

**Michigan Technological University****Minor in Pharmaceutical Chemistry**

Program Code: CHPM, Academic Year 2019-20

Department of Chemistry

Total Credits Required: 22 to 28

**Required Courses: 19 to 24 credits**

Course	Credits
CH 4222 Bioanalytical Chemistry (5) <b>or</b> CH2212 Quantitative Analysis (5) <b>and</b> CH4212 Instrumental Analysis (5)	
CH 3510 Physical Chemistry I (3)	
CH 3511 Physical Chemistry Lab I (2)	
CH 4110 Pharmaceutical Chemistry: Drug Action (3)	
CH 4120 Pharmaceutical Chemistry: Drug Design (3)	
CH 4710 Biomolecular Chemistry I (3)	

**Elective Courses: 3 to 4 credits**

Course	Credits
CH 4140 Pharmaceutical Analysis (3)	
CH 4720 Biomolecular Chemistry II (3)	
MA 2720 Statistical Methods (4) <b>or</b> MA 3710 Engineering Statistics (3)	
CH 4990 Undergraduate Research in Chemistry* (3)	

\*Undergraduate research experiences will be permitted in the minor as long as the topics are in the area of pharmaceutical chemistry.

Courses listed in this minor have the following prerequisites (shown in parenthesis). Concurrency is illustrated by the letter C:

CH4140 (CH2410), CH4222 (CH1160 and CH1161) and CH3510 C and CH3511 C), CH2212 (CH1160 and CH1161)), CH4212 (CH2212 and CH3510 C and CH3511 C), CH3510 (CH1160 and CH1161)) and PH2200 C and MA2160), CH4710 (CH2420), CH4110 (BL2100 or CH4710), CH4720 (BL4010 or CH4710), MA3710 (MA2160), MA2720 (MA1020 or MA1030 or ALEKS math placement  $\geq 61$  or CEEB Calculus BC  $> 2$  or CEEB Calculus AB subscore  $\geq 2$  or Math ACT of 22 or Math SAT of 540).