

ACADEMIC AFFAIRS COUNCIL

AGENDA ITEM: 3 – A (2)

DATE: March 31, 2016

SUBJECT: Program Modifications – DSU

Dakota State University has submitted the following program modification proposals. The modifications are posted on DSU’s website at the following URL. Upon approval, the proposals will move forward to the April COPS and May BOR meetings.

<https://public-info.dsu.edu/curriculum/>

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*

RECOMMENDED ACTION

Approve DSU’s program modification requests for its D.Sc. in Cyber Security; and M.S. in Health Informatics programs. Move forward to COPS and BOR.

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: **Doctor of Science in Cyber Security**

3. THIS PROPOSAL DEALS WITH A CHANGE IN:

Distribution of Credits

_____ total credits required within the discipline

_____ Program name

_____ total credits of supportive course work

_____ Existing specialization

_____ total credits of elective course work

_____ Addition of specialization

 X total credits required for program

_____ Other (explain)

4. LEVEL:

_____ Certificate

_____ Associate Degree

_____ Bachelor's Degree

_____ Master's Degree

 X Doctoral Degree

5. CATEGORY:

_____ Minor

_____ 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)			
Current Program Name: D.Sc. in Cyber Security				Proposed Program Name:			
Pre	Num	Title	Cr Hrs	Pre	Num	Title	Cr Hrs
Computer Science and Cyber Operations Masters Core			27				
CSC	705	Design & Analysis of Algorithms	3				
CSC	710	Structure & Design of Programming Languages	3				
CSC	714	Database Systems	3				
CSC	718	Operating Systems & Parallel Programming	3				
CSC	720	Theory of Computation	3				
INFA	723	Cryptography	3				
INFA	725	Advanced Network Hacking	3				
INFA	729	Advanced Web Hacking	3				
INFA	751	Wireless Security	3				
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)			
Current CIP Code 51.0707				Proposed CIP Code 51.2706			
<p>Title: Health Information/Medical Records Technology/Technician.</p> <p>Definition: 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>Title: Medical Informatics.</p> <p>Definition: 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	Foundations in Healthcare Information	3
INFS	601	Information Systems	3	INFS	601	Information Systems	3
INFS	612	Mgmt & Evaluation of Information Systems	3	INFS	608	Applied Statistics	3
Required Courses			33	Required Courses			33
HIMS	742	Healthcare Information Infrastructure	3	HIMS	742	Health Informatics, Information Systems and Technology	3
HIMS	744	Healthcare Information Analysis	3	HIMS	744	Data Analytics in Healthcare	3
				HIMS	745	Legal and Ethical Aspects of Health Informatics	3
HIMS	746	Data Management in Health Informatics	3	HIMS	746	Health Information Lifecycle Governance	3
HIMS	747	Business of Health Informatics	3	HIMS	747	Leadership and Management for Health Informatics	3
HIMS	748	IS Tools and Application for Healthcare Research	3	HIMS	748	Research Design in Health Informatics	3
				HIMS	758	Workflow and Usability Optimization in Health informatics	3
HIMS	788	Master's Research Prob/Project	3	HIMS	788	Masters Applied or Research Project	3

				INFS	720	Systems Analysis & Design Using Case Tools	3
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
Elective			3				
Choose one specialization or three elective courses			9				
Database Specialization			9				
INFS	762	Data Warehouse and Data Mining	3				
INFS	764	Information Retrieval	3				
INFS	766	Advanced Database	3				
Privacy and Security Specialization			9				
HIMS	745	Legal Issues in Health Informatics	3				
INFA	713	Management Security Risks	3				
INFA	715	Data Privacy	3				
Healthcare Specialization			9				
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				
Elective Courses							
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				
Total number of hours required for major, minor, or specialization			33	Total number of hours required for major, minor, or specialization			33
Total number of hours required for degree			33	Total number of hours required for degree			33

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.