

Four-Year Graduation Plan - Courses and Critical Benchmarks


The following is a sample course of study. It is the Student's responsibility to ensure that all program requirements are met. This guide is not a substitute for academic advisement. **All incoming freshmen must develop an academic plan (which maps out all courses needed to graduate within your intended major/degree). Your academic advisor is available to meet with you and create your specific plan.**


*Your path to graduation may vary slightly based on factors such as college credit you earned while in high school, transfer work from other institutions of higher learning and placement in Mathematics. You are responsible for checking prerequisites to any courses. Critical Courses and minimum recommended grades (as noted below) provide feedback regarding major fit and help indicate likelihood of successful completion of chosen academic program and degree.*

|            |                                  |                              |     |                     |      |
|------------|----------------------------------|------------------------------|-----|---------------------|------|
| First Math | MATH 110, or 200-level MATH/STAT | Foreign Language Requirement | Yes | Free Elective Hours | 9-35 |
|------------|----------------------------------|------------------------------|-----|---------------------|------|

| Critical Course or Benchmark | Course Subject, Number, and Title and Academic Plan Benchmarks<br>Bold = UMKC General Education Core Requirement<br>*Prerequisite May Be Required<br>**Co-Requisite Enrollment Required | Min Recom Grade | Credit Hours (CH) | Notes |
|------------------------------|---|-----------------|-------------------|-------|
|------------------------------|---|-----------------|-------------------|-------|


Fall Semester Year 1: 15 hours


|  |  |    |     |  |
|--|--|----|-----|--|
|  | <b>**Anchor I: Reasoning and Values</b> <a href="#">Click for options</a>  |    | 3   | <a href="#">ALEKS Math Placement Exam</a> is required prior to enrollment in MATH 110 and some 200-level MATH/STATS courses.<br><br>MATH 110 & MATH 210 can satisfy <b>Focus B: Scientific Reasoning &amp; Quantitative Analysis Requirement</b> .<br><br>CHEM 211L fulfills CAS Laboratory Experience Requirement.<br><br>MATH 110 or any MATH/STAT at the 200 level fulfills the CAS Math Requirement. |
|  | <b>**DISC 100: Reasoning and Values</b> (Speech and Writing)   |    | 3   |  |
|  | <b>**CHEM 211L: General Chemistry I Laboratory</b> (CAS Laboratory Requirement)<br>OR Free Elective  | C- | 1   |  |
|  | 2 Courses from (select 2 different curricular designations):<br><b>**CHEM 211: General Chemistry I (Focus B – Scientific Reasoning &amp; Quantitative Analysis)</b> OR<br>CHEM 111: Physical Basis of Chemistry Chemistry I<br><b>OR</b><br>MATH 110: College Algebra (CAS Science & Math Requirement) OR<br>MATH 120: Precalculus OR<br>MATH 125: Trigonometry OR<br>*MATH 210: Calculus I OR<br>*MATH 220: Calculus II OR<br>*STAT 235: Elementary Statistics<br><b>OR</b><br>(for pre-dental, pre-medical and pre-pharmacy only)<br>BIOLOGY 108: General Biology I AND BIOLOGY 108L: General Biology I Laboratory OR<br>BIOLOGY 109: General Biology II AND BIOLOGY 109L: General Biology II Laboratory | C- | 6-8 |  |

 Complete 15 term hours toward degree (recommended), 12 minimum (required)  
 Earn minimum 2.000 term GPA  
 Earn minimum 2.000 cumulative UM GPA


