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Graduate Programs—NEW COURSE PROPOSAL

DEPARTMENT NAME: **BMED**

COLLEGE OF: **COLLEGE OF BIOMEDICAL SCIENCE – MEDICAL EDUCATION PROGRAM**

RECOMMENDED COURSE IDENTIFICATION:

PREFIX BMS COURSE NUMBER 6638 LAB CODE (L or C)

(TO OBTAIN A COURSE NUMBER, CONTACT ERUDOLPH@FAU.EDU)

COMPLETE COURSE TITLE : **RENAL SYSTEM**

EFFECTIVE DATE

(first term course will be offered)

FALL , 2012

CREDITS: **6 HRS.**

TEXTBOOK INFORMATION:

Primer On Kidney Diseases

Greenburg, Cheung

Elsevier-Saunders

GRADING (SELECT ONLY ONE GRADING OPTION): REGULAR PASS/FAIL _____ SATISFACTORY/UNSATISFACTORY _____

COURSE DESCRIPTION, NO MORE THAN 3 LINES: The purpose of the Renal System course is to teach second-year medical students the structure, function and pathophysiology of the kidneys and genitourinary tract. This knowledge should provide a solid foundation to approach the disorders of fluid, acid-base and electrolyte balance as well as the diseases of the kidneys and collecting system that they will encounter during their clinical years

PREREQUISITES W/MINIMUM GRADE:*

COREQUISITES:

OTHER REGISTRATION CONTROLS (MAJOR, COLLEGE, LEVEL):

PREREQUISITES, COREQUISITES & REGISTRATION CONTROLS SHOWN ABOVE WILL BE ENFORCED FOR ALL COURSE SECTIONS.

*DEFAULT MINIMUM GRADE IS D-.

MINIMUM QUALIFICATIONS NEEDED TO TEACH THIS COURSE : **M.D.**

Other departments, colleges that might be affected by the new course must be consulted. List entities that have been consulted and attach written comments from each.

Ira L. Lazar, M.D.

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E-Mail : nephron01@aol.com

Faculty Contact, Email, Complete Phone Number

SIGNATURES

SUPPORTING MATERIALS

Approved by:

Department Chair: _____

College Curriculum Chair: _____

College Dean: _____

UGPC Chair: _____

Dean of the Graduate College: _____

Date:

Syllabus—must include all details as shown in the UGPC Guidelines.

Written Consent—required from all departments affected.

Go to: <http://graduate.fau.edu/gpc/> to download this form and guidelines to fill out the form.

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 Medical Education Program. 2011-2012

Syllabus :

1. **Course title** : Renal System

Course number: BMS 6638

Number of credit hours: 6

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

2. **Course prerequisites**:

Accepted for matriculation in the FAU Medical Sciences program.

3. **Course logistics**:

a. term: Fall 2112

b. not an online course

c. Biomedical Science Building room BC-126, anatomy lab, small group PBL rooms.

4. **Instructor information**:

Course Director:

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Please note: Any official student communication from the director or program assistant 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**:

Rationale:

The Continuity Medicine Curriculum uses a chronic illness model and an integrated patient care approach to prepare students for medical practice.

The purpose of the Renal System course is to teach second-year medical students the structure, function and pathophysiology of the kidneys and genitourinary tract. This knowledge should provide a solid foundation to approach the disorders of fluid, acid-base and electrolyte balance as well as the diseases of the kidneys and collecting system that they will encounter during their clinical years. To achieve this goal, a combination of lectures and problem-based learning (PBL) is used. The PBL sessions in the small-group setting use a set of neurological and psychiatric disease models to focus students on the basic science; lectures in the classroom setting are thematically related to the disease model and used to complement the PBL with additional key concepts.

The goals of the medical program are to teach the attitudes and skills required for achieving competency as effective practitioners. The goal of the course is to provide opportunities to acquire a fund of knowledge by

encouraging students to be proactive and responsible for their learning in the classroom, small-group and laboratory settings.

7. Course objectives/student learning outcomes:

Competency Based Objectives:

At the end of the Fundamentals of Biomedical Science courses, medical students will be able to:

Professionalism

- § Demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to their peers, patients and faculty
- § Appreciate the importance of a compassionate, non-judgmental attitude with classmates, faculty and staff
- § Understand and respect the need to collaborate with each other to promote learning
- § Apply reflective practice as a strategy to achieve personal and professional growth
- § Apply methods to reduce stress and improve wellness in oneself and others

Interpersonal Skills and Communication

- § Students must be able to demonstrate interpersonal and communication skills that result in effective information exchange and teaming with their peers and faculty
- § Demonstrate the ability to work in professional teams to solve problems.
- § Demonstrate the ability to do self and peer evaluations of performance and knowledge levels
- § Demonstrate skills to learn in a student-centered and adult learning environment

