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.

coursework.

<table>
<thead>
<tr>
<th>First Math Course:</th>
<th>MATH 210 Calculus I</th>
<th>Foreign Language Requirement:</th>
<th>No</th>
<th>General Elective Hours:</th>
<th>10</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>
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<tr>
<td>** Co-Requisite Enrollment Required</td>
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</table>

** Fall Semester Year 1: 15-18 hours **

- MATH 210 Calculus I (Focus B) OR MATH 120 Pre-Calculus (Focus B) OR MATH 125 Trigonometry (if MATH 110 Pre-Calculus Algebra completed) B 2-5
- CHEM 211 + 211L General Chemistry I with Lab B 5
- **Anchor I Reasoning & Values [Click for options]** 3
- **DISC 100 Reasoning & Values (Speech & Writing) [Click for options]** 3
- Focus A Arts & Humanities (if taking Math 125) [Click for options] 3

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

** Spring Semester Year 1: 15 hours **

- MATH 220 Calculus II B 4
- PHYSICS 240 Physics for Scientists & Engineers I B 5
- ASTR 150 Motions of the Cosmos (even years, Focus Elective) OR ASTR 155 Starlight & Star Stuff (odd years, Focus Elective) 3
- Focus C Human Values & Ethical Reasoning [Click for options] Recommend HISTORY 101, 102, or POL-SCI 210 3

Complete 15 credit hours toward degree
Earn minimum 2.00 term GPA

** Summer Semester Year 1: 0 hours **

Complete Anchor I & DISC 100
Complete at least 30 total credit hours toward degree
Maintain a 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 2: 15 hours **

- MATH 250 Calculus III B 4
- PHYSICS 250 Physics for Scientists & Engineers II B 5

Take the RooWriter Assessment after completing DISC 200. Must
<table>
<thead>
<tr>
<th>Semester</th>
<th>Requirements</th>
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<tbody>
<tr>
<td><strong>Anchor II Culture &amp; Diversity</strong></td>
<td>3 credits, complete prior to enrolling in a Writing Intensive (WI) course.</td>
</tr>
<tr>
<td><strong>DISC 200 Culture &amp; Diversity</strong> (Speech &amp; Writing)</td>
<td>3</td>
</tr>
</tbody>
</table>

**Spring Semester Year 2: 15 hours**

- PHYSICS 350 Modern Physics: 3
- COMP-SCI 101 Problem Solving & Programming I: 5
- ASTR 353 Practical Astronomy (even years) OR PHYSICS 410 Thermal Physics (odd years): 3
- ASTR 150 Motions of the Cosmos (even years) OR ASTR 155 Starlight & Star Stuff (odd years): 3
- **Focus A Arts & Humanities** (if not taken in Fall Year 1): 3

**Summer Semester Year 2: 0 hours**

- Complete Anchor II & DISC 200
- Complete RooWriter Assessment
- Complete at least 60 credit hours toward degree
- Maintain minimum 2.00 cumulative GPA

**Fall Semester Year 3: 15 hours**

- PHYSICS 310 Mechanics I: 3
- PHYSICS 330 Methods of Theoretical Physics I: 3
- ASTR 355 Stellar Astrophysics (even years) OR ASTR 356 Galaxies (odd years): 3
- **Anchor III Civic & Community Engagement** | 3
- **DISC 300 Civic & Community Engagement** (Speech & Writing): 3

**Spring Semester Year 3: 15 hours**

- PHYSICS 311 Mechanics II: 3
- ASTR 353 Practical Astronomy (even years) OR PHYSICS 410 Thermal Physics (odd years): 3
- CAS Social & Behavioral Sciences Requirement: 3 (Complete MO Constitution requirement if not met above)
- CAS Arts & Humanities Requirement | 3
- General Elective (PHYSICS 499 Undergraduate Research recommended): 3

**Summer Semester Year 3: 0 hours**

- Recommend Summer Research Project/Internship: 0

**Fall Semester Year 4: 15 hours**

- ASTR 355 Stellar Astrophysics (even years) OR ASTR 356 Galaxies (odd years): 3
Apply for graduation & complete your Final Degree Audit for Major and Minor (if applicable).

Take the ETS Proficiency Profile (EPP) exit exam.

Complete 15 credit hours toward degree
Earn minimum 2.00 term GPA

Spring Semester Year 4: 12-15 hours

ASTR 465 Cosmology (odd years) OR
PHYSICS 410 Thermal Physics (even years) 3

PHYSICS 461 Electricity & Magnetism II 3

CAS Arts & Humanities Requirement Click for options 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.