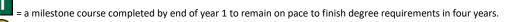


## Northwest Missouri State University Department of Natural Sciences Chemistry: Medicinal Emphasis – Pre-Pharmacy Bachelor of Science

| Term 1        | Course Title/Description           | Pre-requisite               | Cr Hrs            | Milestone/Notes  |
|---------------|------------------------------------|-----------------------------|-------------------|--|
| 34-102        | Intro to American Government       |                             | 3                 |  |
| 04-106/107    | Principles of Biology & Lab        |                             | 4                 |  |
| 77-101        | University Seminar                 |                             | 1                 |  |
| 10-111        | Composition I                      |                             | 3                 |  |
| 24-114/115    | General Chemistry I & Lab          |                             | 4                 | Enrolling in General Chemistry 112/113 should be considered prior to General Chemistry I if a rigorous high school Chemistry background is absent. Similar considerations without proficiency in high school Algebra II. |
|               |                                    | Total Hours                 | 15                | 0  |
| Term 2        | Course Title/Description           | Pre-requisite               | Cr Hrs            | Milestone/Notes  |
| 10-112        | Composition II                     | Composition I               | 3                 |  |
| 24-116/117    | General Chemistry II & Lab         | General Chemistry I & Lab   | 5                 |  |
| 17-117 OR     | Precalculus OR                     | Precalc: Minimum ACT        | 4-5               | Most pharmacy schools  |
| 17-120        | Calculus                           | Math 22 or high school      |                   | require Calculus I. Refer  |
|               |                                    | GPS of 3.5                  |                   | to pharmacy program of   |
|               |                                    | Calculus I: Precaclulus OR  |                   | interests.   |
|               |                                    | Precaclulus Algebra AND     |                   |  |
|               |                                    | Trignometry OR ACT Math     |                   |  |
|               |                                    | score of 27 or high school  |                   |  |
|               |                                    | GPA 3.9                     |                   |  |
|               | Elective                           |                             | 3                 |  |
|               |                                    | Total Hours                 | 15-16             |  |
| Term 3        | Course Title/Description           | Pre-requisite               | Cr Hrs            | Milestone/Notes  |
| 24-342/343    | Organic Chemistry I & Lab          | General Chemistry II & Lab  | 4                 |  |
| 04-140        | General Microbiology               | Principles of Biology & Lab | 4                 |  |
|               |                                    | OR General Biology & Lab    |                   |  |
|               |                                    | OR General Chemistry I &    |                   |  |
|               |                                    | Lab                         |                   |  |
| 24-110/111 OR | General Physics I & Lab OR         | General: Mathematical       | 4-5               |  |
| 25-120/121    | Classical Physics I & Lab          | Modeling OR Precacl OR      |                   |  |
|               |                                    | Precalculus Algebra OR      |                   |  |
|               |                                    | Calculus I                  |                   |  |
| 20.400        | <u> </u>                           | Classical: Calculus I       |                   |  |
| 29-102        | Fundamentals of Oral Communication |                             | 3<br><b>15-16</b> |  |
| Total Hours   |                                    |                             |                   |  |



= a milestone course completed by end of year 2 to remain on pace to finish degree requirements in four years.

I = a milestone course completed by end of year 3 to remain on pace to finish degree requirements in four years.

= a milestone courses taken in final year to complete degree requirements.



Northwest Missouri State University
Department of Natural Sciences
Chemistry: Medicinal Emphasis – Pre-Pharmacy
Bachelor of Science

| Term 4        | Course Title/Description      | Pre-requisite               | Cr Hrs | Milestone/Notes           |
|---------------|-------------------------------|-----------------------------|--------|---------------------------|
| 24-344/345    | Organic Chemistry II & Lab    | Organic Chemistry I & Lab   | 4      |                           |
| 25-112/113 OR | General Physics II & Lab OR   | General: Mathematical       | 4-5    |                           |
| 25-230/231    | Classical Physics II & Lab    | Modeling OR Precacl OR      |        |                           |
| •             | ·                             | Precalculus Algebra OR      |        |                           |
|               |                               | Calculus I                  |        |                           |
|               |                               | Classical: Calculus II AND  |        |                           |
|               |                               | Classical Physics I & Lab   |        |                           |
| 04-350        | Genetics                      | Principles of Biology & Lab | 4      |                           |
| 10-220        | Intro to Literature           |                             | 3      |                           |
|               |                               | Total Hours                 | 15     |                           |
| Term 5        | Course Title/Description      | Pre-requisite               | Cr Hrs | Milestone/Notes           |
| 08-103        | General Psychology            | ·                           | 3      |                           |
| 24-322/323    | Analytical Chemistry & Lab    | General Chemistry II & Lab  | 4      |                           |
| 04-310        | Cell Biology                  | Principles of Biology & Lab | 4      | Recommended to have       |
|               |                               | AND General Chemistry I &   |        | Organic Chemistry I & Lab |
|               |                               | Lab AND General             |        | ,                         |
|               |                               | Chemistry II & Lab          |        |                           |
| 04-436        | Human Anatomy                 | General Zoology & Lab (or   | 4      | Recommended to have       |
|               | ·                             | permission from             |        | Medical Terminology       |
|               |                               | instructor)                 |        |                           |
|               | •                             | Total Hours                 | 14     |                           |
|               |                               |                             |        |                           |
| Term 6        | Course Title/Description      | Pre-requisite               | Cr Hrs | Milestone/Notes           |
| 04-438        | Human Physiology              | Cell Biology                | 4      | Recommended to have       |
|               |                               |                             |        | Medical Terminology AND   |
|               |                               |                             |        | either Allied Anatomy OR  |
|               |                               |                             |        | Human Anatomy             |
|               | Western Experience            |                             | 3      |                           |
|               | Digital Literacy              |                             | 3      |                           |
| 24-436        | Medicinal Chemistry I         | Permission of Instructor    | 3      | Taught ONLINE through     |
|               |                               |                             |        | University of Kansas      |
|               | Electives                     |                             | 3      |                           |
|               |                               | Total Hours                 | 16     |                           |
| Term 7        | Course Title/Description      | Pre-requisite               | Cr Hrs | Milestone/Notes           |
| 24-562        | General Biochemistry          | Organic Chemistry I         | 3      |                           |
| 24-438        | Medicinal Chemistry II        | Permission of Instructor    | 3      | Taught ONLINE through     |
|               | ,                             |                             |        | University of Kansas      |
|               | Behavioral & Social Science   |                             | 3      |                           |
|               |                               |                             |        | †                         |
|               | American Experiences          |                             | 3      |                           |
|               | American Experiences Elective |                             | 3      |                           |

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## Northwest Missouri State University Department of Natural Sciences Chemistry: Medicinal Emphasis – Pre-Pharmacy Bachelor of Science

| Term 8      | Course Title/Description | Pre-requisite | Cr Hrs | Milestone/Notes |
|-------------|--------------------------|---------------|--------|-----------------|
| 24-592      | Chemistry Seminar        |               | 1      |                 |
|             | Electives                |               | 7-8    |                 |
|             | Fine Arts                |               | 3      |                 |
|             | Humanities               |               | 3      |                 |
| Total Hours |                          |               |        |                 |

Students applying to medical or pharmacy school should consult with school of interest to determine the specific requirements for that specific program (i.e. Human Anatomy & Human Physiology), which will take priority over suggested outline.

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= a milestone courses taken in final year to complete degree requirements.