WELCOME to the

CECA
UofT

Project Management Workshop

LAND ACKNOWLEDGEMENT

"We wish to acknowledge this land on which the University of Toronto operates. For thousands of years it has been the traditional land of the Huron-Wendat, the Seneca, and most recently, the Mississaugas of the Credit River. Today, this meeting place is still the home to many Indigenous people from across Turtle Island and we are grateful to have the opportunity to work on this land." #TKARO FORALL

What is CECA?

Multi-Disciplinary Design Team

- Provide **workshops** on sustainable building energy
- Participate in **Green Energy Challenge** (design competition)
- Provide **networking opportunities** with industry professionals
- Provide opportunity to use **softwares** to help audit and evaluate building performance

The 2019 team in Las Vegas

CECA UofT

OUTLINE

1. **Project Management Basics**
2. **Scheduling**
3. **Cash Flow**
   a. Costs
   b. Financing
   c. Payback Period

The Basics

What is project management?

- Time ⏱️
- Money 💸
- Leadership ✓

Why is it important?

- Utilize it in your classes
- Skills applicable to all fields

What tools do I need?

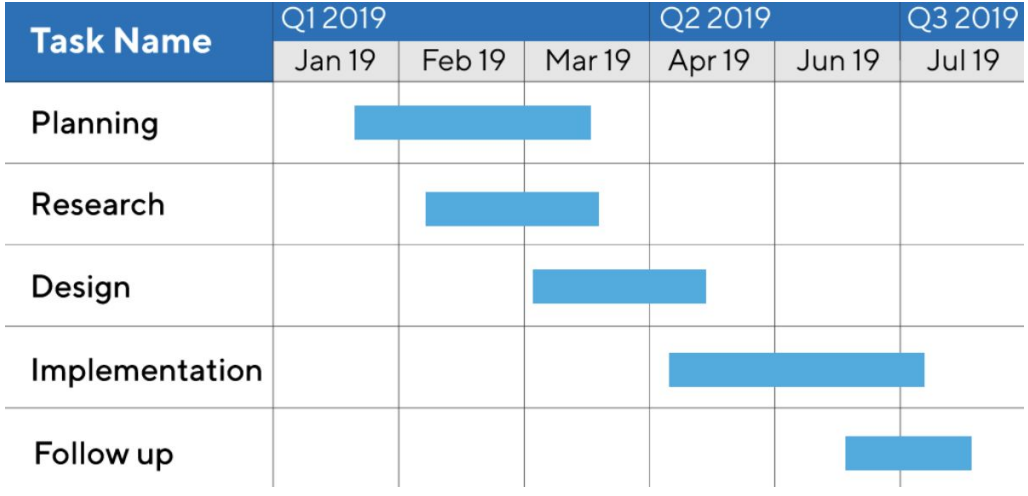
- EXCEL!!! And MS Project
- Communication and Leadership Skills

CECA UofT

Scheduling

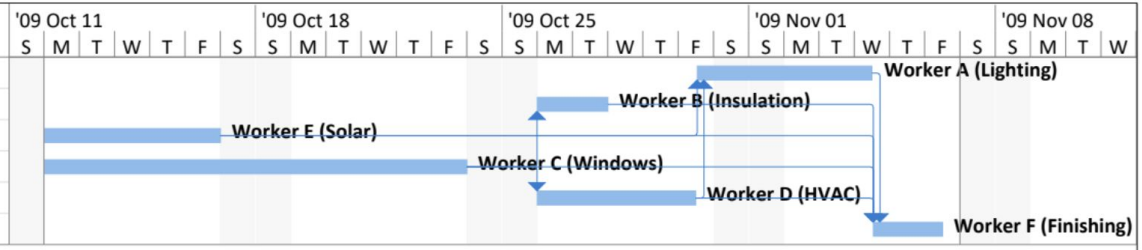
Building a Gantt Chart:

1. Split up project into **tasks**
2. Determine the **order** and **length** of tasks
   Do certain tasks require other tasks to be completed?
   Can the task only be completed at certain times?
3. **Optimize!**
   Can some tasks be done at the same time?



