WAYNE STATE UNIVERSITY

SCHOOL OF MEDICINE

YEAR 2
CURRICULUM GUIDE

WAYNE STATE UNIVERSITY
SCHOOL OF MEDICINE

2008-2009

PLEASE READ THE INTRODUCTORY PAGES VERY CAREFULLY.

THEY CONTAIN IMPORTANT POLICY STATEMENTS.

Wayne State University, School of Medicine
Medical Student Competencies and Institutional Learning Objectives

The Wayne State University School of Medicine has established a comprehensive set of competencies and institutional objectives to prepare students for practicing medicine in the 21st century. The following table summarizes the general competencies and institutional learning objectives. The first row defines the general competency. The second row refers to the specific learning objective associated with each competency and the cognitive domain (knowledge, skill, attitude/behavior) being evaluated for each objective.

The six general clinical competencies for medical students (identical to the general competencies of postgraduate training) include:

- Integration of the Basic Sciences in Medicine
- Integration of Clinical Knowledge and Skills to Patient Care
- Interpersonal and Communication Skills
- Professionalism
- Organization and Systems-Based Approach to Medicine
- Life Long Learning and Self-Improvement

As you progress through the basic science curriculum of medical school, periodically review these competencies and educational objectives. They provide valuable guides to the organization of the knowledge, skills and attitudes you will learn during this phase of your professionalism growth.

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Competency: **Integration of the Basic Sciences in Medicine**	
Cognitive Domain: K=Knowledge S=Skill AB=Attitude/Behavior	**Institutional Learning Objectives:**
K1	Knowledge of the normal structure of the human body (cell tissues and organs).
K2	Knowledge of the normal function of the human body (cell tissues and organs).
K3	Knowledge of the nature of agents and mechanisms that produce alterations in structure and function of the body.
K4	Knowledge of the nature and course of alterations in function produced by etiological agents and mechanisms (Pathophysiology) of the body.
K5	Knowledge of the nature and course of alterations in structure produced by etiological agents and mechanisms (Pathological Anatomy) of the body.
K6	Knowledge of the appropriate use of laboratory techniques in identifying diseases or health problems.
K7	Knowledge of the action, metabolism, and toxic effects of drugs.
K8	Knowledge of the therapeutic use of drugs.
K9	Knowledge of normal growth and development.
K10	Knowledge of the principles and concepts underlying normal behavior and mental illness.
K11	Knowledge of the aging process.

Competency: **Integration of Clinical Knowledge and Skills to Patient Care**	
Cognitive Domain: K=Knowledge S=Skill AB=Attitude/Behavior	**Institutional Learning Objectives:**
S1	The ability to perform a satisfactory physical exam.
S2	The ability to take a satisfactory medical history including psychosocial, nutritional, occupational and sexual dimensions.
S3	The ability to utilize data from the history, physical exam and laboratory evaluations to identify the health problem.
S4	The ability to formulate an appropriate differential diagnosis.
S5	The ability to formulate effective management plans (diagnostic, treatment, and prevention strategies) for diseases and other health problems.
S6	The ability to monitor the course of illnesses and to appropriately revise the management plan.
S7	The ability to perform routine technical procedures specific to the medical specialty.
S8	The ability to document the clinical encounter.
S9	The ability to apply the principles and concepts underlying normal behavior and mental illness.
S10	The ability to diagnose and participate in the management of mental illnesses.
S11	The ability to apply the therapeutic use of drugs in patient care.
S12	The ability to recognize normal growth and development.
S13	The ability to recognize the relationship between health and illness, the patient and the patient's environment.
S14	The ability to apply psychosocial principles and concepts in the delivery of health care.
S15	The ability to apply preventive and health maintenance principles and techniques in the delivery of health care.
S16	The ability to apply the appropriate use of laboratory methods in identifying diseases or health problems.
S17	The ability to recognize patients with immediately life threatening conditions.
K12	Knowledge about relieving pain and ameliorating the suffering of patients.
S18	The ability to apply Evidence Based Medicine principles to clinical decision making.

Competency: **Interpersonal and Communication Skills**	
Cognitive Domain: K=Knowledge S=Skill AB=Attitude/Behavior	**Institutional Learning Objectives:**
S19	The ability to demonstrate effective physician-patient interaction skills.
S20	The ability to utilize appropriate communication skills to obtain a history, diagnosis, and deliver an effective treatment plan to patients.
S21	The ability to effectively communicate with peers and members of the healthcare team in the care of patients and their families.
Competency: **Professionalism**	
Cognitive Domain: K=Knowledge S=Skill AB=Attitude/Behavior	**Institutional Learning Objectives:**
AB1	The ability to apply humanistic values in the delivery of health care.
AB2	The ability to work cooperatively with other health care workers in the delivery of health care.
AB3	The ability to respect the patients' dignity, privacy, and confidentiality in the delivery of health care.
AB4	The ability to effectively interact with patients, peers and other healthcare workers from diverse cultural backgrounds.

Competency: **Organization and Systems-Based Approach to Medicine**	
Cognitive Domain: K=Knowledge S=Skill AB=Attitude/Behavior	**Institutional Learning Objectives:**
S22	The ability to apply the concepts and principles of primary care and Family Medicine in the delivery of health care.
S23	The ability to apply cost containment principles and techniques in the delivery of health care.
K13	Knowledge of the health care delivery systems including social, economic and political dimensions.
Competency: **Life Long Learning and Self-Improvement**	
Cognitive Domain: K=Knowledge S=Skill AB=Attitude/Behavior	**Institutional Learning Objectives:**
AB5	Recognize the need to engage in lifelong learning to stay abreast of relevant scientific advances.
AB6	The ability to recognize personal educational needs and to select and utilize appropriate learning resources.
S24	The ability to critically appraise the medical literature.

The integration of the new School of Medicine competencies and revision of the educational objectives were approved by the Curriculum Committee in February, 2005.

GENERAL ORGANIZATION OF THE CURRICULUM

The Year 2 Curriculum for 2008-2009 will consist of **(a)** disciplinary courses, i.e., Immunology/Microbiology/Infectious Disease, Pathology, Psychiatry, Pharmacology, **(b)** an interdisciplinary course, Pathophysiology, with 9 units, i.e., Cardiovascular, Respiratory, Renal, Endocrinology, Connective Tissue, Dermatology, Hematology, Gastrointestinal, Neurology, and **(c)** Clinical Medicine II.

ACADEMIC AND STUDENT PROGRAMS OFFICE

Executive Vice Dean of Academic & Student Programs	Robert Frank, Ph.D.	577-1450
Director of Academic Information/Registrar	Mark Speece, Ph.D.	577-1470
Assistant Dean for Basic Science	Matthew Jackson, Ph.D.	577-1450
Assistant Dean for Clinical Education	Thomas Roe, MD	577-1450
Assistant Dean for Evaluation, Student Information & Education Research	Patrick D. Bridge, Ph.D.	577-1450

YEAR 2 COURSE DIRECTORS FOR 2008-2009

IMMUNOLOGY/ MICROBIOLOGY/ INFECTIOUS DIS.	Matthew Jackson, Ph.D. (Immun/Micro.) Jack Ebright, M.D. (Int. Medicine)	577-1299 745-9131
CLINICAL MEDICINE II	Tom Roe, M.D. (Family Medicine) Michael Stellini, M.D. (Int. Medicine) Nelia Afonso, M.D. (Co-Director Int. Medicine)	577- 1450 577-5025 576-3221
PATHOBIOLOGY	Richard VanderHeide, M.D. (Pathology)	745-8648
PHARMACOLOGY	Raymond Mattingly, Ph.D. (Pharmacology)	577-6022
PSYCHIATRY	Lisa Spurlock, MD (Psychiatry)	577-3130
PATHOPHYSIOLOGY UNIT		
PHARMACY	Michael Nailor, Pharm D. (Pharmacy)	
CARDIOVASCULAR	Richard VanderHeide, M.D. (Pathology) Deepak Thatai, M.D. (Internal Medicine)	577-8648 576-3226
RESPIRATORY	Kenneth Palmer, Ph.D. (Pathology) Willane Krell, M.D. (Internal Medicine)	577-5152 745-8007
RENAL	Madhumita Jena-Mohanty, M.D. (Nephrology) Janet Poulik, M.D. (Pathology) Xu Zeng, M.D. (Internal Medicine)	576-4504 745-8555

ENDOCRINOLOGY	Hind Nassar (Pathology)	745-8555
	Hamdee Attallah (Internal Medicine)	745-4008
CONNECTIVE TISSUE	Mousa Al-Abbadi, M.D. (Pathology)	966-3333
	Patricia Dhar (Internal Medicine)	745-8603
HEMATOLOGY	Gail Bentley, M.D. (Pathology)	745-8555
	Mark Edelstein, M.D. (Internal Medicine)	576-3229
GASTROINTESTINAL	Murray Ehrinpreis, M.D. (Internal Medicine)	745-8843
	Hussain Saleh, M.D. (Pathology)	
NEUROLOGY	William Kupsky, M.D. (Pathology)	745-2504
	Edwin George, M.D. (Neurology)	577-1242
DERMATOLOGY	Iltefat Hamzavi, M.D. (Dermatology)	577-5057
CLASS COUNSELOR	Steve Pejuan, MSW	577-1463
ACADEMIC SKILLS COUNSELOR	Leah Robinson, MA	577-1463

ACADEMIC PROGRAM

The Year 2 program is primarily devoted to understanding the effect of disease processes on organ structure and function and the actions of drugs. In the course of achieving this objective the curriculum is designed to help the student prepare him/her self for his/her role as a problem solver. This will involve acquiring basic information, but, more importantly, it will also involve understanding concepts and relationships. The lecture is one important method we have to help you learn. It is used to define part of what you are expected to know. It should be supplemented and reinforced by reading your assigned text, lecture notes, conferring with faculty and fellow Year 2 students, participating in the laboratories, computer assisted and problem solving sessions and increasing use of Blackboard.

ACADEMIC COMMUNICATION

Official Student Notices, Curricular Updates and Other Communications

The E-mail provided by the University for every student is a powerful communications tool. As described below, each class has a Class Listserve established to allow students to talk to their class members, for faculty to provide course information to the class, and for administration to communicate with the class. Please check your E-mail on a regular basis.

Information which Academic and Student Programs and which the Office of Student Affairs need to communicate to the class will be provided through the Class Listserve to all members of the class and inside the Student Affairs Office. Such communications will include the testing logistics memos, official schedule changes and information regarding meetings among others. Immediate, critical information will continue to be communicated to the class with a paper memo in students' mailboxes in addition to the Listserve communication.

In addition to the listserv, students will be assigned membership in a group address in the medical school's Outlook directory. This address can be used for announcements regarding student organizational activities and other student based projects. Anyone who is listed in the SOM Outlook directory has access to these group addresses.

E- Mail Address and Class Listservs

Faculty and Academic staff use a variety of methods to communicate with students. One of these methods is electronic mail (e-mail). All incoming medical students will be issued two e-mail addresses. The primary address, created and supported by the school of medicine will be issued during registration. The University will also issue an address that will allow you free access to the internet and other on-line University services including the University Pipeline. Students who were undergraduates at Wayne State will continue to use their undergraduate addresses and will not receive new e-mail accounts or passwords.

A class listserv will be created for students, faculty and academic administration to communicate general announcements to the class. Students should read their e-mail daily for important curriculum information. If you have any question regarding your e-mail address or the listserv contact the Conjoint Teaching Office, room 2361.

ATTENDANCE

Participation in instructional activities reveals a student's attitude toward his/her professional preparation. Consequently, attendance is expected for lectures. **Attendance is mandatory for laboratories, conferences, case studies, demonstrations, and symposia.** Students will be required to attend and participate in specified learning encounters within Immunology/ Microbiology, Pathobiology, and Pathophysiology. Attendance is required for all Clinical Medicine II activities. Each course director will determine consequences for failure to complete instructional requirements for his or her course.

MISSING ASSIGNMENTS

Failure to complete all assignment, including make-up assignments for missed activities, **by the end of a course** could result in any of the following consequences:

- Being excluded from participation in any scheduling processes for the following year
- Being prevented from registering for the following year
- Having registration for the following year cancelled

HONOR CODE

Wayne State University School of Medicine has an Honor Code expressed in the Oath of Academic Integrity presented to and signed by the Year 1 students during Orientation. Students, faculty and administration believe that academic and professional integrity is an important component in the training and practice of medicine.

Oath of Integrity

As a part of a community of medical students, I know that my instructors and fellow students have placed their trust in my academic and professional integrity. I recognize the importance of helping each other as we struggle. Dishonesty within a medical school, however, affects not only the student, but also the reputation of the institution, and potentially our future patients.

In view of this, I hereby vow to pursue my studies with integrity and conscience. I will not accept dishonesty among my peers and pledge to honor that trust that my instructors and fellow classmates have placed in me.

