# MINNESOTA STATE UNIVERSITY MANKATO

## Undergraduate Degree Map for Completion in Four Years

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|---|---|
| **College:** | College of Science, Engineering & Technology |
| **Department:** | Mathematics & Statistics |
| **Name of Program:** | STATISTICS |
| **Degree Designation:** | BS |
| **Emphasis/Concentration:** | Computer Science Track |
| **Option:** | |
| **Version:** | 1 |
| **Version Explanation:** | |
| **Type of Program:** | Broad Major |
| **Minor Required:** | No |
| **Specific Minor (if required):** | |

**Program Description:**

Statistics is the mathematical science of studying and learning from data. Statisticians acquire, organize, analyze, present and draw inferences from data. Inferences about a population are communicated with measures of likelihood. Statistical analysis is used in a variety of disciplines to communicate uncertainties for the purpose of making informed decisions. Applications of statistics are all around us such as in weather forecasting, surveys, quality control, market demand, causality, and effectiveness of treatments, to name only a few.

**Admission Requirements:**

In addition to minimum university admission requirements of : a minimum of 32 earned semester credit hours and a minimum cumulative GPA of 2.00, students must complete 10 credits in mathematics and statistics counting towards the Major with a minimum GPA of 2.5.

**Advising:**

You are expected to meet with your advisor on a regular basis to ensure courses are taken in an order that will lead to successful completion of the degree.

A complete listing of program faculty, policies, and course descriptions is available in the undergraduate bulletin.

## TERM 1 - FALL

| Designator: | Course: | Course Name: | Credits: | Milestones: |
|---|---|---|---|---|
| | | | | Overall GPA ≥ 2.0<br>Course Completion Rate ≥ 67%<br>Completion of ≥ 15 credit hours |
| MATH | 121 | Calculus I | 4 | |
| STAT | 154 | Elementary Statistics | 3 | |
| GEN ED | Goal Area 1A | | 4 | |
| IT | 210 | Fundamentals of Programming | 4 | |

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**Term 1 Notes:**

Statistics majors automatically satisfy goal area 4.

| TERM 2 - SPRING | | | | |
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| Designator: | Course: | Course Name: | Credits: | Milestones: |
| | | | | Overall GPA ≥ 2.0<br>Course Completion Rate ≥ 67%<br>Completion of ≥ 30 credit hours<br>Advance to Sophomore status |
| MATH | 122 | Calculus II | 4 | |
| GEN ED | Goal Area 1B | | 3-4 | |
| GEN ED | Goal Area 3 | | 3-4 | |
| IT | 214 | Fundamentals of Software Development | 4 | |

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**Term 2 Notes:**

Apply for Admission to Major at the CSET Student Relations Office located in TR C125.  Admission to Major, or provisional Admission to Major, is required to take 300 - 400 level courses.

| TERM 3 - FALL | | | | |
|---|---|---|---|---|
| Designator: | Course: | Course Name: | Credits: | Milestones: |
| | | | | Overall GPA ≥ 2.0<br>Course Completion Rate ≥ 67% |
| MATH | 223 | Calculus 3 | 4 | |
| STAT | 354 | Concepts of Probability and Statistics | 3 | Requires Admission to Major or provisional Admission to Major |
| GEN ED | Goal Area 3 | | 3-4 | |
| IT | 340 | Introduction to Database Systems | 4 | |
| GEN ED | Goal Area 11 | | 2-3 | |

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**Term 3 Notes:**

If you have not been Admitted to Major, apply for Admission to Major at the CSET Student Relations Office located in TR C125.  Admission to Major, or provisional Admission to Major, is required to take 300 - 400 level courses

| TERM 4 - SPRING | | | | |
|---|---|---|---|---|
| **Designator:** | **Course:** | **Course Name:** | **Credits:** | **Milestones:**<br>Overall GPA ≥ 2.0<br>Course Completion Rate ≥ 67%<br>Completion of ≥ 60 credit hours<br>Advance to Junior status |
| STAT | 450 or 451 | Regression Analysis or Experimental Designs | 3 | |
| MATH | 247 | Linear Algebra I | 4 | |
| STAT or GEN ED | 459 or Goal Area 6 | Nonparametric Methods | 3-4 | |
| GEN ED | Goal Area 5 | | 6-8 | |

