This summary tries to answer the most common questions of beginning students. This material should be studied before you meet with an advisor, but it is NOT a substitute for regular meetings with an advisor.

Many students who are older, who already have degrees, or who are changing careers pursue pre-medical studies at SJSU. If you fit one of these categories, in addition to this summary please see a separate handout called, “Is it too late for me to go to medical school?”

GENERAL INFORMATION:

Each year an edition of the Medical School Admission Requirements is published. Many local bookstores and the Spartan Bookstore sell copies or it may be ordered directly from:

Association of American Medical Colleges, Attn: Membership and Subscriptions
2450 N Street, NW
Washington, D.C. 20037
Phone: 202: 828 0400

This book contains important general information, admission requirements, details about application timing, finances, class composition, school emphasis, etc., for every AMA accredited medical school. It also includes details about the Medical College Admission Test (MCAT) and the American Medical Colleges Application Service (AMCAS). You should study one of these manuals early in your college career, and work from the current edition as you prepare your applications about 18 months before you plan to enter medical school. The Biology Department receives MCAT and AMCAS application forms during the spring semester.

UNIVERSITY INFORMATION SERVICES:

General Catalog: Buy a University Catalog. Read it. For graduation, you are bound by the requirements in the catalog that is in use at either the semester of your initial enrollment in your major, or the semester of your graduation, not by some combination of catalog requirements. This book, along with the Schedule of Classes each semester, is your guide through the labyrinth of the University.

Personal advising: Certain faculty in the Department of Biological Sciences serve as pre-medical advisors; majors in this department will be assigned an advisor. Majors in other departments should consult with one or more of these pre-med advisors regularly. Some non-pre-medical seniors who have decided they want to attend medical school unfortunately learn that they need another one to two years of undergraduate preparation in order to apply. If you have thoughts, however tenuous, concerning medical school, see an advisor early in your academic career.

The University Career Planning and Placement Service has information and some medical school catalogs. This service will be of help to individuals who want a career in health, but not necessarily as a physician, and who are unfamiliar with possible jobs and training programs. The Assessment Center, Wahlquist Library Central, helps students who have questions about General Education requirements.

GENERAL INFORMATION:

What are my chances of acceptance? Nationally, of those who complete applications, about 35% will be accepted by some medical school, some in a second or even third year of application. Students file multiple applications, typically 12 to 30 per student; individual schools accept only about 1 out of 10 (or fewer) of the total number applying. State supported schools give preference to state residents, so when applying out-of-state chances are better at private schools. Many state schools accept only their own residents.
Since 1987, applications to medical schools have increased sharply, but the number of spots available remains constant. MCAT scores and GPAs of those accepted are higher now than just a few years ago. Competition is increasingly difficult, and anything short of total commitment to the process will lead to a disappointing outcome.

Must I complete a Bachelor's degree? Yes. Period.

How do San Jose State University graduates do? Exact statistics by institution are not easily available and are hard to interpret. SJSU has relatively few applicants each year, only about 30 to 40 (as compared with hundreds from Davis or Berkeley), and many of those are post-baccalaureates who are changing careers. Within the last few years, our best graduates have been admitted to every medical school in California and to at least 20 out-of-state schools. SJSU students routinely report that they are as well prepared - often better prepared - for medical studies as graduates of any university in the country.

If I do get in, what are my chances of graduating from medical school? About 95%. Medical schools do everything possible to help their acceptees complete their studies. Prospective students worry about financing medical education. You may have to expend more energy than in the past to secure financial aid, and most of that aid may be as loans, but at this time **NO ONE SHOULD BE DETERRED FROM APPLYING TO AND ENTERING MEDICAL SCHOOL FOR FINANCIAL REASONS ALONE.**

What about foreign medical schools? Few openings are available for American citizens in foreign schools. Be very wary of any that advertise guaranteed admission for a large sum. Unfortunately, for those few foreign schools that do admit United States citizens, the percentage of graduates who pass the licensure exam for practice in the United States is discouragingly low, often only 20 percent or less. One or two of the Caribbean schools may be worth considering as an alternative if nothing else works out.

**COLLEGE CURRICULUM: MAJOR, GRADES, AND ACTIVITIES:**

What should my major be? It does not matter, as long as you complete medical school prerequisites with distinction. Whatever you choose, though, do well, because it is your choice, and if you don’t do well in a major of your own choosing, medical schools will consider you a very poor risk. At SJSU most premedical students major in Biological Science with a Concentration in Molecular Biology or Systems Physiology, or in Biochemistry. Most entering freshmen should NOT plan on graduating in four years - see your advisor.

What about grades? Must I get straight “A”s? No. Medical schools want balanced, integrated human beings. HOWEVER, grades are important. Those with recent science GPA’s below about 3.3 are not likely to be admitted except under very special circumstances, and 3.5 is a good target to shoot for.

