

WSU Five-Year Program Review  
Self-Study

Cover Page

Department/Program: Supply Chain & Management Information Systems  
Management Information Systems

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## **Brief Introductory Statement**

The Management Information Systems (MIS) program, formerly Information Systems & Technology (IST), provides students with a balanced education between information technologies and business operations. The program offers a bachelor's degree (BS), an associate degree (AS), an emphasis option for Bachelor of Integrated Studies (BIS), and two minor programs (MIS and Data Analytics). The program provides students with a broad background in basic business knowledge, problem solving, and technical computer-based skills. The depth and breadth of technical know-how will prepare students for successful careers as information systems professionals, and students will be prepared to help organizations use computer technology to support their business processes.

With a focus on streamlining student progress toward degree completion, all course prerequisites were examined closely, along with the mix of required versus elective classes for students pursuing both the major and minor degrees in MIS, during 2014-2016. The total number of required hours was reduced, scheduling problems were largely minimized, and the accessibility and timeliness of courses were increased. Data showed that this initiative has affected the program positively. From 2012 to 2016, the program experienced a decrease of enrollments (with Fall third week numbers dropping from 119 to 100). Since 2016, the numbers have been recovering, and the program had 136 students enrolled in Fall 2019, up from 119 students in 2017 and 129 students in 2018.

Because information technology is a rapidly changing field of study, new areas of interest emerge every few years, and then mature very quickly. Our new flexible program allows the MIS faculty and department to serve students more effectively. Dr. Clements has taught MIS 4720 (Emerging Information Technologies) that is focused on prototyping and the design of 3-D products, and Dr. Zhang has introduced a Data Analytics course (MIS 2030) into the program and plans to offer a Business Intelligence course (MIS 3220) in 2021-22. The program established a new Innovation Lab in the summer 2018, which has been utilized for MIS 4720 (3D printing) and other emerging technologies. This Lab exposes students to state-of-the-art technologies and serves as a vehicle to implement new courses in the program. The program also proposed a new minor in Data Analytics in Fall 2018, collaborating with Computer Science Department. The new minor program was first offered in Fall 2019. Further, the MIS faculty has utilized the Virtual Lab infrastructure, particularly for Networking and Security courses, which has enabled students to develop their technical skills and knowledge.

The program faculty made efforts in helping students get accepted by top graduate programs and summer internships. In 2018-19, nine (9) students were accepted into the Master of Information Management Systems (MISM) program at Carnegie Mellon University (CMU), and six (6) students were admitted to the CMU summer security internship (IT-Lab) program. In 2019-20, five (5) students were accepted into the MISM program at CMU and nine (9) students were admitted to the CMU summer internship program.

In Fall 2017, the college decided to merge two existing programs into a new department, Supply Chain & Management Information Systems, beginning in January, 2018. The MIS program revised its program mission and vision statement, program-level learning outcomes, and assessment rubrics in 2018-19. In addition, the MIS program rebuilt the business advisory board and held the first meeting in Spring 2019.

Further, the MIS program is working on other emphasis areas, which would enhance the program's visibility and ability to compete with the similar programs in Utah. The program faculty are considering the fields of Cyber Security and Data Analytics as the next move. In 2020-21, this initiative will be implemented as the two graduate certificates (Cyber Security and Business Analytics) in the MBA program. In addition, the program plans to propose a master's program in Information Systems in 2020-21, as one of the Goddard School of Business and Economics (GSBE) strategic initiatives for 2020-2025.

## **Standard A - Mission Statement**

The MIS program supports the mission of the Goddard School of Business and Economics (GSBE) as well as the mission of the University. The program's mission and vision statements were revised in 2018-19.

### **MIS Program Mission and Vision**

#### ***Mission***

To attract, engage, and develop transformational leaders equipped with the knowledge, skills, and abilities necessary to design, secure, and manage the information systems supporting organizational and managerial decision making.

We will accomplish our mission by creating an innovative curriculum, utilizing cutting-edge facilities, and fostering an engaging learning environment. We will also conduct novel creative research, and performing meaningful service to the university and community.

#### ***Vision***

- To provide excellent educational experiences for students through extensive personal contact among faculty, staff, and students
- To be a regional leader in MIS higher education which produces future corporate IT leaders

## **Standard B - Curriculum**

### **Curriculum Map**

In 2017-18, the GSBE revised the "Business Core" structure in the major course requirements for BS degrees. Business Cross-Functional Core and Functional Core became "Business Core" with 37-38 credit hours, including Introduction to Information Systems (MIS 2020).

In 2019-20, Introduction to Business Analytics (MIS 2030) became a required course for MIS major students. The other programs, such as Business Administration and Supply Chain Management, also considered the course as a required course for their major programs.

The program revised the program-level learning outcomes and assessment rubrics in Spring 2019. The program provides a couple of courses for students across the campus, including MIS 1100 (The Digital Society) for Social Sciences in General Education and MIS 2010 (Business Computer Skills) for former CIL requirements. MIS 2010 is a required course for many programs, including Apprenticeship (ASS), Construction Management Technology, and other majors.

The program has made pedagogical changes in the required and elective courses, which allows students to experience with high impact learning practices in various levels. For example,

- MIS 2020: To implement many case-based projects,
- MIS 2030: To utilize Tableau and KNIME as Analytics tools,
- MIS 3610, MIS 3620, MIS 4600, and MIS 4700: To help students prepare for Network+, Security+, and other related certifications,
- MIS 4720: To have on-site industry tour (e.g., WhiteClouds) as a course content,
- MIS 4730: To include a capstone project and be feasible to take the CAPM (Certificate Associate in Project Management) exam.

Core Courses in Department/Program	Department/Program Learning Outcomes		
	Learning Outcome 1	Learning Outcome 2	Learning Outcome 3
MIS 1100: The Digital Society			I
MIS 2010: Business Computer Skills	I		
MIS 2020: Introduction to Information Systems	I	I	I
MIS 2030: Introduction to Business Analytics	E (A)		
MIS 2110: Software Development (I)		E (A)	
MIS 3210: Database Design/Implementation	E	E	
MIS 3610: Networks & Data Communications (I)		E	
MIS 3620: Networks & Data Communications (II)		E	
MIS 3700: E-business Tech & Web Develop		E	
MIS 3710: Global Issues in IS&T			E
MIS 4600: Information Security I		E	
MIS 4700: Information Security II			E
MIS 4720: Emerging Information Technologies		E	E
MIS 4730: IT Project Management and Systems Design	E	E	E (A)
MIS 4893: INT - Cooperative Work Experience	U	U	U

*Note<sup>a</sup>*: Define words, letters or symbols used and their interpretation; i.e. 1= introduced, 2 = emphasized, 3 = mastered or I = Introduced, E = Emphasized, U = Utilized, A = Assessed comprehensively; these are examples, departmental choice of letters/numbers may differ

*Note<sup>b</sup>*: Rows and columns may be transposed as required to meet the needs of each individual department

## **Standard C - Student Learning Outcomes and Assessment**

### **A. Measurable Program Learning Outcomes**

At the end of their study at WSU, students in this program will meet the following standards and expectations:

1. Be able to collect, analyze, and use data to improve business decision making.
2. Be capable of developing and implementing information systems.
3. Be adept at helping management understand and plan for the best new technologies and how to integrate them into the organization's business processes.

