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| S:\Communications\Logos and photos\SDBORLogos\final_sdbor_webreadyBW_trans.gif | **SOUTH DAKOTA BOARD OF REGENTS**ACADEMIC AFFAIRS FORMS |
| Existing Courses: Minor Modifications |
|  |  |

Use this form to request minor modifications of existing unique and common courses. Consult the system course database for information about existing courses before submitting this form. If the course revision is for an approved General Education course, please see the Revision to General Education Requirements Form.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| DSU |  | The Beacom College of Computer & Cyber Sciences |  | The Beacom College of Computer & Cyber Sciences |  | 4/20/2022 |
| **Institution** |  | **Division/Department** |  | **Originator** |  | **Date** |
|  |  |  |  |  |  |  |
|  |  | Patrick Engebretson |  |  |  | Click here to enter a date. |
| **Department Chair** |  | **School/College Dean** |  | **Institutional Approval Signature** |  | **Date** |

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**Section 1. Existing Course Title and Description**

|  |  |  |
| --- | --- | --- |
| **Prefix & No.** | **Course Title** | **Credits** |
| CSC 386 | Machine Learning Fundamentals | 3 |

|  |  |
| --- | --- |
| **Effective Date:** | 8/1/2022 |

|  |
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| **This course is a (*Place an “X” in the appropriate box*):** |
|[x]  **Unique Course (see section 2)** |  |[ ]  **Common Course (see section 3)** |

**Section 2. Unique Courses: Requested Minor Modifications**

***Place an “X” in the appropriate boxes*.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | **Current** |  | **New** |
|[ ]  **Prefix change**  |  | to |  |

|  |  |  |  |
| --- | --- | --- | --- |
|[ ]  **Course Number change**  |  | to |  |

*NOTE: You may only change a unique course number to a number not currently used in “active” status at another university. Consult the system database.*

|  |  |  |  |
| --- | --- | --- | --- |
|[ ]  **Credit hours**  |  | to |  |

|  |  |  |  |
| --- | --- | --- | --- |
|[ ]  **Course pre-requisites**  |  | to |  |

|  |  |  |  |
| --- | --- | --- | --- |
|[ ]  **Course co-requisites**  |  | to |  |

|  |  |  |  |
| --- | --- | --- | --- |
|[ ]  **Registration restriction**  |  | to |  |

|  |  |  |  |
| --- | --- | --- | --- |
|[ ]  **Enrollment limitation**  |  | to |  |

|  |  |  |  |
| --- | --- | --- | --- |
|[ ]  **Repeatable for additional credit** |  | to |  |

|  |  |  |  |
| --- | --- | --- | --- |
|[ ]  **Grading option**  |  | to |  |

|  |  |
| --- | --- |
|[x]  **Course title change** | Applications of Deep Learning |

*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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|[ ]  **Cross-listing and equating with** |  |

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| --- |
|[ ]  **Dual-listing at 400/500 level** |

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| --- |
|[x]  **Course description (that does not change course content). Complete table below:** |

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| *Existing description:* |
| This course will provide students with an understanding of algorithms and computational techniques associated with machine learning by studying their structure and applying that knowledge to examples. A wide variety of topics from supervised, unsupervised, and reinforcement learning will be covered. |

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| *New description:* |
| This course covers different types of Deep Neural Networks and their Applications in AI. Types of neural networks include multi-layer perceptrons, convolutional neural networks, and recurrent neural networks. Applications range from image processing, natural language processing, and reinforcement learning. Students will learn how to preprocess input, interpret and tune hyperparameters, as well as analyze and interpret output and performance. |
| 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. |

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|[ ]  **Add course in x9x series** |
| *CIP Code:* |  |

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| --- | --- | --- | --- |
| *New CIP Code for this university?* |  |[ ]  Yes |[ ]  No |

|  |
| --- |
| *Will this university’s sections of the course be limited to S/U (pass/fail)?* |

|  |  |  |
| --- | --- | --- |
|  |[ ]  Yes |[ ]  No |

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| --- | --- |
|[ ]  **Delete Course (effective date):** | Click here to enter a date. |

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| **Justification for changes indicated in Section 2:** |
| As the AI program matures, course content & focus also shift. This change is designed to differentiate the CSC 386 course from others and to give it a unique and well-definite purpose. The course was originally designed as a broad introduction, but that role is now played by other courses. CSC 386 will now build on that machine learning content and explore application areas. |

**Section 3. Common Courses: Requested Minor Modifications**

***Place an “X” in the appropriate boxes*.**

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| --- | --- | --- | --- | --- |
|  |  | **Current** |  | **New** |
|[ ]  **Credit hours (within variable limits)**  |  | to |  |

|  |  |  |  |
| --- | --- | --- | --- |
|[ ]  **University specific co-requisites**  |  | to |  |

|  |  |
| --- | --- |
|[ ]  **Cross-listing and equating with** |  |

|  |
| --- |
|[ ]  **Dual-listing at 400/500 level** |

|  |
| --- |
|[ ]  **Add course in x9x series** |
| *CIP Code:* |  |

|  |  |  |
| --- | --- | --- |
| *New CIP Code for this university?* |[ ]  Yes |[ ]  No |

|  |
| --- |
| *Will this university’s sections of the course be limited to S/U (pass/fail)?* |

|  |  |  |
| --- | --- | --- |
|  |[ ]  Yes |[ ]  No |

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| --- | --- | --- | --- |
|[ ]  **x9x grading method**  |  | to |  |

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| **Justification for changes indicated in Section 3:** |
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**Section 4. Department and Course Codes (Completed by University Academic Affairs)**

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| --- | --- |
| 1. **University department code:**
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| --- | --- |
| 1. **Banner department code:**
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|  |  |
| --- | --- |
| 1. **Change university department code to:**
 |  |