Council Approval

Note: This form is intended to track the progress of a proposal (whether from Academic Affairs or Health Sciences) through the Undergraduate and Graduate Councils.

Proposal: Information St	ystems Minor	
This	s proposal needs to go through:	
Undergraduate Cour Graduate Council Both Approvals Grad Approval/Unde	ncil ergrad Notification	
This proposal has been approved by	y:	
Chair of Undergraduate Council	<u>A</u>	Date: <u>12 · 19 · 17</u>
Chair of Graduate Council		Date:

Once the appropriate signature(s) have been obtained, please forward this completed form to the Office of the Senior Vice President for Academic Affairs. (NOTE: The SVP-AA is the Chief Academic Office for the University of Utah and reports to the Board of Regents in this capacity. When necessary, the CAO will get a signature from the SVP-HSC.)

Chief Academic Officer

Rwatury Date: 1-2-18

Once the Chief Academic Officer's signature has been obtained, this approval document will be forwarded to the **Office of the Academic Senate**.

Utah System of Higher Education New Academic Program Proposal Cover/Signature Page - Abbreviated Template

Institution Submitting Request:	University of Utah
Proposed Program Title:	Information Systems Minor
Sponsoring School, College, or Division:	David Eccles School of Business
Sponsoring Academic Department(s) or Unit(s):	Operations & Information Systems
Classification of Instructional Program Code1 :	11.0401
Min/Max Credit Hours Required of Full Program:	16 / 16
Proposed Beginning Term ² :	Fall 2018
Institutional Board of Trustees' Approval Date:	

Program Type:

	Certificate of Proficiency Entry-level	PI CTE CP Mid-level CP
	Certificate of Completion	
\square	Minor	
	Graduate Certificate	
	K-12 Endorsement Program	
	NEW Emphasis for Regent-Approved Program	
	Credit Hours for NEW Emphasis Only:	Min Cr Hr / Max Cr Hr
	Current Major CIP:	6 - Digit CIP
	Current Program Title:	
	Current Program BOR Approval Date:	
	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 Beginning Term" refers to first term after Regent approval that students may declare this program.

Utah System of Higher Education Program Description - Abbreviated Template

Section I: The Request

University of Utah requests approval to offer the following Minor: Information Systems Minor effective Fall 2018. This program was approved by the institional Board of Trustees on .

Section II: Program Proposal/Needs Assessment

Program Description/Rationale

Present a brief program description. Describe the institutional procedures used to arrive at a decision to offer the program. Briefly indicate why such a program should be initiated. State how the institution and the USHE benefit by offering the proposed program. Provide evidence of student interest and demand that supports potential program enrollment.

The discipline of Information Systems bridges all functional areas of the organization in today's highly competitive business environment. Hence business professionals need a thorough understanding of IS to be relevant in the job market. Since IS facilitates communications throughout every type of organizations, a concentration of this study would definitely be of great value to students majoring in other degree programs throughout the Business School.

The David Eccles School of Business requests approval for the creation of a Minor in Information Systems to be offered ONLY to business students with full major status in the David Eccles School of Business. The minor will be offered by the Department of Operations & Information Systems which currently offers bachelors' degrees in both Information Systems and Operations Management, and Masters' degrees in both Information Systems and Business Analytics. The proposed Minor in Information Systems is designed to provide business students from other majors in the Business School the tools and training to compete successfully in today's technology driven environment. The program is specifically designed to complement non-technical skills developed in other business disciplines in the David Eccles School of Business School.

A recent job report (February 2016) by Bentley University analyzing data from 24.5 million U.S. company job listings from September 2014 to August 2015, found that 71% of in-demand skills are required across 2+ job categories. Individuals that possess those cross-category skills will be best-prepared for the Hybrid Job of tomorrow. The report further clarified that "successful employee of tomorrow will need to combine traditional soft skills such as communication and collaboration with the hard, technical skills that used to belong to a select tech-savvy group".