### **B. Other programs**

#### **a. General Education Outcomes (if applicable)**

This program supports General Education in the following area(s)

- |                              |                               |                             |                             |  |
|------------------------------|-------------------------------|-----------------------------|-----------------------------|--|
| <input type="checkbox"/> AI  | <input type="checkbox"/> Comp | <input type="checkbox"/> IL | <input type="checkbox"/> QL |  |
| <input type="checkbox"/> CA  | <input type="checkbox"/> HU   | <input type="checkbox"/> LS | <input type="checkbox"/> PS | <input checked="" type="checkbox"/> SS |
| <input type="checkbox"/> WSU | <input type="checkbox"/> DV   |                             |                             |  |

The MIS program has offered MIS 1100 (The Digital Society) for students across the campus. The students will meet the following expectations:

1. Interactions between individuals and society: Students will describe how individuals and groups influence and are influenced by social contexts, institutions, physical environments, and/or global process.
2. Applications of concepts, theories, and methods: Students will apply basic social science concepts, theories, and/or methods to a particular issue and identify factors that influence change.

## **Goddard School of Business and Economics (GSBE) Learning Outcomes**

### *Analytical and Critical Thinkers*

Students will be able to gather and organize relevant data and information to identify issues and problems to draw logical conclusions. Students will be able to:

1. Identify issues and problems

2. Gather and organize relevant data and information to analyze issues and problems
3. Draw logical conclusions through analysis and reasoning and posit viable alternative solutions

#### *Ethically Aware*

Students will be able to:

1. Systematically analyze ethical dilemmas that demonstrate advanced moral reasoning to find normative solutions
2. Understand key principles of business law and business ethics

#### *Effective Communicators*

Students will be able to demonstrate proficiency in oral and written communication skills in a professional environment. Students will be able to:

1. Effectively conduct oral presentations in a professional environment
2. Effectively convey ideas through written documents

#### *Knowledge of Key Concepts*

Students will be able to:

1. Demonstrate knowledge of key business disciplines.

#### *Global Viewpoints*

Students will be exposed to an international environment and will recognize and anticipate how sociocultural differences and political and economic forces shape institutions and business decisions. Students will be able to:

1. Recognize and anticipate how sociocultural differences shape institutions and business decisions.
2. Recognize and anticipate how political/economic forces shape institutions and business decisions.

### Five-year Assessment Summary

Before 2018-19, the MIS program has mainly relied upon the GSBE school-level assessment. During that periods, the program-level effort on the assessment was over Business Computer Skills (MIS 2010). After adapting a new platform, called *MyEducator.com*, the pass rate has been improved above 85% at the threshold of 75%. The ETS Major Field Test has been utilized to assess the program-specific knowledge.

In 2018-19, the program revised the program-level learning outcomes and arranged a list of courses for assessment, including a new required course (MIS 2030). The revised learning outcomes were assessed in 2019-2020. Appendix G provides the summary of findings.

### Assessment of Graduating Students

The exit survey was arranged in 2019-20 through the GSBE Career services office. The survey includes the questions such as annual salary, plans after graduation, current employment status, internship experiences before graduation, lessons learned at the program, and strength and weakness of the GSBE.

Fifteen (15) MIS major students completed the questionnaire. The reported annual salary for MIS major students ranged from \$ 50,000 to \$ 80,000 with the average \$ 64,000. 11 out of 15 students (73.3%) were already employed before graduation. 4 out of 15 students (26.7%) had internship experiences during their education at WSU.

## **Standard D - Academic Advising**

### Advising Strategy and Process

The Goddard School of Business & Economics (GSBE) has a dedicated advising office. This office currently consists of three (3) academic advisors who meet with students to explore majors, discuss changes and plan their academic schedule. The advisors also assist with identifying students who have not registered in order to encourage completion of their degree. Degree maps and suggested schedules are provided electronically to all students. MIS minor information sheets are available online as well. The advisors maintain both scheduled and open office hours (including virtual, beginning in Spring 2020). An Advising Collaboration Committee consists of the Academic Advisors, Department Chairs, and Administrative Specialists to ensure that services are meeting the needs of the academic departments and students. Advisors refer students to Department faculty when needed.

All GSBE students are required to complete BSAD 2899 taught by Senior Advisor Karen Hicks. In collaboration with Brett Merrell (Director of Career Services), this course focuses students on the development of a standard professional resume as well as prepares them for admittance into GSBE.

MIS faculty are also actively involved in advising MIS students. Dr. Randy Boyle, for example, hosted the Director of Graduate Admissions at Carnegie Mellon University to speak to all of his classes about the Master of Information Management Systems (MISM) program. He talked about the importance of attending graduate school and the career opportunities it provides. In addition, Randy encouraged students to apply to CMU's summer Cyber Security IT-Lab program.

### Effectiveness of Advising

In 2019-2020, under Dr. Boyle's advising and mentorship, nine (9) students were accepted to CMU's Summer Cyber Security IT-Lab program, comprising 35% of the program's enrollment. Participation in this program guarantees a 50% tuition scholarship for CMU's MISM graduate program. In addition, MIS students enjoy an extremely high acceptance rate to highly selective graduate programs.

### Past Changes and Future Recommendations

The advising office experienced attrition of Advisors which impacted both the availability of advising services to students as well as the quality of information provided. In 2019, a Senior Academic Advisor Karen Hicks was added to the GSBE staff. Alex Muller and Christine Moua serve as academic advisors, rounding out the advising team. The stability of this group and leadership provided by Karen Hicks has resulted in a consistent service to students and academic departments. Formalization of the Advising Committee, along with a chartered sub-committee of Advisors and Administrative Specialists will support continued improvement in this area.

Version Date: April, 2019

The Career services office supports students in the development of a professional resume and interview skills as well as acts as liaison between hiring companies and our students. Brett Merrell, Director of Career Services at GSBE offers filmed mock interviews as well as counsels and encourages students to seek opportunities (leadership, internship, and volunteers) that will strengthen their resumes and provide experience that will support achieving their future ambitions, whether that is securing a full-time position or continuing their graduate-level studies.