As a future physician, my patients and colleagues will entrust to me matters of a sensitive and confidential nature. In some circumstances, their very lives will depend upon my integrity. I will respect their faith in me and will maintain the level of dignity and honesty that medicine demands. From this day foreword, I will keep honor in this profession.

LECTURE HALL ETIQUETTE

The following items highlight elements of common courtesy expected of all medical students who attend lectures:

- Silence all cell phones and pages in the lecture hall.
- If you attend lectures, plan to stay. Sit close to an exit if you think you may have to leave a lecture early.
- Do not engage in activities during lecture that have nothing to do with the class (e.g. reading the newspaper).
- Keep whispering to a minimum.

Your compliance with these issues is an indicator of professionalism and will be greatly appreciated by the School of Medicine faculty and your fellow student/peers.

COURSE EXAMINATIONS

There will be two types of examinations, promotional and non-promotional. The purpose of promotional examinations is to determine whether students have acquired the necessary knowledge and skills. Faculty can also administer non-promotional examinations. The purpose of these non-promotional examinations is to enable students to assess their grasp of the material. Promotional examinations will **NOT** be returned to the students. Academic and Student Programs has instituted a Protected Examination Policy. Students are permitted, and strongly encouraged to use the Examination Question Citation process. Details of the Question Citation process will be presented to students at a separate Testing and Evaluation meeting prior to the first scheduled examination.

All examinations will be based on 1) material covered in lectures, laboratories, conferences, and other instructional formats, 2) assigned readings in required textbooks, and 3) assigned self-instructional on Blackboard.

There will be promotional examinations in Immunology/Microbiology/Infectious Disease, Clinical Medicine II, Pathobiology, Pharmacology, Psychiatry and Pathophysiology.

After a preliminary scoring of the examination, Course Directors or designees will use available statistical data and students' citations as mechanisms for determining whether alternate examination answers will be accepted. Individual departments will determine how many examinations they give.

For all courses, except Pathophysiology (see below), it is the course director who will determine how many examinations to give, how exams are weighted, how the final score is derived and what the pass rate will be.

For the Pathophysiology course there will be an examination given at the completion of each unit and students will receive a pass/fail score for each unit. Units vary in terms of the number of questions on the unit exam. At the end of the Pathophysiology course a cumulative passing score will consist of the average of the nine individual pass rates. **Students whose cumulative percentage is less than the average pass rate for the course or who fail three or more individual units will fail the course.** Students who fail the course will be required to retake failed unit exams, at the discretion of the Promotions Committee. At the re-examination stage, each of the failed unit exams must be passed in order to successfully pass the course. Students who pass the course (achieve an overall percentage greater than the average pass rate and who fail less than three units) are not required to retake their failed unit exams.

In those instances when it is impossible for a student to be present for an examination due either to a serious health problem or to other unavoidable circumstances, the student must explain and document the problem or circumstances to one of the designated members of the Office of Student Affairs. The Assistant Dean (or her designees) will have the authority to decide whether the absence is to be classified as "excused" or "unexcused". The Assistant Dean will be responsible for communicating the decision to the Chair of the Promotions Committee. (See “Policy regarding Excused Absences”)

A comparable examination will be administered for students who have an excused absence. It will be comparable in content to the original examination and it will have the same pass-fail level. The exam will not be retained by the student. Students cannot cite questions on a makeup examination. Make up exams will be administered every month during the academic term. Students who receive excused absences will be automatically scheduled for an exam at the next available make-up date. Scheduled make-up exam dates for 2008/2009:

- September 12, 2008
- October 17, 2008
- November 10, 2008
- December 8, 2008
- January 9, 2009
- February 6, 2009
- March 13, 2009
- April 24, 2009
- May 15, 2009

Students who have failed a course may have an opportunity to take a retake examination at the discretion of the Promotions Committee. This comparable examination will be administered at the end of the academic year. Students are not permitted to cite questions on a retake examination. Students are <u>not</u> allowed to view or keep the retake exam. The minimum pass rate for the course will apply to the re-examination. Students are allowed only one opportunity to remediate a course failure by re-examination; failure of a retake exam will result in the requirement to repeat the entire course.

The use of calculators during examinations is NOT permitted unless the Course Director states otherwise.

Neither faculty proctors nor testing proctors present during the examination may be asked to interpret questions or give definitions. If there is an error identified on a question, a correction will be written on the board at the front of the examination hall(s). It is the student’s responsibility to make the appropriate correction on the test booklet.

Examinations will be scored according to guidelines described under Examination Scoring and Reporting System.

Course examinations from previous years are on BlackBoard.

On examination days, students who report for the exam up to15 minutes after the exam has begun will be allowed to take the exam, but with no additional time added. Students who report more than 15 minutes late to an exam are denied the privilege of writing the exam. If they are excused by their counselor, they will be instructed to write the make-up exam.

EXAMINATION SCORING AND REPORTING SYSTEM

There will be a pre-examination guaranteed minimum pass level (pre-GMPL) of 75%, i.e., in all courses. Students who answer 75% of the examination questions correctly are guaranteed to pass the examination.

At the end of each course, a confidence interval* of approximately 99.6% will be placed around the percent score of 75% (the pre-examination guaranteed minimum pass level). The lower limit of this confidence interval then becomes the post-exam guaranteed minimum pass level (post-GMPL), at or above which all students are guaranteed to pass the exam. For individual exams a Danger Line is provided to alert students who may be at risk for failing the course.

The post-GMPL can be adjusted downward at the Course Director's discretion, based upon post examination analysis.

If on post examination analysis the pre-GMPL is found to be greater than the mean of the students' scores the confidence interval will be applied to the mean.

For the purpose of students ascertaining whether they passed and how well they scored, the scores will be reported as the percent of examination items answered correctly.

For the purpose of students ascertaining how well they performed in relationship to their classmates on a given examination and from examination to examination, examination scores will also be reported in standard score** form with a mean of 500 and a standard deviation of 100.

The honors level will be determined by the Course Director(s). However, a standard score of 600 or above guarantees course honors.

For courses with required promotional examinations, an average standard score of 600 or above guarantees a student year-end honors. The Promotions Committee has the discretion to determine additional honors based on course performance. Students who have an average standard score of 600 or greater and fail a course are not eligible for year-end honors.

Confidence Interval

Degree of certainty that a given score would always fall within the established interval.

Standard Score

A set of scores obtained by converting raw scores to a set of scores based upon the distribution of the raw scores.

Danger Line

An arbitrarily chosen score on exams, proximity to which should alert you to the potential for failure at course end.

GRADING POLICIES

When the process for determining the student's final grades for courses, clerkships, electives or years is completed, one of the following grades will be placed on the student's transcript, i.e., **I** = Incomplete, **U** = Unsatisfactory, **S** = Satisfactory, and **H** = Honors for each course, clerkship, elective or year.

I -**Incomplete**
will be entered if circumstances beyond the student's control have prevented completion of assigned work within the prescribed time. Verification of such circumstances must be obtained from the Assistant Dean of Student Affairs.

U -**Unsatisfactory**
will be entered if the student failed to complete all the requirements for a satisfactory grade and is not eligible for a grade of I = Incomplete.

S -**Satisfactory**
will be entered if the student completed the requirements.

H –**Honors**
will be entered if the student's performance was meritorious.

Subsequently, based upon decisions made by the authorized entities, the student's transcript may contain appropriate explanations within a "Remarks" column.

YEAR END HONORS POLICY

Honors for Year 2 students will be determined as follows: Each student's standard score for Clinical Medicine II, Pathobiology, Immunology/Microbiology/Infectious Disease, Pharmacology, 25% of the standard score for Psychiatry, and 200% of the standard score for Pathophysiology* will be added together and divided by 6.25. Students whose average score is 600 or above will receive honors for the year.

The different course weights reflect differences in the hours devoted to each course. With respect to honors for individual courses, the transcript will reflect honors for:

CLINICAL MEDICINE II
PSYCHIATRY
PATHOBIOLOGY
PATHOPHYSIOLOGY
IMMUNOLOGY/MICROBIOLOGY
PHARMACOLOGY

BASIC SCIENCE COURSE GRADE APPEAL POLICY

At the end of a course, the confidence level is used to establish a guaranteed minimum pass. Course Directors have the discretion to lower the pass rate (below the guaranteed minimum pass rate of 75%) which would result in fewer course failures. Students may appeal their unsatisfactory grade. Grade appeals may be based on all requirements of the course including written exam scores, lab exam scores, small group participation, attendance at required activities, and assignments. However, a student may not appeal the course pass rate or challenge exam questions. Students may submit, in writing and within 30 days of final course grade posting, a grade appeal to the Course Director and Assistant Dean for Basic Science Education. The appeal will be considered by the Basic Science Education Committee (BSEC) and a vote taken to accept or deny the grade appeal. The decision of the BSEC may be appealed in writing to the Promotions Committee.

PROMOTION

In Year 2, each Course Director(s) sets the criteria for satisfactory and honors performance for his/her course.

In order to be promoted to Year 3, students must:

- Pass all courses
- Meet the attendance requirements or fulfill the make-up provisions for all courses with mandatory attendance.
- Sit for Step 1 of the US Medical Licensure Exam no later than the date in late June announced by the School. Students who report a failing score for Step 1 are placed in special matriculation.
- Students who fail any Year 2 course(s) are required to delay the start of Year 3 until September and will be given until the end of August to take Step 1. This assumes that a student has been allowed to take, and passes, a summer remediation exam for the failed course(s), and is otherwise eligible for promotion to Year 3. Any student with an unexcused Step 1 delay may be placed on an administrative leave of absence with a return date to be determined by the School.

POLICY FOR 2 YEAR CLOCK TO PASS STEP 1

School of Medicine policy is that students have two years following their sophomore coursework to report a passing score for Step1 USMLE. The two year clock will begin on July 1 of the sophomore academic calendar. Students have two years to post a passing score for Step 1 USMLE or face dismissal from the Medical School.

Please note that incompletes in Year 2 coursework, leaves of absences, and Step 1 failure do not alter the start of the clock, nor do they stop the clock once it has begun.

Students who are scheduled to return to regular academic status after an absence for any reason of 1 year or more following completion of second year coursework are required to attend a one month clinical refresher before starting or continuing third year clerkship rotations.

SPECIAL MATRICULATION

Students who fail USMLE Step 1 become eligible to be and are designated as ***Special Matriculation*** Students. At the beginning of Special Matriculation, if the student is enrolled in a clerkship, he or she has the option of immediately stopping the clerkship he or she is taking.

Being allowed to complete the clerkship he or she is taking. If a student chooses to remain in a clerkship after receiving a failing score on Step 1, he/she will be required to complete all clinical components of that clerkship of that clerkship by the time the clerkship ends. He/she must take the clerkship examination on the normal date at the end of the clerkship. If the student fails to do this, credit will be denied for the clerkship and it will have to be repeated after the student passes Step 1. Credit for the completed course is earned only if USMLE Step 1 is passed by the end of *that* academic year.

The decision to complete the course vs. immediately suspend clinical work is made by the student in consultation with his or her counselor, with approval of the Assistant Dean for Student Affairs.

DETAILS OF THE SPECIAL MATRICULATION PROGRAM

- Special Matriculation is designated as a time for students to prepare, under supervision, for the USMLE Step 1 examination. As such, students are expected to prepare a written study plan for that preparation which will be monitored by the Office of Student Affairs via regular, scheduled meetings between the student and support personnel. As a minimum, student will meet with the Academic Support Counselor at least twice a month. These meetings will include but not be limited to.
- study skills assessment and enhancement
- study techniques
- time management
- test taking
- effective reading and effective use of notes, texts and other resources
- administration of practice examinations
- Students DO NOT continue in other clerkships while a Special Matriculation student, with the exception that they have the option of continuing the clerkship they are enrolled in when an when a failing score is received (see item 1, above).
- Students are scheduled to take the USMLE Step 1 examination per National Board of Medical Examiners policy.
- Students may enroll in a school-approved USMLE Step 1 review course in order to prepare for the examination. The School of Medicine will reimburse the student once for this course for the full tuition amount up to $800.00
- Students will be eligible for financial aid per current Financial Aid Office policies.
- Students will be assessed tuition per current School of Medicine policies

TERMINATION OF SPECIAL MATRICULATION STATUS

- **Once a student has entered Special Matriculation status, he or she will be released from it at only two times during the academic year, i.e., December 31 or June 30**, unless prior written approval is obtained to terminate Special Matriculation status at an earlier date.
- Special Matriculation session students who are scheduled to return to regular academic status in January or July will spend the month prior to their return reviewing clinical skills in a manner prescribed by the School of Medicine.

