

HNRS-251-A

Eric Araújo Jonathan Hill

Saturday 1st November, 2025



1 Welcome!

Welcome to the **Agent-Based Modeling & Social Theory** class! The official code for this course is HNRS-251-A, and it is part of the Honors program at Calvin University. The course is a core + core course, involving both social sciences and computer science.



In the following weeks we will wrestle with models of reality, providing understanding and challenges about humans and societies.

Using Lewis Smedes standpoint on models, in our fallen world, we believe we are meant to create some imperfect models of the good world that will one day come about [Smedes \[2003\]](#). And that's what we will try to do.

This will be a hands-on course, where we will learn by doing. As we do, we will also reflect and learn important concepts and ideas that will nurture our understanding of the world and our place in it.

This website is the main source of information for the course. You will find the syllabus, schedule, and all the course materials here.

Table 1: *
Weekly: Tuesdays & Thursdays

Session A:	2:10–2:55 pm
Break:	2:55–3:05 pm
Session B:	3:05–3:50 pm

2 Course Organization

This course is organized in **modules**. Each module typically lasts 2 weeks and includes readings, lectures, labs, and assignments. The course culminates in a final project where you will apply what you've learned to a social phenomenon of your choice using agent-based modeling.

2.1 Classes

Location: Heckman Library 406C

2.2 Modules organization

2.3 Important Dates

Table 2: Modules Overview

Module and Context	Weeks	Main Topics/Focus
1 - Introduction	1–2	Intro to ABM, Course orientation, Social sciences, Models & methods, NetLogo basics
2 - Segregation	3–4	Segregation in sociology, Schelling model, Inequality, Extending models
3 - Contagion	5–6	Collective behavior, Thresholds, Social movements, Protest/rebellion, Project pitches
4 - Cooperation	7–8	Cooperation, Commons, IPD, Project scope, Proposal workshop
5 - Polarization	9–11 (and parts of 12–15)	Diffusion, Polarization theory, Labs, Debates, Project build, Presentations

Date(s)	Event/Note
Tue Sept 2	Semester begins
Tue–Wed Oct 21–22	Advising Days (no class Tue Oct 21)
Wed–Fri Nov 26–28	Thanksgiving Break (no class Thu Nov 27)
Thu Dec 11	Last day of class
Dec 13–18	Final Project Reports

2.4 Visual Overview

Week	Dates	SRG Prep	Lab Memo	Project Mile- stone	Other/Notes
1	Sep 2 & 4				Course intro
2	Sep 9 & 11	#1	1		
3	Sep 16 & 18	#2	#2		
4	Sep 23 & 25	#3	#3		
5	Sep 30 & Oct 2	#4	#4		
6	Oct 7 & 9	#5			
7	Oct 14 & 16	#6	#5		
8	Oct 21 & 23				Proposal
9	Oct 28 & 30	#7			Schema & Pseudocode
10	Nov 4 & 6	#8	#6		
11	Nov 11 & 13	#9	#7		
12	Nov 18 & 20				Alpha
13	Nov 25				Beta Demo
14	Dec 2 & 4	#10			Poster Draft
15	Dec 9 & 11				Final Pres, Report

Legend:

- SRG Prep = Structured Reading Group Prep Sheet
- Lab Memo = Lab Memo
- Project Milestone = Project Proposal, Schema, Alpha, Beta, Design Review, Final Presentation/Report
- Other/Notes = Poster Draft, Course intro, etc.

For the grading planning, visit **Course Policies → Grading Rubric**.

2.5 Instructors

Prof. Jonathan Hill and [Prof. Eric Araújo](#) will be your guides in this journey.

The following links provide the office hours and contact information for both professors:

Instructor	Office Hours	Contact
Prof. Jonathan Hill	Office hours to be added	jonathan.hill@calvin.edu
Prof. Eric Araújo	Prof. Araújo's Agenda	eric.araujo@calvin.edu

3 Course Policies

3.1 Grading Rubric

Welcome to the grading rubric for the Agent-Based Modeling & Social Theory course! Here's how your grade will be determined, with a friendly visual to help you see the big picture at a glance.

3.1.1 Grading Breakdown

Component	% of Grade	Details
Structured Reading Groups (SRG)	35%	Prep Sheets: 8 graded at 3% each. Lowest grade dropped.
Labs	25%	5–6 short lab memos (1–2 pages). Each worth 3–4%.
Final Project	30%	Proposal, schema, prototype, review, presentation, report.
Participation Contribution	& 10%	Seminar presence, peer feedback, teamwork evaluation.

Note

Labs are due the week after they are assigned before the start of the next class.

3.1.2 Detailed Breakdown

Category	Component	Weight
SRG (35%)	Prep Sheets (8 @ 5% each, lowest dropped)	35%
Labs (25%)	Lab Memos (5–6 @ 4–5% each)	25%
Final Project (30%)	Proposal Schema & Pseudocode Prototype Demo Design Review Final Presentation Final Report	1% 4% 5% 5% 10% 5%
Participation (10%)	Seminar presence, peer feedback, teamwork	10%

Tip

Stay engaged, ask questions, and collaborate with your peers. We're here to help you succeed!