Most students today realized this same need. In fact, a recent survey conducted among non-Information Systems students in the Business School revealed that out of 122 Non-IS students, 69% acknowledged that Information Systems is important in their careers while 45% indicated a willingness to obtain a Minor in Information Systems if offered.

The Minor in Information Systems is designed to train undergraduate students in the core IS areas of database development, business analytics, web development, data structure, a capstone project, among others. The proposed Minor is outlined in the Curriculum section of this document. The program is expected to commence in Fall Semester, 2018 and will reside within the OIS department.

The faculty in Operations and Information Systems department discussed the IS Minor in a faculty meeting on October 12, 2017 and the faculty voted unanimously to approve it on October 26, 2017.

LEARNING OUTCOMES

Expanded knowledge – An expanded understanding and critical analysis of the student's major functional area of business with the knowledge gained from information systems courses.

Effective communication - An ability to write and speak clearly and to work within group settings in order to effectively

accomplish personal and professional goals

Professional integrity – Guidance on the importance of values and ethics in business, which, in turn, helps students develop their own sense of professional integrity.

LEARNING ASSESSMENT

Expanded knowledge - Capstone project assessment based on student's implementation of his/her major functional area.

Effective communication - Student demonstrates effective oral and written communication in written assignments and group project presentations.

Professional integrity – Student demonstrates understanding in ethical and moral reasoning in assignments on ethical issues in capstone project and other class project assignments.

Labor Market Demand

Provide local, state, and/or national labor market data that speak to the need for this program. Occupational demand, wage, and number of annual openings information may be found at sources such as Utah DWS Occupation Information Data Viewer (jobs.utah.gov/jsp/wi/utalmis/gotoOccinfo.do) and the Occupation Outlook Handbook (www.bls.gov/oco).

The Bureau of Labor Statistics projected a 12 percent growth for employment of computer and information technology occupations by 2024. These occupations are expected to add about 488,500 new jobs from 2014 to 2024.

Locally, according to Utah Department of Workforce Services, "This occupation is expected to experience much faster than average employment growth with a high volume of annual job openings. Business expansion, as opposed to the need for replacements, will provide the majority of job openings in the coming decade." In addition, Utah State Board of Education states that "IT education programs also encourage and promote teamwork, lifelong learning, hands-on experience, ethical behavior, and communication skills."

Researchers from Temple University's Fox School of Business in its 2016 report found that IS students earned higher starting salaries as compared to their business school counterparts. NACE (National Association of Colleges and Employers) confirmed that the difference is by about 17% higher (NACE, 2015). The same Temple University report also concluded that IS job placement rate is at 80% and IS graduates are more prepared in every key knowledge area.

Consistency with Institutional Mission/Impact on Other USHE Institutions

Explain how the program is consistent with the institution's Regents-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/.

The proposed Minor in Information Systems supports the mission of University of Utah in fostering student success by preparing students from diverse backgrounds for lives of impact as leaders and citizens. This program will better prepare our business students with the hybrid skills of tomorrow's employees in the marketplace.

We do not foresee a negative impact of this program on other USHE institutions. BYU has a graduate IS Minor but does not offer such program at its undergraduate level. UVU has a minor in IS and Technology but it is housed in the School of Information Systems and Technology, and not in the business school. Utah State does not have similar program. Weber State is the only school that has a minor for IS&T in its business school. There are no other offerings in the University of Utah which would be affected.

Finances

What costs or savings are anticipated in implementing the proposed program? If new funds are required, indicate expected sources of funds. Describe any budgetary impact on other programs or units within the institution.

The Minor in IS will be financially self-sufficient and will draw its instructors, coursework, and facilities from existing resources. The budget each year will be based on growth income from the previous year's enrollment. The faculty, facilities, and software are already in place to serve the existing School of Business curriculum. We do not perceive the need for additional resources to start this Program. However, as the Program grows in student enrollment and reputation, we anticipate that additional funding will accrue.