## **Standard E - Faculty**

### Programmatic/Departmental Teaching Standards

All faculty members undergo an annual review for teaching effectiveness. In addition to course evaluations, an assessment is made of the relevance and rigor of course materials. The Department of Supply Chain & Management Information Systems strives to maintain very high teaching standards and provides students with access to some of the top academic researchers in their field. It also boasts faculty who have made significant advisory contributions to government and industry, regionally, nationally, and internationally.

Each faculty member is expected to ensure the following:

- Remains knowledgeable of current developments in all courses taught through scholarly activities, updating course content, experimenting with new pedagogies, and/or any other activities that demonstrate engagement in the area of teaching.
- Provides course guidance by producing a syllabus with a course outline, learning objectives, and grading policy.
- Meets classes and with individual students through established office hours.
- Participates in departmental and school assessment of learning activities when asked to do so.
- Works to improve teaching effectiveness when deficiencies are noted by students and academic peers.

With the move to online instruction due to COVID-19, faculty engaged in a college-wide sharing of successes and processes to facilitate this.

### Faculty Qualifications

The MIS program has five full-time faculty members who are all terminally qualified with a Ph.D. All adjunct instructors have a minimum of an appropriately accredited Master's degree in their relevant disciplines along with required industry experience. This puts the department in full compliance with AACSB accreditation requirements with regards to faculty qualification (as represented by the faculty qualifications table for the 5th year accreditation maintenance report for AACSB according to its latest standards).

### Faculty Scholarship



Over the last five years, MIS faculty members have consistently produced high quality articles in peer-reviewed journals, with many of these articles published in leading journals as defined by the Goddard School's Safe Harbor List and external rankings of journal quality. In addition, MIS faculty members have also been very active in other forms of scholarly work. Appendix I provides a summary of recent peer-reviewed journal publications & other scholarly work by all tenured and tenure-track faculty in the department.

### Mentoring Activities

The MIS faculty engage in extensive student mentoring. More specifically, faculty mentor students (both formally and informally) in the areas of research, graduate school admission, and job search preparation.

Faculty actively engage students in new research and industry projects. For example, in 2019, Dr. Boyle engaged twenty-four (24) students in an original research project looking at national Management Information Systems enrollment. The project looks at enrollments in MIS programs at dozens of universities across the country to complete a longitudinal analysis of the growth of MIS programs over time. Dr. Clements included applied projects in MIS 4720 where students worked/consulted with outside businesses to help develop or prototype an innovative solution. Students developed industry contacts through the process of consulting with local companies under the guidance of Dr. Clements.

MIS faculty also actively mentor students during their job search. The job search for technical careers is unique because resumes must include technical skills, business knowledge, and interpersonal skills. Using personal experiences, expertise, and industry connections, MIS faculty have consistently helped students create effective resumes and LinkedIn profiles and build connections with industry professionals. These efforts often result in students' obtaining more immediate and more satisfying job offers. The MIS faculty collectively write dozens of referrals each year for students seeking jobs and admission into graduate programs.

### Diversity of Faculty

The MIS Department has five full-time faculty members with the following demographics:

- Four (80%) male and one female (20%)
- Two (40%) white and three (60%) are Asian (China, Korea)
- All have advanced degrees from U.S. Universities.

### Ongoing Review and Professional Development

MIS faculty are actively engaged in both internal and external professional development activities. MIS faculty are supported by department and school efforts to create innovative courses, infrastructure, and external development, which is particularly important in a dynamic field such as MIS.

MIS faculty are also given resources to take sabbaticals consistent with university policy and attend academic conferences that are relevant to their specific disciplines. Attending these conferences is critical to the overall professional development and ongoing technical expertise. Through attending conferences, faculty are able to regularly discuss new research ideas and participate in ongoing expert conversations

with faculty around the globe, hear about new developments in the field, learn new technical skills, and start new collaborative research projects.

### Use and impact of high impact educational experiences

Dr. Zhang organized a faculty-led Study Abroad trip for students to Italy in Spring 2018. Dr. Song also arranged two Study Abroad trips to Italy in Spring 2017 and to Korea and Japan in Spring 2019. Dr. Clements has encouraged students to take business/industry recognized certification exam CompTIA Network + with several students becoming industry certified.

### Evidence of Effective Instruction

Regular and adjunct faculty teaching effectiveness is assessed via the GSBE Assurance of Learning (AoL) process associated with AACSB accreditation at the college level, in that no distinction is made between AoL measures derived from courses taught by regular faculty versus course taught by adjunct instructors. The MIS program participates fully in the GSBE Assurance of Learning measurement and reporting program. The program also assesses the program-specific learning outcomes (shown in Appendix G).

Further, student evaluations of instruction are administered each semester and are used to provide feedback to faculty. Evaluations of instruction form a part of the formal tenure and promotion review processes.

## **Standard F – Program Support**

Faculty in the MIS program have access to GSBE and departmental administrative support staff, classroom facilities, equipment that is needed for their teaching and research, and library collections. The Goddard School provides dedicated staff to support technology and marketing. The SC&MIS Department shares a dedicated Administrative Specialist.

### Adequacy of Staff

Technology Specialist, Patrick Leavitt supports all technology needs for the Goddard School of Management. Patrick has a BS of Integrated Studies from Weber State in addition to IT Certifications from Davis Applied Technology College. He holds certification for Extron and Crestron control equipment and is an active member of the Campus Technology Coordinators Committee. Patrick led the integration of technology into our classrooms and lecture hall to allow for the massive online learning needs as the campus went fully online due to the COVID-19 pandemic. With his technology solutions and support, all faculty and staff have the resources they need to deliver outstanding content to our students in the safest and most effective ways possible.

Brett Merrell joined the Goddard School in 2017 as Director of Career Services. Brett holds a bachelor's degree from Utah State University and an MBA from Northwestern University, Kellogg Graduate School of Management. Brett brings his extensive corporate background into this position advising all Goddard Schools on development of an effective resume as well as acting as a liaison to job opportunities for students in all Goddard majors, including MIS.

Karen Hicks is the GSBE Senior Academic Advisor. She has a BS in Business Management and MS degrees in Industrial/Organization Psychology from Emporia State University and Academic Advising from Kansas State University. Karen has over 20 years of education advising experience.

Alex Muller is a GSBE Academic Advisor. He has a BS in Political Science from Grinnell College and an MA in Mideastern Studies from the University of Chicago. Prior to joining the GSBE advising team, Alex was a Sponsored Student Advisor in the International Student and Scholar Center.

