



SOUTH DAKOTA BOARD OF REGENTS ACADEMIC AFFAIRS FORMS

New Specialization

Use this form to propose a new specialization within an existing degree program. Specializations provide students with an alternative to the primary format of the major or it may be one of several tracks within a broad major. Specializations contain courses within the discipline(s) of the existing program. Specializations appear in the institutional catalog and on the transcript. Majors that offer specializations typically have one-third to two-thirds of the credits in common with the remaining course work fulfilling the requirements of the specialization(s) offered. The Board of Regents, Executive Director, and/or their designees may request additional information about the proposal. After the university President approves the proposal, submit a signed copy to the Executive Director through the system Chief Academic Officer. Only post the New Specialization Form to the university website for review by other universities after approval by the Executive Director and Chief Academic Officer.

UNIVERSITY:	DSU
TITLE OF PROPOSED SPECIALIZATION:	Data Privacy
NAME OF DEGREE PROGRAM IN WHICH SPECIALIZATION IS OFFERED:	Ph.D. Cyber Defense
BANNER PROGRAM CODE:	DCYD
INTENDED DATE OF IMPLEMENTATION:	5/13/2024
PROPOSED CIP CODE:	111003
UNIVERSITY DEPARTMENT:	Beacom College of Computer and Cyber Sciences
BANNER DEPARTMENT CODE:	DCSI 8N
UNIVERSITY DIVISION:	Computer Science
BANNER DIVISION CODE:	DCSC

Please check this box to confirm that:

- The individual preparing this request has read [AAC Guideline 2.6](#), which pertains to new specialization requests, and that this request meets the requirements outlined in the guidelines.
- This request will not be posted to the university website for review of the Academic Affairs Committee until it is approved by the Executive Director and Chief Academic Officer.

University Approval

To the Board of Regents and the Executive Director: I certify that I have read this proposal, that I believe it to be accurate, and that it has been evaluated and approved as provided by university policy.

Institutional Approval Signature

President or Chief Academic Officer of the University

11/30/2023

Date

SOUTH DAKOTA BOARD OF REGENTS

Academic and Student Affairs
Consent

AGENDA ITEM: 5 – E (2)
DATE: May 13-15, 2024

SUBJECT

New Specialization Requests – DSU – Data Privacy Specialization, Managerial Specialization, and Technical Specialization – PhD in Cyber Defense

CONTROLLING STATUTE, RULE, OR POLICY

[BOR Policy 2.3.2](#) – New Programs, Program Modifications, and Inactivation/Termination

BACKGROUND / DISCUSSION

Dakota State University (DSU) requests authorization to offer a Data Privacy specialization, a Managerial specialization, and a Technical specialization within the PhD in Cyber Defense. Currently, the PhD in Cyber Defense includes this coursework as three informal tracks. By creating these specializations, these tracks become formalized and will appear on the student transcript.

The Data Privacy specialization will focus on how students may build research portfolios focusing on data privacy in the Cyber Defense realm. Topics pertain to the protection of individuals’ information when engaging with third parties to remain safe while online. The Managerial specialization will focus on the business implications of data privacy and the research that must be conducted for secure business policies and practices. The Technical specialization will focus on the application of specific technology controls to enforce cybersecurity policies and procedures within an organization.

IMPACT AND RECOMMENDATION

DSU requests authorization to offer the specializations on campus and online. DSU does not request additional state resources. No new courses will be required.

Board office staff recommends approval of the program.

(Continued)

DRAFT MOTION 20240513_5-E(2):

I move to authorize DSU to offer a Data Privacy specialization, a Managerial specialization, and a Technical specialization within the PhD in Cyber Defense program, as presented.

DSU – PhD in Cyber Defense Specializations

May 13-15, 2024

Page 2 of 2

ATTACHMENTS

Attachment I – New Specialization Request Form: DSU – Data Privacy Specialization –
PhD in Cyber Defense

Attachment II – New Specialization Request Form: DSU – Managerial Specialization –
PhD in Cyber Defense

Attachment III – New Specialization Request Form: DSU – Technical Specialization –
PhD in Cyber Defense

Note: In the responses below, references to external sources, including data sources, should be documented with a footnote (including web addresses where applicable).

1. Level of the Specialization (place an “X” in the appropriate box):

Baccalaureate Master’s Doctoral

2. What is the nature/purpose of the proposed specialization? Please include a brief (1-2 sentence) description of the academic field in this specialization.