Patient Care

- § Correlate the biomedical science aspect of model diseases of the nervous system to the clinical knowledge acquired in the Integrated Patient Care and Physicianship Skills

Medical Knowledge:

- § Apply knowledge of the gross and microscopic anatomy of the kidney and collecting system to nephrogenesis and the genetics of kidney diseases.
- § Apply knowledge of the gross and microscopic anatomy of the kidney and collecting system to describing the pathophysiology of glomerular, vascular and interstitial diseases.
- § Describe the role of the kidneys in the regulation of fluid, electrolyte and acid-base balance and the pathophysiology of the associated disorders.
- § Relate the endocrine function of the kidneys and the effect of systemic hormones to renal function.
- § Relate the role of the kidneys to the regulation of blood pressure and the pathophysiology of hypertension, while taking into account the role of the cardiovascular and respiratory systems.
- § Apply the pharmacology of diuretic drugs and drug pharmacokinetics to management of renal disease.
- § Integrate the role of renal function tests, including urinalysis and renal imaging, into evaluation and management of renal disease.
- § Describe the clinical consequences of reductions in glomerular filtration rate and the manifestations and management of end-stage renal disease.
- § Apply knowledge of the pathophysiology of diseases of the ureters, bladder and urethra to the management of obstructive uropathy, renal tumors and cysts, and urologic complications of the genitourinary tract.

Practice-Based Learning and Improvement

- § Reflect on the importance of dedication to life-long learning and strive for excellence in order to consistently provide optimal performance in class, small group and ultimately in patient care

§ Take charge of their own learning and effectively elicit feedback from faculty and peers in order to optimize learning

Systems-Based Practice

§ N/A

8. Course evaluation method:

Examination Policy:

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. Laboratory Practical Exams will be pen and paper exams.

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 Assistant 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 Assistant 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 class promotions committees and may result in a recommendation up to and including dismissal from the FAU medical Education Program. (See Student Rights and Responsibilities Handbook)

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 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 for review in the Office of Medical Education, Room BC-136

Grading Policy:

Activity	Date	Percentage of Grade
Exam #1	Tuesday October 20	35%
Exam #2	Friday November 6	35%

PBL Small Group Performance		25%
Mini Cases	Thursday October 15	5%
Total		100

Students are required to pass the individual activities (Exam #1, Exam #2, Small group performance) in order to pass the course overall.

The Student Rights and Responsibilities Handbook contains a description of the grading system.

1. Exam #1
 - Consists of questions covering objectives from lectures and PBL cases.
 - Includes material up to and including Monday October 19.
2. Exam #2
 - Consists of questions covering objectives from lectures and PBL cases.
 - Includes material up to and including Wednesday November 4. *The exam is not cumulative but builds on prior knowledge.*
3. PBL Small Group Performance
 - Active participation and attendance are expected in all small groups (See Attendance Policy).
 - Consists of the Core Facilitator Evaluation of the student performance during the course.
 - Students are expected to meet with their Core Facilitator half-way through the course for a 10-15 minute review of their performance and to use the course evaluation form to guide this formative feedback.
 - *Copies of the form used to evaluate students may be found under the "Handouts and links" of the student e-Dossier on One45.*
4. Mini Cases
 - One problem sets of short cases for the students to solve independently and outside of class. The problem set is then discussed in the classroom.
 - 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.

When a student obtains a "D" or "F" 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:

A = 93-100; A- = 90-92; B+ = 88-89; B = 83-87; B - = 80-82;
 C+ = 78-79; C= 73-77; C- = 70-72; D+ = 68-69; D = 63-67; D- = 60-62; F = 59 and below.

10. Policy on makeup tests, etc.

Failure on examinations:

- a) If a student passes a course, but has failed one of the written examinations, the student will be asked to meet with the Course Director to discuss any problems the student may have had with the material. A plan of action for improving the student's performance will be determined.

- b) If a student passes a course, but has a written examination average that is below passing (as determined by the course director), the student will receive a “Fail” for the course and will also be asked to meet with the Course Director. The student will be discussed at the Promotions Committee meeting.
- c) Course Directors may designate a student’s performance for the grade report as a grade of “Low Fail.” While not failing, a grade of “Low Fail” identifies an unsatisfactory performance for graduate level training, and could result in a recommendation by the Course Director to perform remedial work. Students with “Low Fail” grades will be reviewed by class promotions committees. Earning one or more grades of “Low Fail” could signify that the student is not making sufficient academic progress, and may result in a recommendation by the promotions committee for the student to repeat a course or courses, repeat an academic year, or be dismissed from the school of medicine.

Grades of “Low Fail” are used for internal purposes only, and appear only on the grade report. Grades of “Low Fail” are recorded as a passing grade of “P” on the official school transcript.

