Four Year Graduation Plan – Courses & 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. For more information see the University Catalog at umkc.edu/catalog.

Your path to graduation may vary 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.

Please Note: Students who do not place into MATH 120 Pre-Calculus or higher may have to complete preparatory math coursework, potentially adding 3 hours to the total hours required for the degree.

<table>
<thead>
<tr>
<th>First Math Course:</th>
<th>MATH 120 Pre-Calculus</th>
<th>Foreign Language Requirement:</th>
<th>Yes</th>
<th>General Elective Hours:</th>
<th>23</th>
</tr>
</thead>
</table>

### Critical Course

<table>
<thead>
<tr>
<th>Course Subject, Number, &amp; Title and Academic Plan Benchmarks</th>
<th>Min. Rec. Grade</th>
<th>Credit Hours</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bold = UMKC General Education Core requirement</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Co-Requisite Enrollment Required</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Fall Semester Year 1: 14-17 hours

- MATH 120 Pre-Calculus\(^{1}\) (Focus B) OR MATH 125 Trigonometry\(^{1}\) (if MATH 110 College Algebra completed) ** Enrollment restricted. Must take ALEKS Math Placement Exam or show prerequisite requirement has been met prior to enrolling.
- Foreign Language Requirement\(^{2}\) (110 or higher) [Click for options]
- **Anchor I Reasoning & Values [Click for options]
- **DISC 100 Reasoning & Values (Speech & Writing) [Click for options]
- General Elective

Complete 14+ credit hours toward degree
Earn minimum 2.00 term GPA

#### Spring Semester Year 1: 15-16 hours

- MATH 210 Calculus I (Focus B)
- PHYSICS 210 General Physics I (Focus Elective) OR PHYSICS 240 Physics for Scientists & Engineers\(^{1}\) (Focus Elective) ** BA Students are strongly encouraged to take PHYSICS 240 and 250. Register for UMKC Roo Career Network.
- **Anchor II Culture & Diversity [Click for options]
- **DISC 200 Culture & Diversity (Speech & Writing) [Click for options]
- General Elective

Complete 15+ credit hours toward degree
Earn minimum 2.00 term GPA

#### Summer Semester Year 1

- MATH 210 Calculus I (if not already completed)

Complete Math Requirement
Complete Anchor I & DISC 100
Complete at least one Foreign Language course (110 or higher)
Complete at least 30 total credit hours toward degree
Maintain a minimum 2.00 cumulative GPA

Recommend completing MATH 210 over the summer if tested into MATH 100.
### Fall Semester Year 2: 15-16 hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 220 Calculus II</td>
<td>B</td>
<td>4</td>
</tr>
<tr>
<td>PHYSICS 220 General Physics II OR PHYSICS 250 Physics for Scientists &amp; Engineers II</td>
<td>B</td>
<td>4-5</td>
</tr>
<tr>
<td>Foreign Language Requirement (120 or higher)</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td><strong>Focus A Arts &amp; Humanities</strong> Click for options</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>General Elective</td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>

**Complete 15+ credit hours toward degree**

**Earn minimum 2.00 term GPA**

### Spring Semester Year 2: 15 hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYSICS 3XX/4XX Major Elective Click for options. (PHYSICS 350 Modern Physics recommended)</td>
<td>3</td>
</tr>
<tr>
<td>PHYSICS 3XX/4XX Major Elective Click for options. (PHYSICS 385L Advanced Lab Elementary Circuits recommended)</td>
<td>3</td>
</tr>
<tr>
<td><strong>Focus C Human Values &amp; Ethical Reasoning</strong> Click for options</td>
<td>3</td>
</tr>
<tr>
<td>Foreign Language Requirement (211 or higher)</td>
<td>3</td>
</tr>
<tr>
<td>General Elective</td>
<td>3</td>
</tr>
</tbody>
</table>

**Complete 15 credit hours toward degree**

**Earn minimum 2.00 term GPA**

### Summer Semester Year 2: 0 hours

- Complete Anchor II & DISC 200
- Complete Foreign Language Requirement (211 or higher)
- Complete RooWriter Assessment
- Complete at least 60 credit hours toward degree
- Maintain minimum 2.00 cumulative GPA

**Students may use the summer to ensure completion of 30 hours per academic year or to lighten fall and spring course loads.**