ENTRY POINTS FOR BEGINNING YEAR III COURSE WORK

Only three entry points are permitted for students to begin Year III course work. These are:

- At the beginning of Period 1 (the beginning of July)
- At the beginning of Period 3 (late August/beginning of September)
- At the beginning of Period 7 (the beginning of January)

These three allowed entry points for students to begin Year III clerkships apply to all students regardless of the reason(s) for their delayed start of Year III.

REGISTRATION GUIDELINE & YEAR III ORIENTATION

Students who are scheduled to return to regular academic status after an absence for any reason of 1 year or more following completion of second year coursework are required to attend a one month clinical refresher before starting or continuing third year clerkship rotations. All Year II students will be required to register for Year III as scheduled by the Office of Records and Registration. The tentative time for registration is immediately after the final exam for the year. In addition, regardless of the date you plan to begin Year III clerkships, you will be required to attend the Year III Orientation as scheduled by the Assistant Dean, Clinical Science for the first week in July.

PROMOTIONS COMMITTEE

The Promotions Committee is the medical school decision-making body with regard to the promotions process and has the prerogative of determining the student's fitness and suitability for the study and practice of medicine. The Promotions Committee makes decisions relative to the retention, promotion, and readmission of students. It also has the responsibility of assuring that the rules of the School and rights of the individuals involved have been fairly met. The Promotions Committee will formally provide instructions for the exit interview with students who have been dismissed. The Promotions Committee is chaired by the Associate Dean for Academic and Student Programs or his designee and consists of 8 voting members, 4 nominated from the faculty by the President of the Faculty Senate with the advice and consent of the Executive Committee, 4 nominated from the Council of Departmental Chairmen, by the President of that council with its advice and consent. Four students, one from each class, are selected by and from the Student Body. Student members serve for four years and have full privilege of discussion but not formal voting rights. Faculty members serve three-year terms.

Students who complete Year 2 with course deficiencies (Unsatisfactory grades or performance deficiencies) will be reviewed by the school's Promotions Review Committee and with the Committee's permission be allowed to take make-up examinations during the designated re-exam period, usually June.

YEAR END DECISION-MAKING

At the end of the school year the Promotions Committee will meet to:

- Certify the promotion of students who have met all of the promotional requirements.
- Determine those students whose performance merits awarding of honors for the year.
- Determine the disposition of students who fail to meet the requirements for promotion. The options are:

To require students to;

- Make up non-examination deficiencies
- Take make-up examination(s)
- Repeat selected medical courses
- Repeat the entire year, except for those courses successfully passed.

DISMISSAL

In the course of making decisions concerning students who have failed one or more courses

- The Office of Records and Registration will provide the students' pre-entry and medical school performance data.
- The Year Counselor will provide information about the student's problem(s) which appear to impair academic performance,
- the plan that was developed to deal with the problem(s),
- the progress being made, and
- the prognosis for resolution of the problem(s).
- Prior to the meeting, the counselor will review with the student the substance of the counselor's report and what, if any, personal information the student authorizes to be presented.
- The Promotions Committee will provide a hearing for the student at its discretion.

DURING THE YEAR DECISION MAKING
At any time the Promotions Committee can be convened to review students whose academic performance is inconsistent with the school's standards. The Committee has the right to place students on probation, suspend or grant leaves of absences if it is deemed that the student's performance and reasons thereof justify this action. Refusal to submit to psychiatric evaluation when required to do so by the Promotions Committee results in student dismissal.

ACADEMIC STANDING
Enrolled students are designated to be in good academic standing unless they are officially placed on probation or are suspended.

ACADEMIC PROBATION
The purpose of academic probation is to assure that all students whose academic performance places them at high risk for year-end failure are continuously advised/counseled by the Student Affairs staff.

Year 2 students who fail two courses will be placed on academic probation for the remainder of the school year. Students on academic probation will report to their assigned counselor on a biweekly basis for advising and counseling with respect to factors that might have had or are having a negative impact on their academic performance.

Failure to comply with the terms of academic probation will be reported to the Promotions Committee for disposition.

Academic probationary status will be terminated when the student is promoted to the next academic year.

Academic probationary status will not affect a student's financial aid.

The designation "on academic probation" will not be recorded, at any time, on the student's transcript.

Students who are on academic probation, in Special Matriculation or on leave of absence are not permitted to participate as Senate or class officers, nor are they permitted to sit on medical school committees. It will be up to the various Committees and Classes as to how they wish to handle the duties of the officer or committee member in their absence. For students who are on very brief (1 month or less) leaves of absence, their continued participation on committees or as officers will be considered on a case by case basis.

SUSPENSION
Suspension is defined as prohibiting a student from attending classes pending a determination of his/her fitness to continue as a student in the School of Medicine.

COMMITTEE SERVICE
Students who are on academic probation, in Special Matriculation or on leave of absence are not permitted to participate as Senate or class officers, nor are they permitted to sit on medical school committees. It will be up to the various Committees and Classes as to how they wish to handle the duties of the officer or committee member in their absence. For students who are on very brief (1 month or less) leaves of absence, their continued participation on committees or as officers will be considered on a case by case basis.

PROMOTIONS COMMITTEE (PC) APPEAL PROCESS
Students have the right to appeal decisions of the Promotions Committee.

In order to appeal a decision, students must present a written statement to the Chair of the PC, clearly stating the specific nature of the appeal within 48 hours of receipt of the action of the PC.

The student has the right to request the Provost to review any determinations made by the Promotions Committee of the School of Medicine relative to academic performance on their part.

In addition to the role that the Promotions Committee plays in student progress and retention, the Assistant Dean for Student Affairs, the Medical School's Student Due Process Hearing Panel and the School's Professionalism Evaluation Committee have these responsibilities:

The Assistant Dean for Student Affairs may grant a leave of absence for compelling reasons. Under ordinary circumstances, a leave of absence is not continued for more than two years.

When a student is granted an extension for a second year, s (he) must apply for reinstatement at least two months prior to the beginning of the next academic year. If s (he) fails to do so, s (he) is dropped from the rolls of the School.

The Hearing Committee Panel and others play a role in handling students with respect to academic dishonesty. See "Wayne State University Student Due Process Policy", 6/13/86.

The Professionalism Committee and others play a role in handling students with respect to behavioral problems. See "University Guidelines for Assisting Persons with Behavioral Problems".

UNITED STATES MEDICAL LICENSING EXAMINATIONS

Wayne State University School of Medicine students are **required** to take USMLE, Step 1 and 2, at designated times prior to graduation. Students must pass Step 1 with a minimum score designated by NBME in order to be promoted to Year III. If a student chooses to remain in a clerkship after receiving a failing score on Step 1, he/she will be required to complete all clinical components of that clerkship by the time the clerkship ends. He/she must take the clerkship examination on the normal date at the end of the clerkship. If the student fails to do this, credit will be denied for the clerkship and it will have to be repeated after the student passes Step 1.

POLICY REGARDING EXCUSED ABSENCES

The School of Medicine's policy for absences from scheduled course/clerkship examinations is as follows:

If you are ill on the day of a scheduled examination and need to defer taking the examination to a later date, you are required to contact the Office of Student Affairs (313-577-1463) no later than 8:30 A.M. on the day of the examination, report the nature of your medical emergency and request permission to defer taking the examination to a later date (usually the previously announced examination make-up date).

Your request will be noted and you are to follow the procedures given below:

Immediately report to the Detroit Medical Center, Occupational Health Services (OHS) Clinic registration located at 4D of the University Health Center. You will be examined by a health-care clinician in the OHS Clinic (4K-UHC). The Occupational Health Services Clinic will release to the Office of Student Affairs a report including a diagnosis, treatment/prescriptions given, referrals and follow-up recommendations. **The OHS Clinic report must include a statement that the severity of your illness is such that you are physically unable to take the examination on the given date. This required statement must be signed by the clinic's supervising physician.** The Occupational Health Services Clinic fee for this service is $25.00 that will be billed to your health insurance provider or directly to you. If you are too ill to drive and do not have

someone who can transport you to the UHC, take a taxi to the UHC, pay the taxi fare, get a receipt and your fare will be reimbursed by the medical school.

If you have a documented chronic health problem, you may elect to visit your personal physician who will release a report including all of the information required in #1 of this policy.

Personal emergencies (car problems, expressway tie-ups, family emergencies) will be handled on an individual basis and require documentation.

The authority to grant or deny a request taking a scheduled examination resides in the Office of Student Affairs. If a request is denied and you do not take the scheduled examination, the absence is recorded as "**unexcused**" and a score of "**zero**" **(0)** is recorded for that particular examination.

STUDENT EVALUATION OF THE CURRICULUM

Evaluation is considered a course requirement. Students have input into the evaluation of the curriculum through two different processes.

Wayne State University requires that all students evaluate all faculty using a standard question form. This is both a privilege and a responsibility for you as a WSU student. Students who have not turned in their evaluation for a course will not have their course grade posted. It is recognized that not all students attend all lectures (or have the comparable experience of viewing the streaming video or listening to audiotape of the session)! However, all students are required to evaluate each courses, and to evaluate the appropriate items for all faculty regardless of attendance. For example, students can evaluate the quality of the lecture notes whether or not they listened to, or viewed (in person or through streaming video), the lecturer.

The School of Medicine provides students a unique opportunity to give constructive feedback to faculty. Students participating in the Co-Curricular Medical Education Evaluation program will conduct focus groups. The focus groups leaders present a summary of their evaluation and suggested changes to the Course Director and the Assistant Deans of Evaluations and Basic Science Education. This is an opportunity for students and faculty to engage in meaningful dialog.

INJURIES, NEEDLESTICKS AND EXPOSURES TO BODY FLUIDS

During the course of a medical student's education, he or she will come into contact with occupational hazards as a natural consequence of certain laboratory exercises. Medical students are at particular risk for needlestick injuries and other sharp injuries, since because they are in training they may not be skilled in specific procedures being performed. At all times, if a student is uncomfortable performing an assigned procedure because of the perception that his or her skills are inadequate or that supervision will not be adequate, then that student MUST refrain from doing the procedure and report to the instructor.

It is the obligation of the School of Medicine to formally educate its students regarding the prevention of occupational injuries. In addition, the school has developed programs by which students who are injured or exposed in the course of their training have the knowledge to properly seek care. Such programs are formally presented to students in the first, second and third years of the medical school curriculum.

In the event that a student is injured, stuck with a needle or other sharp instrument, or sustains exposure to a body fluid on mucus membranes or non-intact skin while engaged in coursework the student must report the incident to the instructor immediately. A written report must be completed detailing the circumstances of the exposure. The student should also notify his or her counselor of the reported incident.

A student who sustains an injury or exposure to blood and/or body fluids while participating in medical school coursework must go to the Occupational Health Services Section at UHC-4K if the event of a non-emergency injury and if the injury occurs between 8:00 am and 4:00 pm Monday-Friday. In the event of an emergency or if the injury occurs after hours or on a weekend, the student must go to the DRH emergency room. If medical treatment is required, the students' medical insurance co-payments or deductibles will be waived for the first treatment. Follow-up medical appointment(s), if necessary, will be the responsibility of the student.

YEAR 2 GENERAL INSTRUCTIONS AND LABORATORY RULES

During this year, you will be working with pathogenic micro-organisms which are capable of causing infections in yourself and others. There is no danger if you learn to carry out the laboratory techniques carefully; however, careless procedures on your part will endanger yourself and others. For the protection of all individuals working in the laboratory, the following rules must be strictly observed:

- Always wear a knee length laboratory coat when working in the laboratory.

- No food or drink should be consumed in the laboratory. Food should be stored only in the refrigerators labeled **"Food Only"** (one is provided in each inner lab). Students are responsible for keeping this refrigerator clean.

- Students must refrain from eating, smoking, or putting anything in their mouths. No mouth pipetting is permitted. Pipettors will be provided.

- Before beginning any work in the laboratory, wipe the bench top with a sponge which has been moistened with a disinfectant solution.

- At the end of the laboratory period, the sink must be cleared of all debris. All equipment must be removed from the top of the work bench and the area wiped with disinfectant solution.
- Before leaving the laboratory, **during or after an experimental session,** students must wash their hands thoroughly with soap and water. **An antibacterial soap** is provided at the sink in each inner laboratory.

- The inoculating loops and needles must be placed in the small tabletop discard bucket provided. **DO NOT** put used inoculating loops or needles on the tabletop.

- Any spilled or broken infectious material should be thoroughly wet down with a disinfectant and then brought to the attention of an instructor.

- Report any situation which might be hazardous to you or your fellow students to your laboratory instructor.

- In case of **any accident**, report first to your laboratory instructor and to Conjoint Teaching Services.

- Store any materials to be used or observed at a later class period in a drawer in the inner lab, one of the Year 2incubators, or the Year 2 refrigerator labeled "Lab Supplies" as required.

