

# Statistical Methods Minor

## Prepare Future Statisticians

**Goal Description:**

To offer high quality classroom with software knowledge and real life data experiences for undergraduate minoring in Statistics.

**Providing Department:** Statistical Methods Minor

**Progress:** Completed

RELATED ITEMS/ELEMENTS -----

RELATED ITEM LEVEL 1

**Students need to know basics concept in SAS, R, SPSS**

**Learning Objective Description:**

In this minor student has the chance to take Statistical software SPSS, SAS, and R. Also student will take Statistical Learning.

With Design of experiment and Linear regression taught last year, students gained knowledge in SPSS and R software.

RELATED ITEM LEVEL 2

**Independent Study STAT 4090**

**Indicator Description:**

This independent study can be repeated more than once since the subjects are different, for example Categorical Data Analysis, Survival model, and Biostatistics. Also if we do not have enough students to take a course on a regular semester, we offer students as an independent study.

In independent study, students will be more engage and more creative.

**Criterion Description:**

At the end of the semester usually students will write and submit project besides doing homework during the semester. We offered Linear Regression and Time Series as independent study last semester.

**Findings Description:**

Similar to stat theory minor, students gained individual knowledge by taking this course.

This independent study was taken by student in the spring 2022. Student engaged with in individual faculty.

RELATED ITEM LEVEL 3

**Student minor in Statistics Methods has to take 18 credit hours**

**Action Description:**

Student who has minor in statistics has completed 18 hours as expected.

RELATED ITEM LEVEL 2

**Student minor in Statistics Methods has to take 18 credit hours**

**Indicator Description:**

Student can choose 18 credit hours from Experimental Design, Linear Regression, Survey Sampling, Applied Bayesian, Times Series, Quality Control, Statistical Learning, Software Data Analysis, in addition to Statistical Methods in Practice.

Student who has minor in statistics has completed 18 hours as expected.

**Criterion Description:**

Students minoring in statistical methods are required to take 18 credit hours of upper-level statistics courses.

**Findings Description:**

In the fall 2021 we were able to offer 2 courses but one class did not have enough students. Even though we did not have enough students we combine those students in graduate class with different assessment.

In the spring 2022 we offer 2 courses but one course did not have enough students but we still run the class since some of the students in that class had senior.

Overall all four courses run smooth and students gain a lot of knowledge in statistical methods. Some of the courses used statistical software such as in Design of Experiment, instructor used SAS to solve some problems and in Liner Regression, instructor used R software to handle some of the homework.

RELATED ITEM LEVEL 3

**Student minor in Statistics Methods has to take 18 credit hours**

**Action Description:**

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## To provide students with adequate quantitative skills and interpretations.

**Goal Description:**

Students are expected to take 18 credit hours in upper level statistics. They will study concepts and definition, including how to work with real data.

Each minor completed 18 credit hours minor in Statistics

**Providing Department:** Statistical Methods Minor  
**Progress:** Completed

RELATED ITEMS/ELEMENTS -----

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**Update to Previous Cycle's Plan for Continuous Improvement Item**  
**Previous Cycle's Plan For Continuous Improvement (Do Not Modify):**  
**Closing Summary**  
We will continue recruit students so they can take all courses mention in this plan.

**Update of Progress to the Previous Cycle's PCI:**  
We will continue update the progress from the previous cycle to make a better goal.

**New Plan for Continuous Improvement Item**  
**Closing Summary:**  
We expect for the up coming year that we will offer enough classes for our undergraduate courses and the goal will be met next year.  
  
I depends on how many new course we offer next year, we will continue to implement the concept and software to improve the skills of the students.