**Final Project Information**

**UW-WSU Introduction to Structured Decision Making**

For your course project, you will need to produce a report on a decision framework that is relevant to your research. The best approach to this is for you to envision the decisions that might be informed by your research. For any decision, it is important to work with the decision maker to understand their interpretation of the decision, their objectives, and their constraints. However, for purposes of this project, I’ll ask you to put yourself in the roles of scientist, decision maker, and decision analyst, successively, to produce this framework. The concept of rapid prototyping is valuable here: I am asking you to produce an initial prototype that is fairly well developed. You may (or may not) find it useful to continue developing this framework after the course in collaboration with the actual decision makers.

Your report should be no more than 1500 words plus ≤ 2 tables and ≤ 2 figures. This is an upper limit – if you can produce a good report in less space, please do so. Your report should include each of the elements of PrOACT.

**Problem Definition (15% of grade)**

This section should be fairly thorough, and should include the background for the problem, as well as your problem statement.

**Objectives (15%)**

You will need to anticipate the values of the decision maker and the stakeholders. Consider all 4 kinds of objectives that you’ve learned about in the course. Consider building an objectives hierarchy if it is appropriate, and make sure to include measurable attributes for all of your fundamental objectives.

**Alternatives (15%)**

Put some creative thought into your alternatives. Make sure you characterize what kind of alternatives you have (simple discrete, simple continuous, portfolios, strategies). Explain the alternatives in enough detail that it is clear how you will evaluate them.

**Consequences (15%)**

You will need to explain the model(s) necessary to evaluate your alternatives in terms of your objectives. You may need to use placeholders for various things in your model. The model needn’t be extremely well developed, but you should be able to describe the structure (how inputs and outputs represent alternatives and objectives) and the steps in building the model. You should also explain how the model(s) will deal with uncertainty. You will need to produce some predictions of consequences, even if they are just rough guesses to keep you moving forward.

**Tradeoffs (15%)**

Based on the type of decision problem you are dealing with, you should think about how you will solve the problem. I would like to see some effort to actually “solve” the problem, even if incomplete.

**Presentation (25% of grade)**

You will give a presentation on your project during the last two weeks of the course. You will have 10 minutes for your presentation. Your presentation should hit on all the PrOACT steps, even if briefly.

**Working on your project during the week**

During the first week of the course, we will set aside time for teamwork on your projects. Team assignments will be provided on the first day. The team should select a facilitator for each day. This facilitator should divide the available time each day evenly between each group member (setting an alarm will help). Each group member should take turns explaining their decision problem and proposing approaches to framing it. Part of each group member’s time should then go to getting feedback from other team members. Group members will not get all the way through a full prototype, but should develop a strong initial problem framing and some good initial ideas about the other components of their framework.