Data Privacy is an essential topic in the realm of Cyber Defense. The protection of individuals’ information when engaging with third parties is essential for remaining safe while online. This specialization will focus on how students may build research portfolios focusing on data privacy within the Cyber Defense realm.

3. Provide a justification for the specialization, including the potential benefits to students and potential workforce demand for those who graduate with the credential. For workforce related information, please provide data and examples. Data may include, but are not limited to the South Dakota Department of Labor, the US Bureau of Labor Statistics, Regental system dashboards, etc. Please cite any sources in a footnote.

The Cyber Defense program is an existing program within the Beacom College of Computer and Cyber Sciences. This specialization seeks to focus the current enrollment in the PhD CD program into more specialized tracks of research. By creating a specialization, it would appear on the student’s transcript and would highlight student’s skills in data privacy.

The National Institute of Standards and Technology published that the unfilled demand for cybersecurity professionals exceeds 3.4 million. This is coupled with 83% of corporate boards of directors recommending for increasing the headcount of IT personnel focused on cybersecurity¹. In addition, Information from ISC2 has determined that there are 1.495,825 unfilled positions within the North American region².

4. List the proposed curriculum for the specialization (including the requirements for completing the major – highlight courses in the specialization):

Prefix	Number	Course Title (add or delete rows as needed)	Credit Hours	New (yes, no)
Data Privacy Specialization Required Core			15	
INFA	702	Data Privacy	3	No
INFA	713	Managing Security Risks	3	No
INFA	722	Data Privacy Management	3	No
INFA	726	Data Privacy Technology	3	No
INFA	742	Ethics and Information Technology	3	No

¹

https://www.nist.gov/system/files/documents/2023/06/05/NICE%20FactSheet_Workforce%20Demand_Final_20211202.pdf

² <https://www.isc2.org/Insights/2023/11/ISC2-Cybersecurity-Workforce-Study-Looking-Deeper-into-the-Workforce-Gap>

Research	12	
Dissertation	27	
Electives	18	

Total number of hours required for completion of specialization	15
Total number of hours required for completion of major	54
Total number of hours required for completion of degree	72

5. Delivery Location

Note: The accreditation requirements of the Higher Learning Commission (HLC) require Board approval for a university to offer programs off-campus and through distance delivery.

A. Complete the following charts to indicate if the university seeks authorization to deliver the entire program on campus, at any off campus location (e.g., UC Sioux Falls, Capital University Center, Black Hills State University-Rapid City, etc.) or deliver the entire specialization through distance technology (e.g., as an on-line program)?

	Yes/No	Intended Start Date
On campus	Yes	Fall 2024

	Yes/No	If Yes, list location(s)	Intended Start Date
Off campus	No		Choose an item. Choose an item.

	Yes/No	If Yes, identify delivery methods <i>Delivery methods are defined in AAC Guideline 5.5.</i>	Intended Start Date
Distance Delivery (online/other distance delivery methods)	Yes	015 online asynchronous	Fall 2024

B. Complete the following chart to indicate if the university seeks authorization to deliver more than 50% but less than 100% of the specialization through distance learning (e.g., as an on-line program)? This question responds to HLC definitions for distance delivery.

	Yes/No	If Yes, identify delivery methods	Intended Start Date
Distance Delivery (online/other distance delivery methods)	No		Choose an item. Choose an item.

6. Additional Information: *Additional information is optional. Use this space to provide pertinent information not requested above. Limit the number and length of additional attachments. Identify all attachments with capital letters. Letters of support are not necessary and are rarely included with Board materials. The University may include responses to questions from the Board or the Executive Director as appendices to the original proposal where applicable. Delete this item if not used.*



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UNIVERSITY:	DSU
TITLE OF PROPOSED SPECIALIZATION:	Managerial
NAME OF DEGREE PROGRAM IN WHICH SPECIALIZATION IS OFFERED:	Ph.D. Cyber Defense
BANNER PROGRAM CODE:	DCYD
INTENDED DATE OF IMPLEMENTATION:	5/13/2024
PROPOSED CIP CODE:	111003
UNIVERSITY DEPARTMENT:	Beacom College of Computer and Cyber Sciences
BANNER DEPARTMENT CODE:	DCSI 8N
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Institutional Approval Signature

President or Chief Academic Officer of the University

11/30/2023

Date

Note: In the responses below, references to external sources, including data sources, should be documented with a footnote (including web addresses where applicable).

