Much of your time during the first semester will be spent in the study of the human body, and a major part of that study will include Gross Anatomy.

The class will begin with a description of the course and an introductory lecture on the general organization of the human body. You will be responsible for the material presented during this and all subsequent lectures as well as in the printed handouts. At the end of the day following each lecture, you should review the material that has been covered and consult your textbook or a faculty member for clarification of points.

During the afternoon following the first lecture, you will be introduced to the gross anatomy laboratory, located in room 73-167 CHS, and view a video demonstration on how to dissect. Dissection of the human cadaver begins the next day and is performed in teams of four students per cadaver. Students are assigned randomly to a dissecting team, and you will have this assignment for the duration of this course. You should have disposable gloves, a lab coat or other protective covering. You are responsible for all of the assigned material in the dissector. You are also encouraged to purchase one of the recommended atlases of Anatomy (Clemente, Grant or Netter) and bring this to the laboratory as well. We shall provide you with the necessary dissecting instruments but you must purchase #22 disposable scalpel blades. Do not purchase your own dissection instruments.

In addition, the class is divided into eighteen (18) groups for the CABS (Clinical Application of Basic Science) course that will consist of clinical case studies and small group discussions with a faculty tutor. The CABS course will coordinate material from the Gross Anatomy and Cell and Tissue courses whenever possible and will emphasize the practical application of basic science by using selected patient-oriented cases which require independent study prior to the small group discussions.

You are encouraged to consult the Gross Anatomy Web page which contains the daily calendar, lecture handouts, an illustrated study guide, tutorials on transverse and coronal sections of the human body, selected materials on embryology, an archive of past examination questions and supplemental information about the course.

Robert Trelease, Ph.D., Course Chair
Welcome to the UCLA School of Medicine, and congratulations on reaching this next step towards your professional goal of becoming a highly competent physician.

Your first semester in medical school will be a significant challenge to many of you. Facts and concepts come fast and furiously. The methods of study you used successfully to complete your undergraduate education may be challenged and require adjustment. The anatomical topics in the Fall semester require considerable memorization, and in the Spring semester analytical reasoning becomes much more important.

- **Microscopic Anatomy and Cell Biology** (Neurobiology 201)
- **Molecular and Membrane Biology** (Biological Chemistry & Physiology M201)

Specific disciplines such as microscopic anatomy, cell biology, physiology and biochemistry appear to have distinct boundaries; disease processes and clinical medicine, however, do not! The two components of Cell and Tissue Biology are independent courses that will be examined and graded separately. However, we urge you to recognize the interrelationships of the material you will study.

**Microscopic Anatomy and Cell Biology (Neurobiology 201)**

Microscopic Anatomy and Cell Biology is a fairly straightforward course in Histology. It deals primarily with the microscopic and submicroscopic structure of all the parts of the human body. It complements the Gross Anatomy course although it has its own order of presentation of different structures. In many cases, it also deals with the function of organelles, cells, tissues and organs. The course has its own WWW Page and you will be given a CD-ROM with interactive images taken from the class microscope slide sets, plus some review images which have no microscope slide backups. The two laboratory practical examinations (midterm and final) will be administered by computer. The midterm and final examinations also include multiple choice written exams. The final exams are not cumulative and cover only the material presented in the second half of the semester. If you have any initial trouble with your computer or CD-ROM contact Dr. Gorski immediately.

Roger A. Gorski, Ph.D., Course Chair
Welcome to our introductory course in Medical Statistics. We hope you take this opportunity to learn more about our department. We work on a wide range of modeling, computing and statistical applications in genetics, imaging, physiology, pharmacokinetics, etc., on up to the design and analysis of clinical trials.

**Description of First Year Course**
The orientation is very applied and very medical. A primary emphasis is on critical, efficient reading of the medical literature and on understanding of and ability to evaluate the types of studies on which modern medicine is based. To this end, basic statistical concepts such as sampling, inference, various descriptors of distribution, etc., are required, as well as familiarity with the more common statistical tests and the assumptions that underlie their use. Tests and statistics studied include standard normal and tests, chi-square, F-test, confidence intervals, correlation coefficient, and several useful nonparametric tests (Sign, Signed-rank, Rank-sum). In the course, there is practice in reading the literature and in preparing written critiques. We urge understanding and discourage memorization. All examinations are open-book, open-note - just as your application of these skills will be in real life.

**Organization of the Course**
This kind of material cannot be taught well to large classes, and your backgrounds with respect to it differ tremendously. Therefore, we provide several groups, leaving it to you to select the one most appropriate. There may be more than one section per group (e.g., Group A), with class sizes generally ranging 15-30. The amount of required course work and effort is the same in all groups. The purpose is to group students together with similar backgrounds and interests.