Spring Semester Year 1: 14-18 hours

|  |   |  |   |   |
|--|---|--|---|---|
|  | <b>**Anchor II: Culture and Diversity</b> <a href="#">Click for options</a> |  | 3 | Any MATH/STAT at the 200 level fulfills CAS Math Requirement. |
|  | <b>**DISC 200: Culture and Diversity</b> (Speech and Writing)               |  | 3 |   |


|  |   |    |     |  |
|--|---|----|-----|--|
|  | <p>*/**CHEM 212R: General Chemistry II (<b>Focus Elective</b>) OR<br/>                 **CHEM 211: General Chemistry I (<b>Focus B – Scientific Reasoning &amp; Quantitative Analysis</b>)</p>  | C- | 4   |  |
|  | <p>***CHEM 212LR: General Chemistry II Laboratory OR<br/>                 **CHEM 211L: General Chemistry I Laboratory (CAS Laboratory Requirement)</p>  | C- | 1   |  |
|  | <p>MATH 110: College Algebra (CAS Science &amp; Math Requirement) OR<br/>                 MATH 120: Precalculus OR<br/>                 MATH 125: Trigonometry OR<br/>                 MATH 210: Calculus I OR<br/>                 *MATH 220: Calculus II OR<br/>                 STAT 235: Elementary Statistics<br/> <b>OR</b><br/>                 (for pre-dental, pre-medical and pre-pharmacy only)<br/>                 BIOLOGY 108: General Biology I AND BIOLOGY 108L: General Biology I Laboratory OR<br/>                 BIOLOGY 109: General Biology II AND BIOLOGY 109L: General Biology II Laboratory</p> | C- | 3-5 |  |


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|  | <p>Complete Anchor I and DISC 100<br/>                 Complete 15 term hours toward degree (recommended), 12 minimum (required)<br/>                 Complete 30 total hours minimum toward degree<br/>                 Complete Math requirement (110 or 200-level MATH/STAT course)<br/>                 Complete at least one Foreign Language course (110 or higher)<br/>                 Earn minimum 2.000 term GPA<br/>                 Earn minimum 2.000 cumulative UM GPA</p> |
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Summer Semester Year 1: 0-4 hours

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|--|--|--|--|---|
|  | <p>Complete General Chemistry course sequence (including CHEM 211, 211L, 212LR and 212L) with a “C-“ or better in each course.</p> |  |  | Should use summer to complete the General Chemistry course sequence if necessary. |
|--|--|--|--|---|


Fall Semester Year 2: 15 hours


|  |   |    |     |   |
|--|---|----|-----|---|
|  | <p>*/**CHEM 321: Organic Chemistry I</p>  | C- | 3   | <p>Foreign Language is required for all B.A. degrees in the College of Arts and Sciences; The <a href="#">foreign language placement exam</a> is highly recommended to ensure placement in the correct level.</p> <p>ALEKS Math Placement Exam required prior to enrollment in many higher level MATH/STAT courses.</p> <p>Any MATH/STAT at the 200 level fulfills CAS Math Requirement</p> |
|  | <p>*/**CHEM 321L: Organic Chemistry I Lab</p>   | C- | 1   |   |
|  | <p>Foreign Language Requirement (110 or higher) – <a href="#">Click for options</a></p>   |    | 3   |   |
|  | <p>PHYSICS 210: General Physics I (CAS Science &amp; Math Requirement) OR Free Elective</p>   | C- | 4   |   |
|  | <p><b>Focus A: Arts and Humanities</b> <a href="#">Click for options</a><br/> <b>OR</b><br/>                 (for pre-dental, pre-medical and pre-pharmacy only)<br/>                 MATH 210: Calculus I OR<br/>                 *MATH 220: Calculus II OR<br/>                 STAT 235: Elementary Statistics<br/> <b>OR</b><br/>                 (for pre-dental, pre-medical and pre-pharmacy only)<br/>                 BIOL 202: Cell Biology</p> | C- | 3-5 |   |

