UR PRE-HEALTH ADVISING 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 either the IQS or 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 either the IQS or 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.
   c. Students considering a Physics major are encouraged to also take PHYS 131 in their first semester, unless they will be entering the IQS course sequence.
   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 is not applicable toward 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. We offer a tuition-free, in-house MCAT preparatory course (spring semesters only). It is listed in on the course schedule as IDST 281.

5. Study Abroad
   - With the exception of the UR / Univ. of St Andrews partnership program, pre-health students should not take professional school science requirements abroad.
   - A list of pre-health oriented study abroad programs is available at http://prehealth.richmond.edu/advising/study-abroad.html

Important Notes

1. New MCAT
   - Significant revisions in 2015 included:
     i. a new section on social and behavioral sciences
     ii. addition of biochemistry topics
     iii. incorporation of experimental design and statistics
   - Students with no prior exposure to statistics should be encouraged to take Introduction to Statistical Modeling (MATH 209), Methods & Analysis (PSYC 200), or Experimental Design & Biostatistics (BIOL 320).

2. Human Anatomy with Lab
   - Required by most allied health professional schools (e.g., physician assistant)
   - Offered in fall semesters through SPCS and listed as BIOL 280U
   - John Vaughan (Biology) manages course enrollment

3. Clinical Externships
   - Rachel Rodney (CDC) now oversees the health preceptorship program.
   - Eligibility requirements: 1. Pre-medical or pre-dental student, 2. Sophomore standing or above, 3. Minimum GPA of 3.4 for pre-medical or 3.2 for pre-dental.

4. UR / Univ. of St Andrews Partnership
   - Students may take the equivalents of CHEM 204 (Organic Chemistry I) and BIOL 206 (Cell Structure and Function) at Univ. of St Andrews. They will receive a letter grade on their Richmond transcript for CHEM 204 whereas BIOL 206 transfers with credit only.

5. Noteworthy facts
   - Taking a gap year (or more) has become increasingly common for pre-health students.
   - Interest in allied health fields, especially physician assistant, is quickly rising among our students. Pre-PA students should be made aware that most programs require significant patient care experience as an admission requirement, which usually necessitates taking a gap year or two after college.
## 2017 Richmond Pre-health Curriculum Guide

<table>
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<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 190 or 192, and 200)  
General Chemistry (CHEM 141, 317)  
Organic Chemistry (CHEM 205-206)  
Physics (PHYS 131 plus either 132, 133, or 134)  
Biochemistry (CHEM 326)  
Psychology (PSYC 100)**  
Sociology (SOC 101)**  
Statistics (MATH 209, BIOL 320, CHEM 300, PSYC 200, or SOC 211)** | HCS 100 Introduction to Healthcare Studies  
PHIL 251 Elementary Symbolic Logic (also satisfies FSSR)  
LDST 377 Ethical Decision Making in Healthcare |
| **Pre-dental and Pre-veterinary** | General Biology (BIOL 199 or 190 or 192, and 200)  
General Chemistry (CHEM 141 and 317)  
Organic Chemistry (CHEM 205-206)  
Physics (PHYS 131 plus either 132, 133, or 134)  
Microbiology (BIOL 229)  
Biochemistry (CHEM 326) | HCS 100 Introduction to Healthcare Studies |
| **Pre-pharmacy** | General Biology (BIOL 199 or 190 or 192, and 200)  
General Chemistry (CHEM 141 and 317)  
Organic Chemistry (CHEM 205-206)  
Physics (PHYS 131 plus either 132, 133, or 134)  
Human Physiology (BIOL 220) and Human Anatomy (BIOL 280U)  
Microbiology (BIOL 229)  
Economics (ECON 101)  
Statistics (MATH 209 or BIOL 320)  
Psychology (PSYC 100)  
Public speaking (RHCS 101) | HCS 100 Introduction to Healthcare Studies |
| **Pre-physician assistant** | General Biology (BIOL 199 or 190 or 192, and 200)  
Genetics (BIOL 314 or 384) – consult individual PA programs  
Microbiology (BIOL 229)  
Human Physiology (BIOL 220) and Human Anatomy (BIOL 280U)  
General Chemistry (CHEM 141)  
Organic Chemistry (CHEM 205-206)  
Biochemistry (CHEM 326)  
Psychology (PSYC 100) | HCS 100 Introduction to Healthcare Studies |
| **Pre-physical therapy** | General Biology (BIOL 199 or 190 or 192, and 200)  
Chemistry (CHEM 141 plus either CHEM 205 or CHEM 205, 206, 317); consult individual PT programs  
Physics (PHYS 131 plus either 132, 133, or 134)  
Human Physiology (BIOL 220) and Human Anatomy (BIOL 280U)  
Statistics (MATH 209 or BIOL 320)  
Psychology (PSYC 100)  
Developmental Psychology (No UR equivalent) | HCS 100 Introduction to Healthcare Studies |
| **Pre-nursing & other pre-health tracks** | Consult Dr. Vaughan | HCS 100 Introduction to Healthcare Studies |

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

**For MCAT preparation; not commonly required by medical schools.