- **Group A** - No prior statistical training. Usual aptitude for quantitative subjects.
- **Group B** - No prior statistical training. Above average aptitude for quantitative subjects and/or additional mathematical training beyond the minimal requirements for medical school (e.g. majors in mathematics, computer science, engineering, and physical sciences.) As time permits, the core course material may be supplemented with elective topics in modeling and computer applications in medicine.
- **Group C** - For students who have some knowledge of basic statistical concepts and of issues relating to design of scientific studies. Basic concepts covered in Groups A and B will be reviewed. There will be more time for discussion of clinical applications and reading of medical literature. Advanced statistical topics may be covered as time permits.

A sign-up sheet for choosing a group will be in the Student Affairs Office during the first few weeks of classes. Your assigned section and room will be posted just prior to our first class in October.

*Carol Newton, MD, PhD, Course Chair*
Doctoring 1 is the first year of a four-year curriculum for medical students, providing students with an opportunity to learn important clinical skills. The first year is focused on:

- Developing interviewing skills.
- Introducing exposure to Clinical Medicine through community preceptorship.
- Learning how to identify specific clinical questions.
- Improving skills in independent learning and problem-solving around clinical material.
- Learning the basics of human development, behavioral aspects of health care, medical ethics, and techniques for effective listening.
- Gaining experience working in a group of colleagues.

The Doctoring course is arranged around multiple modules, each of which is based on an actual patient case. Collectively, the modules will give first year students both early clinical experience and insight into some of the complexities of medical practice. At the end of the first year, you should have a good idea of how physicians work in a variety of non-hospital settings. More importantly, you will begin to develop an appreciation of the doctor/patient relationship and the multiple factors that have an impact on this relationship.

The course includes a weekly lecture or clinical presentation. However, the majority of the course is taught in small groups. You will begin by meeting with your group on a weekly basis for the first four weeks. The focus during this time will be on developing interview skills. You will also begin gaining skills in group learning. Students will be working together in groups of eight students and two carefully selected faculty members. One faculty member will be a physician involved in medical care. The other will be a mental health professional from psychiatry, social work, or psychology.

Beginning with the fifth week, the groups will meet twice monthly. You, your colleagues, and the faculty will meet the patients who pose the clinical questions the first meeting. The next week will be the time for students to seek the answers, through consultations, site visits, and readings. The third week will be a time to apply the learning. This approach will allow you all to be active, responsible participants in the learning process.

The fourth week you will spend half a day with a primary care physician in his / her practice. Most students find this a highlight of the first year.

Welcome! We hope you will enjoy this first encounter with "doctoring."

Susan Stangl, M.D., M.S. Ed., Course Chair
Margaret Stuber, M.D., Course Chair
The course is a multidisciplinary approach to the basic science curriculum, designed to break down the traditional barriers of compartmentalization that are imposed by a departmental structure. Students are required to apply basic science concepts to realistic clinical problems. The course requires students to begin to reason as clinician/scientists, in other words, by defining problems, working out a decision tree, ruling out possibilities, designing hypotheses and understanding what is required to test these hypotheses. The course also has the usual objectives of problem-based learning, including helping students become self-directed learners, helping them define the limits of their current knowledge, and teaching them skills for independently obtaining information.

Susan Baillie, Ph.D., Course Chair
Leonard Mankin, M.D., Course Chair
John Tormey, M.D., Course Co-Chair, Second Semester
Gregory Brent, M.D., Course Co-Chair, Second Semester
The faculty and staff of the Department of Biological Chemistry welcome you and hope that you will become acquainted with us as soon as possible.

Our course deals with the biochemistry of the human body in health and disease. Since so much of medical practice now has a sound biochemical basis, it would be impossible for you to learn all of the relevant aspects of human biochemistry in just one semester. Thus, we attempt to have you learn the basic principles in hopes that you will appreciate the beauty of the biochemical processes by which a normal human body functions, gain insight into the changes these processes undergo during disease, and understand the opportunities these processes offer for medical intervention and treatment of disease. If these goals are realized, you will be stimulated and prepared to continue learning human biochemistry throughout your medical career.

The Biological Chemistry course, which is called Biological Chemistry 201, is given during the second semester. It builds on the Cell Biology course you will take during the first semester. Thus, we will assume that you will have remembered most of what you will have learned in that course. We do not assign a specific biochemistry textbook for Biological Chemistry 201. If you took an undergraduate biochemistry course, the text you used in that course will likely suffice for this year. If you have not previously taken a biochemistry course, we'll recommend a few books at the beginning of the second semester. In addition to the lecture course, in the second semester all students will take a separate laboratory course, Biological Chemistry 204. This course emphasizes the role of biochemical measurements in medical practice and deals with a variety of biochemical and computer techniques that are currently used in clinical diagnostic laboratories.

