

| Week | Lecture | Lab |
|-------------------------|---|--|
| 1. Sept 11; 12&13 | - Course organization and expectations - Signal acquisition: A/D - Data presentation, report format, graphs etc. | Using the equipment: Model neurons: resistor and capacitor circuits. |
| 2. Sept. 18; 19&20 | Graphs of model neuron data due Sept. 18 (5%) Extracellular and intracellular recording techniques. Superficial flexor muscle dissection | Crayfish superficial flexor muscle (1) Spontaneous spikes versus psp. s. |
| 3. Sept. 25; 26&27 | Short-term synaptic plasticity & neuromodulation | Crayfish superficial flexor muscle (2) Evoked psp. s |
| 4. Oct 2; 3&4 | Neuronal staining techniques: Backfill, iontophoresis. Light and fluorescence microscopy theory and practice, sectioning tissue | Serotonin effects on superficial flexor muscle synapses Preparation of stained neurons – wholemount nerve backfills |
| 5. Oct ; 10&11 | No lecture Stat. holiday | Sectioning, mounting brain tissue/ start immuno. This will require time out of class to do solution changes. |
| 6. Oct 16; 17&18 | Immunohistochemistry theory – lecture Dr. Chow? Crayfish spikes report Due Friday the 19th. (10%) | Finish immuno, mount tissue. Examination/photography of stained tissues during lab time and on thur/fri |
| 7. Oct 23; 24&25 | Tutorial help – data analysis or figure prep etc. for images Staining theory quiz in lecture | Examination/photography of stained tissues during lab time and on thur/fri |
| 8. Oct 30; 1&2 | Voltage gated currents and action potentials. Crayfish Plasticity report due Friday Nov. 4 | Slugs 1 |
| 9. Nov 6; 7,8 | No lecture Reading break | Reading Break.... Lab open for those who want access for slugs... |
| 10. Nov. 13; 14&15 | Presentation of anatomy data – 8 groups, 10 minutes each, powerpoint... | Slugs 2 (more slugs....) |
| 11. Nov 20; 21&22 | Open -- Independent project | Independent Project |
| 12. Nov 27; 28&29 | Independent Project | Independent Project |
| Exam during exam period | Independent Project Presentation- “defense”. 8 presentations scheduled during 3 hour exam period. | |

Text: Neuroscience (Purves) for theory Crawdad online manual

<https://www.amazon.ca/Crawdad-Online-Lab-Manual-Neurophysiology/dp/1605353213>

Marking:

- Model neuron report 5%
- Crayfish muscle report1 15% -- **Oct 19**
- Crayfish muscle report2 15% -- **Nov. 4**
- Anatomy theory quiz 5% **Oct 23**
- Anatomy presentation 20% **Nov. 13** and report **Nov. 17**
- Slug neuron report 15% **Dec. 2**
- Project Report and Final "Exam" presentation **Date TBA-** 15 + 10 = 25%