Section III: Curriculum

Program Curriculum

List all courses, including new courses, to be offered in the proposed program by prefix, number, title, and credit hours (or credit equivalences). Indicate new courses with an X in the appropriate columns. The total number of credit hours should reflect the number of credit required to receive the award. For NEW Emphases, skip to emphases tables below.

For variable credits, please enter the minimum value in the table below for credit hours. To explain variable credit in detail as well as any additional information, use the narrative box below.

Course Number	NEW Course	Course Title	Credit Hours
General Educ	ation Co	ourses (list specific courses if recommended for this program on Degree N	Лар)
		General Education Credit Hour Sub-Total	
Required Courses	;		
IS4410		Information Systems	3
OR			
IS4411		Information Systems (Honors)	
IS4420		Database Fundamentals	3
IS5910		Capstone	1
		Add Another Required Course	
		Required Course Credit Hour Sub-Total	7
Elective Courses			
IS4415		Data Structures & Java	3
IS4430		Systems Analysis & Design	3
IS4440		Networking & Servers	3
IS4460		Web Based Applications	3
IS4470		Telecommunication & Security	3
IS4480		Data Warehouse Design & Implementation	3
IS4482		Data Mining for Business Applications	3
		Students must take 9 elective credits from courses above.	
		Only 16 total credits are required.	
		Add Another Elective Course	
		Elective Credit Hour Sub-Total	9
		Core Curriculum Credit Hour Sub-Total	16

Propose a NEW Emphasis to an existing Regent approved program

Program Curriculum Narrative

Describe any variable credits. You may also include additional curriculum information, as needed.

The Information Systems Minor consists of the following coursework totaling 16 credit hours:

- 1. IS 4410 Information Systems OR IS 4411 Information Systems Honors (3 credits)
- 2. IS 4420 Database Fundamentals (3 credits) prereq IS 4410 or IS 4411
- 3. IS 5910 Capstone (1 credit)
- 4. Three courses (9 credits) from the IS department offerings below:
 - a. IS 4415 Data Structures & Java (3 credits) prereq IS 4410 or IS 4411
 - b. IS 4430 Systems Analysis & Design (3 credits) prereq IS 4420
 - c. IS 4440 Networking & Servers (3 credits) prereq IS 4410 or IS4411
 - d. IS 4460 Web Based Applications (3 credits) prereq IS 4415
 - e. IS 4470 Telecommunication & Security (3 credits) prereq IS 4440
 - f. IS 4480 Data Warehouse Design & Implementation (3 credits) prereq IS 4420
 - g. IS 4482 Data Mining for Business Applications (3 credits) prereq IS 4420

Degree Map

Degree maps pertain to undergraduate programs ONLY. Provide a degree map for proposed program. Degree Maps were approved by the State Board of Regents on July 17, 2014 as a degree completion measure. Degree maps or graduation plans are a suggested semester-by-semester class schedule that includes prefix, number, title, and semester hours. For more details see http://higheredutah.org/pdf/agendas/201407/TAB%20A%202014-7-18.pdf (Item #3).

Please cut-and-paste the degree map or manually enter the degree map in the table below

First Year Fall	Cr. Hr.	First Year Spring	Cr. Hr.
IS4410 OR IS4411 Information Systems	3	IS4420 Database Fundamentals	3
		IS4415 Data Structures & Java or another cour	3
Total	3	Total	6
Second Year Fall	Cr. Hr.	Second Year Spring	Cr. Hr.
Second Year Fall IS4430 Systems Analysis & Design or another	Cr. Hr. 3	Second Year Spring IS 4482 Data Mining for Business Applications	Cr. Hr. 3
Second Year Fall IS4430 Systems Analysis & Design or another	Cr. Hr. 3	Second Year Spring IS 4482 Data Mining for Business Applications f IS 5910 Capstone	Cr. Hr. 3 1
Second Year Fall IS4430 Systems Analysis & Design or another	Cr. Hr. 3	Second Year Spring IS 4482 Data Mining for Business Applications	Cr. Hr. 3 1
Second Year Fall IS4430 Systems Analysis & Design or another	Cr. Hr. 3	Second Year Spring IS 4482 Data Mining for Business Applications IS 5910 Capstone	Cr. Hr. 3 1
Second Year Fall IS4430 Systems Analysis & Design or another	Cr. Hr. 3	Second Year Spring IS 4482 Data Mining for Business Applications IS 5910 Capstone	Cr. Hr. 3 1



