



SOUTH DAKOTA BOARD OF REGENTS
ACADEMIC AFFAIRS FORMS
 Revised Course Request: Unique Course
(Substantive Modification)

USD	QuocNam Tran	<i>Matthew Moen</i>	12/21/2016
Institution	Form Initiator	Dean's Approval Signature	Date
USD	Arts & Sciences/ Computer Science	<i>Elizabeth M. Freeburg</i>	01/19/2017
Institution	Division/Department	Institutional Approval Signature	Date

Section 1. Existing Course Title and Description

Prefix & No.	Course Title	Credits
CSC 731	Automata, Languages and Computation Theory	3

Course Description
The scanning, parsing, semantic analysis, and code generation phases of a compiler are studied. Specific parsing methods, finite state methods for lexical analysis, symbol table construction, internal forms for a program, run time storage management, and code optimization are covered.

Pre-requisites or Co-requisites N/A
 Registration Restrictions N/A

Section 2. Modification(s) Requested

2.1. This modification will include:

A change in description/subject matter content (enter revised description below).

Introduction to the theory of computers and computation including formal models for computation such as automata, languages, grammars, Turing machines, decidability, reducibility and the recursion theorem. The theory provides the abstract framework for conceptualizing computation and computers.

2. Add justification for all changes noted above:

The Department of Computer Science has reviewed our graduate curriculum in order to meet the current trends and national standards in the fast changing knowledge areas of the discipline. The department has decided that the students need to learn a broader range of knowledge in the theory of computers and computation including formal models for computation such as automata, languages, grammars, Turing machines, decidability, reducibility and the recursion theorem.

Section 3. Other Course Information

1. Will this course equate with any other unique or common courses in the common course database (Colleague and the [Course Inventory Report](#))?

Yes No

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

	<u>Current</u>		<u>New</u>	
<input type="checkbox"/> Change in University Department Code	UCSCI	to	N/A	
<input type="checkbox"/> Change in CIP Code	11.0101	to	N/A	