

<b>Module title</b> Wireless and Mobile Security: Current Issues and Future Trends				
<b>Module code</b> YWMS	<b>Level</b> Bachelor (B.Sc.) IN, IT	<b>Hours per week</b> 4	<b>ECTS credits</b> 5	<b>Duration</b> 2 weeks block course + virtual lectures
<b>Module instructor</b> Dr. Abhijit Sen, Kwantlen Polytechnic University, Surrey, BC, Canada		<b>Lecture type</b> Regular lecture, on line consultations	<b>Prerequisite(s)</b> Understanding of computer networks	<b>Grading</b> Exam Project Assignment
<b>Objectives</b> A student successfully completing the course will have reliably demonstrated the ability to: <ul style="list-style-type: none"> <li>• Describe methods for target locating and wireless local area network (WLAN) mapping</li> <li>• Recognize different wireless attacks</li> <li>• Describe different types of wireless intrusion prevention systems</li> <li>• Describe wireless security policies</li> <li>• Describe wireless security solutions</li> <li>• Configure security features on wireless devices</li> <li>• Use wireless discovery tools and protocol analyzers</li> <li>• Conduct research in wireless security</li> </ul>				
<b>Content</b> Students will learn about wireless security technologies such as advanced user authentication, robust encryption, and intrusion prevention. They also will learn concepts of wireless discovery, wireless attack identification and monitoring, and wireless security policies and solutions. Students will be required to conduct research and work on a project to solve real-world wireless system security problems in a simulated environment. Student will also learn recent trends in wireless security. <ul style="list-style-type: none"> <li>• Topic 1: Wireless Security Basics, Current Issues</li> <li>• Topic 2: IEEE 802.11 Security , Encryption Ciphers and Methods</li> <li>• Topic 3: Enterprise 802.11 Layer 2 Authentication Methods</li> <li>• Topic 4: 802.11 Dynamic Encryption Key Generation</li> <li>• Topic 5: Wireless LAN Security Auditing, Wireless Security Monitoring</li> <li>• Topic 6: 802.11 Fast Secure Roaming</li> <li>• Topic 7: Wireless Security Risks, Wireless Security Policies</li> <li>• Topic 8: Trends in Wireless Security</li> </ul>				
<b>Textbook/teaching material</b> <ul style="list-style-type: none"> <li>• Lecturer provided materials on e-learning platform.</li> </ul>				

Note: this is not the official course descriptor according to the "Studien- und Prüfungsordnung" (SPO)