1. Level of the Specialization (place an “X” in the appropriate box):

Baccalaureate Master’s Doctoral

2. What is the nature/purpose of the proposed specialization? Please include a brief (1-2 sentence) description of the academic field in this specialization.

This specialization will focus on the business implications of Data Privacy and the research that must be conducted for secure business policies and practices.

3. Provide a justification for the specialization, including the potential benefits to students and potential workforce demand for those who graduate with the credential. For workforce related information, please provide data and examples. Data may include, but are not limited to the South Dakota Department of Labor, the US Bureau of Labor Statistics, Regental system dashboards, etc. Please cite any sources in a footnote.

The Cyber Defense program is an existing program within the Beacom College of Computer and Cyber Sciences. This specialization seeks to focus the current enrollment in the PhD CD program into more specialized tracks of research. By creating a specialization, it would appear on the student’s transcript and would highlight student’s skills in management of cyber security.

The National Institute of Standards and Technology published that the unfilled demand for cybersecurity professionals exceeds 3.4 million. This is coupled with 83% of corporate boards of directors recommending for increasing the headcount of IT personnel focused on cybersecurity¹. In addition, Information from ISC2 has determined that there are 1.495,825 unfilled positions within the North American region².

4. List the proposed curriculum for the specialization (including the requirements for completing the major – highlight courses in the specialization):

Prefix	Number	Course Title (add or delete rows as needed)	Credit Hours	New (yes, no)
Managerial Specialization Required Core			15	
INFA	702	Data Privacy	3	No
INFA	713	Managing Security Risks	3	No
INFA	720	Incident Response	3	No
INFA	730	Physical Security	1	No
INFA	731	Personnel Security	1	No
INFA	733	Vendor Management	1	No
INFA	758	Security Metrics	3	No

¹

https://www.nist.gov/system/files/documents/2023/06/05/NICE%20FactSheet_Workforce%20Demand_Final_20211202.pdf

² <https://www.isc2.org/Insights/2023/11/ISC2-Cybersecurity-Workforce-Study-Looking-Deeper-into-the-Workforce-Gap>

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	Yes/No	Intended Start Date
On campus	Yes	Fall 2024

	Yes/No	If Yes, list location(s)	Intended Start Date
Off campus	No		Choose an item. Choose an item.

	Yes/No	If Yes, identify delivery methods <i>Delivery methods are defined in AAC Guideline 5.5.</i>	Intended Start Date
Distance Delivery (online/other distance delivery methods)	Yes	015 online asynchronous	Fall 2024

B. Complete the following chart to indicate if the university seeks authorization to deliver more than 50% but less than 100% of the specialization through distance learning (e.g., as an on-line program)? This question responds to HLC definitions for distance delivery.

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UNIVERSITY:	DSU
TITLE OF PROPOSED SPECIALIZATION:	Technical
NAME OF DEGREE PROGRAM IN WHICH SPECIALIZATION IS OFFERED:	Ph.D. Cyber Defense
BANNER PROGRAM CODE:	DCYD
INTENDED DATE OF IMPLEMENTATION:	5/13/2024
PROPOSED CIP CODE:	111003
UNIVERSITY DEPARTMENT:	Beacom College of Computer and Cyber Sciences
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1. Level of the Specialization (place an “X” in the appropriate box):

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2. What is the nature/purpose of the proposed specialization? Please include a brief (1-2 sentence) description of the academic field in this specialization.

The technical specialization within the Cyber Defense PhD program will focus on the application of specific technology controls to enforce cybersecurity policies and procedures within an organization.

3. Provide a justification for the specialization, including the potential benefits to students and potential workforce demand for those who graduate with the credential. For workforce related information, please provide data and examples. Data may include, but are not limited to the South Dakota Department of Labor, the US Bureau of Labor Statistics, Regental system dashboards, etc. Please cite any sources in a footnote.

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Technical Specialization Required Core			15	
INFA	720	Incident Response	3	No
INFA	721	Digital Forensics	3	No
INFA	735	Offensive Security	3	No
INFA	751	Wireless Security	3	No
INFA	754	Network Security Monitoring	3	No

¹

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