PRE-HEALTH PROFESSIONS ADVISING PROGRAM

Pre-Requisite Coursework for Medical School

PRE-HEALTH  Brian Clinton, Lecturer/Pre-Health Advisor, Brian_Clinton@uri.edu
ADVISING: Schedule appointments via e-Campus advising: Click on “Professional/Honors” tab located at top-right.

Listed below are the courses required by medical schools as pre-requisites for admission. This worksheet is only a guide based on the requirements of most programs. These courses should be completed before applying to medical school and before taking the required entrance examination (MCAT). It is strongly recommended that the courses listed below be taken during the regular semesters at URI (not summer and not online). Note: Depending on the school, all medical schools require at least a C or C- in the pre-requisite courses.

Pre-Admission Clinical Experience (shadowing): A critical component of a competitive medical school applicant is prior clinical experience. Shadowing is highly recommended by most schools, and it is recommended that students begin to gain clinical exposure/experiences as early in their academic career as possible.

Students planning to pursue a pre-medical curriculum should regularly attend workshops and events offered by the Pre-Health Professions Advising Program.

BIOLOGICAL SCIENCES/CELL & MOLECULAR BIOLOGY: 11-12 credits are recommended to meet requirements at most medical schools. Additional coursework may be required or recommended (see reverse side).

___ BIO 101/103 (3+1 credits) AND EITHER: ___ BIO 341* (Cell Bio - 3 credits)
AND ___ MIC 211 (Microbio - 3+1 credits) AND/OR: ___ BIO 352* (Genetics - 4 credits)

CHEMISTRY:
Two semesters of general chemistry: AND Two semesters of organic chemistry:
___ CHM 101 w/ 102 (3+1 credits) AND ___ CHM 227 (3 credits)
___ CHM 112 w/ 114 (3+1 credits) AND ___ CHM 228 w/ 226 (3+2 credits)

BIOCHEMISTRY:
___ BCH 311 (3 credits) *Pre-req: 1 semester organic chemistry. BCH 311 is recommended after CHM 228.

PHYSICS: Two semesters are required. The 3-course sequence of PHY 203, 204 and 205 with labs may be substituted.
___ PHY 111 w/ 185 (3+1 credits) AND ___ PHY 112 w/ 186 (3+1 credits)

STATISTICS/MATHEMATICS: One semester of statistics is required. In addition, some programs stipulate a calculus requirement of at least one semester.
___ STA 307, 308, 409 or 411 AND ___ MTH 131 or 141 AND/OR MTH 132 or 142

ENGLISH: Two semesters are required. Most English, Writing, and Literature Courses will fulfill this requirement, with the exception of Poetry. Selected Honors courses (HPR 112/125/326) may also fulfill the requirement. Upper-level coursework is recommended when possible.
___ An ENG/WRT (3 or 4 credits) AND ___ An ENG/WRT (3 or 4 credits)

SOCIAL SCIENCES: 6 credits are recommended. As of 2015, the MCAT will contain a section on the Psychological, Social and Biological Foundations of Behavior, which recognizes the importance of socio-cultural and behavioral determinants of health and health outcomes. The majority of medical schools recommend coursework in the behavioral and social sciences, and many require it. For these reasons two of the following courses are recommended (6 credits):

___ PSY 113, 232*, 254*, or 255; SOC 100, 204, or 224 AND ___ PSY 113, 232*, 254*, or 255; SOC 100, 204, or 224
*Pre-req: PSY 113

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“Pre-Health/Pre-Medical” is not a major, and students from any major can opt to follow a pre-medical curriculum in conjunction with their major and general education requirements. Medical schools expect applicants to pursue a challenging, broad-based undergraduate education. However, you should be careful to never take more credits than you can manage successfully. Successful applicants will achieve a grade point average of 3.5 and above.

Students preparing for medical school must complete all requirements for their chosen major, general education requirements, and the pre-requisites listed above. In addition to (or in conjunction with) those requirements, the courses listed below are wise choices for students preparing for a health profession. Pre-health students are also strongly encouraged to participate in the Honors Program.

OTHER SUGGESTED COURSEWORK:

**Strongly recommended:**
- BIO 437 Fundamentals of Molecular Biology

**Other good options, not required:**
- BIO 242/244 Human Physiology or BIO 201 Animal Physiology
- BIO 302 Animal Development
- BIO 121 Human Anatomy or BIO 304 Comp. Vertebrate Anatomy
- BIO 445 Endocrinology
- BIO 452 Advanced Topics in Genetics
- MIC 333 Immunology and Serology
- MIC 334 Virology
- MIC 335/BCH 435 Biology and Genetics of Cancer
- MIC 432 Pathogenic Bacteriology
- MIC 450 Practical Tools for Molecular Sequence Analysis
- MIC 483 Introductory Diagnostic Microbiology
- MIC 491/BCH 491 Research in Microbiology or Biochemistry
- HDF 200 Life Span Development I
- HDF 201 Life Span Development II
- APG 201 Human Origins (N)
- SOC 300 Topics in Sociology (subject varies)

Courses to Consider for Gen Eds** & Free Electives:
- BPS 201 How Drugs Work (N)
- BPS 203 Herbal Medicines and Functional Foods (N)
- ENG 357 Literature and Medicine (A)
- HIS 116 History of Western Science (L)
- HIS 117 History of Medicine (L)
- HIS 351(H) Historical Perspectives on Women and Health (L)
- HPR xxx Various Honors Program courses. See web.
  → Note: HPR 309 Global Challenge of Emerging Infectious Disease (N)
- PHL 212(H) Ethics (L)
- PHL 215 Science and Inquiry (L)
- PHL 314 Ethical Problems in Society and Medicine (L)
- PHP 114 Responsible Health Care (S)
- PHP 143 Sustainable Solutions for Global Health (S)
- THN 360 Impact of Death of Behavior (L)
  → Any “Research Methods” coursework is beneficial.

**Note:** Courses marked with (A), (L), (S), or (N) may fulfill fine arts and literature, letters, social science, or natural science general education requirements, respectively. For students pursuing a Bachelor of Arts, be mindful of the one-course-per-discipline rule, i.e., not all six credits can come from the same course code.

In addition to strong academics and entrance exam scores, applicants to medical school are expected to have shadowed practitioners, sought out other medically-related experiences, and demonstrated a strong desire to serve others. Research experience is not required, but competitive applicants often partake in research.

HEALTH PROFESSIONS ADVISORY COMMITTEE:
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Most medical schools require that a committee letter of recommendation from the home institution accompany a student’s application for admission. To seek such endorsement, students must provide the Health Professions Advisory Committee (HPAC) with a dossier including five letters of recommendation (three from science faculty) by February 1 of the calendar year prior to the year in which they plan to begin medical school (i.e., 16-18 months prior to entry). Students ready to apply for HPAC endorsement are highly encouraged to attend the annual fall HPAC info session to initiate this process and receive application guidance prior to the February 1 deadline.

URI-BROWN EARLY IDENTIFICATION PROGRAM:
The Early Identification Program (EIP) is a cooperative venture with The Warren Alpert Medical School at Brown University that provides selected URI sophomores a place in Alpert Medical School following their graduation from URI. Sophomore pre-meds who meet the following criteria are eligible to apply for nomination to the EIP program:

3.5+ GPA, no C in any course, graduated from a RI high school, will have completed two college-level chemistry courses by January of sophomore year, have shadowed, and have a demonstrated passion for studying medicine at Alpert Medical School. Applications for nomination, including letters of recommendation, are due to the HPAC by February 1.

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