ITEC451
Research Paper or Hands-on Project
(Individual Project; Collaboration is acceptable)

- **Topics:**
  1. You can continue your work from the previous semester; or
  2. Any topic related to
     a. Network Design
     b. Traffic Monitoring and Shaping
     c. Optimization

- Submit **an idea note** (a paragraph and at least one key paper) which states the problem your will solve.
  - **Due - 11:59 pm on 3/22 (Friday)**

- Submit **your final paper** (6~10 pages) and prepare a **presentation** (30 minutes) on your research result.
  - **Due - 11:50 pm on 4/22 (Monday)**
  - What to submit:
    - **Proposal Format**: IEEE transaction paper format
    - (For Hands-on Project, **Format of Sections III, IV, V, and VI**) **Lab Guide** in the format of the Project 1 Lab guide
    - **Presentation file Format**: *.pptx file

Grading Criteria: Your final paper and the presentation must include all of the following sections:

Abstract

I. Introduction
   - Justification on your topic
     You need to justify or explain why your topic is interesting to be investigated.
   - Background knowledge.
     You need to explain background knowledge of your research topic to help a reader understand your proposal, under the assumption that the reader is a junior or senior who took ITEC350 and/or ITEC451.

II. Literature Survey
   You need to summarize existing research results by other researchers on the similar topics. This section must (1) briefly explain their idea; and (2) address disadvantages or weakness of their idea which your solution will tackle.

III. Problem Statement (or Project Statement)

You must state what the problem that you will solve is.
(Or you must explain what your hands-on project is.)

IV. Approach to Solve the Problem (or Technical Details of Your Project)

For research project, you must include a theory part as well as a simulation part.

- Theory: (ex) a graph theory
- Simulation: (ex) Are you writing the simulation code from the scratch? If so, in what language? If not, do you plan to use a network simulator, or something else?

For a hands-on project, you must explain a list of hands-on skills which are needed to complete the hands-on project in this section and submit a separate lab guide file in the format of **the lab guide** of the project 1.

V. Theoretical Results (for a hands-on project, Lab Guide)

As stated in the previous section, for a hands-on project, a lab guide needs to be submitted as a separate file.

VI. Simulation Results

(for a hands-on project, Test Results to show the completion of the hands-on project)

VII. Concluding Remarks

You need to address a summary of your results might include a future research issue.

References