### Fall Semester Year 3: 15 hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYSICS 310 Mechanics I</td>
<td>3</td>
</tr>
<tr>
<td>PHYSICS 330 Methods of Theoretical Physics I</td>
<td>3</td>
</tr>
<tr>
<td>PHYSICS 3XX/4XX Major Elective Click for options. (PHYSICS 395L Advanced Lab Computer Interfacing recommended)</td>
<td>3</td>
</tr>
<tr>
<td><strong>Anchor III Civic &amp; Community Engagement</strong> Click for options</td>
<td>3</td>
</tr>
<tr>
<td><strong>DISC 300 Civic &amp; Community Engagement (Speech &amp; Writing)</strong> Click for options</td>
<td>3</td>
</tr>
</tbody>
</table>

**Complete 15 credit hours toward degree**

**Earn minimum 2.00 term GPA**

### Spring Semester Year 3: 15 hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 211 + 211L General Chemistry I with Lab</td>
<td>5</td>
</tr>
<tr>
<td>CAS Social &amp; Behavioral Sciences Requirement Click for options</td>
<td>3</td>
</tr>
<tr>
<td>CAS Social &amp; Behavioral Sciences Requirement Click for options (Complete MO Constitution requirement if not met above)</td>
<td>3</td>
</tr>
<tr>
<td>CAS Arts &amp; Humanities Requirement Click for options</td>
<td>3</td>
</tr>
<tr>
<td>General Elective</td>
<td>1</td>
</tr>
</tbody>
</table>

**Complete 15 credit hours toward degree**

**Earn minimum 2.00 term GPA**

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3 BA students must take at least one advanced lab course. All three advanced lab options are recommended.

4 HISTORY 101, 102, & POL-SCI 210 fulfill both the Focus Elective & Missouri Constitution requirement.
Summer Semester Year 3: 0 hours
Complete Anchor III & DISC 300
Complete at least 90 credit hours towards degree
Maintain minimum 2.00 cumulative GPA

Fall Semester Year 4: 15 hours
- PHYSICS 3XX/4XX Major Elective [Click for options.] 3
- PHYSICS 472 Introduction to Quantum Mechanics 3
- PHYSICS 3XX/4XX Major Elective [Click for options.]
  (PHYSICS 476LW Advanced Lab Writing Intensive recommended) 3
- General Elective 3
- General Elective 3

Complete 15 credit hours toward degree
Earn minimum 2.00 term GPA

Spring Semester Year 4: 12-15 hours
- PHYSICS 3XX/4XX Major Elective [Click for options.]
  (PHYSICS 420 Optics recommended) 3
- CAS Arts & Humanities Requirement [Click for options] 3
- General Elective (CAS Writing Intensive Course if not completed above) 3
- General Elective 3
- General Elective (if needed to reach 120 hours) 0-3

Earn minimum 2.00 term GPA

Graduation Requirements Summary

<table>
<thead>
<tr>
<th>Total Hours</th>
<th>Total Hours at UMKC</th>
<th>Upper Lvl Hrs in Major at UMKC</th>
<th>Upper (300 / 400) Level Hours</th>
<th>Major GPA</th>
<th>UMKC GPA</th>
</tr>
</thead>
<tbody>
<tr>
<td>120 minimum</td>
<td>30 minimum</td>
<td>12 minimum</td>
<td>36 minimum</td>
<td>2.00 minimum</td>
<td>2.00 minimum</td>
</tr>
</tbody>
</table>

Other Information

A minimum of 30 hours must be earned at the University of Missouri-Kansas City, regardless of the number and level of hours earned at another institution. Undergraduate degree-seeking students are required to earn credit in at least 36 hours of coursework numbered 300 and above at UMKC. In the case of transfer credit, the coursework must be numbered as junior-senior level work by the transferring institution. Community-college transfer coursework cannot count towards the 36-hour requirement.

Non-course Requirements
- RooWriter Assessment
- Major Field Exam
- ETS Proficiency Profile

Policy

The University reserves the right to make changes in courses and course schedules. 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 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.
Advising Contact Information
College of Arts & Sciences Student Services
09 Scofield Hall (basement)
http://cas.umkc.edu/advising/default.asp
816-235-1148

Career Opportunities
UMKC Career Services – career.umkc.edu | 816-235-1636 | 2nd Floor, Atterbury Student Success Center.
O*Net OnLine – OnetOnline.org Learn about careers related to your major, income potential, and more.