Those accepted with lower GPA’s are always able to point to good reasons for the low grades, AND they offer unusual evidence of promise for the medical profession. This is especially true of older applicants, and of those changing careers. Keep in mind that your applications will be filed before your last year in college, and that action will usually be taken before your senior grades can be reported. Senior grades are thus of primary concern mostly to those who have been turned down and will be applying a second time.

What about extracurricular activities? In addition to studies, be active in whatever interests you. Medical schools look for evidence of continuing interest and motivation, and for expertise in depth. They do not count activities. Whether your hobby is music, art, computers, athletics, journalism, etc., keep at it and do a good job. If you develop a skill that might be of value in medicine (fabrication of miniature instruments, computer problemsolving for diagnosis, interviewing) your admission chances will be enhanced. Participating in activities that show an interest in people is desirable, as is serving as an officer in an organization.

Should I work, or volunteer, In a hospital? Of course, the more the better! Hospital experience will help you to evaluate medicine as a career and will provide evidence to schools of your knowledge of medicine. Consider enrolling in SJSU’s Bio 181 pre-med program at San Jose Hospital once you reach upper-division status. Your AMCAS personal statement must include discussion of how you came to your interest in medicine, why medicine
appeals to you, and why you think you would make a good doctor. Having worked around physicians, you will have fewer illusions and will be able to give reasonable answers to such questions. Many medical schools also appreciate evidence of community service.

Does it matter if some required course work is completed at a Community College? Not officially. But be sure to take major’s biology and chemistry courses, not those for health professions such as nursing. Do realize that many schools assume that good grades are easier to obtain at community colleges. Also, recommendation letters from faculty at four year colleges usually carry more weight than those from two year college faculty.

THE APPLICATION PROCESS:

When do I take the Medical College Admissions Test (MCAT), and how important is it? In April, about 15 months before you plan to enter school, or in August. The MCAT may be taken more than once, and medical schools consider only the highest scores. But recently we are hearing that students should not take the MCAT more than twice, and the results should be no more than two years old when you apply. In general, the MCAT is the single most important measure you will present to medical schools, especially if your background is in any way unusual. Discuss MCAT thoroughly with at least two advisors.

Do I apply to each medical school Individually? Yes and no. The majority use the American Medical College Application Service (AMCAS), a process by which you submit all material, including work history, grades, personal statement, and MCAT scores just once. Each school to which you have this information sent evaluates it, and then asks for supplementary material to be sent directly to the school. Letters of recommendation are sent as part of the supplementary material, not before. A word of caution: most schools use GPA’s and MCAT scores as weeding out devices; those below certain levels are not asked to submit supplementary material. Some schools request supplementary material and fees from almost everyone.

From whom will I get letters of recommendation? From people familiar with your intellectual potential, achievements, sense of responsibility, and commitment to medicine. These will be people who can speak of specific achievements rather than people who say vaguely what a nice person you are. Prestige and medically oriented recommendations do carry weight. A physician’s recommendation is valuable IF it comes from a doctor who has seen you at work. Typically a Biology faculty member and a Chemistry faculty member are used for recommendations. Committee recommendations are occasionally requested, but are not required and in fact are rare in schools with relatively few applicants (such as SJSU).

What about special admissions consideration for minorities? These are extraordinarily valuable opportunities, and you should immediately seek out information if you think you may qualify. Note, however, that these programs do not result in the admission to medical school of students with mediocre records. They do get your application a good look, even if formal scores are not as good as you would like. There are an increasing number of special opportunities for populations poorly represented in medicine, including special MCAT reviews, interview preparation, etc. You are strongly advised to explore and take advantage of special programs and opportunities. For the most part, these minority considerations apply only to African-Americans, Hispanics, and American Indians/Alaskan Natives, and certain Pacific Islanders.

“Diversity” - broadly defined to include age, cultural background, professional and research interests, and family experience - is something sought by every medical school. So consider any unusual aspects of your life to be positive factors in the application process.

How much will it all cost me? Depending upon whether or not you take trips to visit schools to which you have applied, a matter you should talk over with your advisor, 10 to 20 applications and some interviews could easily cost you $3,000. If your interviews are all local, then costs will be less. If you are eligible, do apply for waiver of application fees; there is no bias against students who do so.
SPECIFIC COURSE INFORMATION:
Degree requirements are outlined in the catalog. The following information describes how medical school prerequisites may be fulfilled at San Jose State University.

MINIMUM REQUIREMENTS: Every school demands successful completion of the following. These courses are also to be completed before taking the MCAT, with the exception of calculus, which may be taken at any time prior to entering medical school.

a. One year of “major’s” biology, including animal biology and cell biology. Biology 2 followed by Biology 3 satisfies this minimum requirement. Some medical schools require additional courses in biology. Note: Biology 1 is prerequisite to Biology 2 for majors, but is waived for students not seeking a Biology degree.

b. One year of inorganic chemistry, with lab. Chemistry 1A and 1B.

c. One year of organic chemistry lecture, with two semester or three quarter units of lab. Chemistry 112A, 112B, and 113A. Chemistry 8 and 9 are definitely not sufficient.

d. One year of college physics. Physics 2A and 2B.

e. One year of English Composition. English 1A and 1B.

f. Any course entitled Calculus I, or Beginning Calculus. At SJSU, Math 20 or 30 suffice. Trigonometry is prerequisite to calculus, and you may have to take a pre-calculus course (Math 19) if you do not score well on the Calculus Placement Exam for Math 20.