CECA UofT

ID	Task Mode	Task Name
1		Lighting
2		Insulation
3		Solar Panels
4		Windows and Doors
5		HVAC
6		Finishings



Project: msproj11
Date: Fri 19-11-29

Task		Inactive Task		Start-only	
Split		Inactive Milestone		Finish-only	
Milestone		Inactive Summary		Deadline	
Summary		Manual Task		Progress	
Project Summary		Duration-only		Manual Progress	
External Tasks		Manual Summary Rollup			
External Milestone		Manual Summary			

Cash Flow

Cost Estimation 💸
- Direct Costs
- Indirect & Maintenance Costs

Financing 💰
- Rebates and Incentives
- Loans

Final Cash Flow 📈
- Cash Flow Opportunity Calc.
- Combining Costs and Financing
- Payback Period

"This is money—get ready to worry about it for the rest of your life."

CECA UofT

Direct Costs

Materials 🌲

- Direct 🏠 or Indirect 🔨
- Estimation [$] = quantity [#] * unit cost [$/#]

Labor 👷

- Need to know: hourly wage [$/hr] & productivity [#/hr]
- Estimation [$] = $\frac{\text{quantity [\#]}}{\text{productivity [\#/hr]}}$ * hourly wage [$/hr]

Indirect & Maintenance Costs

Indirect Costs:

- Overhead and profit
- Insurance and liability
- Inspections
- Tax
- Contingency
- Labor escalation
- Material delivery and handling

Maintenance Costs:

- Inspection
- Cleaning

Financing

1. **Rebates & Incentives**
   - Cost deduction!
2. **Loans**
3. **Building's Budget**
   - Small but may be used for general operations

Cash Flow Opportunity Calculator

A tool made by Energy Star that allows you to estimate how much new equipment you can finance using the anticipated energy savings from your project.
We use it for the GEC!

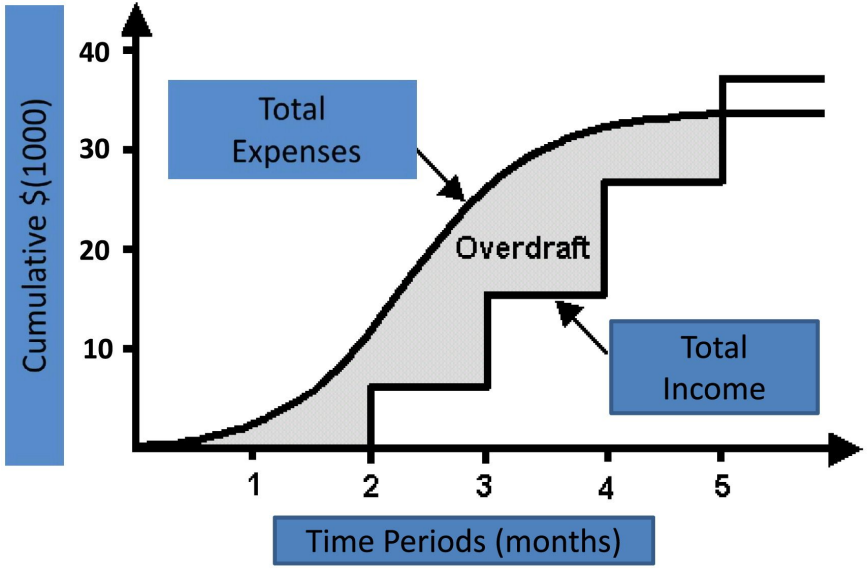
Now let's take a walk through...
Find the excel spreadsheet here.

https://www.energystar.gov/CFOcalculator

Final Cash Flow

Building a Cash Flow Diagram:

1. Find your total cost, any costs that may be recurring, and any costs that may increase in the future
2. Determine your financing and thus how you will pay off the cost over time (**hint:** use the cash flow opportunity calculator!)
3. Input into excel :)



Payback Period

$$= \frac{\text{amount invested (P)}}{\text{annual savings}}$$

CECA UofT

Leadership

Questions?

CECA UofT

THANK YOU
for Coming to our Workshop!

Remember to...
Sign Up for our Newsletter!
Check Out our Website: www.cecauoft.com
Follow us on our Social Media Accounts!
Facebook: CECA U of T Student Chapter
Instagram: cecauoft
LinkedIn: CECA UofT
Contact us!
Email: cecauoft@skule.ca