STATE UNIVERSITY OF NEW YORK
COLLEGE OF TECHNOLOGY
CANTON, NEW YORK

COURSE OUTLINE
CITA 450 – CYBERSECURITY BODY OF KNOWLEDGE

Prepared By: Minhua Wang

CANINO SCHOOL OF ENGINEERING TECHNOLOGY
March 2016
A. **TITLE:** CYBERSECURITY BODY OF KNOWLEDGE

B. **COURSE NUMBER:** CITA 450

C. **CREDIT HOURS:** 3

D. **WRITING INTENSIVE COURSE:** No

E. **COURSE LENGTH:** 15 weeks

F. **SEMESTER(S) OFFERED:** Spring

G. **HOURS OF LECTURE, LABORATORY, RECITATION, TUTORIAL, ACTIVITY:**
   - 3 lecture hours per week

H. **CATALOG DESCRIPTION:** This course provides a comprehensive, trustworthy framework of practices for assuring cybersecurity. It helps future security professionals understand how the various roles and functions within cybersecurity practice can be combined and leveraged to secure an organization. The course content is derived from the Department of Homeland Security’s Essential Body of Knowledge (EBK) for IT Security and the International Information System Security Certification Consortium’s Common Body of Knowledge (CBK).

I. **PRE-REQUISITES/CO-REQUISITES:**
   a. Pre-requisite(s): CITA 250 Information Security, or permission of instructor
   b. Co-requisite(s): none

J. **GOALS (STUDENT LEARNING OUTCOMES):**
   By the end of this course, the student will be able to:

<table>
<thead>
<tr>
<th>Course Objective</th>
<th>Institutional SLO</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Specify fundamental concepts and components of Cybersecurity from both</td>
<td>2. Crit. Thinking</td>
</tr>
<tr>
<td>managerial and professional end user perspective</td>
<td>3. Prof. Competence</td>
</tr>
<tr>
<td>b. Summarize and compare Cybersecurity requirements for various types of</td>
<td>2. Crit. Thinking</td>
</tr>
<tr>
<td>decision making and planning strategies</td>
<td>3. Prof. Competence</td>
</tr>
<tr>
<td>c. Evaluate the impact of Cybersecurity on society</td>
<td>2. Crit. Thinking</td>
</tr>
<tr>
<td></td>
<td>3. Prof. Competence</td>
</tr>
<tr>
<td>d. Dissect foundations of Cybersecurity to the demands of electronic commerce,</td>
<td>2. Crit. Thinking</td>
</tr>
<tr>
<td>connectivity, and networked economy</td>
<td>3. Prof. Competence</td>
</tr>
<tr>
<td>e. Recommend Cybersecurity solutions to specific electronic system</td>
<td>2. Crit. Thinking</td>
</tr>
<tr>
<td>implementations</td>
<td>3. Prof. Competence</td>
</tr>
<tr>
<td>f. Identify examples of most current developments in Cybersecurity</td>
<td>2. Crit. Thinking</td>
</tr>
<tr>
<td></td>
<td>3. Prof. Competence</td>
</tr>
</tbody>
</table>
I. INTRODUCTION TO ESSENTIAL BODIES OF KNOWLEDGE AND COMMON BODY KNOWLEDGE
   A. Essential Bodies of Knowledge
   B. Common Body of Knowledge

II. ESSENTIAL BODIES OF KNOWLEDGE ROLES AND REQUIRED CAPABILITIES
   A. The Executive role.
   B. The Functional role.
   C. The Corollary role.

III. ESSENTIAL BODIES OF KNOWLEDGE ROLES AND REQUIRED CAPABILITIES
   A. Data Security.
   B. Digital Forensics.
   C. Enterprise Continuity.
   D. Incident Management.
   E. IT Security Training and Awareness.
   F. IT Systems Operations and Maintenance.
   I. Physical and Environmental Security.
   J. Procurement.
   K. Regulatory and Standards Compliance.
   M. Strategic Security Management.
   N. System and Application Security.

IV. COMMON BODY KNOWLEDGE DOMAINS
   A. Security and Risk Management.
   B. Asset Security.
   C. Security Engineering.
   D. Communication and Network Security.
   E. Identity and Access Management.
   F. Security Assessment and Testing.
G. Security Operations.

VIII. Other Topics: As Defined by the Instructor (The topics on most recent advanced Cybersecurity developments are strongly recommended.)

Q. **LABORATORY OUTLINE:** N/A