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| For Academic Affairs and Research Use Only | |
| CIP Code: |  |
| Degree Code: |  |

**Bulletin / Banner Change Transmittal Form**

**[ ] Undergraduate Curriculum Council**

**[X] Graduate Council**

Signed paper copies of proposals submitted for consideration are no longer required. Please type approver name and enter date of approval.

Email completed proposals to [curriculum@astate.edu](mailto:curriculum@astate.edu) for inclusion in curriculum committee agenda.

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| |  |  | | --- | --- | | Jeff Jenness | 11/5/2019 |   **Department Curriculum Committee Chair** | |  |  | | --- | --- | | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Enter date |   **COPE Chair (if applicable)** |
| |  |  | | --- | --- | | Hung-Chi Su | 11/5/2019 |   **Department Chair:** | |  |  | | --- | --- | | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Enter date |   **Head of Unit (If applicable)** |
| |  |  | | --- | --- | | Brandon Kemp | 11/8/2019 |   **College Curriculum Committee Chair** | |  |  | | --- | --- | | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Enter date |   **Undergraduate Curriculum Council Chair** |
| |  |  | | --- | --- | | Abhijit Bhattacharyya 11/8/2019 |  |   **College Dean** | |  |  | | --- | --- | | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Enter date |   **Graduate Curriculum Committee Chair** |
| |  |  | | --- | --- | | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Enter date |   **General Education Committee Chair (If applicable)** | |  |  | | --- | --- | | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Enter date |   **Vice Chancellor for Academic Affairs** |

**1.Contact Person** (Name, Email Address, Phone Number)

Hung-Chi Su, [suh@astate.edu](mailto:suh@astate.edu), 8119

**2.Proposed Change**

Addition of options to emphasis areas in master’s degrees

**3.Effective Date**

1/1/2020

**4.Justification –** *Please provide details as to why this change is necessary.*

The options for the requirements of the emphasis areas in Computer Science master’s degrees are being increased to address scheduling problems many students face due to the two-year rotation of many courses offered by the department.

**Bulletin Changes**

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| **Instructions** |
| **Please visit** [**http://www.astate.edu/a/registrar/students/bulletins/index.dot**](http://www.astate.edu/a/registrar/students/bulletins/index.dot) **and select the most recent version of the bulletin. Copy and paste all bulletin pages this proposal affects below. Follow the following guidelines for indicating necessary changes.**  **\*Please note: Courses are often listed in multiple sections of the bulletin. To ensure that all affected sections have been located, please search the bulletin (ctrl+F) for the appropriate courses before submission of this form.**  - Deleted courses/credit hours should be marked with a red strike-through (~~red strikethrough~~)  - New credit hours and text changes should be listed in blue using enlarged font (blue using enlarged font).  - Any new courses should be listed in blue bold italics using enlarged font (***blue bold italics using enlarged font***)  *You can easily apply any of these changes by selecting the example text in the instructions above, double-clicking the ‘format painter’ icon 🡪 , and selecting the text you would like to apply the change to.*  *Please visit* [*https://youtu.be/yjdL2n4lZm4*](https://youtu.be/yjdL2n4lZm4) *for more detailed instructions.* |

**page 158**

Emphasis Area (Cyber Security): Sem. Hrs.

~~CS 6313, Data Security 3~~

~~CS 6323, Computer Security 3~~

~~CS 6333, Network and Internet Security 3~~

Core (select three of the following): 9

CS 6123, Software Security

CS 6313, Data Security

CS 6323, Computer Security

CS 6333, Network and Internet Security

Emphasis Elective (select one of the following): 3

CS 6123, Software Security

CS 6343, Cloud Security

LAW 6033, Cyberlaw and E-Commerce

CS Electives 6

CS, MATH, and/or STAT Electives, 6

Subject to the prior approval of the Computer Science Curriculum Committee.

Sub-total 24

**page 159**

Emphasis Area (Data Science): Sem. Hrs.

~~CS 5543, Database Systems 3~~

~~CS 5623, Fundamentals of Data Science 3~~

~~CS 6523, Data Mining Techniques 3~~

Core (select three of the following): 9

CS 5543, Database Systems

CS 5623, Fundamentals of Data Science

CS 6443, Machine Learning

CS 6523, Data Mining Techniques

Emphasis Elective (select one of the following): 3

CS 6443, Machine Learning

CS 6543, Advanced Database Systems

STAT 6433, Time Series Analysis

STAT 6643, Multivariate Analysis

STAT 6653, Data Analysis I: Regression Analysis

STAT 6663, Data Analysis II: Analysis of Variance

CS Electives 6

CS, MATH, and/or STAT Electives, 6

Subject to the prior approval of the Computer Science Curriculum Committee.

Sub-total 24

**page 160**

Emphasis Area (High Performance Computing): Sem. Hrs.

~~CS 6213, Parallel Processing 3~~

~~CS 6243, Distributed Systems 3~~

~~CS 6253, Heterogeneous Computing 3~~

Core (select three of the following): 9

CS 6213, Parallel Processing

CS 6243, Distributed Systems

CS 6253, Heterogeneous Computing

CS 6263, Cloud Computing

Emphasis Elective (select one of the following): 3

CS 5223, Unix Systems Programming

CS 6223, Advanced Computer Architecture

CS 6233, Operating System Design

CS 6263, Cloud Computing

CS Electives 6

CS, MATH, and/or STAT Electives, 6

Subject to the prior approval of the Computer Science Curriculum Committee.

Sub-total 24