Information Technology Concentrations

Choose ONE concentration. Four of the five courses must be completed from the chosen concentration. The fifth course may be from the same or any concentration.

1. **Enterprise Systems –** This is the most generic/well-rounded concentration option. Several courses build upon concepts introduced in the major required courses to provide additional depth into that field.

		Course	Prerequisite(s)		
1	IT 4153	Advanced Databases	CSE 3153	3	
2	IT 4333	Network Configuration & Administration	IT 4323	3	
3	IT 4403	Advanced Web & Mobile Applications	IT 3203	3	
4	IT 4673	Virtual IT Systems	IT 3423, IT 4323 & CSE 3153	3	
5	IT 4713	Business Intelligence Systems	IT 3703	3	

2. **Cyber Operations Security –** This concentration goes into more specific areas of information security already introduced in the IT 4823 course. It does not go into the same specifics of how networks work as the CS Cyber and Network Security concentration does. The CS concentration looks at things like network protocols and how to code them whereas IT is understanding how to use networks and systems, protocols, and how to keep information safe.

		Course	Prerequisite(s)		
1	IT 4833	Wireless Security	IT 4323	3	
2	IT 4843	Ethical Hacking for Effective Defense	IT 4323	3	
3	IT 4853	Computer Forensics	IT 4323	3	
4	IT 4863	Web & Mobile Applications Security	IT 3203	3	
5	IT 4883	Infrastructure Defense	IT 4323	3	
6	IT 4893	Internet of Things: Applications & Security	IT 4823 & IT 4323	3	

3. **Data Analytics and Technology** - This concentration does not go into the same depth as the CS Data Science concentration either but instead teaches the different systems and methods for how to go about managing and using big data systems. Also, this concentration teaches students how to utilize business intelligence concepts when working with users/clients, and various data visualization techniques. Applied Data Driven Solutions is the process of getting data and creating solutions to issues in organizations.

		Course	Prerequisite(s)		
1	IT 4153	Advanced Databases	CSE 3153	3	
2	IT 4713	Business Intelligence Systems	IT 3703	3	
3	IT 4733	Big Data Systems Administration	IT 3703	3	
4	IT 4773	Machine Learning for Enterprise Applications	IT 3703	3	
5	IT 4793	Applied Data Driven Solutions	IT 3703	3	

Additional 5th Course Options

IT 3503	Foundations of Health Information Technology	ENGL 1102	
IT 4490	Special Topics	Varies, Junior/Senior Standing	3
IT 4493	Undergraduate Research	Junior Standing	
CSE 4983	CSE Computing Internship	Senior Standing	