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| S:\Communications\Logos and photos\SDBORLogos\final_sdbor_webreadyBW_trans.gif | **SOUTH DAKOTA BOARD OF REGENTS**  ACADEMIC AFFAIRS FORMS |
| New Course Request |
|  |  |

Use this form to request a new common or unique course. Consult the system course database through for information about existing courses before submitting this form.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| DSU |  | **College of Business and Information Systems** | | |
| **Institution** |  | **Division/Department** | | |
|  | | |  | 11/25/2020 |
| **Institutional Approval Signature** | | |  | **Date** |

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**Section 1. Course Title and Description**

If the course contains a lecture and laboratory component, identify both the lecture and laboratory numbers (xxx and xxxL) and credit hours associated with each. Provide the complete description as you wish it to appear in the system course database, including pre-requisites, co-requisites, and registration restrictions.

|  |  |  |
| --- | --- | --- |
| **Prefix & No.** | **Course Title** | **Credits** |
| INFS 784 | Artificial Intelligence Applications | 3 |

*NOTE: The Enrollment Services Center assigns the short, abbreviated course title that appears on transcripts. The short title is limited to 30 characters (including spaces); meaningful but concise titles are encouraged due to space limitations in the student information system.*

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| --- | --- |
| **Course Description** |  |
| This course addresses concepts, techniques, and applications of Artificial Intelligence. Students will learn what Artificial Intelligence (AI) is, explore use cases and applications of AI, understand core AI concepts and technologies such as machine learning, neural networks, and deep learning, and learn to use these technologies to solve real-world business problems. | |

*NOTE: Course descriptions are short, concise summaries that typically do not exceed 75 words. DO: Address the content of the course and write descriptions using active verbs (e.g., explore, learn, develop, etc.). DO NOT: Repeat the title of the course, layout the syllabus, use pronouns such as “we” and “you,” or rely on specialized jargon, vague phrases, or clichés.*

**Pre-requisites or Co-requisites (add lines as needed)**

|  |  |  |
| --- | --- | --- |
| **Prefix & No.** | **Course Title** | **Pre-Req/Co-Req?** |
| INFS 772 | Programming for Data Analytics | Pre-Req |
|  |  |  |

**Registration Restrictions**

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| --- |
| None |

**Section 2. Review of Course**

1. **Will this be a unique or common course (*place an “X” in the appropriate box*)?**

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| --- | --- |
|  | **Unique Course**  *If the request is for a unique course, institutions must review the common course catalog in the system course database to determine if a comparable common course already exists. List the two closest course matches in the common course catalog and provide a brief narrative explaining why the proposed course differs from those listed. If a search of the common course catalog determines an existing common course exists, complete the Authority to Offer an Existing Course Form. Courses requested without an attempt to find comparable courses will not be reviewed.* |

|  |  |  |
| --- | --- | --- |
| **Prefix & No.** | **Course Title** | **Credits** |
| INFS 778 | Deep Learning (DSU) | 3 |
| INFS 768 | Predictive Analytics for Decision Making (DSU) | 3 |
| CSC 547 | Artificial Intelligence (SDSU/SDSMT/DSU/USD) | 3 |
| CSC 761 | Adv Artificial Intelligence (SDSMT/USD) | 3 |
| *Provide explanation of differences between proposed course and existing system catalog courses below:* | | |
| This course is related to, but different form INFS 778 Deep Learning. INFS 778 provides a detailed discussion on deep learning, one of the most important AI technologies nowadays, while this course introduces various AI concepts and technologies including machine learning, neural networks, reinforcement learning, deep learning, and others.  This course is also related to INFS 768 Predictive Analytics for Decision Making offered by DSU. INFS 768 focuses on introducing conventional data mining techniques such as classification and regression, while the proposed course helps our analytics students expand their analytics skill set and learn more advanced AI technologies such as neural networks and deep learning that have become an integral part of data analytics.  The course is also different from CSC 547 Artificial Intelligence (SDSU/SDSMT/DSU/USD) and CSC 761 Adv Artificial Intelligence (SDSMT/USD). CSC 547 and 761 teach AI from the computer science perspective and focus more on theories and programming. Our proposed course is developed to help prepare our MS in Analytics students (future business analysts) for the new wave of jobs that require training in AI-powered analytics. It surveys AI applications and solutions in the business and organizational context and focuses on developing skills of applying AI tools and methods to solve real-world business problems.  Moreover, our proposed course teaches different sets of AI technologies from CSC 547 and CSC 761. Our course focuses on teaching Big Data and Machine-Learning based AI technologies including neural networks, reinforcement learning and deep learning that have been increasingly incorporated into analytics flatforms in various industries, while CSC 547 focuses on AI approaches including search, inference, and expert systems and CSC 761 teaches expert systems, fuzzy logic and fuzzy expert systems, genetic algorithms, and case-based reasoning. | | |

