

Modeling, Simulation, and Military Gaming

INTA 4742/ 6742, CX 4232, CSE 6742

Schedule – Fall 2021 (Online)

Week(s)	Module	Release Date	Module	Lectures	Readings/Assignments Due
1	1	Aug. 23 at 8 am (EST)	Introduction to Modeling and Simulation	Introduction to Modeling and Simulation Using Models for Research <i>Guest Speaker: Final Presentation Examples</i>	Readings (Optional): Wilensky and Rand, Ch. 7 Discussion: Introductions Discussion: Evaluating Models – Paper Plate Solar System Discussion: Evaluating Models – Ultimatum Game DUE END OF WEEK 1 Aug. 30th at 11:59 pm (EST)
2	2	Aug. 23 at 8 am (EST)	Introduction to Agent Based Modeling	Heroes and Cowards Introduction to Agent Based Modeling and Netlogo	Readings (Optional): Wilensky Ch. 0 and 1 Assignment: Heroes and Cowards Assignment: NetLogo Tutorials Assignment: Evaluating a NetLogo Model Assignment: Team Formation Questionnaire DUE END OF WEEK 2 Sept. 7 at 11:59 pm (EST)

3	3	Aug. 23 at 8 am (EST)	Military History, Strategy, and Tactics	<i>Guest Speaker: Mike Salomone</i>	<p>Assignment: Military Battle Summary</p> <p>Readings: Chapter 5 from “Military Power: Explaining Victory and Defeat in Modern Battle” By Stephen Biddle</p> <p>Discussion: Evaluating “Military Power” by Stephen Biddle</p> <p>DUE END OF WEEK 3 <i>Sept. 13 at 11:59 pm (EST)</i></p>
4	4	Aug. 23 at 8 am (EST)	Developing a Research Question	Developing at Research Question	<p>*Groups Assigned (Sept. 13th)</p> <p>Assignment: Independent and Dependent Variables in “Military Power” by Stephen Biddle</p> <p>Group Assignment: Battle Background and Research Question</p> <p>DUE END OF WEEK 5 <i>Sept. 27 at 11:59 pm (EST)</i></p>
5	4	Aug. 23 at 8 am (EST)	Developing a Research Question (Continued)		<p><i>Group Assignment: Interim Presentation: Battle Background and Research Question</i></p> <p>DUE END OF WEEK 7 <i>Oct. 11 at 11:59 pm (EST)</i></p>
		Oct, 12 at 12 am (EST)			Assignment: Peer Review on Interim Presentations

					Oct. 15 at 11:59 pm (EST)
6	5	Aug. 23 at 8 am (EST)	Critiquing Military Simulation Research	Critiquing Military Simulation Research	<p>Reading: Gowlett, P. “Assessing the Military Impact of Capability Enhancement with Netlogo using the Falklands War as a Case-Study.”</p> <p>Reading: Wheeler, Scott and Justin Kelly, “Biotechnology on the Battlefield: An Application of Agent-based Modeling for Emerging Technology Assessment.”</p> <p>Reading: Millikan, J. 2013, “Suppression of Dismounted Soldiers: Towards Improving Dynamic Threat Assessment in Closed Loop Combat Simulations.”</p> <p>Discussion: Evaluation of Gowlett Discussion: Evaluation of Wheeler Discussion: Evaluation of Millikan</p> <p>DUE END OF WEEK 8 Oct. 18 at 11:59 pm (EST)</p>
7	6	Aug. 23 at 8 am (EST)	Conceptual Model	Conceptual Model in NetLogo	<p>Readings: Chapter 4 from “Face of Battle” by John Keegan</p> <p>Discussion: Chapter 4 from “Face of Battle” by John Keegan</p>

					<p><i>Group Assignment: Interim Presentation: Conceptual Model</i></p> <p>DUE END OF WEEK 9 Oct. 25 at 11:59 pm (EST)</p>
		October 26 at 12 am (EST)			<p>Assignment: Peer Review on Interim Presentations</p> <p>Oct. 28 at 11:59 pm (EST)</p>
8	7	Aug. 23 at 8 am (EST)	History of Modeling and Simulation	History of Modeling and Simulation	
9	8	Aug. 23 at 8 am (EST)	Combat Modeling	Combat Modeling	<p>Readings (Optional): Tolk, Ch. 6-10</p> <p><i>Group Assignment: Interim Presentation: NetLogo Model</i></p> <p>DUE END OF WEEK 11 Nov. 8 at 11:59 pm (EST)</p>
		Nov 9 at 12am (EST)			<p>Assignment: Peer Review on NetLogo Model</p> <p>Nov. 11 at 11:59 pm (EST)</p>
10	9	Aug. 23 at 8 am (EST)	Ethics of Modeling and Simulation	Ethics of Modeling and Simulation	
11	10	Aug. 23 at 8 am (EST)	Model Analysis	<p>Approaches to Model Analysis</p> <p><i>Guest Lecture: DILAC – Data Visualization – Kevin Tain</i></p>	<p>Readings (Optional): Wilensky and Rand, Ch. 4 and 6</p> <p><i>Group Assignment: Interim Presentation: Analysis and Conclusions</i></p>

					DUE END OF WEEK 13 Nov. 22 at 11:59 pm (EST)
		Nov. 23 at 12 am (EST)			Assignment: Peer Review on Analysis and Conclusions Nov. 24 at 11:59 pm (EST) (Due date change due to holiday)
12	11	Aug. 23 at 8 am (EST)	Contemporary Use of Military Models (Updates and Extensions)	<i>Guest Speaker: Gen. Winnefeld</i>	
13	12	Aug. 23 at 8 am (EST)	Final Presentation Development	<i>Guest Lecture: Communication Center: Slide Design and Public Speaking</i>	Group Assignment: Final Presentation Assignment: Peer Review on Final Presentation
14 - 16	13	Aug. 23 at 8 am (EST)	Final Presentation Development Continued and Course Summary	Course Summary	DUE END OF WEEK 15 (LAST DAY OF CLASS ASSIGNMENTS ALLOWED) FRIDAY, Dec. 3 at 11:59 pm (EST)
		Dec 5 at 12 am (EST)			Assignment: Peer Review of Teammates Dec. 5 at 11:59 pm (EST) (Due date change due to instructional days coming up)