9/27/2024

ECE Guided MS Curriculum for the Software Engineering (SW)-Focused Track

The suggested curriculum below is an example path designed to guide students interested in software engineering. You are NOT required to follow this recommendation. Depending on your undergraduate major (CS/CE majors vs. other majors) and/or industry experience (working experience in Software Engineering), you can choose to follow either path (less experienced vs. more experienced).

Please note that the recommended courses may not always be available in the semester specified. CS courses also have limited spaces for non-CS students, so these CS courses might use waitlists or not have any open slots during registration. If these courses are not available, you are always welcome to consult with your faculty advisor on your alternative course selection.

Less Experienced Students					
Class Number	*Class Title*	*Class Number*	*Class Title*	*Class Number*	*Class Title*
Fall 1		**Spring**		**Fall 2**	
EC601	Product Design	EC504	Advanced Data Structures	EC528	Cloud Computing
EC602	Design by Software	EC530	Principles of SW Development	EC531	Full-stack Software at Scale
EC605	Computer Engineering Fundamentals	CS561	Data Systems Architectures	EC521	Cybersecurity
		EC512	Enterprise Client-Server Software Systems Design		
More Experienced Students					
EC601	Product Design	EC530	Principles of SW Development	EC528	Cloud Computing
EC504	Advanced Data Structures	EC527	High-Performance Programming with Multicore and GPUs	EC504	Advanced Data Structures
EC521	Cybersecurity	CS561	Data Systems Architectures	EC521	Cybersecurity
EC531	Full-stack Software at Scale	EC535	Embedded Systems		
		CS552	Operating Systems		

* A broader selection of the software engineering-focused courses is listed on the second page of the MS program planning sheet under the “Software” track. Depending on student interest and background, some students interested in software engineering might benefit from the following classes below.

EC518: Robot Learning
EC523: Deep Learning
EC520: Digital Image Processing and Communication
EC541: Computer Communication Networks