



SOUTH DAKOTA BOARD OF REGENTS
ACADEMIC AFFAIRS FORMS
New Course Request

<u>USD</u>	<u>Beacom School of Business / Economics and Decision Sciences</u>
Institution	Division/Department
<u>Elizabeth M. Freeburg</u>	<u>11/16/2017</u>
Institutional Approval Signature	Date

Section 1. Course Title and Description

Prefix & No.	Course Title	Credits
DSCI 519	Advanced Business Analytics Modeling	3

Course Description
Applies advanced SAS® programming techniques to create efficient programs for the analysis of data. Extensive SQL use, along with programmatic use of arrays, hashing and memory management within SAS® environments. Assists students preparing for the Advanced SAS Programming Certification Exam.

Pre-requisites: DSCI 507, SAS® Base Programming Certification, or equivalent.
Registration Restrictions N/A

Section 2. Review of Course

- 2.1. Was the course first offered as an experimental course?
 Yes (if yes, provide the course information below) No
- 2.2. Will this be a unique or common course?

Unique Course

Prefix & No.	Course Title	Credits
CSC 561	Programming Languages	3
CSC 570	Software Engineering	3
CSC 584	Database Management Systems	3
CSC 785	Information Storage and Retrieval	3

Provide explanation of differences between proposed course and existing system catalog courses below:

DSCI 519 differs from CSC 561, CSC 570, CSC 584 and CSC 785 by its analytics focus. DSCI 519 uses SAS® and SQL to retrieve data from, and manipulate data values in, SAS tables. DSCI 519 also uses SAS® and SQL to teach students how to add, modify or drop columns in a table, create tables and views, join multiple tables, indexes, and generate reports. DSCI 519 will also teach students to create and execute advanced queries, including subsetting data by conditional operators, calculated values, as well as using subqueries, noncorrelated and correlated subqueries. DSCI 519 will prepare students to combine tables horizontally through inner and outer joins, inline views, and step match-merges. DSCI 519 will equip students to combine tables vertically through exception, intersection, union and outer union set operations. DSCI will cover the SAS Macro Language, along with a suite of optimization techniques, including memory control and persistent storage control techniques. CSC 561 studies the syntax (or form) and semantics (or meaning) of languages but not the languages used in analytics (e.g. SAS, and SQL). Moreover, CSC 561 has a theory orientation, but DSCI 519 has an applied analytics orientation. CSC 570 explores the design, coding, and testing phases of the software life cycle,

with a focus on building quality software on time and within budget, but is a general course, and does not have an analytics focus. CSC 584 studies database systems encompassing the view of organization and management through the technology needed to support a database. Topics include E/R diagrams, semantic object models, and Structured Query Language (SQL). CSC 584 does include topics covered by DSCI 519, but CSC 584 does not use SAS, and is focused on a general-purpose orientation. CSC 785 studies the architecture, requirements and capabilities of different database management systems, but DSCI 519 is focused on SAS and relational database management systems exclusively.

Section 3. Other Course Information

3.1. Are there instructional staffing impacts?

- Yes. Specify below: DSCI 519 is an additional course which will require additional staffing (either adjunct, summer pay or overload).

3.2. Existing program(s) in which course will be offered: Master of Science in Business Analytics

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

3.4. Proposed delivery method by university: 001 Face-to-face Term Based Instruction

3.5. Term change will be effective (enter catalog year): Summer 2018

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 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: UECDS

4.2. Proposed [CIP Code](#): 52.1302 Business Statistics

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