Essay ESS (15%) – 1500 words:

Please choose a topic from the list below, but make sure that you choose a DIFFERENT title from the one submitted previously:

1. Compare and contrast human and animal experimental techniques that have increased our understanding of human genetic conditions. Illustrate your answer with examples of how these techniques could contribute to future treatments.

2. Describe and provide evidence for how drug exposure during fetal development can have long term consequences on the brain and behaviour.

3. Describe in detail the role of voltage dependent ion channels in neuronal transmission. How have voltage clamp experiments contributed to our knowledge of these processes?

4. The amygdala is central to fear learning in the brain. Provide experimental evidence in both animals and humans for the role of the amygdala in fear processing.

5. Long term potentiation (LTP) is believed to be the molecular basis for learning in the brain. Describe the molecular events leading to LTP and provide evidence that this may be occurring in vivo.

6. Compare and contrast how activation of ionotropic and metabotropic receptors can result in either inhibition or excitation of a postsynaptic neuron. Provide examples to support your arguments.

Computer-Based Exam CEX (85%)

The resit exam will be on Canvas and students will have a 24 hour window in which to begin the 2 hour exam (includes 30 minutes extra time should any technical difficulties arise). The exam will consist of short answer questions and one essay, as it was the case with the Sit exam.