Utah System of Higher Education
Changes to Existing Academic Program Proposal
Cover/Signature Page - Abbreviated Template

Institution Submitting Request: University of Utah

	Current	*Proposed (if applicable)*
Program Title:	Computational Science	Computational and Data Scien +
Sponsoring School, College, or Division:	Graduate School	
Sponsoring Academic Department(s) or Unit(s):	Master of Science and Technol +	
Classification of Instruction Program Code[1]:	30.3001	
Min/Max Credit Hours for Full Program Required:	36 / 36	Min Cr Hr / Max Cr Hr

Proposed Effective Term for Program Change[2]:   Fall   2020

Institutional Board of Trustees' Approval Date:

Program Change Type (check all that apply):

☒	Name Change of Existing Program
☐	Program Consolidation
☐	Program Restructure
☐	Program Transfer to a new academic department or unit
☐	Program Suspension
☐	Program Discontinuation
☐	Reinstatement of Previously Suspended Program
☐	Out-of-Service Area Delivery Program

Chief Academic Officer (or Designee) Signature:
I, the Chief Academic Officer or Designee, certify that all required institutional approvals have been obtained prior to submitting this request to the Office of the Commissioner.

Please type your first and last name   Date:

☐ I understand that checking this box constitutes my legal signature.

---

[1] For CIP code classifications, please see http://nces.ed.gov/ipeds/cipcode/Default.aspx?y=55

[2] "Proposed Effective Term" refers to term when change to program is published. **For Suspensions and Discontinuations,** "effective term" refers to the term the program will suspend admissions.

Section I: The Request

University of Utah requests approval to change name from Computational Science to Computational and Data Science effective Fall 2020. This action was approved by the institutional Board of Trustees on .

Section II: Program Proposal

Program Change Description/Rationale

Present a brief program change description. Describe the institutional procedures used to arrive at a decision for the change. Briefly indicate why such a change should be initiated. State how the institution and the USHE benefit by the change.

Developing mathematical models, employing numerical methods, and using data visualization has become increasingly important for a variety of businesses and industries. Currently, the Computational Science degree program incorporates coursework from different mathematical and computer science disciplines to reflect the breadth of computational and data science employed by scientists and engineers to solve real-world problems.

The Master of Science and Technology (MST) degree in Computational Science is part of the Professional Master of Science and Technology (PMST) program. The degree was approved in 2002 and enrolled its first students in 2003. Between 2003 and 2009, the program enrolled an average of approximately four students per year; however, between 2010 and 2016, the number of enrollments dropped to only one student per year. Within the PMST program, four to eight students per degree track are required to establish a cohort of 20 to 25 students per year. (The PMST program currently has five programs: Biotechnology, Computational Science, Earth Resource Management, Environmental Science, and Science Instrumentation.) In 2016, the program, in consultation with the program's faculty executive committee, initiated a marketing campaign to highlight "data science" as a focus area within the track. For 2017, 2018, and 2019, the program has admitted nine, five, and four students, respectively.

This request would only change the program name. Core courses within the current programs of study for the MST Computational Science degree will not change as both courses from math and computer science are currently offered.

This name change will allow the PMST program to more effectively attract scientist and engineers who are looking to expand their knowledge and develop the skills needed to work in the broad field of data science. Current students in Computational Science degree program would be moved into the new Computational and Data Science degree program which is favored over the current focus area designation for their program of study.

Faculty consultation: The proposed name change is unanimously supported by the program's executive committee which includes tenured faculty from the departments of Math, Physics, Chemistry, Geography, and Mining Engineering as well as the Dean of the Graduate School. In addition, the PMST program Director worked with Dr. Jeff Philips, Associate Professor in the School of Computing and Professor Ross Whitaker, Director of the School of Computing to align the PMST program with current course offerings from the School of Computing and the school's graduate certificate program.

This change would not alter the program learning outcomes and assessment which are presented below:

1. Have an advanced understanding of topics developed from their course work in math and computer science.
2. Be able to evaluate and synthesize research literature on topics within their area of specialization
3. Demonstrate skills necessary to be successful in their STEM discipline as well as business, management and communication (for example, positions in industries, governmental agencies, and non-profit organization, etc.)
4. Be able to communicate effectively to a variety of audiences within and outside STEM disciplines.
5. Be able to propose, organize, and conduct projects in the workplace which apply specific STEM skills and business and management skills to define and address specific problems.

Students in the PMST program complete a professional experience (internship) project which enables them to apply the learning objectives of the program. The following four learning outcomes relate specifically to the professional experience project:

6. Estimate resources and the timeline necessary to accomplish the project. Evaluate and conduct the business, management, and communication aspects of the project.
7. Understand the science behind the project and apply sound scientific expertise to the project.
8. Bring the project to a successful completion and describe the project at a formal presentation and in a formal report presented to the project sponsor and faculty supervisory committee.

 There will be no grandfathering of the old name. All students will be moved to the new degree name.

Consistency with Institutional Mission/Institutional Impact

Explain how the action is consistent with the institution's Regent-approved mission, roles, and goals. Institutional mission and roles may be found at higheredutah.org/policies/policyr312/ . Indicate if the program will be delivered outside of designated service area; provide justification. Service areas are defined in higheredutah.org/policies/policyr315/ . Will faculty or staff structures be impacted by the proposed change?

The PMST program at the University of Utah provides graduate education to scientist and engineers who live along the Wasatch Front. The program provides a unique opportunity for these professionals to gain knowledge beyond their undergraduate education in an area aligned with their career goals. Graduates of the PMST program work for technology companies and have reported earning above-average wages, providing a positive economic impact on the region. The program estimates that half of PMST students receive tuition reimbursement from their employers, highlighting the need for talent development at the graduate level by local industries.

There will be no changes in how the program will be delivered, and no faculty or staff structures will be impacted by the proposed change.

Suspension, Discontinuance, or Reinstatements ONLY
If suspending a program, indicate the statewide impact of this change. Explain the reason for suspension and the anticipated length of time for the suspension.

NA

If discontinuing the program, indicate the statewide impact of this change. Explain how currently admitted students may complete the program within a reasonable period of time compatible with accreditation standards either through either (1) enrollment of students at other institutions of higher education; or (2) courses being taught for a maximum of two years after discontinuation of the program or until no admitted students remain who are entitled to complete the program, whichever comes first.

NA

If reinstating a program, indicate the statewide impact of this change. Explain the reason for reestablishing the program and explain any changes being made to original program.

NA

Finances

What costs or savings are anticipated from this change? If new funds are required to implement the change, indicate expected sources of funds. Describe any budgetary impact on other programs or units within the institution.

No changes to program finances are anticipated from this change.