by the student on their laptop computer.* Miskeying of answers or omission of an answer will not be considered in grading a student's examination. Accuracy is the sole responsibility of the student.

Grades will be available via Blackboard in a timely fashion.

Viewing the Examination: All exams will be secure. Students can access a copy of the exam in the Office of Medical Education, Room BC-136. Review of the exams is limited to times outside formal curriculum activities.

Grading Policy:

The course grade is made up of two components (exams & mini-cases, and PBL). An unsatisfactory grade for either of the two components will result in an unsatisfactory grade for the course

Component 1
Exam 1 30 points Exam 2 30 points Exam 3 30 points Mini-cases 10 points

 Three problem sets of short cases for the students to solve independently and outside of class. These problem sets are then discussed in three scheduled small-group sessions. Consists of independently done work handed in at the beginning of the session. Evaluation is based upon turning in the mini-cases and satisfactory completion as defined by the standards set forth by students in their class oath.

Component 2
PBL facilitators will provide narrative evaluation which will contain notations as to whether the student's academic and professional performance is on the level of "honors" (H), ―high satisfactory' (HS), "satisfactory" (S), "marginally satisfactory" (MS), and ―unsatisfactory‖ U. This will be based on the student's performance the following areas:

 Use of student's own knowledge base Knowledge acquisition/active learning Critical thinking/reasoning/problem-solving Teamwork/group communication and assessment

When a student obtains a ―MS‖ or ―U‖ on any examination, a letter is sent to the student asking them to contact the course director for assistance. The letter is copied to the student's file.

9. Course grading scale:
The grading scale for the course is as follows:

(H) Honors = or>93% and (H) in PBL (HS) High Satisfactory 85% -92.99% (H) or (S) in PBL
(S) Satisfactory =or>75% and (S) or (H) in PBL
(MS) Marginal Satisfactory =or>75% and (MS) in PBL 70%-74.99% and (H), (S) or (MS) in PBL
(U) Unsatisfactory =or>70% and (U) in PBL <70% and (H), (S), (MS), or (U) in PBL

10. Policy on makeup tests, etc.

Exam Administration: All examinations will be administered in the Biomedical Sciences building on the dates and times documented in the examination schedule. A student must sit for all examinations as scheduled. A student must obtain permission for an excused absence from the course director and notify the Senior Associate Dean for Student Affairs prior to the time for sitting for a scheduled examination. In the event of a personal emergency, the course director and the Senior Associate Dean for Student Affairs must be notified of the absence as soon as possible. Missed examinations will be rescheduled at the discretion of the course director, at a time that does not interfere with other course work. Unexcused absences will result in a grade of zero (0) for the missed examination.

All absences from examinations should be documented by a PIR from the course director and will be communicated to the Office of Student Affairs. A record of excused and unexcused absences from examinations will be maintained by the Office of Student Affairs. A pattern of recurrent absences from examinations, whether excused or unexcused, will be reviewed by the MSPPSC and may result in a recommendation up to and including dismissal from the FAU medical Education Program. (See Student Rights and Responsibilities Handbook)

11. Special course requirements:

Attendance Policy:

The FAU faculty and administration agree that student attendance and participation in all scheduled learning sessions are important to students' academic and professional progress and ultimate success as physicians.

Attendance at the Monday/Wednesday/Friday small-group sessions and wrap-up is mandatory.

***For an absence to be excused, a request must be made to the Course Director*. Only a Course Director can excuse an absence. No missed work associated with a specific session can be made up without loss of credit for satisfactory completion unless an excused absence has been granted.**

An excused absence from a small-group PBL session will be made up by the assignment of an additional learning issue to the student. An unexcused absence will result in the assignment of an additional learning objective for each absence, and a two point deduction from the PBL small group performance component of the final grade.

Repeated unexcused absences from required curricular activities may result in disciplinary action, up to and including dismissal from the FAU Medical Education Program.

12. Classroom etiquette policy:

Students should be considerate of each other by switching his/her cell phone to vibrate during all teaching activities.

If a telephone call is of an emergency nature and must be answered during class, the student should excuse him/herself from the lecture hall before conversing.