Christine Moua joined the GSBE advising team in 2020, previously working in Student Affairs for the College of Science at the University of Utah. Christine earned her BA in Early Childhood Education with a minor in Psychology from Weber State University.

Niki Tonks joined the Goddard School of Business & Economics in the Fall of 2016 as the School's first Marketing Manager. Niki has a BA in communications from Weber State University, along with over 15 years of experience in small business development, strategic marketing execution, public relations campaigns, brand establishment, local, online and international sales, government negotiations, social media engagement as well as process and procedure creation and implementation. Niki leads outreach initiatives through social media and through networks within the University and among local high schools.

#### Adequacy of Administrative Support

Nancy Tomon is the dedicated Administrative Specialist for the Department of Supply Chain & Management Information Systems (SC&MIS). Responsibilities of this position include administrative and financial record-keeping as well as responding to student and faculty requests. This position is also an interface to prospective students, our advisory board and other partners. Nancy has relevant professional experience as well as a BS degree. She is currently pursuing her MBA at Weber State.

#### Adequacy of Facilities and Equipment

This is an area of marked improvement vs. our last 5-yr self-study report. This is of particular importance as the MIS field is constantly changing and as our program focuses on applied projects, often involving the use of current, state-of-the art technology and equipment.

All classrooms and lecture halls in GSBE have been updated with smartboard technology as well as technology upgrades that allow courses to be streamed and recorded. During the rapid transition to online, virtual, and hybrid schedules, faculty were provided with technology such as web cams, microphones, headphones, iPads, etc. to support their remote delivery of course content.

In 2018-19, Dr. Song has successfully funded the replacement of computers in the computer lab (WB 120) through Carl D. Perkins CTE grant. In summer 2018, the Innovation Lab was established with 3D printers and laser engraving printers, where students are enabled to engage with new software programs to understand prototyping and the design of 3-D products. Dr. Boyle has upgraded the Virtual Lab infrastructure through Academic Resources & Computing Committee (ARCC) grant.

## Adequacy of Library Resources

The library representative for the GSBE, Dr. Ed Hahn, has been very responsive to any requests by the department. Library facilities are sufficient with a good range of online business databases and access to a wide range of e-journals.

## **Standard G - Relationships with External Communities**

### Description of Role in External Communities

The MIS faculty are actively engaged with external communities in a variety of ways.

Dr. Le served on Utah's Spike 150 Commission, celebrating the anniversary of the First Transcontinental Railroad at Promontory Summit. Dr. Le continues to act as a liaison between Utah and Liaoning Province of China. In May 2018, Dr. Le coordinated visits of Utah legislative delegations to China as well as coordinated meeting of Chinese Ministers with the Utah Governor and economic and trade leaders. Dr. Le also serves as a Business Division chair at the Utah Academy of Science, Arts, & Letters.

Dr. Song worked with International partner schools (Incheon National University, Korea and Konan University, Japan) for potential double-degree programs in 2018-2019. Dr. Song made a presentation of mobile app development at 2019 Business Summer Camp – Early Executive Leadership Academy.

Dr. Boyle presents to local industry groups, community organizations, and university-related groups each year, typically sharing security-related topics. For example, Dr. Boyle was featured on a KSL televised news report about privacy in 2018.

When the COVID-19 pandemic first hit Utah, health care providers lacked necessary PPE to safely perform their jobs. Dr. Clements and the 3D printers in the Innovation Lab sprang into action. Dr. Clements put all six 3D printers to work and, within days, created over 500 PPE masks and face shields for the Weber-Morgan Health Department.

### Summary of External Advisory Committee Minutes

The MIS Advisory Board was formed in Fall 2018, with 11 representatives from local and national companies, and had a first board meeting in April 2019. The program hopes to continue to foster this relationship with the following objectives:

- a. To revise mission statement and program assessment
- b. To advise on curriculum changes, along with the industry demands
- c. To promote mentoring and internships
- d. To offer hiring advice – skills, interviewing, utilizing LinkedIn, etc.
- e. To be guest speakers for clubs or classes

While the Spring 2020 meeting was cancelled due to COVID-19, the recent board meeting was arranged on November 6, 2020. The board members shared their ideas on the current course offerings, graduate

certificates (Cybersecurity and Business Analytics) in the MBA program, and the proposal of a master's program in Information Systems. In addition, the board members showed strong support for establishing a mentoring program.

### Community and graduate Success

Results from the most recent survey indicate that our graduates choosing to enter the workforce accepted positions as Cyber Security Analyst, IT Specialist, Operations Analyst, Systems Administrator, Fund Accountant, Intelligence Manager at companies including Goldman Sachs, BAE Systems, Lifetime Products, EMB, American First Credit Union and Deseret Books at an average starting salary of \$64,000. Salaries reported ranged from \$50,000 to \$80,000. Students report the MIS curriculum and outstanding faculty as critical to their success in the program.

In 2018-2019, over 40% of the MIS graduating class pursued graduate school, with nine (9) students accepted to the #1 ranked MIS program at Carnegie Mellon University as well as the University of Utah, Bentley University, and the University of Arizona. In 2019-2020, five students (100% acceptance) were accepted to CMU's very competitive program.

**Standard H – Program Summary**  
Results of Previous Program Reviews

The recommendations, from the previous program review in 2016-17, pertinent to the MIS program and our responses are enumerated below.

Problem Identified	Action Taken	Progress
Measurable Learning Outcomes - Review (with possible changes made to) the program’s measurable learning outcomes - Update the evidence of learning assessment (program-specific)	The MIS faculty had several meetings to revise program-specific learning outcomes. The group also discussed which courses can be used to assess those learning outcomes.	The assessment of revised learning outcomes was implemented in 2019-2020, through the selected courses shown in Curriculum table (Standard B).
Program Advisory Board - Establish open communication channels with external parties for feedback - Formulate an advisory committee to help guide the evolution of the program, its mission, and curriculum	The MIS Advisory Board was formed in Fall 2018 with 11 representatives from local and national companies.	The first board meeting was arranged in April 2019. The discussion topics included, but were not limited to the revision of mission and vision statements, major and minor curriculum, and the objectives of the advisory board.
Include a capstone project to more thoroughly assess IS&T students’ ability	MIS 4730 was revised to incorporate a capstone project. In addition, upon completion of the course, students are able to take the CAPM exam.	Six project deliverables were arranged to assess students’ learning outcomes. The instructor helped students enroll in uCertify Online and take the CAPM exam.

