

## **THE DECISION TO PURSUE A CAREER IN MEDICINE**

Dear Pre-Medical Student,

Welcome to Augusta State University. Having career aspirations to become a physician is a challenging and exciting choice. Your undergraduate pre-professional preparation will be a key element in your overall comprehensive master plan for success (i.e., **ACCEPTANCE**). You should be aware that competition for admission to medical schools is very intense. Only about one-third of those who now apply gain admission, even though the majority of those rejected would likely be able to successfully complete medical school and could make competent and dedicated physicians. Each year, the number of applicants increases while the number of positions remains constant. Thus, competition for admission is becoming even more intense.

Many students enter college expecting to become doctors with little real knowledge of what is involved in the practice of medicine. Often students have little understanding of the trade-offs that are made when choosing medicine as a career goal, particularly concerning the pressure and demands made by the profession. Your pre-medical advisor at ASU can be a valuable source of information as you make your choices and trade-offs in preparation for a career in medicine.

We look forward to working with you as you embark on a career pathway that will make heavy demands on your mental, physical, and emotional well-being. It is essential that you maximize your awareness, make informed judgements, pay attention to details, minimize errors, and excel academically. Your pre-medical advisor can help you enjoy a positive undergraduate preparation. However, your success will be determined by **your** academic performance, **your** admission test (MCAT) scores, and **your** overall credentials. We wish you the best as you prepare to join the health care delivery team.

Sincerely yours,

Donna S. Hobbs, Ph.D., Department of Chemistry & Physics

Richard D. Griner, Ph.D, Department of Biology

Russell E. Stullken, Ph.D., Department of Biology

William R. Wellnitz, Ph.D., Department of Biology

## **PRE-MEDICAL ADVISING AT AUGUSTA STATE UNIVERSITY**

Pre-medicine is not a degree at ASU but rather a pre-professional intention. Pre-medical advisors can assist in a number of ways in planning for admission to medical school, including the dissemination of information regarding changing policies or requirements for admission. Assistance is available in preparation of documents required in support of application, and all serious pre-medical students are urged to make full use of this assistance.

Periodic group meetings will be held for students in pre-medicine. Topics of interest will be discussed and questions answered in what are essentially group advising sessions. Meeting information will be posted on the pre-med web site. **All pre-med students are urged to check this pre-med web site regularly so that meetings of importance and deadlines will not be missed. This web site is the primary means by which communication is maintained with pre-medical students.**

Pre-medical students with specific questions about any aspect of preparation for medical school including course work, the major, evaluations, preparations for MCAT, where to apply, etc. are urged to make an appointment with their pre-medical advisor. It is a good idea to periodically (at least once a semester) stop by to review your record with your advisor.

It should be stressed that the final responsibility for planning the academic program rests with the student and *not* with an advisor. The advisor should explain the options, including requirements that must be met, but the final decisions as to which courses to take and when to take them must be made by the student. Good judgement will be required, for there are many options available and many decisions to be made. The mature student will have as much information as possible on which to make any decision. One of the best sources for information will be your fellow students, particularly those ahead of you who have already taken the courses and are acquainted with the instructors and course content. The better informed student will usually be in a much more competitive position.

## **THE PRE-MEDICAL PROGRAM OF STUDY AT AUGUSTA STATE UNIVERSITY**

When planning a program of study, students should keep in mind that they must usually meet three different sets of requirements. First are the requirements of the medical school, which must be completed before the applicant matriculates. Second are the general degree requirements that are set by the university for a particular degree. Third are the requirements set by the departmental faculty for a specific major. Planning must also include completion of the subject matter which will be tested on the MCAT *before* taking the test. Each of these specific requirements will be discussed below.

### **Pre-medical Requirements**

There are some variations between schools, but almost all of the U.S. medical schools will accept as minimum preparation in science one year each of general chemistry, general physics, general biology and/or zoology, and organic chemistry, all with the appropriate laboratory. Most also accept a semester of biochemistry in lieu of a third semester of organic. Requirements for specific medical schools are found in the AAMC publication, *Medical School Admission Requirements*. This booklet is an invaluable source of information and should be consulted before completion of the application so that you are assured of having all requirements for each school to which application is made.

### **Course Selection**

When selecting courses, pick those that will fulfill your graduation requirements for ASU, count toward your major or minor, and/or satisfy the admissions requirements of medical schools. These requirements include at least one year of biology, two years of chemistry and one year of physics, one year of English, and one year of mathematics, and they are necessary for admission to almost all medical schools. In addition, many schools recommend that students take a *variety* of other courses. Courses recommended by ten or more schools are mathematics, biochemistry, humanities, physical chemistry, embryology, genetics, behavioral science and social science.

