NEW/REVISED/DELETED GRADUATE PROGRAMS COVER SHEET
(Degree Programs, Sequences, Graduate-Level Certificates)
Graduate Curriculum Committee
2010-11

Deadlines for receipt by Graduate Curriculum Committee:
   Revised Degree Program, Sequence, Graduate Certificates: September 14, 2010, for inclusion in 2011-12 catalog
   New Sequence, New Graduate Certificate: September 29, 2010, for inclusion in 2011-12 catalog
   New Degree Program: February 9, 2011, for inclusion in 2012-13 Graduate Catalog.

DEPARTMENT/SCHOOL _School of Information Technology_ DATE _11/30/204_
TITLE OF DEGREE, SEQUENCE, OR CERTIFICATE _Network and Security Management Sequence_
Proposed Action: (Refer to Part I, Section C of *GCC Proposal Guidelines and Procedures.*)

☒ New* (Check one):

   ☐ Degree Program ** (goes beyond Graduate Curriculum Committee)
   ◉ Sequence (goes beyond Graduate Curriculum Committee)
   ☐ Post-Master's Graduate Certificate (goes beyond Graduate Curriculum Committee)
   ☐ Post-Baccalaureate Graduate Certificate (goes beyond Graduate Curriculum Committee)
   ☐ Graduate Certificate

☐ Change in requirements for: (Check one.)

   ☐ Degree Program   ☐ Sequence   ☐ Certificate

☐ Other program revisions

☐ Deletion of: (Check one.)

   ☐ Degree Program (goes beyond Graduate Curriculum Committee)
   ☐ Sequence (goes beyond Graduate Curriculum Committee)
   ☐ Post-Master's Graduate Certificate (goes beyond Graduate Curriculum Committee)
   ☐ Post-Baccalaureate Graduate Certificate (goes beyond Graduate Curriculum Committee)
   ☐ Graduate Certificate

   *Attach approved *Request for New Program Approval: Reporting of Financial Implications* form (available at
   www.academicsenate.ilstu.edu/documents.html).
   **Obtain the New Program Request (NEPR) format from the Office of the Provost.

Attachment: Summary of proposed action: For all proposals, provide current title and current catalog copy. Provide new title and new catalog copy for new programs, and for revised programs if catalog copy/title is altered. For revised programs, provide a summary of the changes. (Refer to New/Revised/Deleted Programs checklist in *GCC Guidelines and Procedures.*)

   See attached

Routing and action summary:

1. _____   9/21/12
   Dept./School Curriculum Committee Chair   Date Approved

2. _____   9/21/2012
   Department Chair/School Director   Date Approved

3. _____   9/21/2012
   College Curriculum Committee Chair   Date Approved

4. _____   9/24/12
   College Dean   Date Approved

5. _____   _____
   Teacher Education Council Chair   Date Approved
   (28 copies to Dean of College of Education)

6. _____   _____
   Graduate School   Date Approved

Submit the original and one hard copy of the proposal to the Graduate Curriculum Committee (Hovey 309, Campus Box 4040). Submit an electronic copy of proposal (Word or pdf), without signatures, to sdportr@ilstu.edu. New and deleted programs will be routed by GCC to the Academic Senate.

Rec'd 9/25/2012

1. **Institution:**	Illinois State University
2. **Responsible School:**	School of Information Technology
3. **Program Title:**	Network and Security Management Sequence in the Masters Degree in Information Systems (CIPS Code: **11.1003**)
4. **Proposed Date of Initiation:**	Fall 2013

5. Summary of the Proposed Action:

The Masters Degree will have four sequences – Geographic Information Systems, Internet Application Development, the new sequence Network and Security Management, and Systems Development

- No new courses are required for this sequence
- Changes to be implemented with first catalog after approval, expected to be the 2013-2014 catalog.

6. Description of Proposed Program Changes

The new sequence uses courses previously utilized by the Network and Telecommunications Management Sequence and the Information Assurance and Security sequence, so no new courses are required. The sequence will allow students to focus on secure network design, which the older sequences did not facilitate since there was no overlap between them. A brief description of the role of each course in the program follows.