An exit survey for graduating students and a mechanism for reaching out to IS&T alumni	An exit survey was arranged in 2019-20 through the GSBE Career services office.	The GSBE Career services office collected this data, including the responses of 15 MIS major students. The survey included the questions such as annual salary, plans after graduation, current employment status, internship experience before graduation, and lessons learned at the program.
Maintain the analytics and enterprise systems courses	MIS 2030 (Intro to Business Analytics) was arranged as a required course in Fall 2019. The course is offered every semester.	53 students enrolled in MIS 2030 in Fall 2020, while 34 students enrolled in Fall 2019. The program has not yet arranged an enterprise systems course.
Reach out to university and industry contacts to identify the software, tools, and platforms critical for student learning	For MIS 2030, the MIS group had a meeting to identify relevant tools and decided to utilize Tableau and KNIME.	Tableau and KNIME were implemented in MIS 2030. The MIS faculty actively engaged with these new tools in their courses.
Evaluate the program's current emphasis on teaching Java	The MIS group had an open discussion with the advisory board members in Spring 2019.	While some board members supported Python as alternative language, many board members voiced that Java is still one of the top programming languages. More discussions will be had in future meetings.
Hire an additional full-time faculty member	The department chair expressed in the recent Strategic Planning Report that the program needs new faculty.	No funds have been allocated to hire additional faculty. The department chair keeps requesting funds for additional full-time faculty.

<p>Make it possible/feasible to obtain certificates (e.g., CAPM, Network+, etc.) after completing the relevant courses</p>	<p>Our faculty members implemented this suggestion into their courses.</p>	<p>The pedagogical changes were made in the following courses:</p> <ul style="list-style-type: none"> <li>- MIS 3610, MIS 3620, MIS 4600, and MIS 4700 helped students prepare for Network+, Security+, and other related certifications.</li> <li>- MIS 4730 made it feasible to take the CAPM exam.</li> </ul>
<p>Academic Advising</p> <ul style="list-style-type: none"> <li>- Require academic advising upon admission</li> <li>- Develop more rigorous data collection tools in close collaboration with academic advisors</li> </ul>	<p>In 2018-19, the college formed an Advising Collaboration Committee, including department chairs, academic advisors, and administrative specialists, to facilitate advising strategy and process.</p>	<p>Senior advisor Karen Hicks leads the Committee. The Committee has a meeting at the beginning of every semester to discuss the issues and/or concerns about academic advising.</p>
<p>Train/employ a support person to manage the virtual infrastructure</p>	<p>The department chair shared this and related issues with the Dean.</p>	<p>The college hired Patrick Leavitt, as a new Technology Specialist in 2018-19. Patrick holds outstanding knowledge and skills to support our virtual infrastructure.</p>
<p>Promotion of the MIS program &amp; Recruitment of New Students</p> <ul style="list-style-type: none"> <li>- More formal and systematic promotion of the department</li> <li>- Use existing relationships with alumni and current students to recruit new students</li> </ul>	<p>The MIS group shared these ideas with the college Marketing Manager, Niki Tonks. The MIS group used MIS 2020 (Intro to Information Systems) to promote the program.</p>	<p>The faculty members have actively worked with Niki. The college web site has been updated. To promote the program, the faculty members regularly engage in multiple events and activities, such as Purple Carpet Events, Business Summer Camp (Early Executive Leadership Academy), and High school outreach.</p>



<p>A possible rebranding of the program from IS&amp;T to the more widely-used program title</p>	<p>The MIS group decided to change the program title and course prefix from IS&amp;T to MIS (Management Information Systems).</p>	<p>In Spring 2018, a new department (Supply Chain &amp; Management Information Systems) launched. The new program title and course prefix have been effective since 2018.</p>
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Action Plan for Ongoing Assessment Based on Current Self Study Findings

Action Plan for Evidence of Learning Related Findings

Problem Identified	Action to Be Taken
The program needs to update the evidence of learning assessment and revisit assessment strategies.	The MIS group will meet in Spring 2021 to bring the discussion of learning outcomes and assessment.
The program needs to update the course offerings to be consistent with peer schools.	The MIS group had a discussion about additional elective courses in Fall 2020. The group will meet in Spring 2021 to discuss further, while faculty members survey the course offerings in peer schools.

Action Plan for Staff, Administration, or Budgetary Findings

Problem Identified	Action to Be Taken
The program needs additional full-time faculty to arrange more course offerings and flexibly support faculty development.	Recommend that a full-time faculty be hired.

## APPENDICES

### Appendix A: Student and Faculty Statistical Summary

(Note: Data provided by Institutional Effectiveness. This is an extract from the Program Review Dashboard and shows what will be sent to the Boards of Trustees and Regents)

Mgmt Information Systems	2015-16	2016-17	2017-18	2018-19	2019-20
<b>Student Credit Hours Total <sup>1</sup></b>	<b>8,238</b>	<b>7,758</b>	<b>7,623</b>	<b>8,280</b>	<b>7,420</b>
<b>Student FTE Total <sup>2</sup></b>	<b>274.60</b>	<b>258.60</b>	<b>254.10</b>	<b>276.00</b>	<b>247.33</b>
<b>Student Majors <sup>3</sup></b> other (2nd or 3rd majors)	115	100	119	129	136
<b>Program Graduates <sup>4</sup></b>					
Associate Degree	5	6	4	10	8
Bachelor Degree	21	18	28	29	45
<b>Student Demographic Profile <sup>5</sup></b>					
Female	17	9	14	20	17
Male	98	91	105	109	119
<b>Faculty FTE Total <sup>6</sup></b>	<b>5.13</b>	<b>4.915</b>	<b>6.33</b>	<b>6.58</b>	<b>6.46</b>
Adjunct FTE	1.63	1.42	1.83	<b>2.08</b>	1.96
Contract FTE	3.5	3.5	4.5	4.5	4.5
<b>Student/Faculty Ratio <sup>7</sup></b>	<b>53.58</b>	<b>52.61</b>	<b>40.14</b>	<b>41.95</b>	<b>38.30</b>

- <sup>1</sup> **Student Credit Hours Total** represents the total department-related credit hours for all students per academic year. Includes only students reported in Banner system as registered for credit at the time of data downloads.
- <sup>2</sup> **Student FTE Total** is the Student Credit Hours Total divided by 30.
- <sup>3</sup> **Student Majors** is a snapshot taken from self-report data by students in their Banner profile as of the third week of the Fall term for the academic year. Only 1st majors count for official reporting.
- <sup>4</sup> **Program Graduates** includes only those students who completed all graduation requirements by end of Spring semester for the academic year of interest. Students who do not meet this requirement are included in the academic year in which all requirements are met. Summer is the first term in each academic year.
- <sup>5</sup> **Student Demographic Profile** is data retrieved from the Banner system.
- <sup>6</sup> **Faculty FTE** is the aggregate of contract and adjunct instructors during the fiscal year. **Contract FTE** includes instructional-related services done by "salaried" employees as part of their contractual commitments. **Adjunct FTE** includes instructional-related wages that are considered temporary or part-time basis. Adjunct wages include services provided at the Davis campus, along with on-line and Continuing Education courses.
- <sup>7</sup> **Student/Faculty Ratio** is the Student FTE Total divided by the Faculty FTE Total.

