

## 2023 Nengo Summer School Schedule

Welcome to the 2023 Nengo Summer School! This packet is designed to provide you with a high-level schedule of activities, along with information about getting around campus and finding places to eat. All of this information (and more) will be hosted on a wiki in the GitHub repository for the summer school. If you don't have access to this repository, email your GitHub username to [michael.furlong@uwaterloo.ca](mailto:michael.furlong@uwaterloo.ca), and we'll get you set up.

### On-Campus Accommodations:

Residence-style rooms are available on campus, and can be booked at a cost of \$50 per night: <https://webreg.uwaterloo.ca/onlinereg/Register/default.aspx?code=C000929>.

A list of available amenities that come with a residence room booking, along with further information, can be found at the University of Waterloo Accommodations Center website: <https://uwaterloo.ca/summer-accommodations/>

Free parking is included with a room booking, and all events at the summer school are within walking distance of the residence building where the rooms are located.

### Off-Campus Accommodations:

There are a number of hotels within the vicinity of the University of Waterloo, but for convenience and comfort, the Waterloo Delta is likely the best option:

<https://www.marriott.com/hotels/travel/ykfdw-delta-hotels-waterloo/>

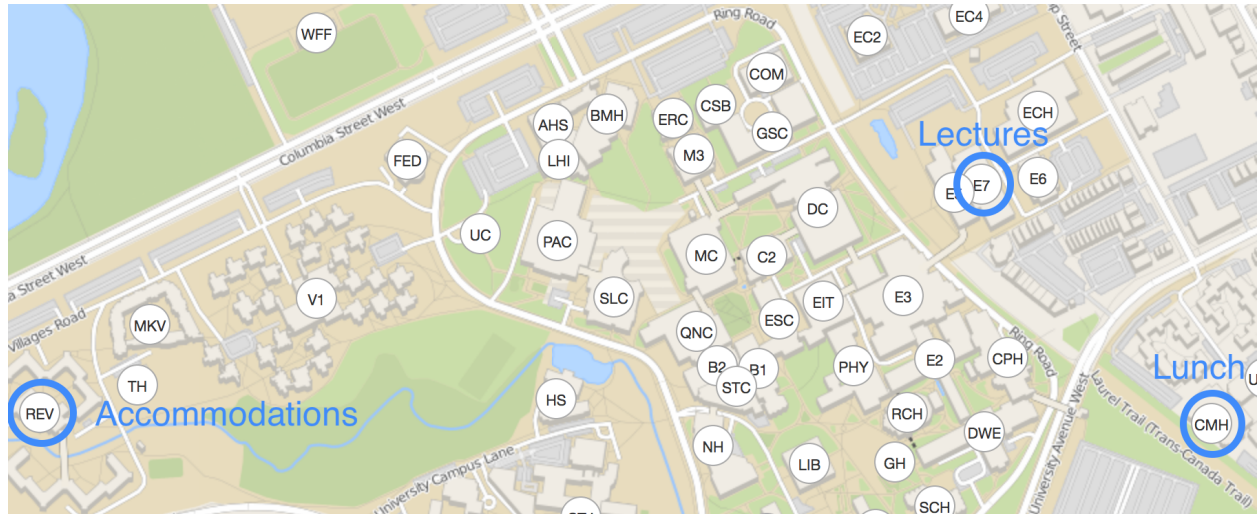
For a more budget-friendly option that is a bit farther away from campus, the Comfort Inn is a good choice: <https://www.choicehotels.com/ontario/waterloo/comfort-inn-hotels/>

AirBNB is another option that may be suitable depending on the length of your stay.

### Getting Around Campus:

Most events will be held in the new E7 engineering building on the eastern side of the UW campus. Below is a map illustrating the location of E7 in relation to the

accommodations center where you will likely be staying, and the cafeteria where lunch will be served each day. It's a 10-15 minute walk from the accommodations center to E7, and a 5-10 minute walk from E7 to the CMH cafeteria.



Once inside the E7 building, take the elevator to the seventh floor. Directly opposite the elevators is room 7303. This is a room with two sections, one of which we'll use for lectures, and the other of which will be used for breakfast and miscellaneous project space.

## Meals:

We'll have breakfast available each weekday morning in E7, and lunch at the cafeteria each weekday afternoon. For dinners aside from those listed on the schedule below, there are a variety of restaurants and shops in a plaza directly adjacent to E7. You are also welcome to use the CMH cafeteria for dinner or cook your own meals in the kitchen facilities in the accommodations center.

## Schedule:

The schedule below specifies the time and location of all scheduled events over the course of the summer school. Locations for dinners at the beginning and end of the school are also on campus, and we'll be travelling as a group, so you'll have no trouble finding your way to these.