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|  | **Common Course** | | | | *Indicate universities that are proposing this common course:* | | | | | | | | |
|  |  | | | |  | | | | | | | | |
|  |  | BHSU |  | DSU | |  | NSU |  | SDSMT |  | SDSU |  | USD |

**Section 3. Other Course Information**

1. **Are there instructional staffing impacts?**

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| --- | --- | --- | --- | --- |
|  | **No**. Replacement of |  | | |
|  |  | (course prefix, course number, name of course, credits) | | |
|  |  | \*Attach course deletion form | | |
|  |  |  | | |
| Effective date of deletion: | | | Click here to enter a date. |  |

|  |  |
| --- | --- |
|  | **No**. Schedule Management, explain below:  The course will be handled by existing faculty at this time. |

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|  | **Yes**. Specify below: |

1. **Existing program(s) in which course will be offered (i.e., any current or pending majors, minors, certificates, etc.)**: MS in Analytics
2. **Proposed instructional method by university *(as defined by*** [*AAC Guideline 5.4*](https://www.sdbor.edu/administrative-offices/academics/academic-affairs-guidelines/Documents/5_Guidelines/5_4_Guideline.pdf)***)*:**

*If requesting an instructional method that is exempt from the* [Section Size Guidelines](https://www.sdbor.edu/administrative-offices/academics/academic-affairs-guidelines/Documents/5_Guidelines/5_7_Guideline.pdf)*, please provide a brief description of how the course is appropriate for the instructional method, as defined in AAC Guidelines.*  Lecture

1. **Proposed delivery method by university *(as defined by*** [*AAC Guideline 5.5*](https://www.sdbor.edu/administrative-offices/academics/academic-affairs-guidelines/Documents/5_Guidelines/5_5_Guideline.pdf)***)*:** 001 & 015
2. **Term change will be effective**: Summer 2021
3. **Can students repeat the course for additional credit?**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Yes, total credit limit: |  |  |  | No |

1. **Will grade for this course be limited to S/U (pass/fail)?**

|  |  |  |  |
| --- | --- | --- | --- |
|  | Yes |  | No |

1. **Will section enrollment be capped?**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Yes, max per section: | 25 |  |  | No |

1. **Will this course equate (i.e., be considered the same course for degree completion) with any other unique or common courses in the common course system database?**

|  |  |  |  |
| --- | --- | --- | --- |
|  | Yes |  | No |
| *If yes, indicate the course(s) to which the course will equate (add lines as needed):* | | | |
|  | | | |

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| **Prefix & No.** | **Course Title** |
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1. **Is this prefix approved for your university?**

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| --- | --- | --- | --- |
|  | Yes |  | No |
| *If no, provide a brief justification below:* | | | |
|  | | | |

**Section 4. Department and Course Codes (Completed by University Academic Affairs)**

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| 1. **University Department Code:** | DINFS |

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| 1. **Banner Department Code:** | DINFS |

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| 1. **Proposed** [**CIP Code**](http://nces.ed.gov/ipeds/cipcode/default.aspx?y=55)**:** | 11.0401 | | | | |
|  |  | | | | |
| *Is this a new CIP code for the university?* | |  | Yes |  | No |