Appendix B:

**Faculty (current academic year)**

	Tenure and Tenure-track	Contract	Adjunct
Number of faculty with Doctoral degrees	5	1	-
Number of faculty with Master's degrees	-	-	5
Number of faculty with Bachelor's degrees	-	-	-
Other Faculty	-	-	-
<b>Total</b>	5	1	5

**Contract/Adjunct Faculty Profile**

Name	Rank	Tenure Status	Highest Degree	Years of Teaching	Areas of Expertise
Scott "Terry" Allen	Adjunct	n/a	MS	15	MIS
Marion Jensen	Adjunct	n/a	MS	16	MIS
Jason Koop	Adjunct	n/a	MS	8	MIS
Christopher Heywood	Adjunct	n/a	MS	2	MIS
Barbara Niklason	Adjunct	n/a	EdD	19	MIS
Yong Zhang	Associate Professor	Tenured	PhD	8	Computer Science

Appendix C: Staff Profile

Name	Job Title	Years of Employment	Areas of Expertise
Nancy Tomon	Administrative Specialist	1	Administrative, Finance
Patrick Leavitt	Technology Specialist	2	Technology, Network systems
Brett Merrell	GSBE Career Advisor	3	Career Advising, Interview and Resume Skills
Niki Tonks	GSBE Marketing Manager	4	Marketing, Strategic Planning
Karen Hicks	GSBE Advisor	1	Academic Advising
Alex Muller	GSBE Advisor	6	Academic Advising
Christine Moua	GSBE Advisor	1	Academic Advising

Appendix D: Financial Analysis Summary  
 (This information will be provided by the Office of Institutional Effectiveness)

<b>Management Information Systems</b>					
<b>Funding</b>	<b>15-16</b>	<b>16-17</b>	<b>17-18</b>	<b>18-19</b>	<b>19-20</b>
Appropriated Fund	3,020,288	3,445,158	3,436,976	1,751,989	1,877,410
Other: IW Funding from CE	328,334	308,334	223,649	120,420	120,000
Special Legislative Appropriation					
Grants or Contracts					
Special Fees/Differential Tuition	388	2,714	12,906	16,768	6,215
<b>Total</b>	<b>3,349,010</b>	<b>3,756,206</b>	<b>3,673,531</b>	<b>1,889,177</b>	<b>2,003,625</b>
Total FTE	495.9	479.7	477.7	161.4	182
cost per FTE	\$6,753	\$7,830	\$7,690	\$11,705	\$11,009

In AY18, the MIS and SC departments left the Business Administration Department to create their own, combined department - Supply Chain and Management Information Systems.

AY18 was a transition year - where financing was likely drawn from both departments for the MIS program in particular.

Appendix E: External Community Involvement Names and Organizations

<b>Name</b>	<b>Organization</b>
Sarah Shelburne	Mountain Star Healthcare
Ben Roberts	Loan Pro
Emric Delton	ARUP
Gabe Chino	Fidelity Investments
Cory Carrigan	nThrive
Jason Koop	CGI
Matt Christensen	InterMountain Healthcare
Nicholas Degnan	Northrop Grumman
Robert Morrill,	BAE Systems, Inc.
Mike Kattelman	Maverick, Inc.
Jerry Ropelato	WhiteCloud, Inc.

Appendix F: Site Visit Team (both internal and external members)

<b>Name</b>	<b>Position</b>	<b>Affiliation</b>
Brian Rague	Associate Dean	Engineering, Applied Science, and Technology, WSU
Kelly Fadel	Professor	Utah State University
Daniel McDonald	Associate Professor	Utah Valley University



Appendix G: Evidence of Learning Courses within the Major

(use as a supplement to your five-year summary, if needed. Be sure to delete the sample text before using)

Evidence of Learning: Courses within the Major					
Measurable Learning Outcome	Method of Measurement	Threshold for Evidence of Student Learning	Findings Linked to Learning Outcomes	Interpretation of Findings	Action Plan/Use of Results
Students will...	Direct and Indirect Measures*				
Learning Outcome 1.  Be able to collect, analyze, and use data to improve business decision making	Measure 1:  Two major assignments with multiple sub-questions (MIS 2030)	Measure 1:  80% of students will meet or exceed expectations on three areas: visualization, model building, and interpretation	Measure 1:  79.2% of students met or exceeded expectations in overall rubric	Measure 1:  Students performed well developing data visualization and building models, but students struggled in evaluating model performance.	Measure 1:  Need more assessment data to compare. No action necessary, though faculty will keep track of the topics/areas that students struggle from.
Learning Outcome 2.  Be capable of developing and implementing information systems	Measure 1:  Three programming assignments in key concept areas (MIS 2110)	Measure 1:  80% of students will meet or exceed expectations: class/object concepts and programming logic	Measure 1:  83.3% of students met or exceeded expectations in overall rubric	Measure 1:  Students performed well completing the programming assignments, but some students struggled in understanding the programming logics.	Measure 1:  Continue to monitor the progress of students. Faculty may consider revising the rubric.
Learning Outcome 3.  Be adept at helping management understand and plan	Measure 1:  Complete six (6) major project deliverable	Measure 1:  80% of students will meet or exceed expectations on six	Measure 1:  92.9% of students met or exceeded	Measure 1:  Students performed very well completing most project	Measure 1:  No action necessary. Faculty will continue

Evidence of Learning: Courses within the Major					
Measurable Learning Outcome	Method of Measurement	Threshold for Evidence of Student Learning	Findings Linked to Learning Outcomes	Interpretation of Findings	Action Plan/Use of Results
Students will...	Direct and Indirect Measures*				
for the best new technologies and how to integrate them into the organization's business processes	assignments (MIS 4730)	project deliverables, including work breakdown, risk assessment, cost estimation, and resource management	expectations in overall rubric	deliverables. In risk analysis & mitigation, 89.3% of students met or exceeded expectations.	to monitor the progress of students.

