

**SOUTH DAKOTA BOARD OF REGENTS**

**Academic and Student Affairs**

**AGENDA ITEM: 3 – C (2)**

**DATE: May 11-12, 2016**

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**SUBJECT: Program Modifications – DSU**

Dakota State University has submitted the following program modification proposals. These requests have been reviewed by the system Vice President for Academic Affairs and the Executive Director recommends approval.

Existing Program: Substantive Program Modification

- Cyber Security (D.Sc.) – *request to change total credits required for the program*
- Health Informatics (M.S.) – *request to change the CIP Code*

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**DRAFT MOTION 20160511\_3-C(2):** I move to approve DSU’s program modifications for its D.Sc. in Cyber Security; and M.S. in Health Informatics programs



**8. PRIMARY ASPECTS OF THE MODIFICATION:**

Existing Curriculum				Proposed Curriculum (Highlight Changes)			
Current Program Name: D.Sc. in Cyber Security				Proposed Program Name:			
Pre	Num	Title	Cr Hrs	Pre	Num	Title	Cr Hrs
<del>Computer Science and Cyber Operations Masters Core</del>			<del>27</del>				
<del>CSC</del>	<del>705</del>	<del>Design &amp; Analysis of Algorithms</del>	<del>3</del>				
<del>CSC</del>	<del>710</del>	<del>Structure &amp; Design of Programming Languages</del>	<del>3</del>				
<del>CSC</del>	<del>714</del>	<del>Database Systems</del>	<del>3</del>				
<del>CSC</del>	<del>718</del>	<del>Operating Systems &amp; Parallel Programming</del>	<del>3</del>				
<del>CSC</del>	<del>720</del>	<del>Theory of Computation</del>	<del>3</del>				
<del>INFA</del>	<del>723</del>	<del>Cryptography</del>	<del>3</del>				
<del>INFA</del>	<del>725</del>	<del>Advanced Network Hacking</del>	<del>3</del>				
<del>INFA</del>	<del>729</del>	<del>Advanced Web Hacking</del>	<del>3</del>				
<del>INFA</del>	<del>751</del>	<del>Wireless Security</del>	<del>3</del>				
Cyber Security Core			15	Cyber Security Core			15
Cyber Security Research Core			9	Cyber Security Research Core			9
On-Site Research Seminars			3	On-Site Research Seminars			3
Dissertation			25	Dissertation			25
Electives			9	Electives			9

Total number of hours required for degree **88**

Total number of hours required for degree **61**

**9. EXPLANATION OF THE CHANGE:**

Students admitted to the Doctorate in Cyber Security have an earned Master's degree; therefore the minimum requirement to the program will consist of a BS and MS in order to apply for admission. The proposed requirement change is further reflected by the removal of 27 credits of Masters Coursework resulting in the total number of credit hours to earn this terminal degree becoming 61.

## South Dakota Board of Regents

### EXISTING PROGRAM: SUBSTANTIVE PROGRAM MODIFICATION

This form is used to request substantive changes in already existing programs (majors, minors, specializations).

**1. INSTITUTION:**    **Dakota State University**

**2. CURRENT PROGRAM NAME:**    **Master of Science in Health Informatics**

**3. THIS PROPOSAL DEALS WITH A CHANGE IN:**

*Distribution of Credits*

<u>      </u> total credits required within the discipline	<u>      </u> Program name
<u>      </u> total credits of supportive course work	<u>      </u> Existing specialization
<u>      </u> total credits of elective course work	<u>      </u> Addition of specialization
<u>      </u> total credits required for program	<u>  x  </u> Other: CIP Code change

**4. LEVEL:**

       Certificate  
       Associate Degree  
       Bachelor's Degree  
  X   Master's Degree  
       Doctoral Degree

**5. CATEGORY:**

       Minor  
  X   Major  
       Specialization

**6. EFFECTIVE DATE OF CHANGE:**      Fall 2016  

**7. IF A NAME CHANGE IS PROPOSED, THIS WILL OCCUR:**

  X   on the effective date for all students

       on the effective date for students new to the program  
           (enrolled students will graduate from existing program)