- Laboratory supplies and materials will be clearly indicated for your use. **DO NOT** use any materials not specifically marked for your use. Additional supplies can be picked-up during the lab exercise from Conjoint Teaching Services.

DISCARDS

- Discard all disposable materials such as tubes, petri dishes, etc., and any material contaminated with blood or serum in the cans marked **"Microbiological Discards"**. These materials will be picked up and sterilized once a week.

- When you are finished observing or working with cultures, discard them. **DO NOT** leave them in the incubators, refrigerators, or drawers.

- Small items such as slides, Pasteur pipettes, berel pipettes, etc. should be discarded in the small white containers on the bench top.

- All syringes and needles must be discarded in the containers labeled"SHARPS."

- **NEVER** discard materials used in the laboratory experiments in the **WHITE CANS** labeled **"PAPER ONLY"**.

DRESS CODE

We do not have a dress code, but we expect you to have an appearance that inspires confidence in you and your school when working with patients and dealing with the public.

STUDENT COUNCIL

The Student Council is asked to appoint a representative from each class to the Curriculum Committee and the Promotions Committee. It is through these committees as well as through discussions with the individual faculty members, Course Directors, the Director of Curricular Management, and the Dean of Curricular Affairs, that your perspective can be presented effectively and our program can be improved. Students also play an important role in evaluating each course.

SHIFFMAN MEDICAL LIBRARY & LEARNING RESOURCE CENTERS

The medical library service hours are: 8:00 a.m. to 11:00 p.m. Monday through Thursday, 8:00 a.m. to 9:00 p.m. Friday, 9:00 a.m. to 5:00 p.m. Saturday, and 12:00 p.m. to 11:00 p.m. Sunday. The Medical Students Study ("24-hour room") is open for quiet study purposes during the hours the library is closed and three nights/week during the summer. Your WSU One Card, once encoded, will access the door to Shiffman, facing Scott Hall, once the library is closed. The turnstyle to enter the library uses the One Card and students are strongly encouraged to wear this card.

The circulation/reserves and reference desks are located on the main floor, along with books published after 1975; the basement houses books published prior to 1975 and journals published prior to 1980; the second floor contains current journals, study rooms, and a snack room. One Card-operated photocopy machines are located in the basement and second floors. A collection of books on 'class reserve', and certain popular and review books are located at the circulation desk for restricted use. Books from the library's circulating collection may be signed out for one month; journals do not circulate. The library's catalog can be accessed from any location; it indicates the location of library materials including online access to over 3,000 health sciences journals. The library's web site directs students to the online catalog, online databases and a wealth of additional information resources http://www.lib.wayne.edu/shiffman

Two computing laboratories (main floor and basement) are available to School of Medicine students and other SOM personnel only and include a variety of software, network access, server space, zip drives and CD/DVD. Access to these computers requires the students' med.wayne.edu login name and password.

All areas of the Shiffman Library have wireless access; pick up a flyer or see our web site for login options and basic information.

Off-campus access to many library resources, including MEDLINE, online journals and MD Consult for example, requires the use of students' WSU Access ID (aa1234). For more details about the library, computer labs and remote access, please see http://www.lib.wayne.edu/shiffman or send any questions or suggestions you may have to askmed@wayne.edu.

MEDICAL EDUCATION SUPPORT GROUP (MESG)

The MESG (room 1367 Scott Hall; mededu@med.wayne.edu) provides students support services for BlackBoard and PocketPC applications.

SCHOOL OF MEDICINE LEARNING RESOURCES

There are 8 PCs in each MD lab and 30 PCs available in the computer lab, room 2238 Scott Hall, for student use.

REQUIRED CLINICAL EQUIPMENT SUPPLIES

Clinical equipment necessary for Year 2 includes:
Short white jacket
Stethoscope with bell and diaphragm
Otoscope/Opthalmoscope with nasal speculum
Penlight
Reflex hammer
Thermometer
128 and 512 CPS tuning forks
Tongue blades (wooden)
Ruler
Tape measure
Cotton and pins

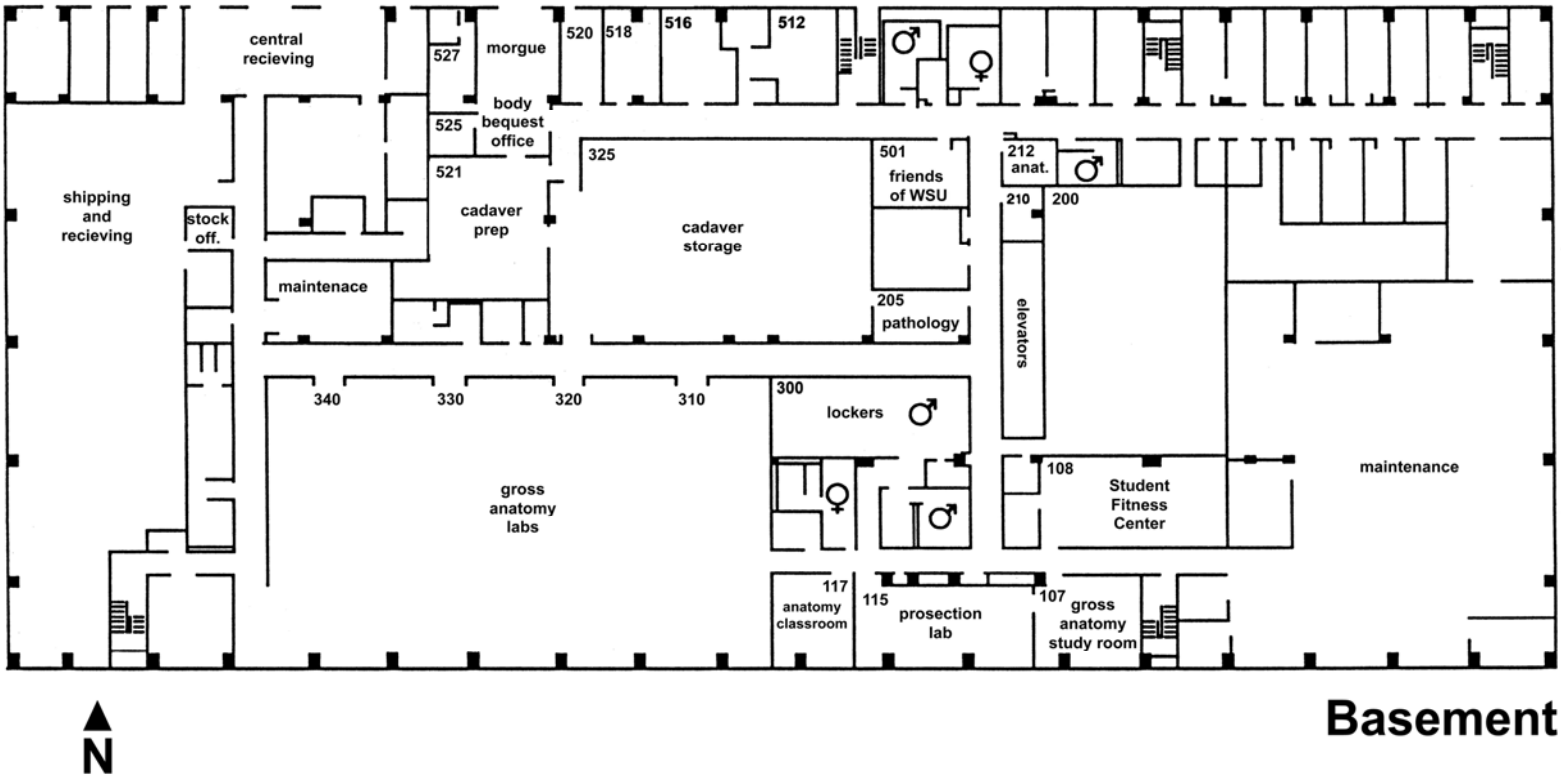
ACADEMIC SUPPORT

Academic Support provides supplemental instruction in the format review sessions, tutoring and one-on-one assistance. Additional programming information is available at www.med.wayne.edu/student_affairs/academic_support/index.asp

YEAR 2
AT-A-GLANCE
2008-2009
IMPORTANT DATES

August 2008	**4**	**Classes Begin**	**10:00 A.M.**
	18	Imm/Micro/ID Exam I	1:00 P.M. – 4:00 P.M.
	29	Imm/Micro/ID Exam II	1:00 P.M. – 4:00 P.M.
September	1	**Labor Day Holiday**	
	15	Imm/Micro/ID Exam III	1:00 P.M. – 4:00 P.M.
October	1	Imm/Micro/ID Exam IV	9:30 A.M. – 12:00 Noon
	1	Imm/Micro/ID Lab	1:00 A.M. – 3:00 P.M.
	28	Psychiatry Exam I	10:00 A.M. – 12:00 Noon
	28	Pharmacology Exam I	1:00 P.M. – 4:00 P.M.
	31	Clinical Medicine Exam 1	10:00 A.M. – 12:00 Noon
	31	Pathobiology Exam 1	1:00 P.M. – 4:00 P.M.
November	24	Psychiatry Exam II	9:00 A.M. – 12:00 Noon
	24	Pharmacology Exam II	1:00 P.M. – 4:00 P.M.
	26	Pathobiology Exam II	1:00 P.M. – 4:00 P.M.
November	27-28	**Thanksgiving Recess**	
December	1	Classes Resume	9:00 A.M.
	17	PP: Respiratory/Pharm D. 1 Exam	1:00 P.M. – 4:00 P.M.
	18	**Winter Recess Begins**	
January	5	**Classes Resume**	9:00 A.M.
2009	16	Medical Student Research Day	1:00 P.M. – 5:00 P.M.
	19	**Martin Luther King Holiday**	
	21	PP: Hematology/Pharm D. 2 Exam	1:00 P.M. – 4:00 P.M.
February	9	PP: Cardiovascular/Pharm D. 3 Exam	1:00 P.M. – 4:00 P.M.
	25	PP: Neurology/ Pharm D. 4 Exam	1:00 P.M. – 4:00 P.M.
March	6	PP: Dermatology/Pharm D. 5 Exam	1:00 P.M. – 3:00 P.M.
	20	PP: Connective Tissue/Pharm D. 6 Exam	1:00 P.M. – 4:00 P.M.
March	23-27	**Spring Recess**	
March	30	**Classes Resume**	9:00 A.M.
April	9	PP: Endocrine/Pharm D. 7 Exam	1:00 P.M. – 4:00 P.M.
	28	PP: Renal/Pharm D. 8 Exam	1:00 P.M. – 4:00 P.M.
May	11	PP: Gastro/Pharm D. 9 Exam	1:00 P.M. – 4:00 P.M.
	12	Clinical Medicine Exam 2	9:00 A.M. – 12:00 Noon
	12	Kaplan Diagnostic Exam	1:00 P.M. - 4:00 P.M.
	20	Comprehensive Basic Science Exam	1:00 P.M. – 4:00 P.M.

