



**SOUTH DAKOTA BOARD OF REGENTS**  
**ACADEMIC AFFAIRS FORMS**  
**New Course Request**

<b>USD</b>	<b>Computer Science</b>
<b>Institution</b>	<b>Division/Department</b>
<i>Elizabeth M. Freeburg</i>	3/21/18
<b>Institutional Approval Signature</b>	<b>Date</b>

**Section 1. Course Title and Description**

Prefix & No.	Course Title	Credits
CSC-555	Algorithms	4
CSC-555L	Algorithm Laboratory	0

<b>Course Description</b>
A study of important algorithms and their applications using the C++ programming language. Topics include asymptotic analysis of algorithms, use of lists, sets, and maps, underlying techniques including hashing and self-balancing trees. Graph algorithms and their implementations will be studied. Laboratory component.

**Pre-requisites or Co-requisites** N/A  
**Registration Restrictions** Instructor permission required

**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-350	Algorithms & Data Structure	

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

CSC-555 prepares graduate students for the study of research topics. It does not include the theory of computation (as CSC-350 does), but emphasizes applying algorithms. CSC 555 includes both understanding the implications for using standard libraries and the ability to devise novel but similar algorithms.
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### **Section 3. Other Course Information**

**3.1. Are there instructional staffing impacts?**

**Yes.** Specify below:

CSC-555 will be built into the computer science rotation. The department also plans to reinstate dual-listing of elective courses, which will allow for a more efficient rotation of courses. Moreover, eight CSC courses are scheduled to be deleted from the USD catalog.

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

**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):** Fall 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 (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:** UCSCI

**4.2. Proposed [CIP Code](#):** 11.0201

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