Evidence of Learning: General Education Courses (MIS 1100)  
 (use as a supplement to your five-year summary, if needed)

Evidence of Learning: General Education					
Measurable Learning Outcome	Method of Measurement	Threshold for Evidence of Student Learning	Findings Linked to Learning Outcomes	Interpretation of Findings	Action Plan/Use of Results
Students will...	Direct and Indirect Measures*				
Learning Outcome 1.A: Interactions between individuals and society: Students will describe how individuals and groups influence and are influenced by social contexts, institutions, physical environments, and/or global process.	Measure 1: A set of 6 questions from 2 different quizzes	Measure 1: 85% of students will score 80% or better on 6 questions	Measure 1: 92.16% of students scored 80% or better on 6 questions	Measure 1: Students successfully described how individuals and groups are influenced by social contexts, institutions, physical environments and global processes.	Measure 1: No curricular or pedagogical changes needed at this time
	Measure 2: Essay on NSA and Mass Surveillance	Measure 2: Students will average 4 (meets expectations) on assessment rubric	Measure 2: Students average was 4.3	Measure 2: Students successfully described how individuals and groups are influenced by social contexts, institutions, physical environments and global processes	Measure 2: No curricular or pedagogical changes needed at this time
Learning Outcome 2.A: Applications of concepts, theories, and methods: Students will apply basic social science concepts, theories,	Measure 1: A set of 4 questions from 2 different quizzes	Measure 1: 85% of students will score at 80% or better on the 4 questions.	Measure 1: 92.5% of students scored above 80% on the 4 questions.	Measure 1: Students successfully demonstrated competence in applying the diffusion of innovation theory to identify factory that influence change	Measure 1: No curricular or pedagogical changes needed at this time

Evidence of Learning: General Education					
Measurable Learning Outcome	Method of Measurement	Threshold for Evidence of Student Learning	Findings Linked to Learning Outcomes	Interpretation of Findings	Action Plan/Use of Results
Students will...	Direct and Indirect Measures*				
and/or methods to a particular issue and identify factors that influence change.	Measure 2: A "Signature Assignment" Essay on Diffusion of Innovation	Measure 2: Students will average 4 (Meets Expectations) on learning assessment when gauged on a scale from 0 (not observed)-5 (exceeds expectations)	Measure 2: Students average was 4.1	Measure 2: Students successfully demonstrated competence in applying the diffusion of innovation theory to identify factors that influence change.	Measure 2: No curricular or pedagogical changes needed at this time

\*At least one measure per objective must be a direct measure. Indirect measures may be used to supplement evidence provided via the direct measures.

## Appendix H: sample Signature Assignments (MIS 1100)

Your assignment is to apply the theory of "diffusion of innovation" to a practical experience.

You are the head VP of your dream job. You have been tasked by the CEO with directing and supporting a technology change in the work place environment. This can be a situation with which you are familiar or one that you make up. Using what you've learned from the readings and materials in Part 1, do the following:

1. Develop a scenario. Describe the technology change you will be directing (some examples are provided below).
2. Describe the workplace in which this is to be implemented (for example, the number of workers, the age of workers, the level of comfort with technology that your workers possess, location of workers - centralized or distributed, the company's tolerance for risk, etc.), and any other work-place dynamics that might influence this change process.
3. Describe the challenges you expect to encounter while implementing this change. Be sure to consider ideas of relative advantage, compatibility, complexity, trialability, and observability. Consider the rate of adoption that is needed and the challenges that might introduce. Also consider consequences - intended and potential unintended.
4. Develop and present your plan for implementing the change you plan to incorporate.

In developing your plan for implementation, consider the following:

- What type of innovation-decision is this; optional, collective, or authority-based? How might that impact your plan or approach?
- How do you communicate this proposal to your workplace? How do you get people 'on board' with the process?
- How does the 'social system' of your workplace impact your plan? Do you have innovators and laggards? Do you have mostly late or early adopters?
- How does time figure into your plan? Is this something that has to be done all at once (a specific-cutover) or can it be implemented more slowly?
- What are your anticipated consequences of the change; how might you address unanticipated consequences?
- Does this innovation contribute to the greater good? Are people put out of work? Does it cause increased pollution? Is it sustainable?

Ideas of possible changes:

- Implementing virtual reality workstations rather than traditional computer workstations.

- Moving a company's business strategy from traditional paper-based to social media
- A move from Microsoft Office Suite to Open Office (or a similar, software transition)
- Transition from a Windows culture to an Apple culture (or a similar hardware transition)
- Moving half of your staff to offices in their homes
- Adopting 3d Printing for manufacturing instead of using overseas suppliers.
- A cut back on travel funds while still needing to meet with staff at distant locations (i.e., implementing a 'virtual meeting' application)
- Moving from desktop computer storage of files to 'Cloud Storage'
- Lots of other possibilities - feel free to 'borrow' from your own experiences or just create a scenario of your own.

Be creative!

Your final paper should be 4 to 6 pages, double-spaced; 12-point font, 1 inch margins. If you include a title page, just remember it doesn't count as part of your total pages. If you have references, cite them (using APA or MLA - whatever you are most comfortable with) in-text and include a references page (again, it doesn't count as part of your total pages).

## Appendix I: Recent Journal Publications and Other Scholarly Work by Tenured and Tenure-Track Faculty

### **Dr. Randall Boyle**

Clements, J., and Boyle, R. (2018). Compulsive technology use: Compulsive use of mobile applications, *Computers in Human Behavior*, 87:34-48.

Boyle, R., Clements, J., and Proudfoot, J. (2018). Measuring Deception: A look at antecedents to deceptive intent, *American Journal of Psychology*, 131:3, 347-367.

Boyle, R., Chandrashekar, D., and Clements, J. (2017) Valuing Information Security: A Look at the influence of user engagement on information security valuations, *Journal of Information Privacy and Security*, 13:3, 137-156.

Proudfoot, J., Boyle, R., Schuetzler, R. (2016). Man vs. machine: Investigating the effects of adversarial system use on end-user behavior in automated deception detection interviews, *Decision Support Systems*, 85:23-33.

Clements, J.A., Boyle, R., Proudfoot, J.G. (2016). Exploring Political Skill and Deception, *International Journal of Sociology and Social Policy*, 36 (3/4), 1-21.

McDonald, D., Boyle, R., Anderson, J., (2016). When Deceitful Chats Look Truthful. *Journal of Computer Information Systems*, 56(4): 331-340.

### *Text Books*

Kroenke, D., Boyle, R., (2021) *Using MIS* (12<sup>th</sup> edition). New Jersey: Pearson. (ISBN: TBD).

Kroenke, D., Boyle, R., (2020) *Experiencing MIS* (9<sup>th</sup> edition). New Jersey: Pearson. (ISBN: TBD).

Boyle, R., Panko, R., (2020) *Corporate Computer Security* (5<sup>th</sup> edition). New Jersey: Pearson. (ISBN: TBD).

