

**New Graduate Program (Majors, Sequences, Certificates) Proposal**  
**Illinois State University - Graduate Curriculum Committee**

**Program Department** School of Information Technology

**Initiator** Bee Lim

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**Initiator Department** School of Information Technology

**Coauthor(s)** None

**Title of New Program** Data Science: Computer Science Graduate Certificate

**Submission Date** Friday, December 14, 2018

**Email** bllim@ilstu.edu

**Campus Address** 5150 School Of Info Technology

**Version** 2 **ID** 79

**Proposed Starting Catalog Year** 2020-2021

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**Associated Course Proposal(s):**

New Graduate Course proposal IT 452 titled *Data and Information Visualization*

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**1. Proposed Action**

New Major

New Sequence

✓ New Certificate

More than 50% of courses in this program are Distance Education

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**2. Provide Graduate Catalog copy for new program.**

Data Science: Computer Science Graduate Certificate

The Data Science: Computer Science Graduate Certificate is designed to provide a specialized education in emerging technologies for students who seek further studies in data science. The certificate is intended to prepare students to meet the growing demand for qualifications in this field.

Three out of the four core courses, namely IT 441, 444, 448, and 452, are required to earn the certificate. Prerequisites: IT 279 and 378 or consent of the graduate advisor.

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**3. Provide a description for the proposed program.**

The Data Science: Computer Science Graduate Certificate is a three-course program designed to provide students with an opportunity to deepen their knowledge and expertise in the targeted field of data science. The certificate provides training opportunities in the areas of fundamental skills on the analyses of big data and their visualizations, predictive analyses using machine learning methods, and data analytics and mining.

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**4. Provide a rationale of proposed program.**

Data science is an burgeoning field of IT and this certificate allows students to be educated in this highly in-demand market skill in today's data-intensive world.

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**5. Describe the expected effects of the proposed program on existing campus programs (if applicable).**

N/A

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**6. Describe the expected curricular changes required, including new courses. If proposals for new courses that will be or have been submitted, please reference those related proposals here:**

The four courses, that three are to be chosen out of for the certificate, are part of the new courses developed and submitted in the M.S. Computer Science degree program. Two of them, IT 441 and 448, are required as part of the MSCS degree, and the other two, IT 444 and 452, are part of the electives in the MSCS degree.

It is anticipated that no changes to the course offerings will be required due to the proposed certificate.

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**7. Anticipated funding needs and source of funds.**

No new funding needs are anticipated.

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8. **No** Does this program count for teacher education?

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9. **The following questions must be answered.**

N.A. Have letter(s) of concurrence from affected departments/schools been obtained?  
*A departments/school is affected if it has a program with significant overlap or if it teaches a required or elective course in the program.*



