

**AREA OF CONCENTRATION IN FORENSIC SCIENCE/Biochemistry emphasis  
MAJOR WORKSHEET 2005-2007**

Students wishing to pursue this area of concentration must complete an application available at the following website: [http://www.morris.umn.edu/services/acad\\_affairs/aavarious.html#areaconcentration](http://www.morris.umn.edu/services/acad_affairs/aavarious.html#areaconcentration) . Attach the worksheet below to the application for Area of Concentration. Required signatures must be provided on the Area of Concentration form.

Objectives – A concentration in forensic science will prepare you for advanced studies in forensic science, toxicology, or forensic biology; or for a career in a crime lab at the bachelor’s degree level. “The majority of positions within a crime lab require a bachelor’s degree in a physical science. . . . The major that you choose should reflect the forensic discipline in which you wish to work” *American Society of Crime Laboratory Directors*. “ “The minimum requirement [to work in the field of criminalistics] is a B.A. in chemistry, biology, physics, molecular biology, or a related science. In the future, an M.A. may be required. Many colleges and universities offer degrees and courses in forensic science. In deciding whether to major in chemistry or biology, or in forensic science, study the courses offered. At least 24 semester hours of either chemistry or biology is required and math is a must. The title of the degree is not as important as the courses taken” *American Academy of Forensic Sciences*.

Students who are interested in pursuing forensic science at UMM should meet the requirements for an appropriate major while taking elective courses tailored to his or her specific interest in the broad areas of study associated with forensic science. In addition to meeting the requirements for biochemistry, a concentration in forensic science requires completion of the courses listed for either an *Anthropology/Sociology* or a *psychology* emphasis, listed following the biochemistry requirements.

**Minimum required credits = 88**

<b>Required Courses for biochemistry:</b>	<b>Credits</b>	<b>Term</b>
Biol 1101 Freshman Seminar in Biological Principles	3	_____
Biol 2111 Cell Biology	4	_____
Biol 3101 Genetics	4	_____
Biol 3121 Molecular Biology	5	_____
Biol 4211 Biochemistry	4	_____
Biol 4611 Biochemistry Lab	1	_____
Chem 1101 General Chemistry I	4	_____
Chem 1102 General Chemistry II	4	_____
Chem 2301 Organic Chemistry I	4	_____
Chem 2302 Organic Chemistry II	3	_____
Chem 2311 Organic Chemistry Lab I	1	_____
Chem 2321 Intro to Research	2	_____
Chem 3101 Analytical Chemistry	4	_____
Chem 3501 Physical Chemistry I	4	_____
Chem 3901 Chemistry Seminar I	1	_____
Chem 4351 Bioorganic Chemistry	3	_____
Chem 4901 Chemistry Seminar II	1	_____
Math 1101 Calculus I	5	_____
Math 1102 Calculus II	5	_____
Phys 1101 General Physics I	5	_____
Phys 1102 General Physics II	5	_____

*Continued on Reverse*

**Electives – complete one course from the following:**

Chem 3111 Instrumental Analysis	4	_____
Chem 3502 Physical Chemistry II	4	_____
Chem 3701 Inorganic Chemistry	4	_____
Chem 3801 History of Chemistry	3	_____
Chem 3811 Macromolecules	3	_____
<i>or</i>		
Another Chem course numbered 43xx-47xx	3	_____

***For Anthropology/Sociology Emphasis in Forensic Science:***

**Required Courses:**

Anth 1111 <i>or</i> Soc 1100 Intro to Cultural Anthropology/IntroSociology	4	_____
Anth 2101 Physical Anthropology	4	_____
Soc 3141 Sociology of Deviance	4	_____

***For Psychology Emphasis in Forensic Science***

Psy 1051 Introduction to Psychology	4	_____
Psy 3302 Personality	4	_____
Psy 3313 Psychopathology	4	_____

**Other recommended electives for Forensic Science:**

Phil 2111 Introduction to Ethics	4	_____
Pol 3263 Political Psychology	4	_____
Soc 2101 Systems of Oppression	4	_____

***Sample Four Year Plan: Area of Concentration in Forensics/Biochemistry Emphasis***

Year	Fall	Spring
<b>One</b>	IS 1001 First Year Seminar (FYS) 2	Chem 1102 General Chemistry II (Sci-L) 4
	Chem 1101 General Chemistry I (Sci) 4	Math 1102 Calculus II 4
	Engl 1011 College Writing <sup>1</sup> (CW) 4	Phys 1101 Physics I 5
	Math 1101 Calculus I (M/SR) <u>5</u>	GenEd elective (ArtP) <u>1</u>
	Credits this term = 15	Credits this term = 14
	Foreign Language I 4	Biol 1101 Biological Principles 3
	Phil 2111 (Hum) 4	Chem 2302 Organic Chemistry II 3
	Chem 2301 Organic Chemistry I 4	Chem 2321 Intro to Research 2
	Chem 2311 Organic Chemistry Lab I 1	Foreign Language II (FL) 4
	Phys 1102 Physics II <u>5</u>	Stat 1601 Statistical Methods <u>4</u>
	Credits this term = 18	Credits this term = 16
<b>Three</b>	Anth 2101 Physical Anthropology 4	Anth 1111 or Soc 1101 Intro (SS) 4
	Biol 2111 Cell Biology 4	Biol 3101 Genetics 4
	Chem 3501 Physical Chemistry I 4	Chem 4351 Bioorganic Chemistry <sup>2</sup> 3
	Soc 2101 Systems of Oppression (HDiv) <u>4</u>	Chem 3901 Chemistry Seminar I 1
	Credits this term = 16	GenEd Elective (FA) <u>4</u>
	Credits this term = 16	
<b>Four</b>	Biol 4211 Biochemistry 4	Biol 3121 Molecular Biology 5
	Biol 4611 Biochemistry Lab 1	Chem 3111 Instrumental Analysis 4
	Chem 3101 Analytical Chemistry 4	GenEd elective (Hist) <u>4</u>
	Chem 4901 Chemistry Seminar II 1	Credits this term = 13
	Soc 3141 Sociology of Deviance (E/CR) <u>4</u>	
	Credits this term = 14	

<sup>1</sup>If exempt from College Writing, take Anth/Soc/Psy Introductory course.

<sup>2</sup>Offered alternate years; check current catalog.