All of the instructors in Biological Chemistry enjoy teaching very much and are extremely conscientious about this important responsibility. We genuinely mean it when we say we are glad to meet and interact with you individually; so please come see us if you have any problems or if you just want to chat. Moreover, don't hesitate to see us before you have a problem - we can probably prevent it from happening.

You have chosen a wonderful profession; we hope your first year in this profession is as exciting and enjoyable as the practice of medicine, itself.

Bruce Howard, M.D., Course Chair
In addition to Biological Chemistry 201, all students will take a separate laboratory course, Human Biological Chemistry and Nutrition Laboratory 204. Our course teaches basic biochemical and nutritional concepts relevant to future practicing physicians experientially through techniques currently used in clinical diagnostic laboratories. Each student has the opportunity to be both the patient and the physician by analyzing and interpreting the results of each exercise. The modules serve as springboards to address other important concepts such as the importance of units, the meaning of a reference range, sources of error, and the importance of patient compliance. The participation of guest speakers from clinical labs, hematology, cardiology, and exercise physiology provides breadth of knowledge for areas outside the expertise of the course staff. Our approach integrates each laboratory module with a computer interface using custom designed programs to build a student database from personal lab results and epidemiological data for analysis at the end of the semester.

The faculty and staff are dedicated to teaching concepts relevant to future physicians. Toward this goal our course is evaluated each year in response to student, faculty and staff input to continually improve. We strive to provide individual as well a group learning opportunities through collegial discussions both formally and informally.

Leonard H. Rome, Ph.D., Course Co-Chair
John Edmond, Ph.D., Course Co-Chair
Felice Kurtzman, M.P.H., R.D., Nutrition Coordinator
Eryn Ujita Lee, Ph.D., Course Co-Chair, Course Coordinator
Alexander van der Blied, Ph.D., Course Co-Chair
Neuroscience (M203) is an integrated neuroscience course that is organized jointly by the Departments of Neurobiology and Physiology and includes the participation of neuroscientists and clinicians from several other departments. The primary goals of the course are: first, to understand basic cellular and neuroanatomical organization of the central nervous system; second, to understand the physiological basis of neuronal signaling; and then to be able to use this information to gain an understanding of the functional and integrative systems of the brain and spinal cord. The function of the nervous system is taught from a basic science perspective, with an emphasis on mastery of the material at a level which promotes integration and problem solving rather than simply learning a body of facts. Understanding the function of any part of the central nervous system requires knowledge of its relationships with other regions of the nervous system. One cannot fully explain the function of spinal reflexes, for example, without understanding their modification by inputs from the cerebral cortex and brain stem. Therefore, the course requires understanding of many different topics before one feels that he/she has a thorough comprehension and command of the material.

The first part of the course is designed to provide an essential foundation in functional and regional neuroanatomy. This material is then integrated with studies of neuronal communication and functional systems in the second half of the course with the goal of providing a broad view of central nervous system function.

The selection of material and the approach to problems is intended to provide a solid base for subsequent clinical training. The clinical relevance of the material is emphasized throughout the course by references to neurological and neuropathological cases and by discussions of basic experimental studies which have potential clinical applicability. A thorough knowledge of the neuroscience material in this course is essential preparation for understanding neurological disorders and neuropathological processes that will be encountered in general medical practice as well as in the fields of neurology, neuropathology and neurosurgery.

Carolyn Houser, Ph.D. and
Alan Grinnell, Ph.D., Co-Chairs
You will take the Physiology course with us in the second semester. Physiology, as a discipline, spans the whole range of body function from molecules to man, and it provides the foundation for much of your clinical work. Its relevance to your future studies is a major reason why we, as a Department, enjoy teaching it in the medical school setting. Also, a large part of our faculty is either clinically trained or has clinical interests.

The Physiology course, however, does not cover all of physiology. It will focus mostly on four organ systems, the cardiovascular, respiratory, renal and gastrointestinal systems.

(The basic principles of physiology are introduced in Molecular and Membrane Biology in the first semester. Endocrinology is primarily covered in the Microscopic Anatomy and Biological Chemistry courses. And of course neurophysiology is central to the Neuroscience course.)

Physiology is very logical subject that offers a high degree of intellectual satisfaction. The Physiology course is “integrative”. You will see how individual organs, such as heart, lungs, and kidney work, and how they are controlled by nerves and hormones. You will also see how they work together as a functional whole, and how they adapt the human body to a variety of situations. The clinical implications are enormous.

The topics build logically from one week to the next, and certain themes will recur again and again. The bad news is that this will require you to study at a steady pace, so that you will not get lost. The good news is that this requires little memorization, so that once you understand you will not easily forget.

In recent years, we have been reducing emphasis on lectures, and putting more emphasis on problem solving in laboratories and in small groups. We hope you will agree with previous classes that these are especially valuable and pleasant ways to learn the subject.

Have a good first semester. Some of us will teach you in the Membrane and Molecular Biology. The rest of us look forward to meeting you in January.

