

# ANAT 542. Syllabus. Winter 2024

**Lecture Time:** 1:35 – 2:25 pm (Monday and Wednesday).

**Lab Time:** 14:30 – 17:30 (Monday).

**Room for lectures:** SAD M-48

**Lab location:** FEMR and room W315F SAD building. For all in-person labs meet your TA at 14:30 on the date indicated below at the Strathcona Building room W315F. For the first lab - meet at Strathcona Building level B, University Avenue entrance

**Coordinator:** Dr. Natalie Zeytuni.

**Instructors:**

Dr. Joaquin Ortega [joaquin.ortega@mcgill.ca](mailto:joaquin.ortega@mcgill.ca)

Dr. Khanh Huy Bui [huy.bui@mcgill.ca](mailto:huy.bui@mcgill.ca)

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Dr. Natalie Reznikov [natalie.reznikov@mcgill.ca](mailto:natalie.reznikov@mcgill.ca)

**Teaching Assistant:**

Mon, Feb 19	Fourier Transform I	JO
Wed, Feb 21	Fourier Transform II	JO
Mon, Feb 26	Single Particle Analysis. Introduction	NZ
Wed, Feb 28	Single Particle Analysis. Image processing I	NZ
March 4-8	2020 SPRING BREAK WEEK	
Mon, Mar 11	Single Particle Analysis. Image processing II	NZ
Wed, Mar 13	Single Particle Analysis. Image processing III	NZ
Mon, Mar 18	Single Particle Analysis. Recent advances	NZ
Wed, Mar 20	Symmetry	HB
Mon, Mar 25	Tomography processing and subtomogram Averaging	HB
Wed, Mar 27	Data acquisition in tomography applications	HB
Mon, Apr 1	Easter Monday – no class	
Wed, Apr 3	Volumetric EM	NR
Mon, Apr 8	Deep learning for segmentation for volumetric EM	NR
Wed, Apr 10	Other structural Biology Methods	NZ
Thur, Apr 11	Cryo-EM and drug discovery	NZ
Apr 15 - 30	Final Exam Period	

## Lab schedule

Date	Lab Title	TA
Mon, Jan 8	NO LAB	
Mon, Jan 15	FEMR Tour + presentations guidelines	DA/AU
Mon, Jan 22	Negative staining and TEM acquisition with Spirit	DA/AU
Mon, Jan 29	Cryo-EM prep + Loading in Tecnai F20	DA/AU
Mon, Feb 5	Embedding & Ultramicrotomy/ Paper Presentation (From TA selection)	DA/AU
Mon, Feb 12	Embedding & Ultramicrotomy/ Paper Presentation (From TA selection)	DA/AU
Mon, Feb 19	Basic Image Processing	DA/AU
Mon, Feb 26	Single Particle Analysis I	DA/AU
March 4-8	2020 SPRING BREAK WEEK	

Mon, Mar 11	Single Particle Analysis II	DA/AU
Mon, Mar 18	Single Particle Analysis III	DA/AU
Mon, Mar 25	Visualization with Chimera	DA/AU
Mon, Apr 1	Easter Monday – no lab	
Mon, Apr 8	Tomography Reconstruction	DA/AU
Thur, Apr 11	Paper Presentation (Student pick) and Image processing troubleshooting, if needed.	DA/AU

## ***General Information***

Attendance to all classes and all the labs is **mandatory**.

Any

**Department of**