- d) If a student passes a course, but failed the practical examination, (as determined by the course director), the student will receive a grade of “Low Fail” for the course and be asked to meet with the Course Director. A plan of action for improving the student’s performance will be determined. Evidence of successful completion of the remediation must be provided by the Course Director for inclusion in the student file. The student will be discussed at the Promotions Committee meeting.

Failure in problem-based learning:

- a) If a student fails the problem-based learning portion of a course (as determined by the course director), the student will receive a grade of “Low Fail” for the course and be asked to meet with the Course Director. A plan of action for improving the student’s performance will be determined. Evidence of successful completion of the remediation must be provided by the Course Director for inclusion in the student file. The student will be discussed at the Promotions Committee meeting.

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.

Attendance at the Tuesday morning anatomy sessions is expected for all scheduled activities. Students are expected to be on time: in that each session will start with a short written quiz, being on time is defined as being ready to start at the assigned time so as to not be pressured to finish the web-based quiz within its assigned time.

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.

The Code of Honorable and Professional Conduct should serve as a guide to medical students in matters related to academic integrity and professional conduct. The Code of Honorable and Professional Conduct provides a mechanism for peer evaluation of student conduct which the FAU faculty and administration believe is an essential component of medical education and development of medical students.

15. Required texts/reading

Required Textbooks:

The following are textbooks that students are expected to purchase for use in the Neuroscience and Behavior course. All the textbooks listed below are available at the FAU Bookstore.

Title	Author(s)	Publisher
Primer On Kidney Diseases	Greenburg, Cheung	Elsevier-Saunders

16. Supplementary resources:

Web Resources:

(These resources and others may be accessed via the “*Handouts and links*” of the student e-Dossier on Blackboard)

Integrated Medical Curriculum <http://imc.meded.com/>

The site provides materials related to the gross anatomy component of the FBS sequence. The username and password given to each student at the beginning of the FBS1 course will continue to be valid.

Medline Dictionary, an online dictionary provided by the US National Library of Medicine and the National Institutes of Health. 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, which can also be accessed through the Blackboard site via the “Handouts and Links” tab, is a comprehensive learning tool, encompassing the latest edition of the software. Individual PBL-based exercises will utilize this resource. In addition, the application contains useful anatomy, radiology, histology, and microbiology images and tutorials, in addition to thousands of general and systemic pathology images. WebPath contains a section of case-based laboratory exercises and examination questions (with fully-explained answers) that are very helpful resources for learning and review.

Web-based postings:

Students are encouraged to carry their laptop with them as much as possible in order to access resources, patient log and other resources.

Session handouts	Yes	Session Objectives	Yes	Quizzes	No
Required Activities	Yes	Grades	Yes	Exams	Delivered via laptop

(These resources and others may be accessed via the “*Handouts and links*” of the student e-Dossier on Blackboard)

17. Course topical outline, including dates:

Content outline:

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

Week of	Academic Week	Session Topic
10/5/12	Week 12	Short course intro; Hemodynamics
		Renal clearance
		Assessing the patient with abnormal renal function
		Tubular transport and body fluid compartments
		Transport of NaCl, Proximal Tubule
		NaCl and water Reabsorption, Distal Nephron
		Function of Vasa Recta, Urea Transport
		Acid-Base Balance: Renal Contributions
		Thiazide and Loop Acting Diuretics
		Regulation of K Balance and Sparing Diuretics
		PBL 1

10/12/12	Week 13	Chronic Kidney Disease Complications
		Nephrologic Emergencies
		Whole Body Acid-Base Balance
		Divalent Ions Balance
		Pharmacology and Renal Disease
		Approach to Acid Base Problems
		Renal Mini Cases
		Workshop on Acid Base
		PBL 1-2
10/19/12	Week 14	Hematuria and Proteinuria
		Light Chain
		Hepatorenal Syndrome
		Sodium and Water
		Hyponatremia, Hypernatremia
		Glomerulonephritis
		Urinary Tract Infection and Pyelonephritis
		PBL 2-3
		Exam # 1
10/26/2012	Week 15	Secondary Glomerulonephritis
		Benign Prostatic Hyperplasia
		Voiding Dysfunction: An Overview
		Pathology of Tubular and Interstitial Renal Disease
		Interstitial Nephritis
		Kidney in Pregnancy
		Secondary Causes of Hypertension

Week of	Academic Week	Session Topic
		Renal Stones
		PBL 3-4
11/2/12	Week 16	Renal Disease/Pediatric Tumor Pathology
		Congenital and Hereditary Renal Diseases
		Pathology of Adult Tumors of GU Tract
		Prostate Cancer
		Acid-base and Sodium-water case presentations
		Pregnancy and Hepatorenal syndrome workshop
		PBL 4
		Exam #2

Study Habits:

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

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 be 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.

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.

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