John Tormey, M.D., Course Co-Chair
Robert Ross, M.D., Course Co-Chair
The First-Year Selective Program is an eight-week (or equivalent) experience in which you may choose to participate in a mini course with a set format, the Medical Scholars Program, or an independent experience which may be a research or a clinical experience.

You are required to complete at least one selective for the year. Since the offerings are spread over the academic year, you may sign-up for one additional experience now or as the year progresses.

We hope that you will find opportunities that will enrich your experiences during the first year and allow you to explore avenues that are of interest to you personally. You will receive credit on your transcript for each selective that you complete. Perhaps, your experience may even be a springboard for further work, including a thesis, in the Medical Student Thesis Program.

Susan Stangl, M.D., MDEd,
Selectives Course Chair
UCLA's four-year curriculum is designed to enable students and teachers to cope with the information explosion in medicine and to provide freedom for your optimal development according to your own abilities and interests.

The increasingly holistic approach in medicine is reflected in courses presented cooperatively by faculty in several departments or disciplines. The curriculum is designed to develop a comprehensive scientific and humane approach to patient care that includes basic sciences, preventive medicine, diagnosis, and therapeutics. Clinical skills are taught in the context of anatomical, molecular, pathophysiological, and psychosocial factors in health, disease and treatment.

The first two years provide instruction in the sciences basic to medicine. Various formats for instruction are used, including lectures, tutorials, seminars, laboratory sessions, demonstrations, and visits to physicians' offices. Emphasis is on basic biological mechanisms and understanding normal and abnormal structure and function relating to states of health and disease.

The "Doctoring Curriculum," as well as Clinical Applications of the Basic Sciences (CABS), Pathology, and other courses use problem based learning to integrate clinical relevance with the basic sciences. Microbiology & Immunology, Pathology, Biochem lab, and PPD will use computer-based simulated cases to strengthen your problem solving ability and use of resources. In addition, small group instruction is incorporated into several courses, providing more opportunities for self-directed learning, increased interaction with faculty, and more interactive learning with your colleagues. Emphasis is also placed on understanding the whole person in health and disease.

The Doctoring Curriculum provides a four-year continuum of case-based instruction. The educational foundation of the Doctoring Curriculum is a problem-based, case-based approach to learning. Students and faculty together consider a patient's case, ask questions and then seek out answers. The student is an active, responsible participant in learning rather than a passive receptacle. Areas of study in Doctoring build on students' special areas of interest, prior work and preferred approaches to learning. Students develop their own learning agenda, making learning purposeful and enjoyable. The skills, knowledge and attitudes outlined in the mission of Doctoring are inherent throughout the four-year curriculum. Each year of the Doctoring Curriculum has a central theme, in many cases, coordinated with the other current ongoing courses. There is integration not only throughout each year but also between years so that students' learning is developmentally appropriate.

During the last two years, instruction in patient care is given in the form of required and elective clinical rotations at the UCLA Medical Center and at the many affiliated hospitals. You will have the opportunity to schedule your clerkships at a variety of locations, broadening your experience with various patient populations and types of facilities, such as the academic medical center, private, county, and Veterans Administration hospitals. There are wonderful experiences available in community-based medicine, rural settings, as well as many highly specialized areas.
The curriculum is rich and the opportunities within and outside the curriculum are varied. Research experience is encouraged through selectives, summer programs, Medical Student Thesis Program, and an outstanding faculty with exciting projects in bench research, clinical research and community service.

**A Note on the Pass/Fail System and Residency Selection**

The UCLA School of Medicine implemented a Pass/Fail grading system beginning with the entering class of Fall, 1993.

Before implementing the Pass/Fail system, the Faculty Executive Committee (FEC)* discussed over a period of months the issues surrounding changing from the traditional GPA system. The FEC actively solicited comments from our faculty at UCLA and our affiliated hospitals, from our students and from our own internship/residency program directors. A series of Town Hall meetings were held by the FEC at which the issues were debated by faculty and students in attendance. Data was collected from medical schools across the country with Pass/Fail grading systems.

The residency application process includes a comprehensive Dean's Letter which is written for each one of the graduates. At UCLA, this Dean's letter includes quoted excerpts from the written evaluations which are received from each of the core clinical clerkships taken during the third year, and from fourth-year clinical and research electives.

Therefore, the internship and residency programs will still have a great deal of information on which to base their selection. In many cases, we believe that these quoted excerpts are more effective than a letter grade in accurately portraying the graduates' potential.

Our graduates have fared very well in internship and residency selection over the past several years, and we expect that this will continue.

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* The Faculty Executive Committee (FEC) is the academic senate and legislative body of the School of Medicine. The members are elected representatives from: the basic sciences, the surgical specialties, the medical specialties, the clinical consultation services, and the faculty of the Charles R. Drew University of Medicine and Science.