**Project plan**

Project title (max. 200 characters): <fill this last, after the other details are decided>

Team members: Lucas Riedstra, Jim Wagemans, Mark Bebawy

Team name (optional): Group 4

**Scientific question** (max. 350 words)

<This should include: problem context, description of the investigated scientific phenomenon within the given context with clear research questions/hypotheses, up to 3 references (please use APA citation format if possible, references do NOT count against the word limit).>

Effect of changing [parameter] on shape of graph of action potential, specifically:

* Time between peak of hyperpolarization and return to resting potential;
* Time from start stimulus until back at resting potential;
* Time from start stimulus until hyperpolarization;
* Is there an action potential?
* Rate of increase from start stimulus to peak at which repolarization starts

Options for parameters:

* Peak for when gates closes (maximum of graph, default 50 mV);
* Temperature (influences opening/closing rates of gates);
* Opening/closing times of gates (how long does it take to open/close);

For each temperature, how much current is needed to get an action potential?

Look at propagation of current through a network of neurons (use different networks; for example a line, a circle etc). For each temperature what is the minimum input current for which we still have an output current at the ‘final neuron’ in the network. I.e. for which the final node/neuron is still activated.

**Numerical method** (max 100 words)

<State the chosen numerical method and describe the way that you intend to use AND validate your model.>

**Provisioned tools** (max 100 words):

<A list of e.g. programming languages, version control, visualization tools, etc.>

**Plan for division of work** (max 100 words):

<Prospecting plan on who will do what (it’s not binding, might change during the course, but try to come up with something realistic). This should include all activities.>

**Timeline** (max 100 words):

<A short timeline plan from the start of the project till the end of the course. Keep it concise and realistic, no complicated GANT is necessary.>