## Chemistry, BS - Forensics Chemistry Concentration

This concentration meets the requirements of the American Chemical Society for certification and is designed for a student who plans to do graduate work in forensics chemistry or a related science or desires a forensics science position.

### Chemistry: Forensics Chemistry Concentration, BS Requirements:

- Chemistry, Forensics Chemistry Concentration, BS degree requires 128 credit hours.
- 39 of 128 credit hours must be taken at 300 level or higher (39 credits includes courses taken at the 300+ level in major, minor (if chosen), Pre professional area and electives).
- 12 credit hours of 300 level and above must be taken in the major--or 6 credit hours in the major and 6 credit hours in the minor (if chosen).
- 12 of the last 18 credit hours must be taken at UAH, with an overall 25% of coursework taken at UAH.
- No more than 64 credit hours from a two-year college can be applied toward a UAH degree.
- For graduation application instructions, see here (http://catalog.uah.edu/undergrad/policies-procedures/application-graduation).

## Degree Requirements

### Freshman Composition

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>EH 101</td>
<td>COLLEGE WRITING I</td>
</tr>
<tr>
<td>EH 102</td>
<td>COLLEGE WRITING II</td>
</tr>
</tbody>
</table>

### Humanities and Fine Arts

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>ARH 100</td>
<td>ARH SURV:ANCIENT-MEDIEVAL</td>
</tr>
<tr>
<td>ARH 101</td>
<td>ARH SURV:RENAISSANCE-MODERN</td>
</tr>
<tr>
<td>ARH 103</td>
<td>ARH SUR:NON-WESTERN TRADITIONS</td>
</tr>
<tr>
<td>TH 122</td>
<td>THEATRE APPRECIATION</td>
</tr>
<tr>
<td>ARS 160</td>
<td>DRAWING: FOUNDATIONS</td>
</tr>
<tr>
<td>MU 100</td>
<td>INTRO TO MUSIC LITERATURE</td>
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### Literature: Choose one

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>EH 207</td>
<td>READINGS LITERATURE/CULTURE I</td>
</tr>
<tr>
<td>EH 208</td>
<td>READINGS LITERATURE/CULTURE 2</td>
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### Speech

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>CM 113</td>
<td>Intro to Rhetorical Communication</td>
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</tbody>
</table>

### Humanities or 2nd Fine Art or 2nd Literature: Choose one

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>PHL 101</td>
<td>INTRODUCTION TO PHILOSOPHY</td>
</tr>
<tr>
<td>PHL 102</td>
<td>INTRO TO ETHICS</td>
</tr>
<tr>
<td>PHL 150</td>
<td>TECH, SCIENCE &amp; HUMAN VALUES</td>
</tr>
<tr>
<td>PHL 201</td>
<td>INTRODUCTION TO LOGIC</td>
</tr>
<tr>
<td>Any 100 or 200 level Foreign Language</td>
<td></td>
</tr>
<tr>
<td>WLC 204</td>
<td>INTERNATIONAL CINEMA</td>
</tr>
<tr>
<td>WGS 200</td>
<td>INTRO WOMEN'S &amp; GENDER STUDIES</td>
</tr>
</tbody>
</table>

### 2nd Literature ¹

### 2nd Fine Art

### Mathematics and Sciences

<table>
<thead>
<tr>
<th>Course</th>
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</thead>
<tbody>
<tr>
<td>MA 171</td>
<td>CALCULUS A</td>
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### Natural Sciences: Physics

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>PH 111</td>
<td>GEN PHYSICS W/CALCULUS I</td>
</tr>
<tr>
<td>&amp; PH 114</td>
<td>and GENERAL PHYSICS LAB I</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>PH 112</td>
<td>GEN PHYSICS W/CALC II</td>
</tr>
<tr>
<td>&amp; PH 115</td>
<td>and GENERAL PHYSICS LAB II</td>
</tr>
</tbody>
</table>
### History and Social and Behavioral Sciences  

**History:** Choose one  
- HY 103 WORLD HISTORY TO 1500  
- HY 104 WORLD HISTORY SINCE 1500  
- HY 221 UNITED STATES TO 1877  
- HY 222 UNITED STATES SINCE 1877  

