| COURSE | "Pre-Med" Track | $\begin{aligned} & \text { Biochem } \\ & \text { B.S. } \\ & \hline \end{aligned}$ | Chemistry B.S. | $\begin{aligned} & \text { Chemistry } \\ & \text { B.A. } \end{aligned}$ | Chem Minor | Bio B.S. | Bio B.A. | Bio Minor |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Courses listed below PLUS: <br> - FYS 101 (or W101) <br> - "literature" class (in practice, this can typically be any textbased 'U' class) <br> - Psych 100 <br> and/or SA 100 <br> These courses should usually be completed by end of Jr. year | Required core PLUS: <br> $23 X X$ chem <br> 6 physics/ math/bio <br> PLUS: <br> 5 Advanced Bio and/or Chem <br> - 1 elective must be Bio <br> - 1 elective must be 400 -level Chem in senior year | Required core PLUS: <br> 3 3XX chem <br> 5 physics/ math/bio <br> PLUS: <br> 4 Advanced Chem | Required core PLUS: <br> 1 3XX chem <br> 4 physics/ math/bio <br> PLUS: <br> 3 Intermediate/ Advanced Chem - 1 elective must be 300 -level | Required core <br> PLUS: <br> 2 elective above 200 level | Required core PLUS: <br> 6 bio at or above 300 level (1 diversity) 5 other math/sci, no more than 3 from 1 dept. | Required core PLUS: <br> 5 bio at or above 300 level (incl. <br> 1 diversity) | Required core PLUS: <br> 3 bio at or above 300 level (incl. <br> 1 diversity) |
| Calculus I\& II <br> (MATH 123\&124) | Requirements range from no math to one course in math to one year of Calculus; minimum is Math 121 (pre-req for Physics) | Two semesters required | Two semesters required | Two semesters required |  | elective as other math/sci |  |  |
| Physics I\&II (PHYSICS 121\&122) | Two semesters required | Two semesters required | Two semesters required | ONE semester required |  | elective as other math/sci |  |  |
| Introductory Chemistry (CHEM 131 and 132) | Two years of Chemistry including two semesters of Organic Chemistry (CHEM 132/251) | Two semesters required | Two semesters required | Two semesters required | Two semesters required | Two semesters required | Two semesters required | ONE semester required |
| Organic Chemistry <br> (CHEM 251) |  | Required | Required | Required | Required | or required by some oraduate |  |  |
| Biochemistry (CHEM 258) | Many programs require two years of Chemistry PLUS one semester of Biochemistry; for these schools, it is necessary to take five semesters of Chemistry and Biochemistry | Required | Required | Required | Required |  |  |  |
| $\begin{array}{\|l} \hline \text { Intro Biology } \\ \text { (BIO 150) } \\ \hline \end{array}$ | Required | Required | Required | Required | Required | Required | Required | Required |
| Cell and Molecular Biology (BIO 201) | Recommended or required, by program | Required |  |  |  | Required | Required | Required |
| Ecology and Evolution (BIO 202) |  |  |  |  |  | Required | Required | Required |
| Inorganic Chem (CHEM 317) (Fall only) |  | Elective | Required | Elective | Elective |  |  |  |
| Analytical Chem <br> (CHEM 331) (Fall only) |  | Required | Required | Elective | Elective |  |  |  |
| Physical Chem <br> (CHEM 343) (Spring only) <br> (requires Calculus II) |  | Required | Required | Required | Elective |  |  |  |
| 400-level Chem/Biochem (at least 2 offered each semester; topics vary by course and instructor) |  | one required | four required | Elective | Elective |  |  |  |
| Microbiology (BIO 315) (not all semesters) | Strongly recommended (required for most Vet programs) (required by some Dental programs) | Elective |  |  |  | Elective | Elective | Elective |
| Virology <br> (Bio 316) (not all semesters) |  | Elective |  |  |  | Elective | Elective | Elective |
| Developmental bio <br> (BIO 324)(not all semesters) | Recommended | Elective |  |  |  | Elective | Elective | Elective |
| Genetics <br> (BIO 325) (not all semesters) | Recommended <br> (required for most Vet programs) | Elective |  |  |  | Elective | Elective | Elective |
| Immunology <br> (BIO 341) (not all semesters) |  | Elective |  |  |  | Elective | Elective | Elective |
| Eukaryotic Cell Bio <br> (BIO 345) (not all semesters) |  | Elective |  |  |  | Elective | Elective | Elective |
| Senior Research |  | Elective; 2 semester $=$ 1 "course" for major reqs | Elective; 2 semester = 1 "course" for major reqs |  |  | Elective; 2 semester $=$ 1 "course" for major reqs | Elective; <br> 2 semester $=$ 1 "course" for major reqs |  |

Kuhlman, August 2014

