UR PRE-HEALTH ADVICING NOTES

Planning the First Semester Schedule

1. It is recommended that students take at least one majors-level science course in their first semester, regardless of their intended major.
   
a. Students considering a Chemistry major should take CHEM 141 in their first semester, unless they will be entering the SMART course sequence.

b. Students considering a Biology or Biochemistry & Molecular Biology major should take CHEM 141 in their first semester, unless they will be entering the SMART course sequence. Students may also take BIOL 199 in the fall, but it is fine to take it in the spring of the first year. Students who wish to take BIOL 199, but do not get a seat in the fall, should email Prof. Krista Stenger (kstenger@richmond.edu) so that the Biology department can plan for the needed sections in the spring.

   c. Students considering a Physics major are encouraged to also take PHYS 131 in their first semester.

   d. Students considering a non-science major are encouraged to take CHEM 141 in their first semester.

2. For those students who have a weak background in math or who did not take calculus in high school, taking two science courses plus calculus can be particularly rigorous. Such students should consider postponing calculus until their second or third semester.

3. AP/IB science credit
   
   **Chemistry:** Many health professional schools do not accept AP/IB credit for general chemistry unless more advanced coursework is taken in chemistry. For this reason, it is generally advisable to not use AP/IB credit for general chemistry (i.e., CHEM 141) unless the student intends to major or minor in Chemistry or major in Biochemistry & Molecular Biology (BMB).

   **Biology:** AP credit for Biology is applicable only to BIOL 120, which is a non-majors course that does not satisfy health professional school admission requirements.

   **Physics:** Most health professional schools accept AP/IB credit for physics.

4. It is best to not exceed 4 units of coursework per semester during the freshman year in order to allow a smoother transition into college academics.

Beyond the First Semester

*Commonly required courses for admission to health professional schools are given in the enclosed table. Many schools will require other courses that vary by program. Encourage students to consult catalogs and websites for programs to which they anticipate applying to be sure that all requirements of those particular schools are satisfied. Additionally, please be aware of the following items regarding the pre-health curriculum.
1. Calculus
   • Most health professional schools do not require calculus. However, MATH 211 or 190 is required for PHYS 131 and MATH 212 is required for PHYS 132.

2. Taking more than two lab-associated science courses in any given semester is not recommended.

3. Non-science majors are strongly encouraged to take at least one upper-division science course prior to applying to health professional school.

4. MCAT preparation
   • UR offers a tuition-free, in-house MCAT preparatory course (spring semesters only). It is listed in on the course schedule as IDST 281.

5. Human Anatomy and Human Physiology with Lab
   • Required by most allied health professional schools (e.g., physician assistant)
   • Now offered annually (spring semesters) by the Biology Department
   • Human Anatomy (BIOL 219) does not count toward the Biology major/minor but Human Physiology (BIOL 220) does count toward the Biology major/minor

6. Study Abroad
   • Approximately 35% of UR pre-medical students study abroad for a semester. A list of pre-health oriented study abroad programs is available at [http://prehealth.richmond.edu/advising/study-abroad.html](http://prehealth.richmond.edu/advising/study-abroad.html)
<table>
<thead>
<tr>
<th>Track</th>
<th>Common Professional School Requirements* (UR equivalent given parenthetically)</th>
<th>Additional Recommended Courses</th>
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</table>
| Pre-medical              | General Biology (BIOL 199 or 192, plus 200)  
General Chemistry (CHEM 141 or 192, plus 317)  
Organic Chemistry (CHEM 205-206)  
Biochemistry (CHEM 326)  
Physics (PHYS 127 or 131 plus either PHYS 128 or 132)**  
Psychology (PSYC 100)***  
Sociology (SOC 101)***  
Statistics (1 of MATH 209, BIOL 320, CHEM 300, PSYC 200, SOC 211)*** | HS 100 Health Policy  
PHIL 251 Elementary Symbolic Logic (also satisfies FSSR)  
LDST 377 Ethical Decision Making in Healthcare –OR—PHIL 265 Bioethics |
| Pre-dental               | General Biology (BIOL 199 or 192, plus 200)  
General Chemistry (CHEM 141 or 192, plus 317)  
Organic Chemistry (CHEM 205-206)  
Biochemistry (CHEM 326)  
Physics (PHYS 127 or 131 plus either PHYS 128 or 132)** | BIOL 202  
BIOL 3XX electives (2-3)  
HS 100 Health Policy |
| Pre-physician assistant  | General Biology (BIOL 199 or 192, plus 200)  
General Chemistry (CHEM 141 or 192)  
Organic Chemistry (CHEM 205-206)  
Biochemistry (CHEM 326)  
Genetics (BIOL 120: Human Genetics) – consult individual PA programs  
Human Anatomy (BIOL 219) and Human Physiology (BIOL 220)  
Microbiology (BIOL 229)  
Psychology (PSYC 100) | HS 100 Health Policy |
| Pre-veterinary           | General Biology (BIOL 199 or 192, plus 200)  
General Chemistry (CHEM 141 or 192, plus 317)  
Organic Chemistry (CHEM 205-206)  
Biochemistry (CHEM 326)  
Physics (PHYS 127 or 131 plus either PHYS 128 or 132)**  
Microbiology (BIOL 229)  
Genetics – consult individual programs | BIOL 202  
BIOL 3XX electives (2-3) |
| Pre-pharmacy             | General Biology (BIOL 199 or 192, plus 200)  
General Chemistry (CHEM 141 or 192, plus 317)  
Organic Chemistry (CHEM 205-206)  
Physics (PHYS 127 or 131 plus either PHYS 128 or 132)**  
Human Anatomy (BIOL 219) and Human Physiology (BIOL 220)  
Microbiology (BIOL 229)  
Economics (ECON 101)  
Calculus (MATH 211)  
Statistics (MATH 209 or BIOL 320)  
Public speaking (RHCS 100) | HS 100 Health Policy |