Laptop computer use should be limited to viewing and recording lecture notes rather than checking e-mail, playing or viewing other distracting websites. Students may be asked by faculty to turn off laptops during any session where group participation is required (such as PBL and wrap-up sessions).

13. Disability policy statement:

In compliance with the Americans with Disabilities Act (ADA), students who require special accommodation due to a disability to properly execute coursework must register with the Office for Students with Disabilities (OSD) –in Boca Raton, SU 133 (561-297-3880)—and follow all OSD procedures.

14. Honor code policy:

Students at Florida Atlantic University are expected to maintain the highest ethical standards. Academic dishonesty is considered a serious breach of these ethical standards because it interferes with the University mission to provide a high quality education in which no student enjoys an unfair advantage over any other. Academic dishonesty is also destructive of the University community, which is grounded in a system of mutual trust and places high value on personal integrity and individual responsibility.

The FAU Honor Code requires a faculty member, student, or staff member to notify an instructor when there is reason to believe an academic irregularity is occurring in a course. The instructor must pursue any reasonable allegation, taking action where appropriate. The following constitute academic irregularities:

1. The use of notes, books or assistance from or to other students while taking an examination or working on other assignments, unless specifically authorized by the instructor, are defined as acts of cheating.
2. The presentation of words or ideas from any other source as one's own is an act defined as

plagiarism.
3. Other activities that interfere with the educational mission of the University.

For full details of the FAU Honor Code, see University Regulation 4.001 at www.fau.edu/regulations/chapter4/4.001_Honor_Code.pdf.

In addition to the FAU Honor Code, the FAU College of Medicine has adopted specific academic, professional and behavioral standards governing medical student conduct which the FAU COM faculty and administration believe are essential components of medical education and the development of medical students. The FAU COM academic, professional and behavioral standards are included in the COM Student Handbook.

15. Required texts/readings:

The following are textbooks that students are expected to purchase for use in the Cardiovascular System course. All the textbooks listed below are available at the FAU Bookstore. Students may want to purchase the textbooks

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independently to obtain the best pricing.

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Title	Author(s)	Publisher
Pathophysiology of Heart Disease	Lilly	Lippincott Williams & Wilkins, 4th edition (2006)
12-Lead ECG: The Art of		

Recommended Textbooks:

The following texts from prior year 1 courses remain of interest:

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Title	Author(s)	Publisher
Pathophysiology of Heart Disease	Lilly	Lippincott Williams & Wilkins, 4th edition (2006)

16. Supplementary resources:

(These resources and others may be accessed via the Blackboard resources.

http://cvphysiology.com/ The materials contained in this web site are limited to physiological concepts that serve as the basis of cardiovascular disease.

Medline Dictionary, an online dictionary provided by the US National Library of Medicine and the National Institutes of Health is a potentially useful resource during the PBL small group sessions).

Aperio Microscope Images: These virtual microscope images, which can be accessed through the Blackboard site, via the ―Handouts and Links‖ tab, can be found at: http://med.fau.edu/aperio.

The Internet Pathology Laboratory for Medical Education can be accessed through the Blackboard site

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Title	Author(s)	Publisher
Pathophysiology of Heart Disease	Lilly	Lippincott Williams & Wilkins, 4th edition (2006)

Title	Author(s)	Publisher
12-Lead ECG: The Art of Interpretation	Garcia, Holtz	Jones and Bartlett (2001)

Title	Author	Publisher
Cardiovascular Physiology Concepts	Richard E Klabunde	Lippincott Williams & Wilkins (2004)
Harrison's Principles of Internal Medicine, 16th Edition	Anthony S. Fauci, Eugene Braunwald, Dennis L. Kasper, Stephen L. Hauser, Dan L. Longo, J. Larry Jameson, and Joseph Loscalzo, Eds.	McGraw Hill *(Available through online access at UM Calder Library)*

Title	Author(s)	Publisher
Medical Physiology 1st Edition	Boron and Boulpaep	Elsevier
The Immune System 2nd Edition	Parham	Garland Science
Medical Microbiology 5th Edition	Murray, Rosenthal, Kobayashi & Pfaller	Elsevier
Robbins and Cotran's Pathologic Basis of Disease 7th Edition	Kumar, Cotran, Robbins	Saunders

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via the —Handouts and Links‖ tab, is a comprehensive learning tool. The application contains useful anatomy, radiology, microbiology images and tutorials, in addition to thousands of systemic pathology images. In addition, WebPath contains a section of case-based laboratory examination questions (with fully-explained answers) that are very helpful resources for review.

