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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 Modification |
|  |  |

Use this form to request minor modifications of existing unique and common courses. Consult the system database through Colleague or the [Course Inventory Report](http://apps.sdbor.edu/ris-reporting/CourseInventoryOptions.cfm) 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.

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| DSU |  | The Beacom College of Computer and Cyber Sciences |  |  |  | 4/1/2020 |
| **Institution** |  | **Division/Department** |  | **Originator** |  | **Date** |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  | 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**

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| --- | --- | --- |
| **Prefix & No.** | **Course Title** | **Credits** |
| CSC 483 | Machine Learning Fundamentals | 3 |

|  |  |
| --- | --- |
| **Effective Date:** | 7/1/2020 |

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| **This course is a (*Place an “X” in the appropriate box*):** | | | | |
|  | **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** | 483 | to | 386 |

*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 in Colleague or the* [*Course Inventory Report*](http://apps.sdbor.edu/ris-reporting/CourseInventoryOptions.cfm)*.*

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|  | **Credit hours** |  | to |  |

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| --- | --- | --- | --- | --- |
|  | **Course pre-requisites** | CSC 300 & MATH 316 | to | CSC 250 |

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| --- | --- | --- | --- | --- |
|  | **Course co-requisites** |  | to |  |

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| --- | --- | --- | --- | --- |
|  | **Registration restriction** |  | to |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Enrollment limitation** |  | to |  |

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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Grading option** |  | to |  |

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| --- | --- | --- |
|  | **Course title change** |  |

*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 Colleague.*

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

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

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

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| *Existing description:* |
| This course will study computer algorithms that automatically improve the experience. Applications range from discovering general rules in data sets to intelligent information filtering or search systems that adapt users’ interests. Topics may include: decision trees, artificial neural networks, Bayesian learning, genetic algorithms, support vector systems, and case-based learning. |

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| *New 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. |
| 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 to this university?* |  |  | Yes |  | No |

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| --- |
| *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:** |
| The current course was created as a stand-alone class before the intention of adding an AI minor was proposed. This proposal reshapes the class to fit a specific role in the minor.  This class introduces the primary categories of machine learning (supervised, unsupervised, and reinforcement) while teaching the tools used at a level to familiarize students with the concepts, without going too in depth to overwhelm undergraduate students.  The math needed for algorithm development doesn’t need to be required at this point, and the use of software libraries to give examples and perform assignments is the proposed methodology. The instructor will present the math, but not require students to replicate the development.  This course will become a prerequisite to several more advanced courses. The goal is to have lower number than the courses that will follow in the sequence. |

**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 to 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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| --- | --- |
| **4.1. University department code:** |  |
| **4.2. Change university department code to:** |  |