**Social and Behavioral Sciences:** Choose two  
- ECN 142 PRINC OF MACROECONOMICS  
- ECN 143 PRINC OF MICROECONOMICS  
- PSC 101 INTRO TO AMERICAN GOVERNMENT  
- PSC 102 INTRO TO COMPARATIVE POLITICS  
- PSC 260 INTRODUCTION TO INTERNATIONAL RELATIONS  
- GY 105 WORLD REGIONAL GEOGRAPHY  
- GY 110 PRINCIPLES OF HUMAN GEOGRAPHY  
- GS 200 GLOBAL SYSTEMS AND CULTURES  
- SOC 100 INTRO TO SOCIOLOGY  
- SOC 102 ANALYSIS OF SOCIAL PROBLEMS  
- SOC 105 INTRO CULTURAL ANTHROPOLOGY  
- SOC 150 SOCIOLOGICAL PERSP TECH & SCI  
- PY 101 GENERAL PSYCHOLOGY I  
- PY 201 LIFE-SPAN DEVELOPMENT  

**2nd History or 3rd Social and Behavioral Science:** Choose one  
- 2nd History  
- 3rd Social and Behavioral Science  

### Pre Professional  

**Computer Science:** Choose one  
- CS 100 INTRO COMPUTERS & PROGRAM  
- CS 102 INTRO TO C PROGRAMMING  
- CS 103 INTRO PROGRAMMING USING JAVA  

**Technical Writing**  
- EH 301 TECHNICAL WRITING  

**Additional Required Mathematics**  
- MA 172 CALCULUS B  

### Chemistry  

- CH 121 GENERAL CHEMISTRY I  
- & CH 125 and GENERAL CHEMISTRY LAB I  
- CH 123 GENERAL CHEMISTRY II  
- & CH 126 and GENERAL CHEMISTRY LAB II  
- CH 223 QUANTITATIVE ANALYSIS  
- & CH 224 and QUANTITATIVE ANALYSIS LAB  
- CH 331 ORGANIC CHEMISTRY I  
- & CH 335 and ORGANIC CHEMISTRY LAB I  
- CH 332 ORGANIC CHEMISTRY II  
- CH 361 GENERAL BIOCHEMISTRY  
- CH 401 INORGANIC CHEMISTRY  

### Forensics Courses  

- CH 336 ORGANIC CHEMISTRY LAB II  
- CH 347 BIOPHYSICAL CHEMISTRY I  
- & CH 345 and EXPERIMENTAL PHYSICAL CHEM I  
- CH 348 BIOPHYSICAL CHEMISTRY II  
- & CH 346 and EXPERIMENTAL PHYSICAL CHEM II  
- CH 362 GENERAL BIOCHEMISTRY LAB
CH 363 & CH 364 GEN BIOCHEMISTRY II and GEN BIOCHEMISTRY LAB II
CH 402 INORGANIC CHEMISTRY LAB
CH 421 INSTRUMENTAL ANALYSIS
CH 491 INTRO TO CHEMICAL RESEARCH
or CH 492 INTRO TO CHEMICAL RESEARCH
or CH 493 INTRO TO CHEMICAL RESEARCH

Biology Minor
BYS 119 PRINCIPLES OF BIOLOGY
BYS 120 ORGANISMAL BIOLOGY
BYS 219 GENETICS AND EVOLUTION
BYS 300 CELL & DEVELOPMENTAL BIOLOGY
BYS 321 GENERAL MICROBIOLOGY I
BYS 430 IMMUNOLOGY
or BYS 543 MOLECULAR BIOLOGY OF THE CELL

Elective Courses
Additional Elective courses 100+ level to reach 128 credit hours. Electives can be taken from any department and do not have to be taken in your major or minor. No more than 4 HPE 100 level courses can count towards degree requirements.

Total Semester Hours: 128

1 Students must take one literature and one history course. Students must also take either a second literature or history course to complete a sequence. (EH 207 + EH 208, EH 209 + EH 210, HY 103 + HY 104, or HY 221 + HY 222)
2 Based on Math placement (http://www.uah.edu/science/departments/math/undergraduate-students/placement), prerequisite (MA 112 and/or MA 113) Mathematics courses may be required.
3 No more than 6 hours can be taken in a single discipline.
4 For choices see the World Languages and Cultures (http://catalog.uah.edu/undergrad/colleges-departments/arts-humanities-social-sciences/foreign-languages-literatures/#coursestext) department.

Sample four year plan for Chemistry, Forensics Concentration BS degree:

Year 1
Fall
FYE 101 CHARGER SUCCESS 1
EH 101 COLLEGE WRITING I 3
MA 171 CALCULUS A 4
CH 121 GENERAL CHEMISTRY I 4
& CH 125 and GENERAL CHEMISTRY LAB I
BYS 119 PRINCIPLES OF BIOLOGY 4

Term Semester Hours: 16

Spring
EH 102 COLLEGE WRITING II 3
MA 172 CALCULUS B 4
CH 123 GENERAL CHEMISTRY II 4
& CH 126 and GENERAL CHEMISTRY LAB II
BYS 120 ORGANISMAL BIOLOGY 4
Elective 1

Electives can be taken from any department and do not have to be taken in your major or minor. No more than 4 HPE 100 level courses can count toward degree requirements.

