

**TOPIC: RECOMMEND APPROVAL OF BACHELOR OF SCIENCE IN INFORMATION SCIENCE AT UNIVERSITY OF COLORADO BOULDER**

**PREPARED BY: IAN MACGILLIVRAY, DIRECTOR OF ACADEMIC AFFAIRS**

**I. SUMMARY**

This item recommends approval for University of Colorado Boulder (UCB) to offer a Bachelor of Science in Information Science.

**II. BACKGROUND**

**COMMISSION AUTHORITY**

The Colorado Commission on Higher Education's role and responsibility in the review and approval of new academic programs at institutions operating under a performance contract is defined in §23-5-129(6)(b), which states that new and modified program proposals shall be reviewed and approved only on the basis of fit with the institution's statutory role and mission.

**III. STAFF ANALYSIS**

**OVERVIEW OF PROPOSED PROGRAM**

The following is summarized from UCB's proposal:

The Department of Information Science is home to a new discipline that unites a number of interdisciplinary approaches for understanding and shaping a future characterized by pervasively available digital information and communication technology (ICT). Information Science considers the relationships between people, places and technology, as well as the information or "data" those interactions themselves then yield. The Internet is a broad example of a socio-technical system that is comprised of hardware and software but, in daily life, is better understood as a constantly changing social infrastructure upon which complex forms of human-human and human-information interaction rest. Scholars and students of Information Science develop new methods to study these socio-technical phenomena, and translate those findings into the design and development of useful and meaningful technology.

The department takes as a core idea that *data* sit at the primary point of interaction between social and computational systems. By focusing on the transformation of data

across “systems” of people, places and technology, we can continuously invent what new things society can do with technology, and what technology can do for society. Because of this view, rather than only imagine what today’s technology makes possible, information scientists innovate new ways of supporting new socio-technical connections by considering the enduring fundamentals about how people and technology interact.

Information Science draws on knowledge from social science, the humanities and computer science to support the study of and ongoing innovation in socio-technical systems. Cultural, historical and organizational factors are among the many creative tensions that productively drive the discipline. The disciplinary yield is the creation of new technology, ideas and theory—and a workforce that understands the dynamic processes and potentials that underlie socio-technical interaction.

Additional information on this proposed degree, unrelated to fit with statutory role and mission, is in Appendix A.

#### **ROLE AND MISSION SUPPORT**

This degree supports UCB’s statutory role and mission, which states:

*(a) The Boulder campus of the university of Colorado shall be a comprehensive graduate research university with selective admission standards. The Boulder campus of the university of Colorado shall offer a comprehensive array of undergraduate, master's, and doctoral degree programs. The Boulder campus of the university of Colorado has exclusive authority to offer graduate programs in law. The Colorado commission on higher education, in consultation with the board of regents, shall designate those graduate level programs that are the primary responsibility of the Boulder campus of the university of Colorado. The university has the responsibility to provide on a statewide basis, utilizing when possible and appropriate the faculty and facilities of other educational institutions, those graduate level programs. The commission shall include in its funding recommendations a level of general fund support for these programs. [§ 23-20-101, C.R.S.]*

Pursuant to Colorado Revised Statutes 23-5-129(6)(b), department staff finds that UCB’s proposed degree is consistent with the institution’s statutory role and mission, meets gtPathways requirements and meets the 120 credit cap requirement for bachelor’s degrees. University of Colorado’s Board of Regents approved the program at its September 11, 2014 meeting.

#### **IV. STAFF RECOMMENDATION**

**Staff recommends that the Commission approve University of Colorado Boulder's proposal to offer a Bachelor of Science in Information Science.**

**STATUTORY AUTHORITY**

C.R.S. §23-5-129 Governing boards - performance contract - authorization – operations

(6) While operating pursuant to a performance contract negotiated pursuant to this section, the governing board of a state institution of higher education:

(b) Need not consult with nor obtain approval from the Colorado commission on higher education to create, modify, or eliminate academic and vocational programs offered by the institution, so long as such creations, modifications, and eliminations are consistent with the institution's statutory role and mission. Institutions shall submit information to the department demonstrating that the creation or modification of an academic or career and technical education program is consistent with the institution's statutory role and mission. The Colorado commission on higher education shall have the authority to override the creation or modification of an academic or vocational program if the change made by the governing board is inconsistent with the institution's statutory role and mission.

**APPENDIX:**

Appendix A: Supplemental Information

## APPENDIX A: SUPPLEMENTAL INFORMATION

This supplemental information is unrelated to the proposed degree's fit with the institution's statutory role and mission. The following is summarized from the institution's proposal:

### EVIDENCE OF NEED

**Employer Demand:** Growth in this workforce is anticipated to be large. The number of Bachelor's graduates in I-Schools averages 132 per year per school, as described in the Computing Research Association's Taulbee Survey (to review a copy of the Taulbee Survey, please go to the following link:

[http://cra.org/uploads/documents/resources/crndocs/2012\\_taulbee\\_survey.pdf](http://cra.org/uploads/documents/resources/crndocs/2012_taulbee_survey.pdf)). Among current career prospects, we see job opportunities in data analytics, business analytics, systems analytics, program management, product management, user experience designer, information architecture, information assurance and cyber security that cross a range of fields, including energy, biology, medicine, safety-critical systems, health and medicine, and transportation.

**Student Demand:** Our projection of student demand and enrollment for the BS in Information is based on the Computing Research Association's annual Taulbee Survey, which measures enrollments, among other variables, across I-Schools in addition to Computer Science programs. The CRA Taulbee Survey is an annual report generated by the Computing Research Association to document trends in student enrollment, degree production, graduate employment, faculty salaries and resource allocation at computing- and information-science-related units in North American universities. The Taulbee is recognized as providing the "best workforce statistics in all of science" (Jim Austin, of *Journal of Science*). With origins as early as 1970, the remit of the Taulbee has grown as the field of computing has grown. In addition to the original Computer Science and Computer Engineering fields, the Taulbee now includes "Information" as a discipline that it surveys.

### DUPLICATION

There are no Colorado members in the I-School Caucus (ischools.org), the international professional society that governs Information programs. In fact, if CU joins the Caucus, it will be the only such department/school in an 800-mile radius, putting the program in advantageous position. Of the 52 members of the I-School Caucus, 26 are in the U.S., and are distributed as displayed in the map. The new degree programs offered by the I-Department will fill a great need in the mountain west and beyond, and will allow CU Boulder to enter into the I-School Caucus. The articulation of the program around commercial and social entrepreneurship brings a unique focus among the I-schools. A BS is offered by some I-Schools, though several remain professional programs only. However, established I-Schools see the importance of the BS, and are striving to add a BS to their curriculum. Colorado's

entry on the scene with a BS degree as a focus will make it highly competitive with other programs from the start.