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|  | <p>Complete 15 term hours toward degree (recommended), 12 minimum (required)</p> |
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|  | Earn minimum 2.000 term GPA<br>Earn minimum 2.000 cumulative UM GPA |  |  | Take the <a href="#">RooWriter Writing Assessment</a> the semester immediately following DISC 200 and at least a semester before registering for a Writing Intensive course. |
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**Spring Semester Year 2: 14-18 hours**

|  |   |    |     |  |
|--|---|----|-----|--|
|  | **CHEM 322R: Organic Chemistry II   | C- | 3   | ALEKS Math Placement Exam required prior to enrollment in many higher level MATH/STAT courses.<br><br>MATH 110 or any MATH/STAT at the 200 level fulfills CAS Math Requirement |
|  | **CHEM 322L: Organic Chemistry II Lab   | C- | 1   |  |
|  | PHYSICS 210: General Physics I (if not fulfilled above) OR<br>*PHYSICS 220: General Physics II  | C- | 4   |  |
|  | Foreign Language Requirement (120 or higher)  |    | 3-5 |  |
|  | CAS Social & Behavioral Sciences Requirement - <a href="#">Click for options</a><br><b>OR</b><br>(for pre-dental, pre-medical and pre-pharmacy only)<br>MATH 210: Calculus I OR<br>*MATH 220: Calculus II OR<br>STAT 235: Elementary Statistics<br><b>OR</b><br>(for pre-dental, pre-medical and pre-pharmacy only)<br>BIOL 202: Cell Biology | C- | 3-5 |  |


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|--|--|
|  | Complete Anchor II and DISC 200<br>Complete 60 total hours toward degree<br>Complete 15 term hours toward degree (recommended), 12 minimum (required)<br>Earn minimum 2.000 term GPA<br>Earn minimum 2.000 cumulative UM GPA |
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**Summer Semester Year 2: 0-4 hours**

|  |  |  |  |   |
|--|--|--|--|---|
|  |  |  |  | Should use summer to complete the Organic Chemistry course sequence if necessary. |
|  | Complete Organic Chemistry course sequence (including CHEM 321, 321L, 322R and 322L) with a "C-" or better in each course. |  |  |   |


**Fall Semester Year 3: 16-17 hours**

|  |   |    |     |  |
|--|---|----|-----|--|
|  | <b>Anchor III: Civic and Community Engagement-</b> <a href="#">Click for options</a>                                      |    | 3   |  |
|  | <b>**DISC 300: Civic and Community Engagement</b> (Speech and Writing)  |    | 3   |  |
|  | *CHEM 3XX: Any 300-level Chemistry course OR<br>*LS-BIOC 341: Basic Biochemistry OR<br>*LS-BIOC 365: Human Biochemistry I | C- | 3   |  |
|  | Foreign Language Requirement (211 or higher)  |    | 3   |  |
|  | LS-ANAT 118: Introductory Anatomy (pre-dental, pre-medical and pre-pharmacy)<br>OR Free Elective                          |    | 3   |  |
|  | LS-ANAT 118L: Introductory Anatomy Laboratory (pre-dental, pre-medical and pre-pharmacy)<br>OR Free Elective              |    | 1-2 |  |
|  |   |    |     |  |

|  |  |
|--|--|
|  | Complete RooWriter Writing Assessment<br>Complete Foreign Language Requirement (211 or higher)<br>Complete 15 term hours toward degree (recommended), 12 minimum (required)<br>Earn minimum 2.000 term GPA<br>Earn minimum 2.000 cumulative UM GPA |
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**Spring Semester Year 3: 14 hours**

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|---|----|---|---|
| *CHEM 341WI: Analytical Chemistry I (CAS Writing Intensive Requirement)   | C- | 4 | POL-SCI 210, HIST 101 or 102 fulfill <b>Focus C</b> as well as the Missouri Constitution requirement. |
| <b>Focus C: Human Actions, Values, and Ethics</b> <a href="#">Click for options</a>   |    | 3 |   |
| Missouri Constitution course (if not fulfilled above – <a href="#">Click for options</a> ) or other CAS Social & Behavioral Sciences Requirement course – <a href="#">Click for options</a> |    | 3 |   |
| LS-PHYS 117: Human Physiology (pre-dental, pre-medical and pre-pharmacy)<br>OR Free Elective  |    | 3 |   |
| LS-PHYS 117L: Human Physiology Laboratory (pre-dental, pre-medical and pre-pharmacy) ]<br>OR Free Elective  |    | 1 |   |


|   |  |
|---|--|
|  | Complete 15 term hours toward degree (recommended), 12 minimum (required)<br>Earn minimum 2.000 term GPA<br>Earn minimum 2.000 cumulative UM GPA |
|---|--|