Title	Author(s)
Pathophysiology of Heart Disease	Lilly
12-Lead ECG: The Art of Interpretation	Garcia, Holtz

Title	Author
Cardiovascular Physiology Concepts	Richard E Klabunde
Harrison's Principles of Internal Medicine, 16th Edition	Anthony S. Fauci, Eugene Braunwald, Dennis L. Kasper Stephen L. Hauser, Dan L. Lo J. Larry Jameson, and Joseph Loscalzo, Eds.

1. **Web-based postings:**

Title	Author(s)
Medical Physiology 1st Edition	Boron and Boulpaep
The Immune System 2nd Edition	Parham
Medical Microbiology 5th Edition	Murray, Rosenthal, Kobayash Pfaller
Robbins and Cotran's Pathologic Basis of Disease 7th Edition	Kumar, Cotran, Robbins
Basic and Clinical Pharmacology 10th Edition	Katzung
Genetics in Medicine 7th Edition	Thompson and Thompson
Biochemistry: Lippincott's Illustrated Reviews 4th Edition	Champe, Harvey and Ferrier
Langman's Medical Embryology 10th Edition	Sadler
Histology: a Text and Atlas 6th Edition	Ross and Pawlina
Essential Clinical Anatomy 3rd Edition	Moore and Agur
Anatomy in diagnostic imaging 2nd Edition	Fleckenstein and Tranum-Jens
Neuroanatomy through Clinical Cases	Blumenfeld
Frank Netter Anatomy Atlas 4th Edition	Netter

2. **Course topical outline: Content outline:**

Please refer to Blackboard for up-to-date information and session-related objectives and handouts.

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Session handouts	*Yes*	Session Objectives	*Yes*
Required Activities	*Yes*	Grades	*Yes*

19. Study habits:

A major contribution to your learning is active engagement, which includes participation in the learning of other

Session Topic
Course Introduction
Overview of the Cardiovascular System and Cardiac Anatomy
Mechanical and Electrical Activity of Cardiac Cells
Cardiac Cycle I and II
Metabolism of the Heart

students and interaction with the instructors. Students are expected to be proactive and to access the Blackboard system to review items associated to individual sessions.

Learning in the field of medicine is a life-long endeavor that is not only necessary, but can and should be fun. One of the most important factors for learning is curiosity and sometimes, the best way to keep this curiosity stimulated is through our interaction with colleagues and peers. When learning in small groups, we have a chance to try to explain topics to each other, brainstorm solutions together, give each other constructive feedback, and support and validate each other. We encourage balancing studying alone with learning in small groups. It to important to develop a study routine to avoid
―putting things off‖ and ―cramming‖ and to minimize the stress we may add to our lives in that way.

20. Independent study time:

Independent Study Time allocated within the day time schedule is provided for students, on average about 9 hours per week.

Students are expected to use this time to further their learning. The time should be used for independent study or with peers. It is an opportunity to seek out faculty to interact with them outside the formal teaching setting. Since the PBL small-group format requires that students research learning objectives, the time may be used to prepare for the subsequent sessions. Finally, the time may used to work on assignments, problem-solving cases, off-campus visits or other tasks that are required by the courses.

Occasionally, some Independent Study Time sessions may be used for curriculum-related activities (e.g. standardized examinations): notice will be given as early as possible for these occasions.

21. Course and faculty evaluation:

FAU highly values the process of formal program evaluation and feedback. FAU students are required to complete all course evaluations and program evaluation surveys which are the Students Perception of Teaching (SPOT).

Grades and transcripts may be held for failure to submit required surveys. Evaluations should be constructive, to help improve individual faculty's teaching, and the content and format of the courses.

Moreover, the timely completion of evaluations at the level of undergraduate medical education assists students in developing the administrative and organizational skills required throughout their academic and professional career. We appreciate your completing evaluations to help continue with improvement of the learning experiences and environment for all students.

22. Faculty

Lecturers (in alphabetical order):

Ana Maria Azzarolo, Ph.D.
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Faculty: Core Facilitators

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