IT 450 – Policy & Administration in Information Assurance & Security; capstone security course

IT 477 – Converged Network Architectures; capstone networking course

IT 351.05 – Advanced Information Assurance and Applied Cryptography; covers advanced security topics

IT 371.05 – Simulation & Analysis of Internet Application Performance; allows students to design and simulate computer networks

IT 374 – Topics in Telecommunications; topic varies

IT 376.05 – Wireless and Mobile Network Security; teaches students fundamentals of design for secure wireless networks.

IT 381.05 – Network design and analysis; students design and implement network infrastructures.

Current Catalog Copy:	Proposed Catalog Copy:
Curriculum Requirements	**Curriculum Requirements**
This degree assumes an undergraduate knowledge base in information technology, which students with computer related undergraduate degrees will typically have acquired. Students lacking sufficient background will need to complete fundamental courses before enrolling in the Information Systems core courses. Students lacking sufficient background should expect to complete some or all of the following courses with a grade of "B" or better: IT 254 Hardware and Software Concepts IT 261 Systems Development I IT 275 Java as a Second Language OR IT 177 Problem Solving for Information Technology & IT 178 Computer Applications Programming IT 375.05 Data Communications IT 378.05 Database Processing	**No Change.**
The IT Graduate Advisor will determine specific requirements. To provide a common background, each student is required to complete all courses in the following Core areas: *IS Technology (12 hours):* IT 432 Systems Analysis and Design IT 478 Advanced Database Management IT 350.05 Fundamentals of Information Assurance and Security IT 377.05 Practical Telecommunications Networking	**No Change.**
IS Management (6 hours) IT 463 Information Technology Project Management IT 496 Information Technology Strategy and Policy	**No Change.**

Additional Course (3 hours) IT 497 Introduction to Research Methodology All students must take IT 497 during their first year in the program. There are three options available within this degree: the Thesis Option, the Project Option, and the Course Option. **Thesis Option:** The Thesis Option requires a minimum of 36 semester hours as follows: Core courses 21 hours ITK 499 (Master's Thesis) 6 hours Choose one of the following sequences: 9 hours Enterprise Computing Systems 330.05, 334.05, 464 OR Geographic Information Systems GEO 303, 304 1 of GEO 305, GEO 488, IT 341.05, 353.05, 467, 495 OR **Information Assurance and Security Sequence** **351.05** **2 of: 450, 451, 486, 495** OR Internet Application Development Sequence 353.05 2 of: 354.05, 442, 467, 484, 495 OR Systems Development Sequence 467 2 of: 341.05, 460, 468, 485, 495 OR Telecommunications Management Sequence 477, 479 1 of: 371.05, 487, 495 Total 36 hours	There are three options available within this degree: the Thesis Option, the Project Option, and the Course Option. **Thesis Option:** The Thesis Option requires a minimum of 36 semester hours as follows: Core courses 21 hours IT 499 (Master's Thesis) 6 hours Choose one of the following sequences: 9 hours ~~Information Assurance and Security Sequence~~ ~~351.05~~ ~~2 of: 450, 451, 486, 495~~ **Network and Security Management Sequence** **450, 477** **1 of: 351.05, 371.05, 374, 376.05, 381.05** ~~Telecommunications Management Sequence~~ ~~477, 479~~ ~~1 of: 371.05, 487, 495~~

Students in the Thesis Option must complete a minimum of 18 hours of 400-level course work, not including thesis hours.

