Northwestern University
Executive Management for Design and Construction
Spring Quarter 2018

PROJ_MGT 475: Project Finance
This syllabus is subject to change. Canvas is the best source for the most up to date information. Please note this is a half-course that meets only 5 times/quarter.

DATE: Mondays, April 2-30, 2018 (5 classes)
TIME: 6:30-8:00pm (CST) + 75 minutes of video/week
LOCATION: Online
PROFESSOR: Kevin Croke

The objective of this course is to explore the structure and methods of financing infrastructure projects. Project finance refers to the financing of major capital investments in which the sponsoring company or authority has segregated the security for the project assets from its general purpose obligations. It is employed primarily in the financing of major infrastructure facilities, such as tollways, power plants, water supply systems, and public transportation. Due to the many risks inherent in employing project finance, the crucial element required to enable the project to go forward is often the proper allocation of risk. Using case analysis, this course will focus on methods for the valuation of projects employing project financing and approaches to the allocation of risks among the many participants in such projects.

Week 1 -- Nature of project financing for infrastructure projects, participants, and financial structure
- Definition of project finance
- Main feature of non-recourse debt in project financing versus conventional financing
- Main uses of project financing in infrastructure development
- Benefits of employing project finance
- Structure of a project financed project
- Case study -- Sidney Cross-City Tunnel (Part 1)

Week 2 -- Risks associated with project financing
- Types of project risks: Construction, demand, inflation, interest, exchange, regulatory, political, and counterparty
- Methods of risk allocation: Performance contracts, insurance, futures, swaps, and options
- Case study -- Sidney Cross-City Tunnel (Part 2)

Week 3 -- Corporate structure and legal instruments employed in project financing
- Corporate structure employing special purpose vehicles (i.e. corporations)
- Types of contractual arrangements used in project financing: Construction performance, take-or-pay contracts, O and M agreements, and long run supply arrangements
- Refinancing mechanisms of project finance
- Case study -- Hong Kong Western Harbor Crossing (Part 1)
**Week 4 -- Valuation of proposed project financing projects**
- Analysis of operational cash flows
- Defining an optimal capital structure
- Requirements for cover ratios
- Case study -- Hong Kong Western Harbor Crossing (Part 2)

**Week 5 -- Methods of assessing the sensitivity of valuation estimates**
- Effects of adjustments on debt structure
- Use of scenario and Monte Carlo techniques to evaluate the variance of project performance estimates
- Case study -- Nashville waste-to-energy project.

**Text:** Project Finance for Construction and Infrastructure by F. Pretorius, Blackwell Publishing, 2008

**Grade Determination:**
- Group presentation 33%
- Case analysis 33%
- Final exam 34%