**Summer Semester Year 3: 0 hours if previous courses completed**

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|--|--|--|--|
|  |  |  | May use summer semester to ensure completion of 30 hours per academic year or to lighten fall and spring course loads. |
|--|--|--|--|

**Fall Semester Year 4: 13-15 hours**

|   |    |     |  |
|---|----|-----|--|
| <b>Focus A: Arts and Humanities</b> <a href="#">Click for options</a><br>Or Free Elective   |    | 3   | Apply for graduation and complete Final Degree Audits for the following: UMKC General Education Core, CAS Degree Requirements, Major Requirements, and/or Minor Requirements.<br><br>Take the ETS Proficiency Profile (EPP) exit exam. |
| CAS Social & Behavioral Sciences Requirement - <a href="#">Click for options</a> (recommend 300/400-level) (if not fulfilled above)<br>OR Free Elective |    | 3   |  |
| *CHEM 3XX: Any 300-level Chemistry course   | C- | 1-3 |  |
| CAS Arts & Humanities - <a href="#">Click for options</a>   |    | 3   |  |
| Free Elective (recommend 300/400 level)   |    | 3   |  |

|  |  |
|--|--|
|  | Complete 15 term hours toward degree (recommended), 12 minimum (required)<br>Earn minimum 2.000 term GPA<br>Earn minimum 2.000 cumulative UM GPA |
|--|--|


**Spring Semester Year 4: 12-18 hours**

|   |  |   |  |
|---|--|---|--|
| CAS Arts & Humanities - <a href="#">Click for options</a> |  | 3 | In combination with required upper-level courses, take enough Free Elective hours at |
| Free Elective (recommend 300/400-level)                   |  | 3 |  |

# UMKC Major Map: Bachelor of Arts in Chemistry

## First-Time College Students

Catalog Year: 2014 - 2015

|  |  |  |     |  |
|--|--|--|-----|--|
|  | Free Elective (recommend 300/400-level)  |  | 3   | the 300/400-level to meet the minimum requirement of 36 upper-level credit hours.<br>Take Major Field (MF) exam. |
|  | Free Elective (recommend 300/400-level)  |  | 3   |  |
|  | <i>Free Elective (only take these credits if needed to reach 120 minimum hours)</i>  |  | 0-6 |  |
|  | Complete 15 term hours toward degree (recommended), 12 minimum (required)<br>Earn minimum 2.000 term GPA<br>Earn minimum 2.000 cumulative UM GPA |  |     |  |

## Graduation Requirements Summary

| Total Hours (120 minimum) | Total Hours at UMKC (30 hours min) | Major GPA | UMKC GPA |
|---------------------------|------------------------------------|-----------|----------|
| 120                       | 30                                 | 2.0       | 2.0      |

## Other Information and Policy

### Non-course requirements

**Met**

RooWriter Writing Assessment  
ETS Proficiency Profile (EPP) exam  
Major Field (MF) exam

The School reserves the right to make changes in courses, degree requirements and course schedules without notice.

Students are expected to maintain a quality of achievement significantly above minimum UMKC standards for degree work. Individual student progress will be monitored throughout the program. Satisfactory progress is required of all students for retention in the program. Students are expected to maintain academic standards, perform satisfactorily in courses, refrain from academic dishonesty, comply with the established University and teacher education timetables and requirements, and refrain from unethical or unprofessional behavior or behaviors that obstruct the training process or threaten the welfare of the student or others. Other circumstances involving student behavior will be addressed by the faculty on an individual basis.

A minimum of 36 upper-level hours required for graduation.

## Advising Contact Information

College of Arts and Sciences Advising  
09 Schofield Hall (Basement)  
816.235.1148  
<http://cas.umkc.edu/advising/default.asp>

## Career Opportunities

UMKC Career Services Resources: <http://www.career.umkc.edu/?q=node/87>  
O\*Net OnLine: <http://www.onetonline.org/find/>