November 2, 2017

To reviewers of the proposal for an Information Systems minor:

As chair of the department of Operations and Information Systems (OIS) in the David Eccles School of Business (DESB), I enthusiastically support the proposal for an Information Systems Minor. The proposal has the further unanimous support of all eleven of our Departmental members who cast votes on the initiative.

The accompanying document details the Department's assessment of the need for the degree, and outlines the associated curriculum and cost implications. I would like to highlight a few of the factors that lead us to believe it is appropriate to now offer a minor in Information Systems.

Business professional in all functional areas are making growing use of information systems in the workplace. Firms are now able to acquire information more readily and are continually working to improve their decision-making by better utilizing the growing wealth of data at hand. The DESB is already a leader in educating and training professionals to do just that. To highlight our broader efforts and capabilities in this area, I would like to note the growth of our enrollments in IS-related degrees. We offer an IS major at the undergraduate level (our BSIS degree), in addition to a Master of Science degree in Information Systems (our MSIS degree) along with an online version of the MSIS. We also just introduced another MS in the related field of Business Analytics (our MSBA degree). Our growth in enrollments in these programs demonstrates our ability to educate and train competent students that help fill the demand for IS specialists – for example our enrollment in the BSIS program has grown from 122 to 176 over the past five years while for the MSIS program (introduced in 2009) the five-year enrollment growth has been from 62 to 231. The new MSBA program enrolls 48 students.

The Information Systems Minor is of course targeted at students who will not be pursuing a Bachelor Degree in IS but who instead will be majoring in some other Business discipline. The goal of the Information Systems Minor will thus be to provide students with exposure to, and basic knowledge of, information systems and how to use these systems, as opposed to deeper knowledge of how to design, create, manage, and secure such systems. Students who minor in IS will be better-equipped to perform their functional roles in Accounting, Finance, Marketing, Operations, Management, or Strategy. If a student goes on to be an entrepreneur, they will be better-equipped to turn their venture into a success business enterprise.

The Information Systems Minor can also provide an excellent background experience for students who subsequently decide to enroll in one of our Masters programs in IS, either the MSIS or the MSBA. Thus by offering the minor we anticipate the possibility of higher enrollments in our DESB graduate programs.

In summary, information systems are heavily utilized by today's business professionals across all disciplines. Our IS Minor will offer students in these various disciplines the knowledge and training they need to become more productive and competent employees and entrepreneurs. Thus there exists a need, and we have in place the resources to fill this educational need with only marginal impact on our capacity requirements – the OIS Department already has an established and distinguished IS program that is well-positioned to help meet this growing demand.

Thank you for your efforts and diligence in completing the evaluation of this program. We would be happy to provide further information as needed.

Usdiff

Glen Schmidt David Eccles Professor of Business and Chair, Operations and Information Systems David Eccles School of Business University of Utah, Salt Lake City, UT 84112



October 31, 2017

To Whom It May Concern:

I am writing to offer my support of the new minor in Information Systems to be offered through the Department of Operations and Information Systems.

I have reviewed the proposal and in my view, it will provide valuable training and opportunities for the students at the University of Utah.

Sincerely,

Mark Parker, PhD Associate Dean

Office of the Dean • 1655 East Campus Center Drive, Spencer Fox Eccles Business Building, Room 7150, Salt Lake City, Utah 84112 801-587-3860 • fax 801-587-3380 • www.business.utah.edu