



**University of Tehran**  
**School of Electrical and Computer Engineering**

<b>Course:</b>	<b>8101638 – Advanced Security</b>									
<b>Course type:</b>	EE*						CE*			Credit: 3
	Com	E	P	B	Con	D	SW	HW	IT	
	Required	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Elective	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Level:</b>	Undergraduate <input type="checkbox"/> Graduate <input checked="" type="checkbox"/>									
<b>Co-requisite(s):</b>										
<b>Prerequisite(s):</b>										
<b>Prerequisite by topic:</b>										
<b>Textbook(s):</b>	[1] W. Stallings, “Cryptography and network security”, 5 <sup>th</sup> ed., <i>Prentice Hall</i> , 2011.									
<b>Coordinator:</b>	Sadaf Salehkalaibar, Assistant Professor, School of ECE									
<b>Goals:</b>	To learn the security of wireless, cellular and multi-hop network.									
<b>Outcome:</b>	Upon successful completion of the course, students will be able 1. To learn basics of security in wireless and ad-hoc networks, 2. To work with privacy protection algorithms such as in RFID systems.									
<b>Topics:</b>	1) Introduction to Cryptography (Stream and block ciphers) 2) Security of wireless and cellular networks 3) Security of ad-hoc networks 4) Addressing 5) Key sharing in wireless sensor networks 6) Secure routing in multi-hop networks 7) Privacy protection algorithms									
<b>Computer usage:</b>										
<b>Assignments:</b>										
<b>Projects:</b>										
<b>Grading:</b>	Assignments: 15 % Projects: ... % Quizzes: 15 % Midterm exams: 30%									

	Final exam: 40 %
<b>Further readings:</b>	
<b>Prepared by:</b>	Sadaf Salehkalaibar
<b>Date:</b>	11 <sup>th</sup> December 2017

*EE: Electrical Engineering		CE: Computer Engineering	
Com	Communications	SW	Software
E	Electronics	HW	Hardware
P	Power	IT	Information Technology
B	Bioelectronics		
Con	Control		
D	Digital System		