



SOUTH DAKOTA BOARD OF REGENTS
ACADEMIC AFFAIRS FORMS
New Course Request

USD	Arts & Sciences/Computer Science
Institution	Division/Department
<i>Elizabeth M. Freeburg</i>	3/23/2020
Institutional Approval Signature	Date

Section 1. Course Title and Description

Prefix & No.	Course Title	Credits
CSC 457/557	Data Analysis, Decision Making, and Visualization	3

Course Description
The course aims to deliver fundamental ideas on analyzing data with the help of statistics, implementing scientific decisions using machine learning tools/techniques, and visualizing them for production at the output in accordance with the user's need. The course employs current programming languages appropriate to the discipline.

Pre-requisites or Co-requisites

Prefix & No.	Course Title	Pre-Req/Co-Req?
CSC 155/155L	Introduction to Computer Science & Programming	Pre-Req.

Registration Restrictions

N/A

Section 2. Review of Course

2.1. Was the course first offered as an experimental course (place an "X" in the appropriate box)?
 Yes (if yes, provide the course information below) No

2.2. Will this be a unique or common course (place an "X" in the appropriate box)?

If the request is for a unique course, verify that you have reviewed the common course catalog via Colleague and the system [Course Inventory Report](#) to determine if a comparable common course already exists. List the two closest course matches in the common course catalog and provide a brief narrative explaining why the proposed course differs from those listed. If a search of the common course catalog determines an existing common course exists, complete the Authority to Offer an Existing Course Form.

Unique Course

Prefix & No.	Course Title	Credits
CSC 486/586	Data Mining	3
CSC 460	Scientific Visualization	3

Provide explanation of differences between proposed course and existing system catalog courses below:
 CSC 486/586 is a course that explores data, especially large data; however, CSC 486/586 does not incorporate the decision making and visualization component that CSC 457/557 offers. The proposed course has a capability to deliver fundamental ideas on analyzing data, implementing scientific decisions using machine learning tools/techniques that are built upon statistical modeling, and visualizing them for production at the output in

accordance with the user's need. CSC 486/586 does not incorporate decision-making and data/decision visualization components. CSC 460 is limited to visualization.

Section 3. Other Course Information

3.1. Are there instructional staffing impacts?

- No.** Schedule Management, explain: This course will be taught with current faculty. CSC 457/557 will be part of the regular faculty teaching load on the course rotation. No new hiring will be necessary.

3.2. Existing program(s) in which course will be offered: B.A./B.S./M.S. in Computer Science.

3.3. Proposed instructional method by university: D Discussion/Recitation

3.4. Proposed delivery method by university: U01: Face-to-face Term Based Instruction and U15/U18 Online if offered during summer term.

3.5. Term change will be effective (enter catalog year): 2020-21

3.6. Can students repeat the course for additional credit?

- Yes, total credit limit: _____ No

3.7. Will grade for this course be limited to S/U (pass/fail)?

- Yes No

3.8. Will section enrollment be capped?

- Yes, max per section: 30 No

3.9. Will this course equate (i.e., be considered the same course for degree completion) with any other unique or common courses in the common course system database in Colleague and the [Course Inventory Report](#)?

- Yes No

3.10. Is this prefix approved for your university?

- Yes No

Section 4. Department and Course Codes (Completed by University Academic Affairs)

4.1. University Department Code: UCSC

4.2. Proposed [CIP Code](#): 11.0701

Is this a new CIP code for the university? Yes No