



Rationale Statement for CIP Code Modification Request - WSU Data Analytics Program

From: CIP 30.3001 – *Computational Science*

To: CIP 30.7101 – *Data Analytics, General*

It is standard institutional practice for academic units to regularly evaluate their curricula and program learning outcomes to ensure that each program is accurately represented by its designated Classification of Instructional Programs (CIP) code. As part of this ongoing assessment, the Data Analytics academic unit has conducted a comprehensive review of the Bachelor of Science in Data Analytics curriculum, implemented since the program's launch in 2017, and determined that the existing CIP code (30.3001 – Computational Science) no longer accurately reflects the program's academic content, instructional focus, or intended outcomes.

1. Justification for the Requested CIP Code Change

The Data Analytics program has undergone substantial curricular evolution since its establishment in 2017. Over the past several years, the program has transitioned from a computational-science-adjacent structure to a curriculum explicitly centered on applied data science and analytics. This shift includes the development of numerous DATA-prefix courses, expanded offerings in data management, machine learning, applied statistics, and analytics-driven programming, and the replacement of courses that previously reflected computational science rather than data analytics.

Additionally, the Department of Education has recently introduced CIP code **30.7101 – Data Analytics, General**, which offers a significantly more accurate and discipline-specific classification for programs focused on applied data science, statistical modeling, machine learning, and data-driven insight generation. This new code more closely reflects the academic content and outcomes of Washington State University's Data Analytics curriculum.

2. Current vs. Proposed CIP Code

- **Current CIP Code:** *30.3001 – Computational Science*
Description: A program centered on scientific computing, numerical modeling, simulation, applied mathematics, and high-performance parallel computing.
- **Proposed CIP Code:** *30.7101 – Data Analytics, General*
Description: A program preparing individuals to apply data science to generate insights, identify and predict trends, and utilize databases, machine learning, inference, optimization, statistical modeling, uncertainty quantification, and visual analytics.



This request is made for curricular accuracy. Although the proposed CIP code is STEM-classified, the change is not being made for the purpose of pursuing STEM-related benefits, but rather to ensure that the program's coding is academically correct and aligned with federal CIP definitions.

3. CIP Code Changes Must Align with Academic Accuracy

We affirm that this request is made solely for academic accuracy and curricular alignment.

4. Alignment of Current Curriculum with the Proposed CIP Code

Curriculum Supporting CIP 30.7101

The current curriculum includes instruction in:

- **Computer databases:** DATA 303 (SQL)
- **Data management systems:** DATA 324
- **Machine learning and model-based methods:** DATA 319
- **Big Data systems:** DATA 422
- **Applied statistics and stochastic modeling:** STAT/DATA 360, STAT/DATA 435, STAT/DATA 437
- **Programming and computational foundations for analytics:** DATA 121, DATA 122, DATA 219
- **Visual analytics and high-dimensional visualization:** STAT/DATA 437
- **Ethical and responsible data use:** PHIL 450

These elements align directly with the DOE description for Data Analytics, General (30.7101).

Former Curriculum and Key Curricular Changes

Multiple revisions have moved the program away from computational science and toward data analytics, including:

- Crosslisted analytics-focused courses:
MATH/DATA 225, STAT/DATA 360, STAT/DATA 435, STAT/DATA 437
- Replacement of prior computational-science-related courses with analytics-specific offerings:
 - **DATA 219** replaced CPTS 132 and CPTS 215
 - **DATA 319** replaced CPTS 315 and STAT 419
 - **DATA 324** replaced CPTS 451
 - **DATA 422** replaced CPTS 415
 - **DATA 121 and DATA 122** replaced MATH 171 and CPTS 121/131 (or CS 121)
- Addition of new DATA-prefix courses foundational to the field:
DATA 301, DATA 302, DATA 303



These updates reflect a structural shift toward data science, statistical learning, and database-centered analytics, making the Data Analytics CIP code the accurate classification.

Student Learning Outcomes (SLOs) Supporting the Proposed CIP Code

The program's Student Learning Outcomes clearly align with CIP 30.7101, demonstrating a curriculum centered on applied data science and analytics:

- **Theory and basis of data analytics:**
Students understand computing, statistics, and mathematics as the theoretical foundations of data analytics.
- **Ethical, legal, secure, and professional data use:**
Students can identify, evaluate, collect, and responsibly manage data from multiple sources.
- **Proficiency with analytics and data management software:**
Students can customize and use analytics tools for exploratory, descriptive, and inferential analysis of complex datasets.
- **Problem formulation and analytical design:**
Students can define data problems, ask appropriate analytic questions, design analysis plans, and interpret results.
- **Communication of analytical results:**
Students effectively communicate technical findings to academic, professional, and public audiences using written, oral, and digital formats.
- **Application of analytics in real-world team settings:**
Through client-based experiences, students apply the full range of analytics techniques across computer science, mathematics, and statistics to solve applied problems.

These SLOs align directly with the Data Analytics CIP definition and do not reflect the computational simulation, numerical PDEs, or high-performance computing outcomes expected under CIP 30.3001.



5. Program Director and Department/School Chair Approval

X 

Sergey Lapin
Director, Data Analytics Program

X *Nairanjana Dasgupta*

Nairanjana (Jan) Dasgupta
Chair of Math and Stat

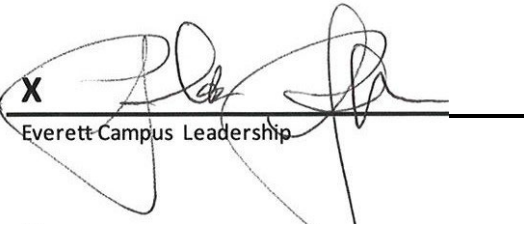
6. Dean's Support

X **Dean Courtney Meehan emailed approval to Christina Myers on 3.18.26**

Courtney Meehan
Dean, College of Arts and Sciences

7. Academic Leadership Approval Across All Campuses Offering the Degree

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Everett Campus Leadership

X **Chancellor Dave Cillay emailed approval to Christina Myers on 3.23.26**

Global Campus Leadership

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Vancouver Campus Leadership