MAP OF SCOTT HALL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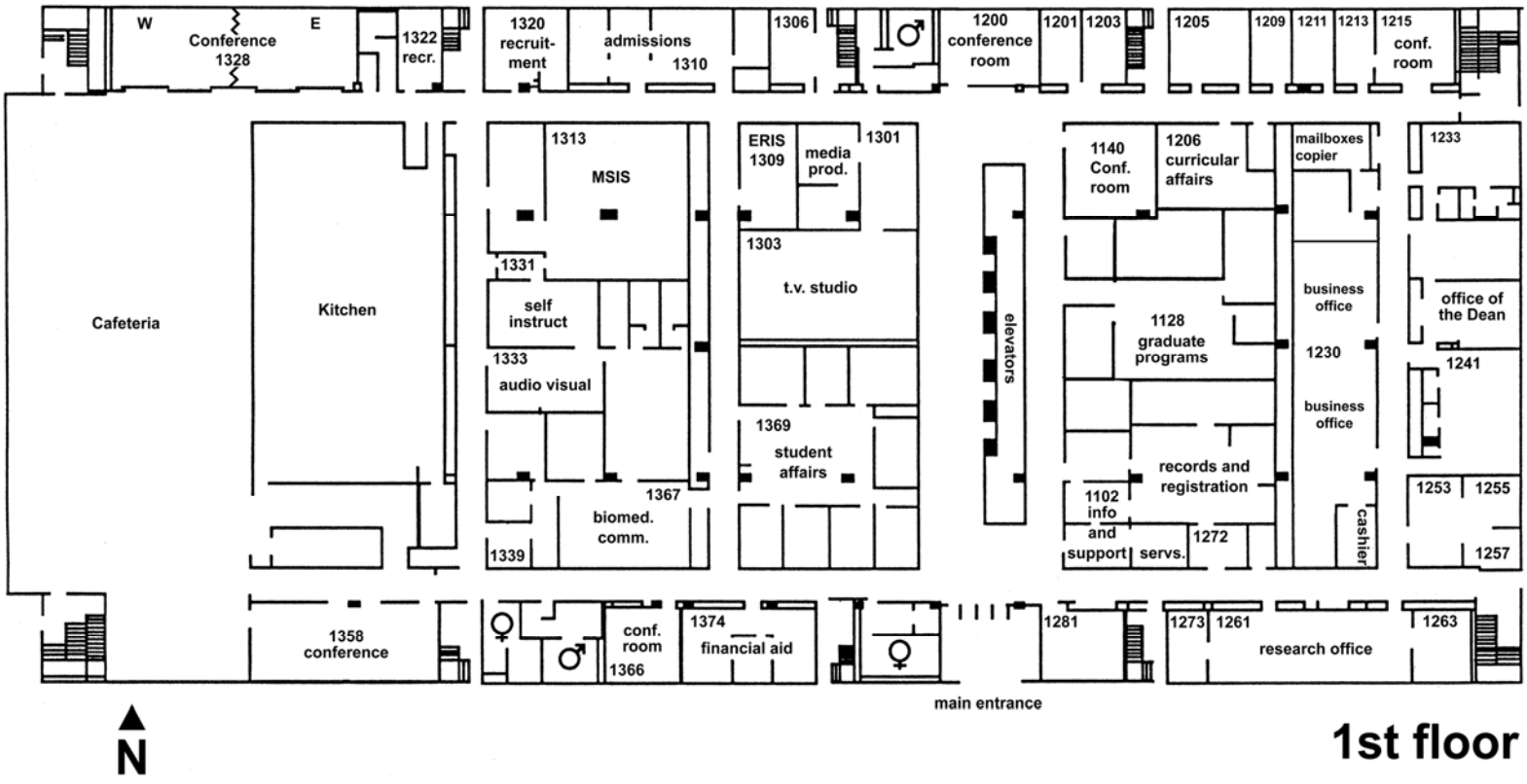
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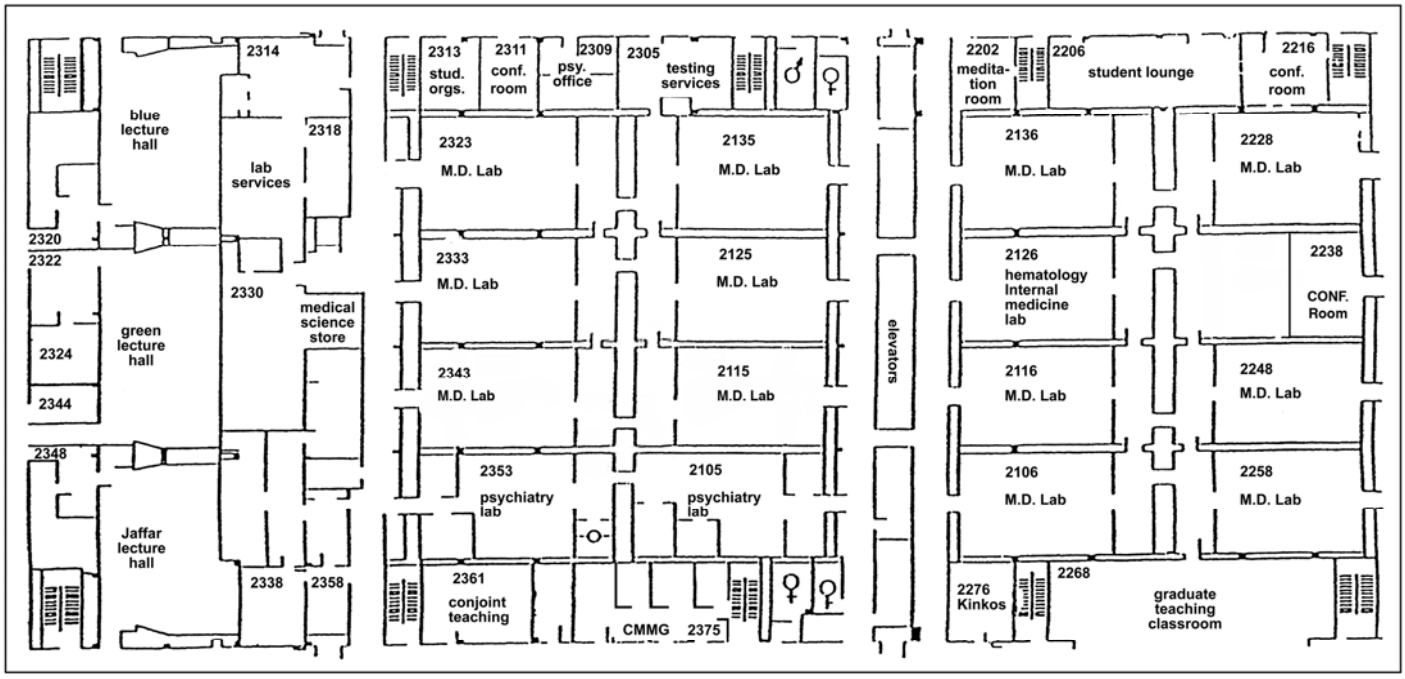

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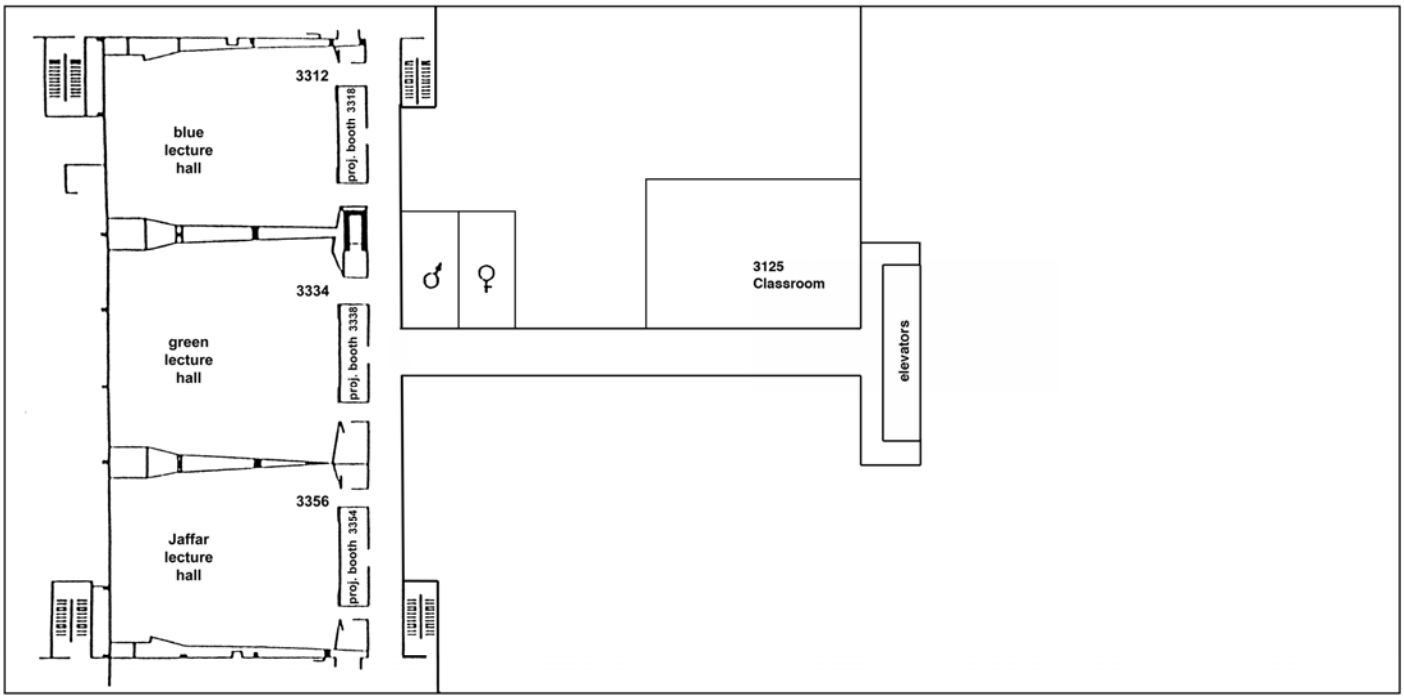

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SCHOOL OF MEDICINE
YEAR 2- TEXTBOOKS
2008-2009

The purchase of textbooks is the responsibility of each student and should depend on one's present library and academic background. The following books are either required or recommended or both.

I. General Reference

Dorland's illustrated Medical Dictionary. (Latest edition)
Stedman's Medical Dictionary. (Latest edition)

II. Immunology/Microbiology (Required)

Benjamini, E., Coico, R., and Sunshine, G. ***Immunology-A Short Course,*** 5th Edition 2003

Rosen, F. and Geha, R. ***Case Studies in Immunology: A Clinical Companion***, 5th Edition Garland Publishing, Inc., 2007.

Gilligan, P., Smiley, M., and Shapiro, D**.,** ***Cases in Medical Microbiology and Infectious Diseases***. 3rd Edition ASM Press 2002

Recommended

Mims, Dockrell, Goering, Roitt; *Mims et al. Medical Microbiology*, 3rd Ed 2004, Elsevier

III. Pharmacology (Recommended)

Basic & Clinical Pharmacology by Betram G. Katzung (Editor), 9th Ed., Lange, New York, 2003, $49.95 list

Reference text

Goodman & Gilman's The Pharmacological Basis of Therapeutics. 11th Edition, Laurence Brunton, John Lazo, Keith Parker, Eds., McGraw Hill, New York, 2005. List price $140.00

IV. Psychiatry (Recommended)

Sadock and Sadock. Concise Textbook of Clinical Psychiatry. 2nd Ed. Lippincott Williams & Wilkins: 2004. (Recommended)

V. Clinical Medicine II

Required:
Bickley, Lynn S. **Bates' Guide to Physical Examination and History Taking.** 9th Edition, Lippincott Williams and Wilkins C., 2007
(***required for CM2***)

Helpful:

Cohen-Cole, S.A. (Ed). **The Medical Interview: The Three Function Approach** Second Edition, Mosby-Year Book, Inc. 2000

Lo, Bernard. **Resolving Ethical Dilemmas: A Guide for Clinicians** Second Edition, Lippincott, Williams and Wilkins, 2001

Guyatt, Gordon and Rennie, Drummond. **Users' Guide to the Medical Literature: Essentials of Evidence-Based Clinical Practice** American Medical Association 2002

Jekel, Katz, Elmore. **Epidemiology, Biostatistics and Preventive Medicine**, Second Edition, W. B. Saunders, 2001

Sackett, Straus, Richardson, Rosenbert and Haynes. **Evidence Based Medicine** Second Edition, Churchill Livingstone, 2000

Web sites:

http://www.cebm.net (Center for Evidence Based Medicine – EBM Tools)

http://www.cche.net/usersguides/main.asp (Centre for Health Evidence - Users Guides)

http://www.usersguides.org/ (JAMA or "Users Guide textbook supported online access)

http://www.ncbi.nlm.nih.gov/sites/entrez (PubMed - Medline access)

http://www.lib.wayne.edu/resources/journals/index.php (WSU-Shiffman supported electronic journal access) you may also find a medical dictionary such as *Stedman's* useful for this course, as well as for other courses during the first two years.

VI. Pathophysiology (Required) REQUIRED TEXT FOR ALL OF PATHOPHYSIOLOGY

Kumar V, Abbas A, & Fasto N; **Pathologic Basis of Disease,** Elsevier-Saunders, 2005. ISBN: 0721601871

VII. Cardiovascular Unit

Required

Kumar V, Abbas A, & Fasto N; **Pathologic Basis of Disease,** Elsevier-Saunders, 2005. ISBN: 0721601871

Recommended

Lilly (ed.): **Pathophysiology of Heart Disease**, 4th Ed., Lippincott, 2007.

Anthony S. Fauci, et al. Editors: **Harrison's Principles of Internal Medicine ,** 15th Ed., 2001.

IX. Renal Unit

Required

Kumar V, Abbas AK, Fausto N. **Robbins & Cotran Pathological Basis of Disease**, W.B. Saunders Co., (July 2004).

Recommended

Rose Burton, **The Clinical Physiology of Acid-Base and Electrolyte Disorders**, 5th Ed., McGraw-Hill, 2001.

Stanton, Bruce and Koeppen, Bruce. **Renal Physiology**, 4th Ed., Mosby., 2006.

Vivette D. D'Agati, J.Charles Jennette and Fred G. Silva. **Non-Neoplastic Kidney Disease**, AFIP ARP PRESS, 2005.

X. Endocrine Unit

Recommended

Harrison's Textbook of Internal Medicine, (Latest edition)

Robbin's Pathologic basis of Disease (Latest edition)

XI. Connective Tissue

Recommended:

Rheumatology:

Klipple JH, Primer on the Rheumatic Diseases, 12th Ed., Atlanta: Arthritis Foundation, 2001.

