Four-Year Degree Plan: Bachelor of Science in Mathematics with Probability and Statistics Concentration

COLLEGE OF
LETTERS,
ARTS AND
SCIENCES Catalog Year: 2023-2024

| Year One |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Semester 1 | Fall | Credits | Semester 2 | Spring | Credits |
| MTH 1110 | College Algebra for Calculus | 4 | MTH 1120 | College Trigonometry | 3 |
| -- | Written Communication I | 3 | -- | Written Communication II | 4 |
| -- | Oral Communication | 3 | -- | Arts and Humanities II | 3 |
| -- | Arts and Humanities I | 3 | -- | Any courses to satisfy hours reqs. | 6 |
| -- | Any course to satisfy hours reqs. | 3 |  |  |  |
|  | Semester 1 Total | 16 |  | Semester 2 Total | 16 |


| Year Two |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Semester 3 | Fall | Credits | Semester 4 | Spring | Credits |
| MTH 1410 | Calculus I |  | MTH 2410 | Calculus II | 4 |
| -- | Natural and Physics Sciences I | 3 | -- | Historical | 3 |
| -- | Natural and Physics Sciences II | 1 | -- | Natural and Physical Sciences III | 3 |
| -- | Social and Behavioral Sciences I | 3 | -- | Minor II | 3 |
| -- | Minor I | 3 | -- | Social and Behavioral Sciences II | 3 |
| -- | Any courses to satisfy hours reqs. | 3 |  |  |  |
|  | Semester 3 Total | 17 |  | Semester 4 Total | 16 |


| Year Three |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Semester 5 | Fall | Credits | Semester 6 | Spring | Credits |
| MTH 3100 | Introduction to Proofs | 3 | MTH 3210 | Probability and Statistics | 4 |
| MTH 2420 | Calculus III | 4 | -- | Programming elective | 4 |
| -- | Linear algebra elective | 4 | -- | Ethic Studies \& Social Justice | 3 |
| -- | Minor III | 3 | -- | Minor IV | 3 |
|  | Semester 5 Total | 14 |  | Semester 6 Total | 14 |


| Year Four |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Semester 7 | Fall | Credits | Semester 8 | Spring | Credits |
| MTH 3220 | Statistical Methods | 4 | MTH 4230 | Regression \& Comput. Statistics | 4 |
| MTH 4210 | Probability Theory | 4 | -- | Upper division elective | 4 |
| -- | Minor V | 3 | -- | Minor VI | 3 |
| -- | Global Diversity | 3 | -- | Any course to satisfy hours reqs. | 2 |
|  | Semester 7 Total | 14 |  | Semester 8 Total | 13 |

## Program Total: 120

Students must complete all courses in the major with a grade of C- or better. A minor is required for students who are not dual majors or completing a concurrent or second degree. Students must meet with a faculty advisor to declare the mathematics major and to register for Introduction to Proofs (MTH 3100).

Advisor Contact Information: Leah Butler, Ibutle14@msudenver.edu, 303-605-7526, or visit CLAS Academic Advising

| General Studies |  |  |  |  |  |  |
| :--- | :--- | :---: | :---: | :---: | :---: | :---: |
| -- | Written Communication | 6 |  |  |  |  |
| - | Oral Communication | 3 |  |  |  |  |
| -- | Arts and Humanities | 6 |  |  |  |  |
| - | Social and Behavioral Sciences | 6 |  |  |  |  |
| -- | Natural and Physical Sciences | 6 |  |  |  |  |
| - | Historical | 3 |  |  |  |  |
| -- | Global Diversity | General Studies Total |  |  |  |  |
|  | $\mathbf{3 0 - 3 3}$ |  |  |  |  |  |


| Core Requirements |  |  |
| :--- | :--- | :---: |
| MTH 1410 | Calculus I |  |
| MTH 2410 | Calculus II | 4 |
| MTH 2420 | Calculus III | 4 |
| MTH 3100 | Introduction to Proofs | 4 |
|  | Core Requirements Total | 15 |


| Specific Degree Requirements |  |  |
| :--- | :--- | :---: |
| MTH 3210 | Probability and Statistics | 4 |
| MTH 3220 | Statistical Methods | 4 |
| MTH 4210 | Probability Theory | 4 |
| MTH 4230 | Regression \& Comput. Statistics | 4 |
| -- | Programming elective | 4 |
| -- | Linear algebra elective | Specific Degree Requirements Total |
| -- | Upper division elective | $\mathbf{2 8}$ |

## Program Totals

General Studies Requirements 33
Ethic Studies \& Social Justice 3
Required Pre-Requisites 7
Major Courses 15
Concentration Courses 28
Unrestricted Electives 16
Minor 18
Total to Graduate 120

