1. **Course number and name**: CSCI 5531 System Assurance and Processes

2. **Credits and contact hours**: 3 credit, 3 contact

3. **Instructor’s or course coordinator’s name**: Vladan Jovanovic, PhD

4. **Text book, title, author and year**: IAM/IEM
   a. **Other supplemental materials**: None

5. **Specific course information**
   a. **Brief description of the content of the course (Catalog Description)**
      Course explores international and national standards (including ISO 17799) as frameworks in modeling internal security standards, policies and procedures. Lectures and case studies situate course topics in the explicit context of technologically rich environments of modern software and data intensive systems and networks. Lectures are based on systematic use of standards and assessments of realistic cases from diverse areas. Cases are used in a comprehensive manner covering the most relevant systems assurance issues in situations characterized by complex interdependencies, for example associated with multiple locations, substantial software development, large data center responsibilities and multilayered networks. Technical issues underlining non-electronic security are fully complemented with leadership ones in all areas of security including those for large and medium-sized organizations. Students will be involved in risk assessments, comprehensive assurance planning, improvement of policies and procedures as well as budget preparations, an array of risk assessments and countermeasure planning based on solid understanding of technical issues involved, including relevant calculations in capacity planning, storage virtualization (using RAID for fault tolerance and backups) and similar.
      **Prerequisites**: A minimum grade of “C” in CSCI 5431
   b. **Indicate whether a required, elective, or selected elective course in the program**
      Elective course for BS-CS.

6. **Specific goals for the course**
   a. **Specific outcomes of instruction, ex. The student will be able to explain the significance of current research about a particular topic.**
      - Not a required course. It is not used to assess student outcomes.

   b. **Student Outcomes**
      N/A

7. **Brief list of topics to be covered**
   - ISMS, plans, and policies
   - Drawing Networks
   - Oracle DB Hardening
   - XP event log
   - DMZ/Firewall
   - Data Backup
- SAINT/NESUS
- Countermeasures
- ISSO duties
- Risks, Assets, Policies
- IA framework, ISMS, IAM
- IAM, Sec. Plan-ISMS
- NIST guidelines, Security Ops
- Access control, Incident response
- Personal Sec, Intrusion Detection
- Secure Software Development
- Security Metrics and Reporting