Hoppenfeld, S., Physical Examination of the Spine and Extremities, New York: Appleton-Century-Crofts, 1976.

Orthopedics:

Lawrence PF, Essentials of Surgical Specialties, Williams & Wilkins, 1993.

Pathology:

Cotran RS, Robbins, **Pathologic Basis of Disease,** 7th edition 2005. ISBN: 0721601871

Vigorita, VJ, Ghelman, B., **Orthopaedic Pathology**.

XII. Dermatology

Recommended

Thomas Habif 2004 Skin Disease: Diagnosis and Treatment
Andrews' Diseases of the Skin by Richard B., M.D. Odom , William D. James , Timothy G., M.D. Berger 10th Edition

Dermatology: Quick Glance by Saeed N. Jaffer and Abrar A. Qureshi 2003

Reference

Odom RB, James WD, Berger TG. **Andrews' Diseases of the Skin: Clinical Dermatology**, 9th Ed. WB Saunders Co. This is an intermediate comprehensive dermatology textbook that covers most dermatology without extensive detail. About $120.

Freedberg IM, Eisen AZ, et al. **Fitzpatrick's Dermatology in General Medicine**, 5th Ed. (two-volume set). This is an excellent comprehensive dermatology reference manual. $395.

Bolognia JL, Jorizzo JL, Rapini RP. **Dermatology**, Mosby. Another excellent comprehensive dermatology textbook, comparable to Fitzpatrick. $299.

XIII. Hematology Unit

Recommended

A.V. Hoffbrand, J.E. Pettit, P.A.H. Moss, Essential Hematology, Blackwell Science Ltd., 4th edition, 2001.
Mehta and A.V. Hoffbrand, Hematology at a Glance, Blackwell Science Ltd., 2000.

XIV. Gastrointestinal Unit

Recommended

Kumar, Abbas, Fausto: Robbins and Cotran **Pathologic Basis of Disease**, 7th edition.

Odze R, Goldblum J and Crawford J. **Surgical pathology of the GI tract, Liver, Billiary tract and Pancreas**. 1st edition, Saunders, 2004.

IX. Neuropathology Unit

Required

Syllabus and self-study materials.

Recommended

Rowland, L.P. **Merritt's Neurology**. 11th Ed., Lippincott Williams & Wilkins, 2005.
ISBN-13: 978-0-7817-5311-1

Cotran RS, Kumar V & Collins T, **Pathologic Basis of Disease,** W.B. Saunders Co., (July 30, 2004).
ISBN-13: 978-0721601878

Asbury, McKhann, McDonald, Goadsby and McArthur, **Diseases of the Nervous System: Clinical Neuroscience and Therapeutic Principles**, 3rd Ed., Cambridge University Press, 2002.
ISBN-13: 978-0521793513

a. *Robbins' Pathologic Basis of Disease*. Cotran, Kumar, and Collins, 7th Edition, 2005.

b. *Merritt's Neurology*. Merritt, Rowland. Lippincott Williams & Wilkins; 10th edition, or *Diseases of the Nervous System: Clinical Neuroscience and Therapeutic Principles*. Asbury, McDonald, McKhann, Goadsby, McArthur. Cambridge University Press; 3rd edition, or *Textbook of Clinical Neurology*, Goetz et al. 2nd Ed. Saunders.

c. Useful Websites or other on-line resources are included with the course syllabus.

Discipline: Immunology/Microbiology/Infectious Disease

Unit Director: Dr. Matt Jackson

August 4, 2008 through October 1, 2008

Course Objectives

The Immunology/Microbiology/Infectious Disease Course seeks to provide students with an understanding of host-parasite relationships. This understanding will encompass the workings of the innate and acquired immune protective systems as well as the microorganisms with which the protective systems seek to cope. The course has two coordinated components, Immunology and Microbiology/Infectious Diseases. The Microbiology/Infectious Diseases component is presented using an organ-based approach to reflect the diagnostic strategy used by physicians. Basic science lectures in Microbiology are followed by Infectious Disease presentations by clinical faculty. Case studies are presented in small group sessions in the MD labs. Wet labs cover topics in basic Immunology and diagnostic Microbiology. Students are also responsible for a series of tutorials available on the MD lab computers (program title: *Micro II Cases in Medical Microbiology*).

Course Structure

- Lectures – covered on 4 written exams
- Laboratories – required attendance; wet lab exercises in Immunology, Bacteriology, Virology; covered on a single, 25 station lab practical
- Case studies – presented by Immunology and Infectious Diseases faculty in the MD labs; group participation required; covered on the 4 written exams
- Computerized case studies (MD lab PC program title: *Micro II Cases in Medical Microbiology*) – only available on the MD lab computers due to license restrictions; covered on the lab practical
- Self-studies – one reading assignment on Vaccines is covered on a written exam

Laboratories

The laboratory topics are correlated with the lecture presentations. Please read the introductory material to each exercise in your lab manual prior to coming to the laboratory. Computerized Microbiology case studies (MD lab PC program title: *Micro II Cases in Medical Microbiology*) will be assigned as self-study modules. These will be available only on the computers in the MD labs.

Pathogenic microorganisms will be used in the lab exercises. Therefore, **you must wear a lab coat for all lab sessions and use safe laboratory practices**. Unless officially excused, attendance at all laboratory activities is mandatory.

Exams

- There will be 4 regular written exams and 1 laboratory practical.

- Written exams will have 3 questions per contact hour. Exam questions will be drawn from lectures and small group case study presentations. Although general knowledge from previous units may be required for some questions, the exams are not cumulative.

- A 25 station laboratory practical will occur at the end of the course. It will cover laboratory exercises and the computer self-study tutorials (MD lab PC program title: *Micro II Cases in Medical Microbiology*). It will be necessary to make a diagnosis based on a case study presentation and interpret basic laboratory results for the practical. Simple laboratory manipulations will be required on the practical. The laboratory practical will be weighted so that it is roughly equivalent to one written exam.

Digital Content

The Immunology, Microbiology, and Infectious Diseases website is accessible to Wayne State medical students and faculty through BlackBoard. The website contains digitized lecture presentations, review tables, interactive questions, course outlines, a list of microbiology study guides, and a faculty contact list. Faculty and students are also encouraged to use BlackBoard as a forum for discussion of relevant course material. Interactive review questions are also provided through the CampusMobility sire. All lecture presentations are provided as streaming media.

Textbooks

1. Benjamini, E., Coico, R., and Sunshine, G. *Immunology-A Short Course*, 5th Edition 2003
   This edition and earlier editions have been used for a number of years in this course. Year after year students have been pleased with this text.

2. Rosen, F. and Geha, R. *Case Studies in Immunology: A Clinical Companion*, 5th Edition Garland Publishing, Inc., 2007.
   This book provides a clinical perspective to the immunology component of the course. This text forms the basis for case study discussions.

3. Gilligan, P., Smiley, M., and Shapiro, D**.,** *Cases in Medical Microbiology and Infectious Diseases*. 3rd Edition ASM Press 2002
   Infectious disease case study descriptions from this book will be discussed in the small group sessions led by the clinical faculty.

Discipline: Clinical Medicine II

Unit Directors: Drs. Thomas Roe, Nelia Afonso, and Michael Stellini,

August 7, 2008 through May 20, 2009

Clinical Medicine II (CM II) occurs in the Year 2 curriculum and is a continuation of Clinical Medicine I in Year 1. It differs from most other courses taught during the first two years of medical school because it is case-based and a significant portion of the course takes place in small groups. It simulates the clinical learning environment in that it includes peer-based team learning facilitated by an experienced clinician. It is a collaborative course including the departments of Community Medicine, Family Medicine, Internal Medicine, Psychiatry, Obstetrics and Gynecology, and Pediatrics. It is taught by University faculty and community-based physicians. The purpose of Clinical Medicine is to introduce the student to the knowledge, skills, and attitudes needed in clinical practice.

Course Objectives

The intent of this course is for students to be introduced to Clinical Medicine and to demonstrate familiarity with:

- Medical Interviewing Skills
- Physical Examination Skills
- Analytic Reasoning Skills
- The Medical Record and Organizational Skills
- Evidence-Based Medicine
- The Patient-Centered Clinical Method
- Professionalism & Medical Ethics
- Preventive Medicine and Public Health
- Current topics in Clinical Practice including End of Life Issues, Substance Use, Interpersonal Violence, Geriatrics, Cross-Cultural Issues, Professionalism, Occupational and Environmental Exposures, Human Sexuality and Managing Care Issues.

Course Structure

This is the first year of Clinical Medicine II, (CM II) which, like CM I, integrates several previously discrete courses: Continuity Clinic Clerkship, Evidence-Based Medicine, Human Sexuality, Human Values, Introduction to the Patient, Medical Ethics, Patient Interviewing, Physical Diagnosis, Preventive Medicine and Public Health, and the vertically integrated curricular themes (Alcohol, Tobacco and Other Drugs, Complementary and Alternative Medicine, Cultural Competence, End of Life, Geriatrics, Interpersonal Violence Across The Lifespan, Managing Care, Occupational and Environmental Medicine). Clinical Medicine consists of several units in Year 1 and Year 2 and will extend through Years 3 and 4 as the course develops. CM2 includes small group sessions (10 –12 students with one physician instructor), large group activities, and self-study and web-based instruction. Physical Diagnosis will continue as an independent unit within Clinical Medicine.

Small Group Sessions
The small group sessions will continue into the first two months of MS2. The emphasis in the small groups will be on learning to effectively communicate with patients and the proper way to obtain an organized and concise medical history. You will be graded on preparation and participation. Once assigned to a small group, you will not receive credit for attendance at any other group. Attendance at small group sessions is required. Please note that only your Year 2 counselor (Ms. Robichaud) can provide an excused absence. It is considerate to notify your small group instructor if you cannot attend a session but it is considered an unexcused absence if not excused by your counselor. Please refer to SOM guidelines for what constitutes an excused absence. Excused absences must be made-up through completion of a special assignment.

Large Group Activities
Generally the patient problem that will be discussed in the small groups will be presented in a large group session or in a computer assisted exercise or reading assignment. These activities should be completed prior to the small group meeting(s) in which the problem will be discussed. Large group sessions may be in the format of lecture, expert panel, audio-visual or patient presentation. Attendance and assignment completion is required.

Web-based Instruction and Self-Study
Self-study assignments, resources and other course information can be accessed via Blackboard. It is a course requirement that you register on Blackboard and you will be accountable for any course information on the Clinical Medicine Blackboard site.

Physical Diagnosis
The Physical Diagnosis unit of Clinical Medicine will build upon the Interview, History Taking, Physical Examination and Clinical Decision-Making (EBM) skills that you have developed so far. The Physical Diagnosis sessions begin in December and continue for the remainder of the year.

Discipline: Psychiatry

Unit Director: Mary Morreale, M.D.

October 2, 2008 through November 24, 2008

COURSE OBJECTIVES

Introduction
This course on psychopathology builds upon concepts of normal growth and development taught in the first year. The course will focus on the recognition, assessment, and treatment of the common psychiatric disorders seen in adults and children. We will also discuss psychiatric nomenclature, the mental status examination, and DSM-IV. In addition, there will be lectures on common psychiatric problems seen in the general hospital setting, and the impact of medical illness and hospitalization on the patient. This course will prepare you for your clinical rotation in psychiatry in the third year. It will also provide a background in psychiatry for future work in any clinical area of medicine.

Textbook

Sadock and Sadock. Concise Textbook of Clinical Psychiatry. 2nd Ed. Lippincott Williams & Wilkins: 2004. (Recommended)

Clinical Correlations
On Tuesday, October 21, 2008, the class will meet in small groups to review videotaped interviews of psychiatric patients and discuss the cases. Further arrangements for this class, including room assignments and faculty preceptors, will be forthcoming.

Evaluations
There will be two multiple choice examinations in the course, on October 28th and November 24th. Each examination will be weighted equally in determining your final course grade.

Course Assistance
Dr. Morreale: mmorreale@med.wayne.edu
Yolanda Pitts: ypitts@med.wayne.edu

Discipline: Pharmacology

Unit Directors: Dr. Raymond Mattingly

October 3, 2008 through November 24, 2008

COURSE OBJECTIVES

Pharmacology, the study of the action of drugs on cells and organisms, is interdisciplinary in that it combines knowledge of the biochemical and molecular mechanisms of drug action with the anatomical distribution of drugs in the body and the physiologic (and sometimes pathologic) responses to the drugs. Upon successful completion of the medical pharmacology course, we expect that students will possess a therapeutics (the clinical application of drug use including appropriate doses) will be learned subsequently in the clinical training.