**8. PRIMARY ASPECTS OF THE MODIFICATION:**

Existing Curriculum				Proposed Curriculum (Highlight Changes)			
<b>Current CIP Code 51.0707</b>				<b>Proposed CIP Code 51.2706</b>			
<p><b>Title:</b> Health Information/Medical Records Technology/Technician.</p> <p><b>Definition:</b> A program that prepares individuals, under the supervision of health information administrators and other professionals, to construct medical records and clinical databases, perform manipulations on retrieved data, control the security and quality of records, and supervise data entry and technical maintenance personnel. Includes instruction in clinical and biomedical science data and information requirements, database management, data coding and validation, information security, quality control, health information content and structure, medical business procedures, and legal requirements.</p>				<p><b>Title:</b> Medical Informatics.</p> <p><b>Definition:</b> A program that focuses on the application of computer science and software engineering to medical research and clinical information technology support, and the development of advanced imaging, database, and decision systems. Includes instruction in computer science, health information systems architecture, medical knowledge structures, medical language and image processing, quantitative medical decision modeling, imaging techniques, electronic medical records, medical research systems, clinical decision support, and informatics aspects of specific research and practice problems.</p>			
Pre	Num	Title	Cr Hrs	Pre	Num	Title	Cr Hrs
Knowledge Support Courses				Knowledge Support Courses			
HIMS	701	Intro to Healthcare Information	3	HIMS	701	<b>Foundations in Healthcare Information</b>	3
INFS	601	Information Systems	3	INFS	601	Information Systems	3
INFS	<del>612</del>	<del>Mgmt &amp; Evaluation of Information Systems</del>	3	<b>INFS</b>	<b>608</b>	<b>Applied Statistics</b>	<b>3</b>
Required Courses			33	Required Courses			33
HIMS	742	Healthcare Information Infrastructure	3	HIMS	742	<b>Health Informatics, Information Systems and Technology</b>	<b>3</b>
HIMS	744	Healthcare Information Analysis	3	HIMS	744	<b>Data Analytics in Healthcare</b>	3
				<b>HIMS</b>	<b>745</b>	<b>Legal and Ethical Aspects of Health Informatics</b>	<b>3</b>
HIMS	746	Data Management in Health Informatics	3	HIMS	746	<b>Health Information Lifecycle Governance</b>	3
HIMS	747	Business of Health Informatics	3	HIMS	747	<b>Leadership and Management for Health Informatics</b>	3
HIMS	748	IS Tools and Application for Healthcare Research	3	HIMS	748	<b>Research Design in Health Informatics</b>	3
				<b>HIMS</b>	<b>758</b>	<b>Workflow and Usability Optimization in Health informatics</b>	<b>3</b>
HIMS	788	Master's Research Prob/Project	3	HIMS	788	<b>Masters Applied or Research Project</b>	3

				<b>INFS</b>	<b>720</b>	<b>Systems Analysis &amp; Design Using Case Tools</b>	<b>3</b>
INFS	724	Project and Change Management	3	INFS	724	Project and Change Management	3
INFS	760	Enterprise Modeling and Data Management	3	INFS	760	Enterprise Modeling and Data Management	3
<b>Elective</b>			<b>3</b>				
<b>Choose one specialization or three elective courses</b>			<b>9</b>				
<b>Database Specialization</b>			<b>9</b>				
INFS	762	Data Warehouse and Data Mining	3				
INFS	764	Information Retrieval	3				
INFS	766	Advanced Database	3				
<b>Privacy and Security Specialization</b>			<b>9</b>				
HIMS	745	Legal Issues in Health Informatics	3				
INFA	713	Management Security Risks	3				
INFA	715	Data Privacy	3				
<b>Healthcare Specialization</b>			<b>9</b>				
HSAD	710	Adv. Strategic Mgmt of Health Services Organizations (USD)	3				
HSAD	740	Adv. Health Care Systems (USD)	3				
HSAD	770	Adv. Health Care Management	3				
<b>Elective Courses</b>							
HIMS	792	Topics	3				
HIMS	820	Current Issues Health Informatics	3				
HSAD	710	Adv. Strategic Mgmt of Health Services Organizations (USD)	3				
HSAD	740	Adv. Health Care Systems (USD)	3				
HSAD	770	Adv. Health Care Management	3				
INFA	713	Management Security Risks	3				
INFA	715	Data Privacy	3				
INFS	720	System Analysis & Design Using Case Tools	3				
INFS	730	Web Application Development	3				
INFS	734	Multi-tiered and Service-oriented Architectures	3				

INFS	750	IT Infrastructure, Technology and Network Management	3				
INFS	752	Adv. Network Technology & Management	3				
INFS	754	Network Security/Intrusion Detection	3				
INFS	756	Cloud Computing and Network Services	3				
INFS	762	Data Warehouse and Data Mining	3				
INFS	764	Information Retrieval	3				
INFS	766	Adv. Database	3				
INFS	768	Predictive Analytics and Decision Making	3				
INFS	780	Information Technology Strategy and Policy	3				
<b>Total number of hours required for major, minor, or specialization</b>			<b>33</b>	<b>Total number of hours required for major, minor, or specialization</b>			<b>33</b>
<b>Total number of hours required for degree</b>			<b>33</b>	<b>Total number of hours required for degree</b>			<b>33</b>

### 9. EXPLANATION OF THE CHANGE:

The description of CIP 51.2706 more closely aligns with the content and intent of the courses in the MSHI program.

The changes have been made to strengthen the MS in Health Informatics major. One new course, HIMS 758 Workflow and Usability Optimization in Health Informatics, and two existing courses, (INFS 720 System Analysis and Design Using Case Tools) and HIMS 758 (Legal and Ethical Aspects of Health Informatics) and are being added to the required course list. Therefore, electives are being removed.