Preparation to apply to medical school involves more than simply taking and doing well in the minimum course requirements. You can find a great deal of information about successful applicants at AAMC.org. Most students who apply to medical school have taken more coursework than the minimum required. Medical school continues to be very competitive, with only about 40% of applicants being admitted at a national scale. SIE students tend to be quite competitive in application to medical school. On average about 20 SIE students apply to medical school each admission cycle, and about 60% are admitted. However, the credentials of these successful students are truly outstanding. SIE will not get you to medical school unless you do outstanding academic work in SIE courses. Our advice to SIE students interested in applying to medical school takes these realities into account course planning plan for medical school.

In addition to this historically competitive landscape, the nature of the MCAT and the linked medical school admissions requirements are in a state of change and flux. Starting January 2015 a new MCAT will be implemented. The AAMC organization is preparing, testing, and evaluating items for this new MCAT now. Medical schools are responding to these changes by loosening their formal course requirements, while at the same time increasing the areas of expertise that applicants are expected to demonstrate. The result of these changes is that medical school applicants will need more science courses to be competitive. The science faculty at University of Maryland have been following the changes closely. We strongly believe that all UM students, including those in SIE, will be very well prepared for the new demands. SIE is adjusting its course offerings, and its timeline for medical school preparation accordingly.

Five important aspects of these changes are particularly relevant to SIE students.

1. The new MCAT will explicitly include biochemistry material. In line with this, many medical schools are expecting students to have taken a biochemistry course before applying to medical school.

2. The importance of molecular genetics is being increasingly stressed on the MCAT and in medical school admissions. In line with this, many medical schools expect to see molecular genetics expertise in applicants. In terms of courses this translates to having a course in genetics on an applicant transcript. In response to this, SIE will begin to alternate offering General Microbiology (BSCI223) and Principles of Genetics (BSCI222).

3. Medical schools increasingly want mathematical skills that reflect what is needed to effectively practice medicine. While the guidelines for math requirements have not been made explicit by AAMC, the University of Maryland pre-medical advisors strongly recommend that students take one semester of calculus and one semester of biostatistics in order to be competitive. Toward this end SIE will now offer MATH220, Calculus 1 and STAT464, Biostatistics, as part of the SIE program.

4. The new MCAT will be much more interdisciplinary than the old MCAT, asking students to understand how math, physics, and chemistry processes underlie and play out in biological processes. SIE courses already emphasize this kind of integration. SIE students should pay attention to these aspects of their studies.
5. The new MCAT will include a social science section that covers the basic principles of psychology and sociology. SIE will NOT offer these courses. If you have not had a psychology and a sociology course in your undergraduate curriculum it is highly recommended that you take these courses through a local community college, in a day time course at UM, or during Summer Term.

### Preparation for the MCAT

#### Recommended SIE Courses

- BSCI105 Principles I with lab
- BSCI222 Principles of Genetics
- BSCI223 General Micro with lab
- BSCI330 Cell Biology and Physiology with lab
- BSCI440 Mammalian Physiology
- Other upper level BSCI courses are helpful
- CHEM131/132 General Chemistry and lab
- CHEM231/232 Organic Chemistry 1 and lab
- CHEM241/242 Organic Chemistry 2 and lab
- CHEM271/272 Analytical Chemistry and lab
- BCHM463 Biochemistry
- PHYS121 Fundamentals of Physics I
- PHYS122 Fundamentals of Physics II
- MATH220
- STAT464

Many of these courses are also offered during evening hours through Summer Term. PSYC 100 and SOCY 100 are offered as well. Summer Term courses are not part of the formal SIE program. The SIE in-state tuition rate does not apply and students will be charged according to their residency status.

- For complete Summer Term information, including registration and courses offered, visit [summer.umd.edu](http://summer.umd.edu).