

CSI 3670: Advanced System Administration

**Credits Hours:** 4 credits, 3.57 contact hours/week.

**Instructor:** Erik Fredericks, Ph.D.

**Text book:** N/A

### **Specific course information**

Advanced concepts in enterprise computing infrastructure analysis, deployment, and management and troubleshooting. Topics include enterprise computing resource requirements analysis and design, single sign-on management, application and server deployment, virtualization, security configurations, and performance analysis.

**Prerequisites:** CSI 3660 and major standing

### **Elective course**

**Course Objectives:** Upon successful completion of this course, students should be able to

- Conduct capacity and resource planning [ABET IT: (a, n)]
- Manage users, storage, hosts and connectivity in networked systems [ABET IT: (k)]
- Configure systems, applications, and network services for Windows and Unix platforms [ABET IT: (k)]
- Analyze and tune performance of applications, web systems, and file servers [ABET IT: (i, k)]
- Conduct strategic security planning, intrusion detection, and penetration testing [ABET IT: (b, i)]
- Perform system deployment and maintenance [ABET IT: (k)]

### **List of Topics:**

- Enterprise computing: directory services and supporting services required for managing an enterprise environment
- Requirements analysis: analysis and elicitation of requirements necessary for an enterprise environment
- Single sign-on: centralized authentication services for an enterprise environment
- Application/server deployment: centralized deployment of applications in an enterprise environment
- Virtualization: configuration and deployment of virtualized systems
- Security configuration: securing Windows and Linux servers against attack
- Troubleshooting: advanced topics in Windows and Linux server troubleshooting
- Performance analysis: advanced topics in performance analysis