MS Information Systems Curriculum Change

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ABSTRACT
This paper reviews the current MS Information Systems program at National University and using the MS Information Systems standards found in the Association for Information Systems (AIS) document: MSIS 2006: *Model Curriculum and Guidelines for Graduate Degree Programs in Information Systems* (AIS, 2006) and the Information from the *Program Self-Study Report: Master of Science in Information Systems (MSIS)* (Snyder, 2009) determines how to improve this program to more closely meet industry standards and enrich the learning experience for students.

NATIONAL UNIVERSITY / AIS CURRICULUM AND COURSE MAPPING

The following is the Justification for modifying the National University MSIS program. Currently National University (NU) has a MSIS degree program in the School of Engineering and Technology that maps well to the AIS 2006 standards, but needs improvements in two areas: The managerial course mapping and additional hands-on lab courses.

This is based on:

1 - MSIS standards found in the Association for Information Systems (AIS) document: MSIS 2006: *Model Curriculum and Guidelines for Graduate Degree Programs in Information Systems* (AIS, 2006).

2 - Information from the *Program Self-Study Report: Master of Science in Information Systems (MSIS)* (Snyder, 2009).

The AIS standards were established because (AIS, 2006):
With accreditation of MSIS programs not yet a reality, the model curriculum serves as a useful document for the programs and students. Prospective MS students in IS generally want to know if a program meets professional standards because standards increase the value of their degree in the marketplace. Schools find it advantageous to respond to such inquiries by stating that their program adheres in principle to the model curriculum approved by ACM and AIS.

The National University program self study was conducted because all degree programs at National University undergo an in-depth review every five years. This report contains the Five Year Program Review for the Master of Science in Information Systems from 2003 through 2008. This was an in-in-depth internal analysis of the MSIS program, comparing the program to other programs and to current and future MSIS demands of organizations. In addition to the internal review, many external reviewers from academic and professional organizations participated in the review. All of this information was reviewed by a formal assessment committee which identified key areas of improvements needed for the program. The major area found for improvement was additional hands-on lab courses, especially in the areas of database management, networking and knowledge management.

JUSTIFICATION FOR CURRICULUM CHANGE
In the MSIS 2006 (AIS, 2006) standards there are three areas a MSIS degree must contain: IS Technology, IS Management and an Integrated Capstone. Changes from the MSIS 2000 standards included: business processes, emerging technologies, globalization, human-computer interactions and the impacts of digitization. The current MSIS program covers all of these topics, however, the IS management courses are from an IS perspective and according to AIS (2006) need to focus more on business processes. Evaluating current courses in the MSIS program and those throughout National University; two existing courses in the School of Business Management (SOBM) map to AIS (2006) Managerial Course standards better than the current MSIS courses.

MATRIX OF COURSES AND TOPICS

Course	Security	Compliance	Tech Integration	Bus. Processes	Info Volume	Mobility	Virility	Sourcing Globalization
IT Infrastructure	X	X	X	X	X	X	X	X
Analysis, Modeling Design	X	X	X	X		X	X	X
Enterprise Models		X	X	X	X		X	x
Emerging Technologies	X		X		X	X	x	
Project and Change Management				X			X	x
Strategy and Policy	X	X	X	X	X	X	X	X
Implications of Digitization	X	X	X	X	X	X	X	x
HCI			X	X		x		
Integrated Capstone	X	X	X	X				X

The courses are:

LED 606 Information Management for Leaders – this course would replace CIS 606 End User Information Systems. LED 606 covers several categories identified in the AIS (2006) Matrix of Courses and Topics, including: Strategy and Policy - compliance, integration, business processes, virtuality and Sourcing/Globalization. An important note is the AIS (2006) MSIS standard separates IS Technology courses from IS Management courses. With LED 606 being a SOBM course, the topics would be taught from an IS management perspective verses an IS Technology perspective.

MGT 604 Business Project Management – this course would replace TMG 640 Managing Technology Change. The key change here is moving from the AIS MSIS 2000 standard to the MSIS 2006 standard of viewing project management from a business perspective verses just managing technology change. MGT 604 covers several categories identified in the AIS (2006) Matrix of Courses and Topics, including: Project and Change Management – Business processes, virtuality, sourcing/globalization. This course also covers several topics indentified under IT infrastructure, analysis, modeling and design and strategy

and policy. An important note is the AIS (2006) MSIS standard separates IS Technology courses from IS Management courses. With MGT 604 being a SOBM course, the topics would be taught from an IS management perspective verses an IS Technology perspective.

Evaluating the findings from the Program Self-Study Report: Master of Science in Information Systems (MSIS) (Snyder, 2009), it was found that the MSIS program needed additional hands-on lab courses, especially in the areas of database management, knowledge management and networking. After evaluating current courses offered at National University three hands-on lab based courses where found that met the requirements identified in the MSIS Self-Study (Snyder, 2009) in the areas of database management and Knowledge Management (KM). In addition to adding lab based courses to the MSIS program, National University would be reducing the number of redundant courses offered and take advantage of subject matter experts from multiple programs and Schools within the university.

The three new lab courses would include:

DAT 604 Database Design and Implementation would replace CIS603 Database Management. In addition to the hands on lab, the course covers many of the topics identified by AIS (2006) for the MSIS program. They include: IT infrastructure – security, compliance, technology integration, information volume, mobility and virtuality. The course also covers topics in enterprise models and emerging technologies and issues.

BKM 600 Knowledge Management for Business Strategies replacing CIS 608 Knowledge Management and BKM 610 Managerial Support Systems, DSS and ESS replacing CIS 609 Advanced Knowledge Management. The BKM courses are redundant courses with the noted CIS courses, however, they have hands-on labs using state-of-the-art software and the CIS courses have no hands on labs. The use of these courses would better prepare students in the area of Knowledge Management and reduce the number of redundant courses taught at National University.

PROPOSED CURRICULUM
Based on the information supplied in this document, the proposed curriculum would contain the following courses:
> CIS 601 Information Systems Strategies
> CIS 602 Network Services and Protocols
> DAT 604 Database Design and Implementation
> CIS 604 Management and Security
> LED 606 Information Management for Leaders
> CIS 607 Systems Integration
> BKM 600 Knowledge Management for Business Strategies
> BKM 610 Managerial Support Systems
> MGT 604 Business Project Management
> TMG 625 Systems Analysis and Design
> CIS 620A Master's Research Project I
> CIS 620B Master's Research Project II

CONCLUSION
The Justification for modifying the National University MSIS program is to improve the program based on the MSIS standards found in the Association for Information Systems (AIS) document: MSIS 2006: *Model Curriculum and Guidelines for Graduate Degree Programs in Information Systems* (AIS, 2006) and the Information from the *Program Self-Study Report: Master of Science in Information Systems (MSIS)* (Snyder, 2009). Five course changes have been identified to strengthen an already strong program

by adding three additional hands on labs and addressing both the technical and managerial components of the degree.

With these changes the new MSIS degree will take advantage of knowledge, leadership and skills from two Schools and six Departments. The students will receive a strong education from multiple subject matter experts.

Finally, there is no formal accreditation organization for MSIS degrees, but following the AIS 2006 standards more closely – adopting the three areas of a MSIS degree (Technical, Managerial and Capstone) will strengthen the recognition of our degree by both students and industry.

REFERENCES

AIS (2006). Communications of the Association for Information Systems (Volume 17, 2006) 1-56.
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        University.

BIOGRAPHIES
Dr. Rell Snyder holds a DBA in Information Systems from Argosy University and is an Associate Professor in the School of Engineering and Technology at National University.