

## Economic Dynamics: Fall Semester, 2020

Instructor: **David Wheat**, Professor, NaUKMA; Professor Emeritus, University of Bergen  
Teaching Assistants: **Alina Novik** (NaUKMA) and **Marianna Oliskevych** (LNU)

**Course Description:** This course introduces basic principles of economic dynamics and compares static models with dynamic models built with spreadsheets and system dynamics. Statistical correlational models are also compared with system dynamics causal models.

**Course Prerequisites:** None.

**Course Objectives:** To enable students to...

- Distinguish between static and dynamic economic models;
- Translate difference equation models into spreadsheet-based dynamic models;
- Compare the spreadsheet and system dynamics approaches to dynamic modeling;
- Compare correlational models and causal models;
- Develop basic skills in system dynamics modeling.

**Instructional Methods:** This is an online course, using Zoom. Normally, there would be a few face-to-face lectures, but those are prevented this year by the pandemic. Most lectures will be 'live' but some may be video-recorded. All lectures are supplemented by reading assignments, slideshow tutorials, discussion board tasks, and simulation exercises. Onsite computer lab sessions conducted by the teaching assistant provide opportunities to improve skills introduced during the lectures and assignments. All assignment deadlines decided by the teaching assistants.

### **Readings:**

- **Primary textbook:** *An Introduction to Economic Dynamics* (Shone, 2003): **ED**
- **Supplementary textbooks:**  
*Business Dynamics* (Sterman, 2000): **BD**
- **Journal articles** to be assigned

**Software:** *Stella Architect*. Install before first lecture. Always bring laptops to lectures & labs.

**Grading:** Your course grade will be calculated as follows:

- homework, discussion, & attendance (50%)
- exam project (50%)

**Office Hours:** Online, by appointment.

**Attendance/Participation:** Active participation is an important aspect of this course. Your own self-discipline will determine whether you maintain a steady, comfortable pace in this course.

**Integrity:** Naturally, you are expected to do your own work. The first evidence of dishonesty results in a grade of zero on the relevant assignment; a second offense results in course failure.

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wk	date	topic	LM	pre-reading
1	Sep 17	Introduction to Dynamic Modeling	O	—
2	Sep 24	Simple Keynesian Dynamics	O	<b>ED 3</b>
3	Oct 1	IS Dynamics	O	<b>ED 5, TBA</b>
4	Oct 8	IS-LM Dynamics	O	<b>ED 5, TBA</b>
5	Oct 15	Alternative Models (IS-PC-MR & others)	O	<b>ED 5, TBA</b>
6	Oct 19-23	— autumn break —		
7	Oct 29	Dynamics of Economic Instability	O	TBA
8	Nov 5	Dynamics of Economic Growth	O	TBA
9	Nov 12	Economic Policy Dynamics	O	TBA
10	Nov 19	Open Economy Dynamics	O	TBA
11	Nov 26- Dec 17	<b>Submit Final Exam Project</b>	—	—

**Lecture Mode (LM):**

**O = online P = in-person**

**ED:** *Introduction to Economic Dynamics* (Shone)

**BD:** *Business Dynamics* (Sterman)

TBA: to be assigned