Note: Some Upper Division Biology (e.g., genetics, 115) should be taken before the MCAT if possible, and at least sit in on a human or mammalian physiology course if you haven’t taken Biol 124.

The above is an absolute minimum list. There are higher level options for some of these courses; consult with an advisor before enrolling in advanced courses.

Prerequisite considerations: Biology 3 must be completed (C or better) before enrolling in upper division biology courses. The lower division labs fill up very quickly, so be persistent in trying to get in and also be alert to shifting policies regarding pre-registration. Note that Chemistry is also prerequisite for Biology 3.

RECOMMENDATIONS: Of the following, some are required by some schools, and all are recommended.

a. Biology 115 (Genetics), Mammalian Physiology (Biology124/125), Histology (Biology 134), Virology (Microbiology 170), Human Genetics (Biology 117), Anatomy (Biology 165) and immunology (Biology 107/S) are good electives for premedical students.

b. Biochemistry (Chem. 135, or the two/three semester major's sequence) is very strongly recommended by students now in medical school. (Chem. 55 is prerequisite to the major's biochem series). Quantitative analysis (Chem 55) and/or physical chemistry (Chem. 160) are good electives for the research-oriented student, but are rarely required at medical schools.

c. Social Sciences. Introductory courses in psychology or sociology or anthropology are recommended.

d. Foreign language. Not required, but a strength in the application. Serious work in music, art, photography, etc., makes a good substitute for language. For today's global perspectives, a second language is strongly recommended.
THE SAN JOSE STATE “TRACK RECORD” AT MEDICAL SCHOOLS

A recurring question: “How do San Jose State students fare at medical schools?” Prospective students ask us, current students ask us, wondering if they should transfer elsewhere; parents and alums ask us. We are, in the pecking order of higher education, not a high-status institution. The common mythology is that attending a college or university higher up the status ladder will improve one's chances for medical and other professional schools.

The facts belie this perception, but the myth persists. San Jose State does not have the hundreds of applicants per year typical of the larger University of California campuses, so in raw numbers we send far fewer students on to medical school. Our rate of acceptance, however, compares favorably. This is due, at least in part, to the more highly personalized classes and counseling we are able to provide to upper-division students. If MCAT scores are acceptable (10's and above, with an occasional 9 sneaking in), then:

1. Most serious applicants, i.e., those who by their senior year have demonstrated work of high quality in the sciences and have the support of the faculty, obtain admission to medical school. Typically about a dozen students well known to advisors are accepted. (Of those who apply, and are officially listed as San Jose students on AMCAS summaries, some have taken only a few courses here, some graduated years ago in non-science majors, etc. So of the total number who officially apply from SJSU, many are simply unknown to advisors).

2. SJSU students have recently been admitted to major medical schools throughout the country, including all of the University of California Schools.

3. With few exceptions (none in recent years), our students have done excellent work at their medical schools; many are in the top 15% of their classes. The reports from the medical schools to our science faculty have been very enthusiastic, and the students report that their SJSU classes have prepared them very well for medical school work.

Several factors probably account for this successful record. The College of Science is a well-equipped and rigorous one, where earned grades of “A” or “B” really do reflect work of quality. The science faculty is demanding, but is also known for personal attention to students and for careful advising.

Furthermore, the atmosphere among pre-medical students and other pre-professional students at SJSU is not one of “cutthroat” competition. Instead, there is a collaborative environment, wherein students cooperate actively with each other in pursuing common goals. There is a good deal of mutual assistance with course work, medical school applications, internship experiences, and the like. An active student pre-medical association assists in job placement, interview preparation, application reviewing, etc.

ATTEND PRE-MED CLUB MEETINGS OFTEN!

All of this contributes to a preparation for pre-medical students that is both broad and deep. SJSU is a heterogeneous University in its students' ages, cultural backgrounds, ethnicities, and life interests. Pre-professional aspirations are not as widespread at SJSU as at institutions with more homogeneously selected populations, and we believe that the combination of tough-mindedness and the care our students receive pays off as they move through medical school into the profession.

You should not rush your undergraduate preparation. Medical schools are increasingly leaning towards students who are a little older rather than younger. One very prestigious school awards one point in the application process for each year from age 20 to age 30. Your undergraduate years will be among the most relaxed of your life, so take the time to find out who you are, what the world is like, and what kind of a fit there is between you and the world. Build a solid foundation, not only in science, but in the things that will make you an interesting human being throughout your life.

HNDTS:PREMED-PGM (rev 8/99)