When selecting electives, a student should consider the following advice from the catalog of Albany Medical College: "Students are advised not to select courses, such as physiology and histology, which are subjects in the medical school curriculum, to the exclusion of other subjects, such as embryology, which are not." On the other hand, note that biochemistry, one of the most frequently recommended courses, is usually a part of the medical school first year curriculum. Courses taken should be those regularly given for science majors, not survey courses, or courses for non-science majors.

## **Additional Courses**

Although many medical school course requirements are also required for specific majors at ASU, certain of these courses should be taken by *all* premedical students unless special circumstances prevent their being scheduled. In this category are Biochemistry, Genetics, and Microbiology, and Cell Biology.

Students should not attempt to take courses that comprise most of the first year of medical school during the senior year in college. Experience has shown, however, that if a student has a strong background in some of these courses, the first year of medical school will be less stressful and the student will get off to a much better start. The desire to obtain a better background for medical school must be tempered by the realization that the senior year of college will probably represent the last opportunity you will ever have to pursue academic interests in areas other than medicine. Many well-qualified students take a few courses completely unrelated to medicine or degree requirements during their senior year in order to indulge in some area which they have always wanted to pursue in more depth.

## **Selection of a Major**

Medical schools would like to admit applicants possessing widely varying interests and with majors in different fields. All medical schools profess that applicants should have a "broad education," by which they mean:

- (1) strong foundation in natural sciences - biology, chemistry, mathematics, physics
- (2) highly developed communication skills - the use and understanding of written and spoken language
- (3) a solid background in the social sciences and humanities

Within this broad framework, a student is free to major in whatever subject or subjects he may find most interesting and challenging and in which he performs best. The AAMC states, "It should be strongly emphasized that a science major is not a prerequisite to medical school, and students should not major in science simply because they believe this will increase their chances for acceptance." There is no significant difference in the acceptance rate for students majoring in the natural sciences, most social sciences, the humanities, or engineering.

Medical schools claim that the discipline in which a student majors does not influence directly his acceptance into medical school. However, many medical school urge students who major outside of the natural sciences to be sure to take more than just the minimum number of science courses required for admission.

It should be emphasized that non-science majors, even more than science majors, need to do well in their science courses. A chemistry major, for example, has ample opportunity to prove himself by performing well in upper level chemistry courses if he should make a C in General Chemistry, but such opportunities might be more difficult for a social science major to find.

## **FACTORS IN MEDICAL SCHOOL ADMISSION**

Medical schools utilize an admissions committee appointed by the Dean for selection of the entering class. The size of the committee will vary from school to school, but it will normally be composed of M.D.s from the clinical faculty, Ph.D.s from the basic sciences faculty, and medical students who are typically in their third or fourth year. Year-to-year changes in the composition of the committee at any particular school are often reflected in slightly different emphasis on selection factors. However, all medical schools, in filling their entering class, will select students who show evidence of high intellectual ability, a good record of accomplishments, and personal traits which indicate ability to communicate with and relate to patients in a realistic, yet compassionate, manner.

Admissions committees strive for objectivity when making their decisions regarding admissions. There is, therefore, a great deal of emphasis on grades, scores on the MCAT, and other factors that can be easily measured; but they consider any information that is available regarding an applicant's overall suitability and promise as a physician. If such factors as state of legal residence and other absolute factors are ignored (i.e., you comply with their particular requirements or preferences, or you do not), there are four factors that will largely determine whether or not a particular applicant is accepted. These factors are: 1) overall academic record, 2) scores on the MCAT, 3) evaluations from faculty members who have had the applicant in class and, 4) impressions made during a personal interview with the faculty and students of the medical school, including members of the admissions committee. Other factors that will affect the decision (not generally equal in weight to the four listed above) are work experience in a medical treatment facility and extracurricular activities.

### **Overall Academic Record**

The undergraduate record, particularly grades in biology, chemistry, physics, and mathematics, is the most important single factor in predicting whether or not a student will be admitted to a particular medical school. Most medical admissions committees feel that the quality of work in the subjects taken leading to the baccalaureate degree is the most important indicator of probable success in medical school. The academic record may be viewed as including the cumulative GPA, subjects taken, rigor of the major, and trends in performance (i.e., were grades mediocre in the freshman year with a constant improvement during the sophomore and junior years, vice versa, or was performance relatively constant?). A strong undergraduate record is considered evidence of both ability and motivation, hence, the heavy reliance by committees on this factor. Succinctly stated, if a student has both high aptitude and good motivation, a competitive academic record will be maintained. Grades are not evaluated alone but rather in the context of the total academic program, with such factors as part-time employment, participation in varsity sports, and other severe demands on study time looked upon as extenuating circumstances. The undergraduate academic record should be stressed since it is difficult to compare records made in graduate or professional school or as an irregular student taking carefully selected courses with those records made by an undergraduate student in a regular degree program.

