SOUTH DAKOTA BOARD OF REGENTS
ACADEMIC AFFAIRS FORMS

Substantive Program Modification Form

UNIVERSITY:	**SDSU**
CURRENT PROGRAM DEGREE:	**Ph.D.**
CURRENT PROGRAM MAJOR/MINOR:	**Computational Science and Statistics**
CURRENT SPECIALIZATION:	**Data Science**
CIP CODE:	**27.0303 – Major CIP** **27.0501 – Specialization CIP**
UNIVERSITY DEPARTMENT:	**Mathematics & Statistics**
BANNER DEPARTMENT CODE:	**SMAS**
UNIVERSITY COLLEGE:	**Jerome J. Lohr College of Engineering**
BANNER COLLEGE CODE:	**3E**

University Approval
To the Board of Regents and the Executive Director: I certify that I have read this proposal, that I believe it to be accurate, and that it has been evaluated and approved as provided by university policy.

Dennis D. Hedge — Vice President of Academic Affairs or President of the University

1/25/2024 — Date

1. **This modification addresses a change in:**
   - ☐ Total credits required within the discipline
   - ☐ Total credits of supportive course work
   - ☐ Total credits of elective course work
   - ☐ Total credits required for program
   - ☐ Program name
   - ☐ Existing specialization
   - ☒ CIP Code
   - ☐ Other (explain below)
   - ☐ Modification requiring Board of Regents approval
     Must have prior approval from Executive Director or designee
2. **Effective date of change: 2024-2025 Academic Year**
3. **Program Degree Level:**
   Associate ☐ Bachelor's ☐ Master's ☐ Doctoral ☒
4. **Category:**
   Certificate ☐ Specialization ☒ Minor ☐ Major ☐
5. **If a name change is proposed, the change will occur:**
   ☐ On the effective date for all students
   ☐ On the effective date for students new to the program (enrolled students will graduate from existing program)
   Proposed new name:
6. **Is the program being modified associated with a current articulation agreement?**
   Yes ☐ No ☒

a. **If yes, will the articulation agreement need to be updated with the partner institution following the approve of the program change? Please explain:** N/A

7. Primary Aspects of the Modification:

CIP Code:
Current Specialization CIP Code: 27.0501; Title: Statistics, General.
Definition: A general program that focuses on the relationships between groups of measurements, and similarities and differences, using probability theory and techniques derived from it. Includes instruction in the principles in probability theory, binomial distribution, regression analysis, standard deviation, stochastic processes, Monte Carlo method, Bayesian statistics, non-parametric statistics, sampling theory, and statistical techniques.

Proposed Specialization CIP Code: 30.7001; Title: Data Science, General.
Definition: A program that focuses on the analysis of large scale data sources from the interdisciplinary perspectives of applied statistics, computer science, data storage, data representation, data modeling, mathematics, and statistics. Includes instruction in computer algorithms, computer programming, data management, data mining, information policy, information retrieval, mathematical modeling, quantitative analysis, statistics, trend spotting, and visual analytics.

8. Explanation of the Change:

The Department of Mathematics and Statistics requests to update the Data Science program CIP code. The code would change to 30.7001 (Data Science, General). This change is requested to update the CIP Code to accurately reflect the nature of the program.