*Requirements may vary; be sure to consult with specific schools you are considering.

**MATH 211-212 pre-requisite / co-requisite for PHYS 131-132

***For MCAT preparation; not commonly required by medical schools
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<td>Pre-physical therapy</td>
<td>General Biology (BIOL 199 or 192, plus 200) &lt;br&gt;Chemistry (CHEM 141 or 192, plus either CHEM 205 or CHEM 205, 206, 317); consult individual PT programs &lt;br&gt;Physics (PHYS 127 or 131 plus either PHYS 128 or 132)** &lt;br&gt;Human Anatomy (BIOL 219) and Human Physiology (BIOL 220) &lt;br&gt;Statistics (MATH 209 or BIOL 320) &lt;br&gt;Psychology (PSYC 100) &lt;br&gt;Developmental Psychology (PSYC 311 plus PSYC 315)</td>
<td>HS 100 Health Policy</td>
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<td>Pre-nurse practitioner</td>
<td>General Biology (BIOL 199 or 192, plus 200) &lt;br&gt;General Chemistry (CHEM 141 or 192); consult individual NP programs &lt;br&gt;Human Anatomy (BIOL 219) and Human Physiology (BIOL 220) &lt;br&gt;Microbiology (BIOL 229) &lt;br&gt;Psychology (PSYC 100) &lt;br&gt;Developmental Psychology (PSYC 311 plus PSYC 315) &lt;br&gt;Sociology (SOC 101) &lt;br&gt;Statistics (MATH 209 or BIOL 320)</td>
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<td>Pre-nursing (BSN)</td>
<td>General Biology (BIOL 199 or 192, plus 200) &lt;br&gt;General Chemistry (CHEM 141 or 192); consult individual NP programs &lt;br&gt;Microbiology (BIOL 229) &lt;br&gt;Psychology (PSYC 100) &lt;br&gt;Developmental Psychology (PSYC 311 plus PSYC 315) &lt;br&gt;Sociology (SOC 101) &lt;br&gt;Nutrition (not offered at UR)</td>
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<td>Pre-occupational therapy</td>
<td>General Biology (BIOL 199 or 192, plus 200) &lt;br&gt;General Chemistry (CHEM 141 or 192) &lt;br&gt;Human Anatomy (BIOL 219) and Human Physiology (BIOL 220) &lt;br&gt;Psychology (PSYC 100) &lt;br&gt;Developmental Psychology (PSYC 311 plus PSYC 315) &lt;br&gt;Abnormal Psychology (PSYC) &lt;br&gt;Sociology (SOC 101) &lt;br&gt;Statistics (MATH 209 or BIOL 320)</td>
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<td>Pre-optometry</td>
<td>General Biology (BIOL 199 or 192, plus 200) &lt;br&gt;General Chemistry (CHEM 141 or 192) &lt;br&gt;Organic Chemistry (CHEM 205-206) &lt;br&gt;Physics (PHYS 127 or 131 plus either PHYS 128 or 132)** &lt;br&gt;Human Anatomy (BIOL 219) and Human Physiology (BIOL 220) &lt;br&gt;Microbiology (BIOL 229) &lt;br&gt;Psychology (PSYC 100) &lt;br&gt;Statistics (MATH 209 or BIOL 320)</td>
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