

CMSE Course Rotation 2020 - 2025

Department of Computational, Modeling, and Simulation Engineering (CMSE) Course Rotation																	
Course Title	Spring 2020	Summer 2020	Fall 2020	Spring 2021	Summer 2021	Fall 2021	Spring 2022	Summer 2022	Fall 2022	Spring 2023	Summer 2023	Fall 2023	Spring 2024	Summer 2024	Fall 2024	Spring 2025	
111 INFO LIT & RSRCH FOR MSIM ENGR	Δ ● ‡			Δ ● ‡													
201 INTRO TO M&S ENGINEERING			Δ ● ‡			Δ ● ‡			Δ ● ‡								
205 DISCRETE EVENT SIMULATION	Δ ● ‡			Δ ● ‡			Δ ● ‡			Δ ● ‡							
ECE 306 Discrete Systems M&S												Δ ●				Δ ●	
281 DISCRETE EVENT SIMULATION LAB	Δ ●			Δ ●			Δ ●			Δ ●							
320 CONTINUOUS SIMULATION			Δ ● ‡			Δ ● ‡			Δ ● ‡			Δ ● ‡					
ECE 320 Continuous Systems M&S													Δ ●			Δ ●	
331 SIMULATION SOFTWARE DESIGN	Δ ● ‡			Δ ● ‡			Δ ● ‡			Δ ● ‡			Δ ● ‡				
ECE 348 Simulation Software Design													Δ ●			Δ ●	
382 CONTINUOUS SIMULATION LAB			Δ ●			Δ ●			Δ ●			Δ ●					
383 SIMULATION SOFTWARE DSGN LAB	Δ ●			Δ ●			Δ ●			Δ ●			Δ ●				
406 INTRO DISTRIBUTED SIMULATION			Δ ● ‡			Δ ● ‡			Δ ● ‡			Δ ● ‡			Δ ● ‡		
408 INTRO TO GAME DEVELOPMENT	Δ ● ‡	Δ ● ‡		Δ ● ‡	Δ ● ‡		Δ ● ‡			Δ ● ‡			Δ ● ‡			Δ ● ‡	
410 MODEL ENGINEERING	Δ ● ‡			Δ ● ‡			Δ ● ‡			Δ ● ‡			Δ ● ‡				
416 CYBER DEFENSE FUNDAMENTALS			Δ ● ‡			Δ ● ‡			Δ ● ‡			Δ ● ‡			Δ ● ‡		
419 CYBER PHYSICAL SYSTEMS SECURITY			Δ ● ‡		Δ ● ‡		Δ ● ‡		Δ ● ‡		Δ ● ‡		Δ ● ‡			Δ ● ‡	
441 COMP GRAPHICS & VISUALIZATION			Δ ● ‡			Δ ● ‡			Δ ● ‡			Δ ● ‡			Δ ● ‡		
ECE 406 Computer Graphics & Visualization																Δ ● ‡	
451 ANALYSIS FOR M&S	Δ ● ‡			Δ ● ‡			Δ ● ‡			Δ ● ‡			Δ ● ‡				
462 INTR TO MEDICAL IMAGE ANALYSIS							Δ ● ‡						Δ ● ‡				
463 DESIGN & MOD OF AUTO ROB SYST						Δ			Δ			Δ			Δ		
474 TRANSPORTATION DATA ANALYTICS																	
470 FOUNDATIONS OF CYBER SECURITY			Δ ● ‡			Δ ● ‡			Δ ● ‡			Δ ● ‡			Δ ● ‡		
480 INTRODUCTION TO ARTIFICIAL INTELLIGENCE			Δ			Δ			Δ			Δ			Δ		
487W CAPSTONE DESIGN I			Δ ●			Δ ●			Δ ●			Δ ●			Δ ●		
488 CAPSTONE DESIGN II	Δ ●			Δ ●			Δ ●			Δ ●			Δ ●			Δ ●	
495 TOPICS IN MSIM	Various Offerings																
497 INDEPENDENT STUDY MSIM ENGR	Various Offerings																
506 INTRO DISTRIBUTED SIMULATION			Δ ● ‡			Δ ● ‡			Δ ● ‡			Δ ● ‡			Δ ● ‡		
508 INTRO TO GAME DEVELOPMENT	Δ ● ‡	Δ ● ‡		Δ ● ‡	Δ ● ‡		Δ ● ‡			Δ ● ‡			Δ ● ‡			Δ ● ‡	
510 MODEL ENGINEERING	Δ ● ‡			Δ ● ‡			Δ ● ‡			Δ ● ‡			Δ ● ‡			Δ ● ‡	
516 CYBER DEFENSE FUNDAMENTALS			Δ ● ‡			Δ ● ‡			Δ ● ‡			Δ ● ‡			Δ ● ‡		
519 CYBER PHYSICAL SYSTEMS SECURITY			Δ ● ‡		Δ ● ‡		Δ ● ‡		Δ ● ‡		Δ ● ‡		Δ ● ‡			Δ ● ‡	
541 COMP GRAPHICS & VISUALIZATION			Δ ● ‡			Δ ● ‡			Δ ● ‡			Δ ● ‡			Δ ● ‡		
551 ANALYSIS FOR M&S	Δ ● ‡			Δ ● ‡			Δ ● ‡			Δ ● ‡			Δ ● ‡			Δ ● ‡	
562 INTR TO MEDICAL IMAGE ANALYSIS	Δ ‡						Δ ● ‡						Δ ● ‡				
563 DESIGN & MOD OF AUTO ROB SYST						Δ			Δ			Δ			Δ		
570 FOUNDATIONS OF CYBER SECURITY			Δ ● ‡			Δ ● ‡			Δ ● ‡			Δ ● ‡			Δ ● ‡		
580 INTRODUCTION TO ARTIFICIAL INTELLIGENCE			Δ			Δ			Δ			Δ			Δ		
595 TOPICS IN MSIM	Various Offerings																
601 INTRO-MODELING AND SIMULATION	Δ ● ‡			Δ ● ‡			Δ ● ‡			Δ ● ‡			Δ ● ‡			Δ ● ‡	
602 SIMULATION FUNDAMENTALS			Δ ● ‡			Δ ● ‡			Δ ● ‡			Δ ● ‡			Δ ● ‡		
603 SIMULATION DESIGN	Δ ● ‡			Δ ● ‡			Δ ● ‡			Δ ● ‡			Δ ● ‡			Δ ● ‡	
607 MACHINE LEARNING I	Δ ●		Δ ●			Δ ●			Δ ●			Δ ●			Δ ●		
660 SYSTEM ARCHITECTURE & MODELING	Δ ●			Δ ●			Δ ●			Δ ●			Δ ●			Δ ●	
670 CYBER SYSTEMS ENGINEERING			Δ ● ‡			Δ ● ‡			Δ ● ‡			Δ ● ‡			Δ ● ‡		
697 INDEP STUDY-MODELING/SIMULATN	Various Offerings																
699 THESIS	Various Offerings																

