THE UNIVERSITY OF TENNESSEE KNOXVILLE

July 14, 2025

Dr. Kevin Sightler
Substantive Change Office
SACS Commission on Colleges
1866 Southern Lane
Decatur, GA 30033

Re: SC031959– New Program Approval – Graduate Certificate in Data Science – Request for Additional Information

Dear Kevin,

Please see requested information regarding the graduate certificate in Data Science program.

1. **Provide documentation of notification of the new program to the Tennessee Higher Education Commission.**

   Documentation of the new program notification that was sent to the Tennessee Higher Education Commission for the graduate certificate in Data Science program can be found in Appendix A.

2. **Clarify the discrepancy on page 5 of the prospectus where the curriculum is presented. It shows *Required course (6 credits)*, while there are three courses in the list totaling 9 credits.**

   The graduate certificate in Data Science program will require 15 credit hours of coursework, which consists of 9 hours of required courses and 6 hours of select elective courses.

   Required courses (9 credits):
   - DATA 501 – The Data Science Toolkit | 3 credits
   - DATA 510 – Disciplinary Lenses on Data Science| 3 credits
   - DATA 550 – Data Engineering and Management | 3 credits

   Select two of the following courses (6 credits):
   - AE 504 – Introduction to Uncertainty Quantification | 3 credits
   - AI 501 – Exploring the World of AI | 3 credits
   - AI 503 – Technical Competencies for Applied AI | 3 credits
   - AI 510 – Methods of AI | 3 credits
   - BME 504 – Introduction to Uncertainty Quantification | 3 credits
   - CECS 599 – Graduate Capstone | 3 credits

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- CEM 505 – Innovative Analytical Methods For Population Health Data | 3 credits
- CEM 601 – Advanced Epidemiology | 3 credits
- CEM 602 – GIS and Geographical Epidemiology | 4 credits
- COSC 522 – Machine Learning | 3 credits
- COSC 524 – Natural Language Processing | 3 credits
- COSC 525 – Deep Learning | 3 credits
- COSC 526 – Data Mining and Analytics | 3 credits
- ECE 517 – Reinforcement Learning | 3 credits
- ESM 577 – Statistics in Applied Fields I | 3 credits
- GEOG 512 – Environmental Modeling and Geospatial Analysis | 3 credits
- HBS 512 – Research Design and Data Acquisition | 3 credits
- HBS 513 – Data Driven Decisions | 3 credits
- HBS 514 – Policy Communication and Data Visualization | 3 credits
- IE 565 – Applied Data Science | 3 credits
- INSC 588 – Human-Computer Interaction | 3 credits
- ME 504 – Introduction to Uncertainty Quantification | 3 credits
- PSYC 622 – Structural Equation Modeling for the Social Sciences | 3 credits
- STAT 537 – Statistics for Research I | 3 credits
- STAT 563 – Statistical Theory and Computation I | 3 credits
- STAT 577 – Data Mining Methods and Applications | 3 credits
- STEM 680 – Foundations of Educational Data Science I | 3 credits
- STEM 685 – Foundations of Educational Data Science II | 3 credits
- STEM 691 – Visualizing Data Using R | 3 credits
- STEM 695 – Capstone in Educational Data Science | 3 credits

3. **Describe the impact that the proposed change will have on physical facilities and equipment for *existing* programs and services.**

   All physical facilities, equipment, and services that are needed for the graduate certificate in Data Science program are already in place, this program will not impact the existing programs in anyway. Students will complete the coursework in classrooms assigned by the registrar's office. The coursework does not require any specific physical facilities or equipment to complete the graduate certificate in Data Science program. There will be no additional expenses incurred to run these classes and there is no anticipated additional burden placed on facilities to support the program.

Should you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

Heather Hartman
SACSCOC Liaison