If you have any questions about grading, please reach out to your instructors.

3.2 Classroom Policy

3.2.1 Disabilities & Accommodations

- Calvin University is committed to access for all students.
- If you have a documented disability, contact Student Success (Hiemenga Hall 227) to discuss accommodations.
- For pregnancy-related accommodations, contact the Title IX Coordinator (Spoelhof University Center 364).
- If you have an accommodation memo, please talk to me in the first two weeks of class.

3.2.2 Diversity and Inclusion

As your instructor, I am committed to creating a welcoming learning environment for ALL students. It is my desire that students from all backgrounds and perspectives be served well in this course. I believe the diversity of experience and perspective students bring to this class enriches us all. This means that we all (myself included) need to practice humility, grace, and a posture of learning from others in the classroom. If you notice someone who is behaving in a way that consistently violates this spirit of inclusion and respect, please let me know.

3.2.3 Concerns Statement

If you or someone you know in my class is hurt by something we say or do, please let us know so that we can learn from our mistakes and work towards a resolution with you. We realize that confronting a professor can be intimidating and awkward, so if you do not feel you can approach any of us directly, feel free to do so through another student or another professor or staff member. My hope is that any cause for concern in our course could be dealt with within the confines of our class. However, if you experience something in our course or another course at Calvin that is particularly egregious and you do not feel safe engaging with me/the professor directly or indirectly, you can submit a complaint using the “Comment on Faculty” form online: <https://calvin.edu/go/comments-on-faculty>, which will be sent directly to the appropriate Dean. You may also use this form to express appreciation for faculty who have gone above and beyond to serve you well in some way.

3.2.4 Illness, Absences, and Make-Up Work

If you fall ill (physically or mentally) for an extended period of time, **and** you send me documentation from Student Life, Student Health Center, or the Center for Health and Wellness, then—and only then—I will consider allowing you to make up late assignments.

Warning

If you begin to skip class repeatedly due to mental health problems, go to the Center for Health and Wellness! **Don’t delay!**

3.2.5 Incompletes & Late Work

An Incomplete (I) grade will be granted only in unusual circumstances, and only if those circumstances have been verified by the Student Life Office. Procrastination does not qualify as an unusual circumstance.

Attention

No work will be accepted after the last day of classes besides the final project report.

3.3 Honesty

In this course, you will engage in hands-on modeling, coding, and critical reflection about social systems. Academic honesty is essential—not just for your own learning, but for the integrity of our shared exploration. The guidelines below clarify what is expected regarding collaboration, originality, and attribution in this interdisciplinary setting.

3.3.1 Collaboration & Independent Work

- Some assignments (such as labs or group projects) will involve collaboration, while others (such as essays or individual coding tasks) must be completed independently. The instructions for each assignment will specify what kind of collaboration, if any, is permitted.
- When collaboration is allowed, you must still write up your own understanding and give credit to your collaborators.
- For individual work, all writing, code, and analysis must be your own.

3.3.2 Plagiarism and Attribution

- In this course, plagiarism includes copying code, text, analysis, or model structure from any source (including classmates, online repositories, or generative AI) without proper attribution.
- If you use ideas, code, or text from any source—including books, articles, websites, or AI tools—you must clearly cite the source in your submission.
- When in doubt, cite your source! Proper attribution is a sign of academic integrity and intellectual honesty.

Consider these rules of thumb:

- If you found it efficient to use copy/paste or use a generative language model to create more than one or two lines of your application, you must document the original source of the code.

- If the moment you figure out how to do something occurs while you are looking at a website or at the output of a generative language model, you should document that website.

Note that these rules of thumb apply to the code supplied in this course's materials as well.

3.3.3 Examples

Acceptable:

- Discussing general modeling strategies or social theory concepts with classmates.
- Citing and building on published models, as long as you clearly reference the source and explain your own contributions.
- Using generative AI or online resources for inspiration, provided you document exactly what was generated or copied and how you used it.

Unacceptable:

- Submitting code, text, or analysis from another student or online source as your own, without attribution.
- Copying large sections of code or text from generative AI or websites and failing to cite the source.
- Allowing someone else to submit your work as their own.



Figure 1: ChatGPT in the wild (comicagile.net)

3.3.4 Detection & Consequences

- All submissions may be checked for similarity using tools like MOSS or other plagiarism detection software.
- If significant overlap is found between your work and another source (including classmates, online code, or AI-generated content), it will be treated as academic dishonesty.
- Academic dishonesty may result in a failing grade for the assignment or the course, and will be reported according to Calvin's Academic Honesty policy.
- If you are ever unsure about what is allowed, ask your instructor before submitting your work.

References

L. B. Smedes. *My God and I: A spiritual memoir*. Wm. B. Eerdmans Publishing, 2003.