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|  | **SOUTH DAKOTA BOARD OF REGENTS**ACADEMIC AFFAIRS FORMS |
| New Specialization |
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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 Specialization** |
| **NAME OF DEGREE PROGRAM IN WHICH SPECIALIZATION IS OFFERED:** | **MS in Cyber Defense** |
| **BANNER PROGRAM CODE:** | **11.0401** |
| **INTENDED DATE OF IMPLEMENTATION:** | **5/6/2024** |
| **PROPOSED CIP CODE:** | **11.0401** |
| **UNIVERSITY DEPARTMENT:** | **Computer** |
| **BANNER DEPARTMENT CODE:** | **DCSI** |
| **UNIVERSITY DIVISION:** | **Beacom College of Computer and Cyber Sciences** |
| **BANNER DIVISION CODE:** | **DCOC** |

[x] **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.*

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| --- | --- | --- |
| A picture containing text  Description automatically generated |  | 3/6/2024 |
| 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 |[x]  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.**

This specialization focuses on technological security controls in the areas of network security, penetration testing, digital forensics, and malware analysis, which are essential for securing business operations within organizations.

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 current MS in Cyber Defense (MSCD) program includes two tracks: Technical Track and Security Management and Compliance Track. However, these tracks do not appear on a student’s transcript. We would like to create two specializations, namely, Technical Specialization and Security Management and Compliance Specialization, which include the same courses as required in the tracks.

The Technical Specialization equips students with advanced expertise in areas such as network security, penetration testing, digital forensics, and malware analysis, enabling them to apply specific technological controls to enforce cybersecurity policies and procedures within an organization.

Information Security Analyst is a great fit for graduates from the MSCD program. According to the Occupational Outlook Handbook from the Bureau of Labor Statistics (https://www.bls.gov/ooh/computer-and-information-technology/information-security-analysts.htm), employment of information security analysts is projected to grow by 32 percent from 2022 to 2032, much faster than the average for all occupations. About 16,800 openings for information security analysts are projected each year, on average, over the decade. Regarding the Technical Specialization, within the category of Business and Financial Operations occupations, there were 10,591.1 employments in 2022. This number is expected to grow to 11,179.7 by 2032, reflecting a 5.6% increase. In another example, within Healthcare Practitioners and Technical Occupations, there were 9,481.0 employments in 2022. This number is expected to grow to 10,243.7 by 2032, representing an 8.0% increase.

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

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| --- | --- | --- | --- | --- |
| **Prefix** | **Number** | **Course Title***(add or delete rows as needed)* | **Credit Hours** | **New****(yes, no)** |
| INFA | 702 | Data Privacy | 3 | No |
| INFA | 713 | Managing Security Risks | 3 | No |
| INFA | 735 | Offensive Security | 3 | No |
| INFA | 754 | Network Security Monitoring and Intrusion Detection | 3 | No |
| **Technical Specialization** |  | Choose an item. |
| INFA | 721 | Digital Forensics | 3 | No |
| INFA | 723 | Cryptography | 3 | No |
| INFA | 732 | Malware Analysis | 3 | No |
| INFA | 751 | Wireless Security | 3 | No |
| Choose two 700-800 level courses from INFA or CSC prefix (except INFA 701) 6 credits | 6 | Choose an item. |
| Total number of hours required for completion of specialization |  | 18 |
| Total number of hours required for completion of major |  | 30 |
| Total number of hours required for completion of degree |  | 30 |

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**  |

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|  | **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 |  | **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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|  | **Yes/No** | ***If Yes, identify delivery methods*** | ***Intended Start Date*** |
| **Distance Delivery (online/other distance delivery methods)** | No |  | 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.*