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**Term 4 Notes:**

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| TERM 5 - FALL | | | | |
|---|---|---|---|---|
| **Designator:** | **Course:** | **Course Name:** | **Credits:** | **Milestones:**<br>Overall GPA ≥ 2.0<br>Course Completion Rate ≥ 67%<br>Apply for Graduation |
| STAT | 457 or 458 | Sample Survey, Design and Analysis or Categorical Data Analysis | 3 | |
| GEN ED | Goal Area 7 | | 3-4 | |
| GEN ED | Goal Area 8 | | 3-4 | |
| MATH or IT | Major Emphasis | | 4 | |
| GEN ED | Goal Area 6 | | 3-4 | |

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**Term 5 Notes:**

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| At least 40 credits must be at the 300 - 400 level |

| TERM 6 - SPRING | | | | |
|---|---|---|---|---|
| **Designator:** | **Course:** | **Course Name:** | **Credits:** | **Milestones:**<br>Overall GPA ≥ 2.0<br>Course Completion Rate ≥ 67%<br>Completion of ≥ 90 credit hours<br>Advance to Senior status |
| STAT | 450 or 451 | Regression Analysis or Experimental Designs | 3 | |
| STAT or GEN ED | 459 or Goal Area 6 | Nonparametric Methods | 3-4 | |

| Designator: | Course: | Course Name: | Credits: | Milestones: |
|---|---|---|---|---|
| | | | | Overall GPA ≥ 2.0<br>Course Completion Rate ≥ 67%<br>Completion of ≥ 90 credit hours<br>Advance to Senior status |
| GEN ED | Goal Area 9 | | 3-4 | |
| MATH or IT | Major Emphasis | | 8 | |

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**Term 6 Notes:**

At least 40 credits must be at the 300 - 400 level

| TERM 7 - FALL | | | | |
|---|---|---|---|---|
| Designator: | Course: | Course Name: | Credits: | Milestones: |
| | | | | Overall GPA ≥ 2.0<br>Course Completion Rate ≥ 67% |
| STAT | 457 or 458 | Sample Survey, Design and Analysis or Categorical Data Analysis | 3 | |
| STAT | 455 | Theory of Statistics I | 4 | |
| MATH or IT | Major Emphasis | | 4 | |
| GEN ED | Goal Area 10 | | 3-4 | |

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**Term 7 Notes:**

At least 40 credits must be at the 300 - 400 level

| TERM 8 - SPRING | | | | |
|---|---|---|---|---|
| Designator: | Course: | Course Name: | Credits: | Milestones: |
| | | | | Overall GPA ≥ 2.0<br>Course Completion Rate ≥ 67% |
| STAT | 456 | Theory of Statistics II | 4 | |
| STAT | 492 | Statistics Capstone Experience | 3 | |
| GEN ELEC | Elective | | 8-9 | |

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**Term 8 Notes:**

At  least 40 credit hours must be at the 300 - 400 level

| PROGRAM NOTES |
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| | DEGREE MAP CHECKLIST: GRADUATION REQUIREMENTS |
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| ☐ | 1. Minimum of 15 credits per semester |
| ☐ | 2. General Education = 44 credits |
| ☐ | 3. Diverse Cultures = 2 course (6 credits minimum) from two disciplines |
| ☐ | 4. Writing Intensive = 2 courses (6 credits minimum) |
| ☐ | 5. Major = ____ credits |
| ☐ | 6. Upper-Division Requirements = 40 credits minimum |
| ☐ | 7. Professional Education (if required) = 30 credits |
| ☐ | 8. Language Requirements (if BA) = 8 credits minimum |
| ☐ | 9. Minor = ____ credits |
| ☐ | 10. Total credits required for degree ____ |

| | DEGREE MAP COMPLETE |
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| ☑ | Map is complete and ready for review<br>   1. Faculty please send an email to your Department Chair when map is ready to review.<br>   2. Department Chair please send an email to your Dean when map is ready to review.<br>   3. Dean please send an email to the Assistant Vice President for Undergraduate Studies when map is ready to review. |

| | DEAN APPROVAL |
|---|---|
| ☑ | Map reviewed and approved by Dean |

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