Note: All courses on the schedule are tentative and subject to change. Revised - March 3, 2017

- Δ Live Face-to-face
- WebeX (Also, at Higher Ed Centers)
- ‡ Online (Asynchronous)

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703 OPTIMIZATION METHODS	△ ●						△ ●			△ ●			△ ●			△ ●
711 FINITE ELEMENT ANALYSIS			△ ●			△ ●			△ ●			△ ●			△ ●	
715 HP COMPUTING & SIMULATION	△ ● ‡			△ ● ‡			△ ● ‡			△ ● ‡			△ ● ‡			△ ● ‡
722 CLUSTER PARALLEL COMPUTING		△ ●			△ ●			△ ●			△ ●			△ ●		
725 COMBAT MODELING & SIMULATION	△ ●			△ ●			△ ●			△ ●			△ ●			△ ●
730 SIMULATION FORMALISMS	△ ● ‡			△ ● ‡			△ ● ‡			△ ● ‡			△ ● ‡			△ ● ‡
741 PRINCIPLES OF VISUALIZATION			△ ● ‡			△ ● ‡			△ ● ‡			△ ● ‡			△ ● ‡	
742 SYNTHETIC ENVIRONMENTS	△ ● ‡			△ ● ‡			△ ● ‡			△ ● ‡			△ ● ‡			△ ● ‡
751 ADVANCED ANALYSIS FOR M&S			△ ● ‡			△ ● ‡			△ ● ‡			△ ● ‡			△ ● ‡	
762 APPLIED MEDICAL IMAGE ANALYSIS	△			△						△						△
772 MODELING GLOBAL EVENTS																
774 TRANSPORTATION NETWORK FLOW MODELS							△						△			
775 TRANSPORTATION NETWORK ALGORITHMS												●				
776 SIMULATION MODELING IN TRANSPORTATION NETWORKS	△			△			△			△			△			△
795 TOPICS-MODELING AND SIMULATION	Various Offerings															
803 OPTIMIZATION METHODS	△ ●						△ ●			△ ●			△ ●			△ ●
811 FINITE ELEMENT ANALYSIS			△ ●			△ ●			△ ●			△ ●			△ ●	
815 HP COMPUTING & SIMULATION	△ ● ‡			△ ● ‡			△ ● ‡			△ ● ‡			△ ● ‡			△ ● ‡
822 CLUSTER PARALLEL COMPUTING		△ ●			△ ●			△ ●			△ ●			△ ●		
825 COMBAT MODELING & SIMULATION	△ ●			△ ●			△ ●			△ ●			△ ●			△ ●
830 SIMULATION FORMALISMS	△ ● ‡			△ ● ‡			△ ● ‡			△ ● ‡			△ ● ‡			△ ● ‡
841 PRINCIPLES OF VISUALIZATION			△ ● ‡			△ ● ‡			△ ● ‡			△ ● ‡			△ ● ‡	
842 SYNTHETIC ENVIRONMENTS	△ ● ‡			△ ● ‡			△ ● ‡			△ ● ‡			△ ● ‡			△ ● ‡
851 ADVANCED ANALYSIS FOR M&S			△ ● ‡			△ ● ‡			△ ● ‡			△ ● ‡			△ ● ‡	
862 APPLIED MEDICAL IMAGE ANALYSIS	△			△						△						△
872 MODELING GLOBAL EVENTS																
874 TRANSPORTATION NETWORK FLOW MODELS							△						△			
875 TRANSPORTATION NETWORK ALGORITHMS												●				
876 SIMULATION MODELING IN TRANSPORTATION NETWORKS	△			△			△			△			△			△
892 DOCTOR OF ENGINEERING PROJECT	Various Offerings															
895 TOPICS-MODELING AND SIMULATION	Various Offerings															
899 DISSERTATION	Various Offerings															
<p>Note: All courses on the schedule are tentative and subject to change. Revised - August 2021</p> <p>△ Live Face-to-face</p> <p>● Webex (Also, at Higher Ed Centers)</p> <p>‡ Online (Asynchronous)</p>																

Note: All courses on the schedule are tentative and subject to change. Revised - March 3, 2017

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