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| S:\Communications\Logos and photos\SDBORLogos\final_sdbor_webreadyBW_trans.gif | **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.

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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** |
| **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](https://www.sdbor.edu/administrative-offices/academics/academic-affairs-guidelines/Documents/2_Guidelines/2_6_Guideline.pdf), 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.*

|  |  |  |
| --- | --- | --- |
| A picture containing text  Description automatically generated |  | 11/30/2023 |
| Institutional Approval Signature  *President or Chief Academic Officer of the University* |  | Date |

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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 |  |

1. **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.

1. **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 technology controls of cybersecurity policy.

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 cybersecurity[[1]](#footnote-1). In addition, Information from ISC2 has determined that there are 1.495,825 unfilled positions within the North American region[[2]](#footnote-2).

1. **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)** |
| **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 |
| **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 |

1. **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)?**

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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. |

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| --- | --- | --- | --- |
|  | **Yes/No** | ***If Yes, identify delivery methods***  *Delivery methods are defined in* [*AAC Guideline 5.5*](https://www.sdbor.edu/administrative-offices/academics/academic-affairs-guidelines/Documents/5_Guidelines/5_5_Guideline.pdf)*.* | ***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. |

1. **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.*

1. <https://www.nist.gov/system/files/documents/2023/06/05/NICE%20FactSheet_Workforce%20Demand_Final_20211202.pdf> [↑](#footnote-ref-1)
2. https://www.isc2.org/Insights/2023/11/ISC2-Cybersecurity-Workforce-Study-Looking-Deeper-into-the-Workforce-Gap [↑](#footnote-ref-2)