Term Semester Hours: 16

Year 2
Fall
CH 331 ORGANIC CHEMISTRY I 4
& CH 335 and ORGANIC CHEMISTRY LAB I
**Chemistry, BS - Forensics Chemistry Concentration**

- **CH 223** QUANTITATIVE ANALYSIS 4
- & **CH 224** and QUANTITATIVE ANALYSIS LAB 4
- **PH 111** GEN PHYSICS W/CALCULUS I 4
- & **PH 114** and GENERAL PHYSICS LAB I 4
- **Literature** 3
  
  See Requirements tab for approved list.

<table>
<thead>
<tr>
<th>Term Semester Hours:</th>
<th>15</th>
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### Spring

- **CH 332** ORGANIC CHEMISTRY II 4
- & **CH 336** and ORGANIC CHEMISTRY LAB II 4
- **BYS 219** GENETICS AND EVOLUTION 4
- **PH 112** GEN PHYSICS W/CALC II 4
- & **PH 115** and GENERAL PHYSICS LAB II 4
- **CM 113** Intro to Rhetorical Communication 3

<table>
<thead>
<tr>
<th>Term Semester Hours:</th>
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### Year 3

#### Fall

- **CH 347** BIOPHYSICAL CHEMISTRY I 4
- & **CH 345** and EXPERIMENTAL PHYSICAL CHEM I 4
- **CH 361** GENERAL BIOCHEMISTRY 4
- & **CH 362** and GENERAL BIOCHEMISTRY LAB 4
- **BYS 300** CELL DEVELOPMENTAL BIOLOGY 4
- **History** 3
  
  See Requirements tab for approved list.
- **Elective** 1
  
  Electives can be taken from any department and do not have to be taken in your major or minor. No more than 4 HPE 100 level courses can count toward degree requirements.

<table>
<thead>
<tr>
<th>Term Semester Hours:</th>
<th>16</th>
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### Spring

- **CH 348** BIOPHYSICAL CHEMISTRY II 4
- & **CH 346** and EXPERIMENTAL PHYSICAL CHEM II 4
- **CH 363** GEN BIOCHEMISTRY II 4
- & **CH 364** and GEN BIOCHEMISTRY LAB II 4
- **BYS 321** GENERAL MICROBIOLOGY I 4
- **Social/Behavioral Science** 3
  
  See Requirements tab for approved list.
- **Elective** 1
  
  Electives can be taken from any department and do not have to be taken in your major or minor. No more than 4 HPE 100 level courses can count toward degree requirements.

<table>
<thead>
<tr>
<th>Term Semester Hours:</th>
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### Year 4

#### Fall

- **CH 401** INORGANIC CHEMISTRY 3
- **CH 421** INSTRUMENTAL ANALYSIS 4
- **CS 100** INTRO COMPUTERS PROGRAM 3
- or **CS 102** or INTRO TO C PROGRAMMING 3
- or **CS 103** or INTRO PROGRAMMING USING JAVA 3
- **BYS 430** IMMUNOLOGY (or Fine Art) 4
<table>
<thead>
<tr>
<th>Term</th>
<th>Semester Hours</th>
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</thead>
<tbody>
<tr>
<td>Spring</td>
<td>17</td>
</tr>
<tr>
<td>CH 402</td>
<td>INORGANIC CHEMISTRY LAB</td>
</tr>
<tr>
<td>EH 301</td>
<td>TECHNICAL WRITING</td>
</tr>
<tr>
<td>CH 493</td>
<td>INTRO TO CHEMICAL RESEARCH</td>
</tr>
<tr>
<td>or CH 491</td>
<td>or INTRO TO CHEMICAL RESEARCH</td>
</tr>
<tr>
<td>or CH 492</td>
<td>or INTRO TO CHEMICAL RESEARCH</td>
</tr>
<tr>
<td>BYS 543</td>
<td>MOLECULAR BIOLOGY OF THE CELL (or Fine Art)</td>
</tr>
<tr>
<td>Literature/Humanities/Fine Art</td>
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<tr>
<td>History or Social/Behavioral Science</td>
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<tr>
<td>Elective</td>
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Electives can be taken from any department and do not have to be taken in your major or minor. No more than 4 HPE 100 level courses can count toward degree requirements.

<table>
<thead>
<tr>
<th>Term Semester Hours:</th>
<th>17</th>
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<tbody>
<tr>
<td>Total Semester Hours:</td>
<td>128</td>
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