

## Proposed Pre-Pharmacy Program at USM

The need for qualified pharmacists continues to grow in the United States. To meet that increasing demand, several new pharmacy schools have opened recently, and they offer a Doctorate in Pharmacy (Pharm.D.). Both the University of New England and Husson College (Bangor) have established a College of Pharmacy, and they will accept their first students in Fall 2009. Their programs, commonly referred to as 2+4 programs, enable students to complete 2 years of pre-pharmacy study (nondegree awarding) and then apply to a School or College of Pharmacy to complete their remaining 4 years of professional studies to earn the doctorate.

USM has an excellent opportunity to participate in educating future pharmacists, preparing students to enter the new schools in Maine or other Schools and Colleges of Pharmacy that have similar 2+4 programs. Such a program would be housed in the Department of Biological Sciences, and it would be a nondegree concentration in pre-pharmacy.

We have become familiar with requirements for the College of Pharmacy at UNE and other 2+4 year programs, and most programs require 60-75 credits in their 2-year pre-pharmacy phase. The main difference in the number of required credits is that some schools include more general education credits than other schools.

The required pre-pharmacy courses that need to be completed before entering the professional Pharmacy (PharmD) program at UNE are the following:

- English Composition – 6 semester hours
- General Biology with lab – 8 semester hours
- Anatomy and Physiology with lab – 8 semester hours
- General Chemistry with lab – 8 semester hours
- Organic Chemistry with lab – 8 or 10 semester hours
- General Physics with lab – 8 semester hours
- Calculus – 4 semester hours
- Statistics – 3 semester hours
- Introduction to Psychology – 3 semester hours
- Public Speaking – 3 semester hours
- Human Behavior/ Social Sciences – 3 semester hours
- Economics – 3 semester hours
- General Education/ Liberal Arts electives – 6 semester hours

Students in UNE's pre-pharmacy program take 16–19 credits each semester. However, the 19-credit load may not be realistic for USM students who often work more than 20 hours per week and face childcare and other family responsibilities. Therefore, USM's proposed pre-pharmacy program includes courses taken in the summer to reduce the number of credits taken each semester. Some students may want to take all their courses during the academic year, which means they would take nearly 20 credits each semester. We do not recommend that plan. Instead, students who do not take summer courses may want to extend the 2 years into a 3-year program.

This concentration will be a time-intensive, two-year nondegree program, and students will need to commit to it upon entering the University. If they do well in this program of study, they will be competitive with students from other universities applying for entry into professional Pharmacy programs. If they decide not to pursue the PharmD, they will be well along the path toward earning a B.S. Biology degree from USM.

## USM Course Sequence

Students completing pre-pharmacy courses at USM will need to take the following courses in the pre-pharmacy concentration in the Department of Biological Sciences. However, students may need additional preparation before enrolling in some courses (e.g., MAT 152D).

### Pre-Pharmacy Year One

#### *Fall Semester*

BIO 105K/106K – Biological Principles I and Laboratory Biology	4.5 credits
CHY 113K/114K – Principles of Chemistry and Lab Techniques I	4.0 credits
ENG 100C – College Writing	3.0 credits
<u>EYE 1XX</u>	<u>4.0 credits</u>
Total	15.5 credits

#### *Spring Semester*

BIO 107 – Biological Principles II	4.5 credits
CHY 115/116 – Principles of Chemistry and Lab Techniques II	4.0 credits
ENG 120H – Introduction to Literature	3.0 credits
<u>THE 170F – Public Speaking</u>	<u>3.0 credits</u>
Total	14.5 credits

#### *Summer Session*

Physics 111K/114K – Elements of Physics and Laboratory I	5.0 credits
<u>Physics 112/116 – Elements of Physics and Laboratory II</u>	<u>5.0 credits</u>
Total	10.0 credits

### Pre-Pharmacy Year Two

#### *Fall Semester*

BIO 111/112 – Human Anatomy and Physiology I and Lab	4.5 credits
CHY 251/252 – Organic Chemistry and Laboratory I	5.0 credits
MAT 152D – Calculus	4.0 credits
<u>PSY 101J – General Psychology I</u>	<u>3.0 credits</u>
Total	16.5 credits

#### *Spring Semester*

BIO 211/212 – Human Anatomy and Physiology II and Lab	4.5 credits
CHY 253/254 – Organic Chemistry and Laboratory II	5.0 credits
MAT 220 – Statistics for Biological Sciences	4.0 credits
<u>SOC 100J – Introduction to Sociology</u>	<u>3.0 credits</u>
Total	16.5 credits

#### *Summer Session*

Economics	3.0 credits
<u>General Education course</u>	<u>3.0 credits</u>
Total	6.0 credits

**Total for 2 years** **79.0 credits**