Project Option: The Project Option requires a minimum of 39 semester hours as follows:

Core courses 21 hours
ITK 494 (Master's Project) 6 hours
Choose one of the following sequences: 12 hours

Enterprise Computing Systems
330.05, 334.05, 464
1 of 331.05, 332.05
OR
Geographic Information Systems
GEO 303, 304
2 of GEO 305, GEO 488, IT 341.05, 353.05, 467, 495

OR
Information Assurance and Security Sequence
351.05
3 of: 450, 451, 486, 495

OR
Internet Application Development Sequence
353.05
3 of: 354.05, 442, 467, 484, 495
OR
Systems Development Sequence
467
3 of: 341.05, 460, 468, 485, 495
OR
Telecommunications Management Sequence
479
3 of: 371.05, 451, 477, 487, 495
Total 39 hours

Students in the Project Option must complete a minimum of 21 hours of 400-level course

Total 36 hours

Students in the Thesis Option must complete a minimum of 18 hours of 400-level course work, not including thesis hours.

Project Option: The Project Option requires a minimum of 39 semester hours as follows:

Core courses 21 hours
IT 494 (Master's Project) 6 hours
Choose one of the following sequences: 12 hours

~~Information Assurance and Security Sequence~~
~~351.05~~
~~3 of: 450, 451, 486, 495~~

Network and Security Management Sequence
450, 477
2 of: 351.05, 371.05, 374, 376.05, 381.05

~~Telecommunications Management Sequence~~
~~477, 479~~
~~1 of: 371.05, 487, 495~~

work, not including project hours. **Course Option:** The Course Option requires a minimum of 39 semester hours as follows: Core courses 21 hours Technical Communication: TEC 349, ENG 349, or MQM 416 3 hours Choose one of the following sequences: 15 hours Enterprise Computing Systems 330.05, 334.05, 464, 495 1 of 331.05, 332.05 OR Geographic Information Systems GEO 303, 304 3 of GEO 305, GEO 488, IT 341.05, 353.05, 467, 495 OR **Information Assurance and Security Sequence** **351.05, 495** **3 of: 450, 451, 477, 486** OR Internet Application Development Sequence 353.05, 495 3 of: 354.05, 442, 467, 484 OR Systems Development Sequence 467, 495 3 of: 341.05, 460, 468, 485 OR Telecommunications Management Sequence 479, 495 3 of: 371.05, 451, 477, 487 Total 39 hours Students in the Course Option must complete a minimum of 21hours of 400-level course work.	Total 39 hours Students in the Project Option must complete a minimum of ~~21~~ 18 hours of 400-level course work, not including project hours. **Course Option:** The Course Option requires a minimum of 39 semester hours as follows: Core courses 21 hours Technical Communication: ~~TEC 349,~~ ENG 349, ~~or MQM 416~~ 3 hours Choose one of the following sequences: 15 hours ~~Information Assurance and Security~~ ~~Sequence~~ ~~351.05, 495~~ ~~3 of: 450, 451, 477, 486~~ **Network and Security Management Sequence** **450, 477, 495** **2 of: 351.05, 371.05, 374, 376.05, 381.05** ~~Telecommunications Management Sequence~~ ~~477, 479~~ ~~1 of: 371.05, 487, 495~~ Total 39 hours Students in the Course Option must complete a minimum of 21hours of 400-level course work.

7. Rationale for Proposal:

The current Information Assurance and Security Sequence does not afford students much experience with network technologies, similarly, the current Network and Telecommunications Management Sequence does not include much coverage of security topics. Given the interconnectedness of today's computer systems, an approach covering secure network design and management is needed. The new sequence mapped out in the Summary of Changes section above require coursework in both security and network topics.

8. Expected Impact of Proposal on Existing Campus Programs:

No impact on existing campus programs.

No impact on existing programs within IT is expected from the proposal.

There are also no additional funding needs or staffing anticipated as a result of this revision to the master's degree. Sufficient seats in undergraduate and graduate IT classes are expected to be available to accommodate the proposed change.

9.   Library resources:

Since this sequence is within the scope of the existing IT MSIS, no additional library material should be required.

10. Curricular Change Including New Courses:

No new courses are required for this sequence.

11. Anticipated Staffing Arrangements:

No new staff is required to implement the changes.

12. Anticipated Funding Needs and Source of Funds:

No new funds are required.