### **Dr. Jeffrey Clements**

- Clements, J., and Boyle, R. (2018). Compulsive technology use: Compulsive use of mobile applications, *Computers in Human Behavior*, 87:34-48.
- Boyle, R., Clements, J., and Proudfoot, J. (2018). Measuring Deception: A look at antecedents to deceptive intent, *American Journal of Psychology*, 131:3, 347-367.
- Boyle, R., Chandrashekar, D., and Clements, J. (2017). Valuing Information Security: A Look at the influence of user engagement on information security valuations, *Journal of Information Privacy and Security*, 13:3, 137-156.
- Clements, J.A., Boyle, R., Proudfoot, J.G. (2016). Exploring Political Skill and Deception, *International Journal of Sociology and Social Policy*, 36 (3/4), 1-21.
- Clements, J. A. (2016). Beyond Habit: The Role of Sunk Costs on Developing Automatic IS Use Behaviors. *Journal of the Southern Association for Information Systems*, 3(1).

### **Dr. Taowen Le**

- Yiming Zhao, Linrong Wu, Jin Zhang, Taowen Le (*Forthcoming*), "How Question Characteristics Impact Answer Outcome on Social Question-and-Answer Websites", *Journal of Global Information Management*
- Jin Zhang, Yuehua Zhao, Xin Cai, Taowen Le, Wei Fei, Feicheng Ma (2020). "A Comparison of Retrieval Result Relevance Judgments between American and Chinese Users", *Journal of Global Information Management*, 28(3), 148-168
- Yiming Zhao, Jin Zhang, Xue Xia, Taowen Le (2019). "Evaluation of Google question-answering quality", *Library Hi Tech*, Vol. 37 Issue: 2, pp.312-328.
- Jin Zhang, Xin Cai, Taowen Le, Wei Fei, F Ma (2019): "A Study on Effective Measurement of Search Results from Search Engines", *Journal of Global Information Management*, 27 (1), 196-221.
- Taowen Le (2019): "Global Issues of Information Technologies", *Global Information Diffusion and Management in Contemporary Society*, pp. 1-33.
- Taowen Le, Jin Zhang, Wayne Huang (2015). "An Exploratory Investigation of Gender and Cross-Major Differences in Business Student Success in an IT Course", *Journal of Utah Academy of Science, Arts, and Letters*



### **Dr. Seokwoo Song**

- Sun, J., Song, S., Wipawayangkool, K., & Oh, J. (*Forthcoming*). "Roles of Dynamic Capabilities and Knowledge Management Strategies on Organizational Performance," *Information Development*
- Kim, J., Song, S., & Jeong, B. (2020). "Minimising Total Tardiness for the Identical Parallel Machine Scheduling Problem with Splitting Jobs and Sequence-dependent Setup Times," *International Journal of Production Research*, Vol. 58, No. 6, 2020, pp. 1628 – 1643
- Sun, J., Song, S., House, D., & Kwon, M. (2019). "Role of Gender Differences on Individuals' Responses to Electronic Word-of-Mouth in the Social Interactions," *Applied Economics*, Vol. 51, No. 28, 2019, pp. 3001 - 3014
- Song, S. & Sun, J. (2018). "Exploring Effective Work Unit Knowledge Management (KM): Roles of Network, Task, and KM Strategies," *Journal of Knowledge Management*, Vol. 22, No. 7, 2018, pp. 1614 – 1636
- Song, S. & Sun, J. (2018). "The Impact of Negative Electronic Word-of-Mouth on Attitudes toward a Company: Moderating Effect of Gender Difference," *Korean Business Education Research*, Vol. 33, No. 4, 2018, pp. 495-514
- Song, S. & Choi, S. (2015). "Modeling Dynamic Organizational Network Structure," *Annals of Information Systems*, Vol. 18, 2015, pp. 191-203

### **Dr. Lixuan Grace Zhang**

- Zhang, L., Yang, H., and Pentina, I. (*Forthcoming*). "Understanding the Roles of Risk and Trust in the Context of Collaborative Consumption: A Test of Competing Models", *Journal of Customer Behavior*
- Zhang, L., Smith, E., and Gouldman, A. (2020). "The Effects of Individual Values on Willingness to Pay and Fairness Perception of Use Tax on Internet Purchases", *Advances in Taxation*, 27, 197-221.
- Amos, C., Zhang, L., and Read, D. (2019). "Hardworking as a Heuristic for Moral Character: Why We Attribute Moral Values to Those Who Work Hard and Its Implications," *Journal of Business Ethics*, 158, 1047-1062.
- Zhang, L., Mouritsen, M., and Miller, J. (2019). "Role of Perceived Value in Acceptance of Bring Your Own Device," *Journal of Organizational and End User Computing*, 31(2), 65- 81.

- Pentina, I., Bailey, A., and Zhang, L. (2018). "Exploring Effects of Source Similarity, Message Valence, and Receiver Regulatory Focus on Yelp Review Persuasiveness and Purchase Intentions" *Journal of Marketing Communication*, 24(2), 125-145
- Pentina, I., and Zhang, L. (2017). "Effects of Social Support and Personality on Emotional Disclosure in Facebook and Real Life," *Behavior & Information Technology* (36:5)
- Amos, C. Allred, T., and Zhang, L. (2017). "Does the 'Health Halo' Effect Apply to Biodegradable Products?" *Journal of Consumer Policy* (40:3), 279-298
- Zhang, L., Pentina, I., and Kirk, W. F. (2017). "Who Uses Mobile Apps to Meet Strangers: The Roles of Core Traits and Surface Characteristics," *Journal of Information Privacy and Security*
- Pentina, I., Zhang, L., Bata, H., and Chen, Y. (2016). "Exploring Privacy Paradox in Information-Sensitive Mobile App Adoption: A Cross-Culture Comparison," *Computers in Human Behavior*, 65, pp. 409-419
- Pentina, I. Basmanova, O., and Zhang, L. (2016). "A Cross-national Study of Twitter Users' Motivations and Continuance Intentions", *Journal of Marketing Communication*. 22 (1), pp. 36-55.
- Pentina, I., Bailey, A., and Zhang, L. (2015). "Exploring Effects of Source Similarity, Message Valence, and Receiver Regulatory Focus on Yelp Review Persuasiveness and Purchase Intentions," *Journal of Marketing Communications*.
- Zhang, L., Amos, C., and Pentina, I. (2015). "Information Disclosure in a Chinese Social Media platform," *Journal of Information Privacy and Security*, 11 (1), 3-18.
- Pentina, Iryna, Oksana Basmanova, Lixuan Zhang and Yulia Ukis (2015). "Exploring the Role of Culture in eWOM Adoption," *MIS Review: An International Journal*, 20(2)