## **Grade Point Average**

For most medical schools, the grade point average is the most important single criterion in determining whether or not a given applicant is admitted. According to the AAMC, "College grades are perhaps the most important single predictor of medical school performance, although medical schools do recognize that grading policy may differ from one college to another, or even with departments of the same institution. The mean undergraduate grade point average (GPA) of the first year entrants [in recent years] was approximately 3.5 or a high B+. The C students admitted in recent years were usually individuals who either achieved strikingly improved performances in their pre-medical studies after modest beginnings in their early years of college or demonstrated other characteristics deemed desirable for medicine by the various medical school admission committees." It cannot be too strongly emphasized that the higher a student's GPA, the better the chances of being accepted into medical school.

Whenever a premedical student registers for a course, it should be with the reasonable expectation of making an A. A good source of information and advice will usually be a fellow student who has already taken the course.

## **Low Grades**

Grades of D earned in courses specifically required for medical school admission will not be accepted. Such courses must be repeated. Grades of D are not looked upon favorably in any course. Grades of C are acceptable and while they are not very good, they should *not*, as a routine matter, be repeated. *Should a C be earned in a required course, it is preferable to take a different, higher-level course in that same discipline, rather than repeating the course itself.*

## **Repeat Credit**

Medical schools are not happy with the student who has very much repeat credit on his transcript. They especially frown upon upperclassmen taking 1000-level courses a second time. Should a student find it necessary to repeat a course, any grade lower than an A the second time around will be looked upon with great consternation. Surely a student should be able to get an A in a course on his second try! See above on the question of repeating courses where C's and D's were earned. Note that AMCAS and many non-AMCAS medical schools average the grades when a course is repeated, rather than substituting the second grade, as ASU does when computing the Institutional GPA (see 2002-2003 ASU Catalog, page 28).

## **Withdrawals**

A sprinkling of W's (withdrawals) on a transcript is a cause for concern by most admissions committees. One or two W's will not usually adversely affect a person's chances for admission, but several, even with a good GPA, would be viewed with apprehension. Pre-medical students are therefore cautioned not to make a practice of withdrawing from courses. As a rule, admissions committees feel that a student who makes a habit of dropping courses lacks either perseverance or a realistic view of his own capabilities, or both. A series of W's will definitely weaken your record!

## **Independent Study**

Medical schools view independent study or participation in research or the Honors Program with great favor. The AAMC states, "Students who have taken special honors courses or who have been selected for advanced sections of a regular course should not hesitate to give medical schools detailed information about this. They should also request their college advisors to refer to this in their recommendations."

## **The Medical College Admission Test**

The Medical College Admission Test (MCAT) has traditionally been second in importance only to grades when evaluating an applicant for medical school. The MCAT is given twice each year, in April and August. The latest that the MCAT may be taken is in August approximately one year before an applicant expects to matriculate in medical school. However, applicants are urged not to wait until the fall of the senior year to take the MCAT, but to take it in the spring almost 18 months before the expected time of matriculation. If a student fails to score sufficiently well on the April test to be competitive, it is possible to retake the exam in August. Most medical schools will accept the otherwise well-qualified student who has poor MCAT scores in the spring administration of the test but good scores in August. The student who takes the MCAT for the first time in August as a rising senior and makes scores that are not competitive (even because of factors such as illness, accident, etc., that are beyond his or her control) will usually not be accepted the next year, causing a *delay in entering medical school for a full year*.

There is considerable misinformation about the strategy which should be employed in taking the MCAT. Many pre-medical students have been advised to take the test "just for practice" the first time, and then to come back and prepare for the exam during the second and perhaps third test. This is generally very poor advice. One reason is that it is not possible to suppress the reporting of scores as was done several years ago. All applications will be accompanied by the results of the last two scores made on the MCAT, and all other scores are available to medical schools.

## **Extracurricular Activities and Work Experience**

It is important to understand the role of extracurricular experience in the context of admission to medical school. Given two students with identical grade point averages and MCAT scores, then extracurricular activities will be a plus factor. **AT NO TIME AND UNDER NO CIRCUMSTANCES, HOWEVER, ARE EXTRACURRICULAR ACTIVITIES A SUBSTITUTE FOR GOOD GRADES.** The student who becomes so involved in campus activities that his grades suffer is not likely to be admitted to medical school. The student who has good grades and participates in extracurricular activities will undoubtedly be admitted before the one who does not have such outside interests.