### Sunday, June 4, 2023

Time	Location	Event
5:00 - 9:00 pm	<a href="#">The Eliasmiths</a>	Welcome BBQ! We'll give rides from the accommodations center

### Monday, June 5, 2023

Time	Location	Event
8:30 - 9:00 am	E7-7303	Breakfast
9:00 - 12:30 pm	E7-7303	Intro to Nengo and the Neural Engineering Framework Instructors: Chris Eliasmith and Terry Stewart
12:30 - 1:30 pm	CMH	Lunch
1:30 - 5:00 pm	E7-7303	Intro to Nengo and the Neural Engineering Framework (cont.) Instructors: Chris Eliasmith and Terry Stewart
5:00 - 7:00 pm	Grad House	Dinner
7:00 - 8:00 pm	E7-7303	Initial project discussions and group formation

### Tuesday, June 6, 2023

Time	Location	Event
8:30 - 9:00 am	E7-7303	Breakfast
9:00 - 12:30 pm	E7-7303	Representation, Transformation and Dynamics in the NEF Instructors: Chris Eliasmith and Terry Stewart
12:30 - 1:30 pm	CMH	Lunch
1:30 - 5:00 pm	E7-7303	Representation, Transformation and Dynamics in the NEF (cont.) Instructors: Chris Eliasmith and Terry Stewart
5:00 - 7:00 pm	N/A	Dinner on your own.
7:00 - 8:00 pm	E7-7303	Project discussions and planning

### Wednesday, June 7, 2023

Time	Location	Event
8:30 - 9:00 am	E7-7303	Breakfast
9:00 - 12:30 pm	E7-7303	Intro to the Semantic Pointer Architecture Instructors: Chris Eliasmith and Terry Stewart
12:30 - 1:30 pm	CMH	Lunch
1:30 - 5:00 pm	E7-7303	Intro to the Semantic Pointer Architecture (cont.) Instructors: Chris Eliasmith and Terry Stewart
5:00 - Evening	N/A	Dinner on your own.

### Thursday, June 8, 2023

Time	Location	Event
8:30 - 9:00 am	E7-2409	Breakfast
9:00 - 10:30 am	E7-2409	Tutorial on practical applications of Spatial Semantic Pointers Instructor: Nicole Dumont
10:30 - 12:30 pm	E7-2409	Tutorial on programming neuromorphic hardware with Nengo Instructor: Terry Stewart
12:30 - 1:30 pm	CMH	Lunch
1:30 - 3:00 pm	E7-2409	Tutorial on probability modelling with Spatial Semantic Pointers Instructor: P. Michael Furlong
3:00 pm - Evening	E7-2409	Project work and dinner on your own.

### Friday, June 9, 2023

Time	Location	Event
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8:30 - 9:00 am	E7-2409	Breakfast
9:00 - 10:30 am	E7-2409	
10:30 - 12:30 pm	E7-2409	Tutorial on advanced dynamics. Instructor: Aaron Voelker
12:30 - 1:30 pm	CMH	Lunch
1:30 - 3:30 pm	E7-2409	Tutorial on spiking deep learning with Nengo DL Instructor: Natarajan Vaidyanathan
3:30 pm - Evening	E7-2409	Project work and dinner on your own.

### Saturday and Sunday, June 10-11, 2023

Time	Location	Event
Morning - Evening	TBD	Weekend break! There will be optional recreational activities such as a trip to nearby Niagara Falls, rock climbing, a hike, or a trip to Toronto. Feel free to suggest things that you are interested in doing over the weekend, and we'll make plans accordingly.

### Monday, June 12, 2023

Time	Location	Event
8:30 - 9:00 am	E7-7303	Breakfast
9:00 - 10:30 am	E7-7303	Guest lecture on embodiment Speaker: Serge Thill
10:30 - 12:30 pm	E7-7303	Tutorial on interfacing simulation environments with Nengo Instructor: Brent Komer
12:30 - 1:30 pm	CMH	Lunch
1:30 - 3:30 pm	E7-7303	Guest Lecture: Bryan Tripp, Topic TBD
3:00 - Evening	E7-7303	Project work and dinner on your own.

## Tuesday, June 13, 2023

Time	Location	Event
8:30 - 9:00 am	E7-7303	Breakfast
9:00 - 10:00 am	E7-7303	Guest Lecture: Ivana Kajić, Topic TBD
10:30 - 12:30 am	E7-7303	Tutorial on biologically plausible neuron models Instructors: Peter Duggins
12:30 - 1:30 pm	CMH	Lunch
1:30 - Evening	E7-7303	Project work and dinner on your own.

## Wednesday, June 14, 2023

Time	Location	Event
8:30 - 9:00 am	E7-7303	Breakfast
9:00 - 10:00 am	E7-7303	Guest Lecture: Sean Wood, Topic: Parallelizing SNN Training Over Time and Neuromorphic Computing at the University of Sherbrooke
10:00 - 12:30 pm	E7-7303	Project work.
12:30 - 1:30 pm	CMH	Lunch
1:30 - Evening	E7-7303	Project work and dinner on your own.

## Thursday, June 15, 2023

Time	Location	Event
8:30 - 9:00 am	E7-7303	Breakfast
9:00 - 12:30 pm	E7-7303	Project work.

12:30 - 1:30 pm	CMH	Lunch
1:30 - Evening	E7-7303	Project work and dinner on your own.

### Friday, June 16, 2023

Time	Location	Event
8:30 - 9:00 am	E7-7303	Breakfast
9:00 - 12:30 pm	E7-7303	Project work.
12:30 - 1:30 pm	CMH	Lunch
1:30 - 4:00 pm	E7-7303	Internal project summaries
4:00 - 6:00 pm	E7-7303	Project demo session.
6:00 - Evening	Fed Hall	Banquet, prizes, and a party!

### Saturday, June 17, 2023

Travel home!