Knowledge Objectives

The overall objectives of the course are to introduce the basic principles of pharmacology and each of the major categories of pharmacologic agents. Our past experience in the teaching of Pharmacology has led us to use mini-exams to provide students with concrete examples of knowledge objectives. While we utilize statements of knowledge objectives in many of the lecture outlines, we have found that students prefer a small non-credit examination as a means of determining both the content and depth of knowledge expected as well as their level of comprehension. The use of these mini-exams is indicated below.

For each major category of pharmacologic agents, a prototype drug is identified. This prototype has been selected as being representative of the class. For each of the prototype drugs, students are expected to know the following properties:

- Indications – For which diseases or conditions is the drug used?
- Contraindications – What other preexisting conditions may prevent this drug from being used in a particular patient?
- Biochemical mechanism of action – How does the drug work at the molecular level?
- Therapeutic or Physiologic responses – What are the expected responses?
- Predictable adverse effects – What are the expected side effects of the drug?
- Toxicity – What are the signs of toxicity of the drug?
- Pharmacokinetics – What is the time course for the amount of drug in the body and what factors may produce individual variation from the norm?
- Absorption – What are the routes of administration?
- Distribution – Where does the drug go within the body?
- Elimination – How is the drug removed from acting within the body (metabolism, excretion)?
- Drug-drug interactions – With what other drugs does this drug produce an interaction?

Detailed knowledge of dose levels and regimens is not required.
A short list of other drugs within the same class of agents will be provided in the lecture notes if the other agents are commonly used or have particular properties. Students will be expected to identify these agents and their particular properties if appropriate.
A knowledge objectives drug list is available for students at Conjoint Teaching. This list is generated by the Association of Medical Pharmacology Department Chairs and is comprehensive in nature.

Structure of Course
The Medical Pharmacology course is structured to begin with three self-instructional modules covering General Principles of Pharmacology. Cholinergic Pharmacology and Adrenergic Pharmacology. These self-instructional modules utilize one introductory lecture followed by 3-4 tutorial sessions that allow students to ask questions of the module author. The remainder of the course uses lectures and clinical correlation sessions to cover the other topics. Antimicrobial and antiviral therapy is not included within this course; rather these topics are included in the Infectious Diseases Unit that occurs earlier in the Second Year Medical Curriculum.

Evaluation of Knowledge
At the conclusion of each of the three self-instructional modules, students are given a self evaluation mini-exam. This examination in constructed to be representative of the questions on the formal examination and allows the student to assess his/her level of mastery of the material without a score or grade being recorded. In general students are expected to achieve a score of 80% on these mini-exams. With a performance below this standard, a student should identify the problematic areas and review the material again. Following the completion of the three self-instructional modules, the first formal examination is administered.

The remainder of the course is taught with a combination of lectures and clinical correlation sessions. Two additional self-evaluation mini-exam sessions are used to provide students with an assessment of mastery of the material. These mini-exam sessions are scheduled prior to the formal examinations to give students the opportunity to review. Again students with a score below 80% on the self-evaluation exams should review the material. Two examinations complete the formal evaluation. The final grade and consideration for Honors in Medical Pharmacology are determined by the combined scores from the three examinations.

Evaluation of knowledge of pharmacology also is included in the United States Medical License Examination (USMLE) Step 1 at the conclusion of Year 2. A student must pass this examination to progress into Year 3 of medical school. This examination has a Pharmacology component although successful passage is determined by overall performance rather than by specific discipline scores.

Recommended textbook
Basic & Clinical Pharmacology by Bertram G. Katzung (Editor), 9th edition, Lange, New York, 2004, $49.95 list. This is a solid textbook with a good blend of overview of concepts and detail. Reading assignments will be from this book.

Review Book
Lippincott's Illustrated Reviews: Pharmacology: Special Millennium Update by Mary Julia Mycek, Richard A. Harvey, Pamela C. Champe, $32.95 list.
This is a good book to use for review after you have studied the material, but it is much too skimpy on details to use as a textbook the first time through and for exams.

Reference text
Goodman & Gilman's The Pharmacological Basis of Therapeutics. 11th Edition, Laurence Brunton, John Lazo, Keith Parker, Eds., McGraw Hill, New York, 2005. List price $140.00
This book is encyclopedic and expensive but is still the best reference source around.

Up-to-date drug and therapeutics information
The Medical Letter – Medical Letter, Inc. is a nonprofit organization that provided non-biased, peer-reviewed drug information and evaluation. Its biweekly publication, The Medical Letter, is generally regarded as the most authoritative source of current drug information. We as a Department of Pharmacology give it our highest rating. The student subscription rate is $27.50 per year.

Web URL: http://www.medicalletter.com/

Pharmacology website

The Department of Pharmacology website includes course schedules, updated information and lecture materials, a list of important drugs, and links to websites for pharmacology information such as drug information, online quizzes, and the online Merck Manual. Lecture outline updates and additional course materials will be posted here. Got to the site below and choose Courses to access the Medical Pharmacology course pages.
http://www.med.wayne.edu/pharm/home.html

Discipline: Pathobiology

Unit Director: Dr. Rick VanderHeide (TBA)

October 6, 2008 through November 26, 2008

COURSE OBJECTIVES

The Pathobiology course is a formal introduction into the mechanisms and cellular consequences of human disease. The course draws heavily upon previously introduced concepts of gross anatomy, histology, microbiology, immunology, biochemistry, physiology and genetics. Familiarity with these areas is important since disease states are essentially presented as perturbations of normal biochemical, cellular and anatomical homeostasis. The course is organized into categories of disease as follows:

- Adaptive cellular alterations and cell death
- Inflammation and repair
- Autoimmune disease
- Neoplasia
- Environmental and nutritional disease
- Genetic, neonatal and pediatric diseases
- Tissue alterations associated with infectious agents

Within each of these categories of disease, two points are emphasized. The first, pathogenesis, is reviewed primarily at the molecular and cellular level. It is at this step that the course interfaces with biochemistry, genetics, immunology and, in some cases microbiology. The second point of emphasis is morphology, both histologic as well as gross pathologic. At this point, path biology interfaces with anatomy and histology. Histopathology and gross pathology of human disease are, when possible, correlated with disease presentation and physical findings and, at all times, presented in the context of pathogenesis as well as correlations between gross pathology and histopathology. Histopathology is extremely challenging for students. Therefore, morphology of disease is presented from a variety of perspectives; these include photos presented at lecture.

Photomicrographs in textbooks, slides presented in review sessions, slides available on "virtual classroom," as well as a weekly pathology laboratory which employs virtual microscopy to examine tissue sections of representative human disease states (see below). Although the student is not expected to develop diagnostic pathology skills, it is a major goal of the course for the student to learn basic criteria for the morphologic distinctions between major classes of human disease.

The weekly Pathobiology Lab (3hr) employs microscopic examination of histologic tissue sections in order to emphasize and review course material as well as demonstrate correlations between disease morphology and clinical features. The lab is a student centered, problem-solving activity; a major goal of this component of the course is for students to develop their ability to make objective observations using a universal form of medical technology (i.e. the microscopy).

In summary, at the end of the Pathobiology course, students will:

- Learn the cellular and molecular pathogenesis of the major classes and categories of human disease;

- Learn the basic functional and anatomical consequences of major human disease states at the level of cells and tissues;

- Learn how to recognize and distinguish, in representative tissue sections or photomicrographs (sometimes gross photographs) the following disease states: hypoxic cell death, the various types of necrosis, the various patterns of inflammation, the major histologic manifestations of autoimmune disease, features of wound healing, the common types of human neoplasia, including the distinctions between benign and malignant, the manifestations of atherosclerosis and thrombosis, the various types of cellular adaptation (e.g. hyperplasia, hypertrophy, metaplasia) and miscellaneous but clinically relevant examples of nutritional, environmental and genetic disease, as outlined in these specific sections, and finally, to be able to correlate histologic alterations associated with infections by the major categories of human pathogens.

- Develop skills at making observations and integrating morphologic alterations in cells/tissues with likely clinical or laboratory disease manifestations.

Course material is tested with two (2) multiple choice format exams of 100 questions each (200 total items). All exams contain photos, either of gross specimens or histologic sections, accounting for 10-20% of total exam items. Exams are graded per school policy. Performance in laboratory sessions is judged according to the satisfaction of the teaching faculty. Attendance is mandatory for all labs.

Discipline: Pathophysiology – Respiratory Unit

Unit Directors: Drs. Willane Krell, and Kenneth Palmer

December 1, 2008 through December 17, 2008

COURSE OBJECTIVE

The overall objective of this unit is to provide the student with a conceptual framework for analyzing and understanding common chest diseases in terms of their causes (when known) and the derangements of function that result. For each disease, by the end of the unit, the student will be expected to know its:

Definition

- Relevant basic science considerations (e.g. epidemiology, microbiology, pathology, etc.)
- Associated functional derangements (i.e. pathophysiology)
- Symptoms and signs, as they reflect b and c
- Relevant investigations, as they reflect b and c
- Different diagnosis (in broad principle)
- Selected complications that reflect a persistence of b and c

Instruction is imparted by the successful combination of lecture, laboratory exercises, self-instructional materials, suggested and required readings and reviews.

Competency is judged by the successful passing of a 100 question multiple choice exam at 75% or greater.

Competency in laboratory sessions is judged according to the satisfaction of the teaching faculty.

Discipline: Pathophysiology – Hematology Unit

Unit Directors: Drs. Gail Bentley and Mark Edelstein

January 5, 2009 through January 21, 2009

COURSE OBJECTIVE

The curriculum for the **Hematology Section** of **Pathophysiology** encompasses a wide spectrum of hematologic disorders, transfusion medicine and pharmacology as it relates to hematology. The overall philosophy for each section will be to include a brief review of the normal physiology/structure/function followed by a discussion of the pathogenesis/pathophysiology, clinical manifestations, laboratory features, diagnostic criteria, and differential diagnosis. Treatment will not be stressed, but will be included as it relates to the natural history, prognosis, or the understanding of the pathophysiologic disease process.

Lecture notes will be provided by each lecturer. Assigned reading will be given from the required text. Students will be responsible for the information in the notes and the assigned reading.

The **hematology curriculum** will include **lectures** on the following topics:

- the clinician and the CBC
- hematopoiesis and hematopoietic agents
- normal and abnormal cellular morphology
- the anemias
- disorders of white blood cell number and function
- the myelodysplastic syndromes and the acute leukemias
- myeloproliferative disorders
- bone marrow and stem cell transplantation
- lymphocyte structure and function and the lymphoproliferative disorders
- hemostasis (including bleeding disorders and the hypercoaguable state)
- bleeding disorders
- clotting disorders
- transfusion medicine
- pain
- review sessions on anemias and the hematologic malignancies

The 7 **laboratory and case study sessions** are designed to reinforce and expand upon the lecture material and the assigned readings. Hematology is a very visual discipline for both the pathologist and clinician. The laboratory sessions are designed around “unknown” case studies, which promote interaction and discussion between the students and session leaders. Besides imparting factual information and reviewing morphology, working through these case studies will put the lecture material into perspective by providing insight into the clinical approach to hematologic problems/disorders, as well as the thought process used to solve them. The laboratory sessions will all involve visual material presented either as kondachrome slides or glass slides. Microscopes and glass slides will be used. Copies of the instructors’ outlines for the cases and copies of all slides will be available on the intranet at the end of each laboratory session. A CD will be available. Although the basic cases discussed in the laboratory sessions and those presented on the intranet/CD versions will be the same, the intranet/CD versions will have additional information that could not be presented in the laboratory sessions due to time constraints.

The laboratory sessions are a requirement for the course. Attendance is taken at the laboratory sessions. It is most strongly suggested that students attend these sessions and bring their microscopes. **Please, remember that for the final exam, students will be responsible for any and all material presented in the laboratory sessions.**

The final examination will be between 60 - 100 questions. Between 15 and 25 questions will be pictures. A minimum of 10 of these pictures will be photographs taken directly from the glass slides used in the laboratory. The final exam will cover materials presented in the assigned reading in the textbooks, lectures and any additional notes and laboratory cases.

There are 2 required textbooks for the course:

14. A.V. Hoffbrand, J.E. Pettit, P.A.H. Moss, **Essential Hematology**, Blackwell Science Ltd., 4th edition, 2001.

2. A. Mehta and A.V. Hoffbrand, **Hematology at a Glance**, Blackwell Science Ltd., 2000.

Discipline: Pathophysiology – Cardiovascular Unit

Unit Directors: Dr. Richard VanderHeide (TBA)

January 22, 2009 through February 9, 2009

COURSE OBJECTIVE

The learning objectives of the cardiovascular unit are as follows:

To understand and be able to describe the mechanisms by which altered anatomy, physiology and biochemistry result in diseases of the heart and vascular system.

To gain an introductory understanding of how cardiovascular diseases present clinically as human disease.

Particular attention will be given to the following:

- Hemodynamics and cardiac adaptation
- Cardiac auscultation
- Understanding of the EKG
- Ischemic heart disease and myocardial infarction
- Valvular heart diseases
- Congenital heart diseases
- Diseases of the pericardium
- Non-atherosclerotic vascular diseases
- Cardiomyopathies
- Heart failure

Instruction is imparted by the successful combination of lectures, clinical correlation demonstration, small group seminars, suggested and required reading and review.

Competency will be judged by the successful passing of a 100 question multiple choice exam.

Discipline: Pathophysiology – Neurology

Unit Directors: Drs. William Kupsky and Edwin George

February 10, 2008 through February 25, 2008

COURSE OBJECTIVE

The Pathophysiology Unit: Neuroscience builds on the elements of neuroanatomy and neurophysiology presented in the Year 1 Neurosciences course to provide an introduction to the pathologic and pathophysiologic basis of diseases of the nervous system. These include diseases of the central and peripheral nervous system, muscle, neuromuscular junction, and organs of special sensation. The course emphasizes the principles of neuroanatomic localization of lesions in the nervous system as a basis for understanding the use of the neurologic examination and includes basic principles of neuroradiology in clinical diagnosis to prepare for the Year III/IV clinical rotations in Neurology. Selected topics in pharmacology provide background for treatment of some kinds of neurologic disease.

Neurology Unit Objectives

At the end of this course, the student should understand the definitions, pathophysiology, pathological and neuroimaging features, and major neuroanatomic and clinical features of the following major disorders of the nervous system including:

- Increased intracranial pressure, edema, mass lesions, and hydrocephalus.
- Cerebrovascular disease and stroke, including ischemic and hemorrhagic stroke, hypertensive cerebrovascular disease, and global hypoxic/ischemic disease.
- Nervous system tumors, including gliomas, PNET's, meningiomas, Schwann cell tumors, and metastatic disease.
- Neurodegenerative diseases, including Alzheimer, Parkinson, Huntington, ALS, and prion diseases.
- Demyelinating and autoimmune diseases, including multiple sclerosis, ADEM and related diseases, Guillain-Barre and related diseases.
- Neuromuscular diseases, including neurogenic muscle disease, myopathies (such as Duchenne muscular dystrophy, inflammatory myopathy, and steroid myopathy), and peripheral neuropathies (axonopathy vs. demyelinating neuropathy).
- Epilepsy, including classification and basic principles of treatment.
- Movement disorders, including pathophysiology and pharmacology of basal ganglia dysfunction.
- Normal neurodevelopment and major diseases causing developmental delay.
- Diseases of the vestibular system and extra-ocular movements.
- Disorders of cognition and consciousness.
- Headache, including classification and pharmacology.
- Categories of traumatic disease, including closed head injury, skull fracture, and penetrating head injury.

At the end of this course, the student should be familiar with the major modalities of neuroimaging (CT and MRI scanning), be able to recognize normal and altered structures and formulate a basic differential diagnosis for common patterns of imaging abnormality.

At the end of this course, the student should understand the basic definitions of clinical electrophysiology and the basic use of this technique in the evaluation of neuromuscular disease.

Course Format
The course consists of a series of lectures, including in-class lectures and self-study lectures, a small-group case discussion with neurology faculty, a *mandatory* laboratory demonstration session ("Clinic Day"), *mandatory* E-lab exercises, self-study atlases for neuropathology and neuroradiology, and in-class review sessions.

Final evaluation consists of

- a 100-question written examination, which includes 15-20 pictures of pathologic materials and neuroimages
- successful completion of the mandatory E-lab exercises.
- documentation of attendance or remediation of the Clinic Day exercise.

Course Materials

- Self-study lectures (available as on-line streaming videos).
- Course syllabus.
- Ancillary materials (streaming videos, powerpoint files, atlases, discussion board) available on Blackboard.

Supplementary Texts

Robbins' Pathologic Basis of Disease. Cotran, Kumar, and Collins, 7th Edition, 2005.

Merritt's Neurology. Merritt, Rowland. Lippincott Williams & Wilkins; 10th edition, or *Diseases of the Nervous System: Clinical Neuroscience and Therapeutic Principles*. Asbury, McDonald, McKhann, Goadsby, McArthur. Cambridge University Press; 3rd edition, or *Textbook of Clinical Neurology*, Goetz et al. 2nd Ed. Saunders.

Useful Websites or other on-line resources are included with the course syllabus.

Neurology Unit Goals

The Pathophysiology Unit: Neuroscience builds on the elements of neuroanatomy and neurophysiology presented in the Year 1 Neurosciences course to provide an introduction to the pathologic and pathophysiologic basis of diseases of the nervous system. These include diseases of the central and peripheral nervous system, muscle, neuromuscular junction, and organs of special sensation. The course emphasizes the principles of neuroanatomic localization of lesions in the nervous system as a basis for understanding the use of the neurologic examination and includes basic principles of neuroradiology in clinical diagnosis to prepare for the Year III/IV clinical rotations in Neurology.

Discipline: Pathophysiology – Dermatology Unit

Unit Director: Dr. Iltefat Hamzavi

February 26, 2009 through March 6, 2009

COURSE OBJECTIVE

At the completion of the course students should be able to:

- Understand the function and structure of the skin.
- Understand basic concepts and terminology in dermatology
- Classify skin lesions based on morphology.
- Recognize and be familiar with common inflammatory skin diseases.
- Recognize and be familiar with skin cancers and pigmented lesions.
- Understand the basic etiology and pathophysiology of common skin disorders.
- Understand basic dermatopharmacology, surgery and light/laser treatment options and their application to the management of common dermatoses seen in the primary care environment.
- Understand basic treatment strategies for multiple skin diseases.

Discipline: Pathophysiology – Connective Tissue Unit

Unit Directors: Drs. Mousa Al-Abbadi and Patricia Dhar

March 9, 2009 through March 20, 2009

COURSE OBJECTIVE

At the completion of the course students should be able to:

- Understand the development and normal basic function and structure of bones, joints, and connective tissues.
- Understand how to analyze synovial fluid and perform crystal analysis
- Understand the epidemiology, pathogenesis, diagnosis, clinical manifestations and basic treatment of rheumatic diseases.
- Understand the epidemiology, pathogenesis, diagnosis, clinical manifestations and basic treatment of metabolic bone disease.
- Have a working approach to bone and soft tissue tumors including interpretation of radiographs and histopathology.
- Be able to interpret musculoskeletal radiograph and imaging studies and understand their utility in the diagnosis and treatment of musculoskeletal disorders.
- Understand the surgical approach to various musculoskeletal disorders and skeletal fractures.
- Understand the pharmacology of drugs used in the treatment of musculoskeletal disorders

Discipline: Pathophysiology – Endocrine Unit

Unit Directors: Drs. Rouba Ali and Hamdee Attallah

COURSE OBJECTIVE

The common disorders affecting the endocrine system will be highlighted through didactic lectures. Where pertinent, the clinical and pathologic lectures will be supplemented by pharmacology lectures, to provide a more comprehensive and integrative approach. In addition there will be three MD laboratory sessions, which will involve clinical problem-solving sessions with a focus on the more common clinical problems. These small group sessions will allow close interaction of members of the Clinical Endocrinology faculty and students.

At the end of the unit, the students should have an understanding of:

Clinical and pathologic understanding of the major regulatory mechanisms affecting the endocrine system and correlation of clinical disorders (hereditary and acquired) with altered anatomy and function

The integrative function of the hypothalamic-pituitary axis and the various functional and structural disorders that affect this system

Thyroid gland anatomy, function, structural and functional diseases and interpretation of thyroid function tests with clinico-pathologic correlations

Disorders of the female reproductive tract

Male hypogonadal disorders and interpretation of the functional tests

Physiological basis of clinical testing of major clinical disorders, including congenital diseases, of the adrenal glands

Endocrine (non-essential) causes of hypertension, including reno-vascular hypertension and the bases of the clinical diagnostic tests

Pathogenesis, clinico-pathologic features, and basic aspects of treatment and prevention of Diabetes mellitus and Obesity, two important multi-system disorders, with major socio-economic implications

Normal bone architecture, role of bone in calcium metabolism, and disorders of structure and function of bone, including metabolic bone disorders

Common disorders of calcium metabolism including diseases of the parathyroid gland with a combined clinical and pathologic presentation of the more important disorders

Clinico-pathologic aspects of common disorders of the female genital tract. These include infectious disorders of the lower female genital tract with particular emphasis on human papilloma-virus infection and its relationship to preneoplastic and neoplastic disorders of the lower female genital tract. Clinico-pathologically important dysfunctional and neoplastic disorders of the upper female genital tract, including the uterus, fallopian tubes and ovaries, will be described. These include endometrial dysfunctional bleeding disorders, benign endometrial tumors, discussion of endometrial hyperplasias and carcinomas, and myometrial tumors including leiomyomas and sarcomas. Disorders of the fallopian tubes to be described include salpingitis, and ectopic pregnancy. Classification of ovarian neoplasia including benign, borderline and malignant neoplasia with clinico-pathologic correlations will be described. A short section will include clinically important disorders of the placenta and trophoblastic disease. Another short section will be a discussion of endometriosis.

The pathophysiology of the more common disorders of the male genitourinary tract and to establish a link between these and clinical presentation and to emphasize the clinical significance of the pathologic classification, grading and staging of prostatic and testicular cancers

Working knowledge of the important surgical and pathological diseases of the breast, with emphasis on surgical anatomy and basic aspects of diagnostic testing and treatment.

Instruction is imparted by combination of didactic lectures, small group lab sessions, extensive handouts, and suggested readings.

Discipline: Pathophysiology – Renal/Urinary Tract Unit

Unit Directors: Dr. Madhumita Jena- Mohanty and (TBA Pathologist)

April 10, 2009 through April 28, 2009

COURSE OBJECTIVE

The sophomore medical student integrated pathophysiology unit on the urinary tract is taught by faculty members from disciplines of Pathology and Nephrology. The aim and responsibility of the two unit co-leaders is planning the course to ensure: a logical progression of taught topics; the synchronization of lectures and seminars etc.; and the integration of the various principles of basic and clinical sciences in a patient-oriented problem-solving approach.

At the end of the unit, students will be able to:

- Gain an understanding of renal and other urinary tract disorders (acquired, congenital and hereditary) based on altered structure and/or function.

- Become knowledgeable of the pathogenetic mechanisms and natural histories of each of these disorders,

- Understand, over a "template" of normal renal physiology, the various disorders of body fluid, electrolyte and acid-based regulation including their cause(s), interrelations, perpetuating factors and the principles underlying appropriate therapeutic strategies,

- Understand the syndromes of acute and chronic renal failure, uremia and end stage renal disease and their effects of the functions of the various organ-systems of the body, and thereby understand the principles for appropriate supportive and therapeutic measures,

- Understand the physiologic basis for the pharmacologic actions of diuretics and thereby gain insight into both their various and appropriate therapeutic applications as well as attendant side effects.

- Integrate all knowledge gained from formal instruction (lectures, seminars, etc.) by applying it to problem-solving in a clinical setting. The latter objective is achieved through a series of patient-oriented small-group seminars with faculty members of the Division of Nephrology.

Instruction is imparted by the successful combination of lectures, laboratory exercises, small group seminars, suggested and required readings and review.

Competency is judged by the successful passing of a 100 question multiple choice exam.

Competency in laboratory sessions (labs and small group patient problem solving) is judged by the ability to answer clinically based or pathologically based/problem solving questions in the exam.

Discipline: Pathophysiology – Gastrointestinal

Unit Directors: Drs. Murray N. Ehrinpreis and Husain Saleh

April 29, 2009 through May 11, 2009

COURSE OBJECTIVE

The student will acquire a knowledge and understanding of the pathology, pathogenesis and pathophysiology selected disease states of the gastrointestinal tract and related organs.

The students will apply the acquired knowledge of pathology and pathophysiology to begin to make decisions regarding the diagnosis, treatment, and prevention of diseases of the gastrointestinal and related organs.

Objectives

At the end of the unit, students will:

- Review normal gastrointestinal and hepatic, and pancreatic function and histology.
- Define and become acquainted with the major hepatic disease clinicopathologic syndromes.
- Summarize for each of the major gastrointestinal, hepatic, and pancreatic disease syndromes.

    The differential diagnosis.

    The major histopathologic features.

    The manner in which normal functions are altered by each of these syndromes.

    The clinical and laboratory features.

Required Reading

- Lecture Notes and Handouts
- Monograph: Jaundice – A Problem-Orientated Clinical Approach (included in handouts)

Recommend Text
Kumar, Abbas, Fausto: Robbins and Cotran PATHOLOGIC BASIS OF DISEASE, 7th edition.