FE exam, registration

Last week Jeffrey showed graph re cost. What did it look like?

1) cost

2) influence on cost

Great conundrum of engineering: greatest effect early on when know least

This conundrum is testament to importance and value of engineering judgment

Although judgment gained through experience, we hope to give you initial understanding in senior design.
Overview

**BDR** Project management – working as a team

What are we going to discuss?

How project management works in engineering and construction

How to apply this to your work in senior design

Qualifications:

Paint with broad brush – much written

Selectively extract some concepts, details, and tips

My bias: structural, multi-disciplinary, buildings, often lead by architects

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Before jumping in full bore, distribute and ask you to take few to complete 1, 2, 5, DOB

Two fundamentals – already heard, hear again

**BDR** Three critical elements of project – What?

Scope, schedule, budget (cost, price, fee) **DISCUSS SCOPE**

**BDR** What two-way process in PM is fundamental? What underpins?

Communication – internal and external
Let’s back up and ask what we are trying to do when we design something.

Why do we bother to engineer a project? What is the alternative?

Trial and error

What is engineering?

Applying laws of science to construct or create

Planning a project and its execution

What is management?

Distinct from actually doing work – organize and plan

Management of construction and management of engineering are similar

How do we organize and plan engineering?

1) Establish overall scope, schedule, and budget – DESCRIBE EACH

2) Break into pieces that can be accomplished by individuals or smaller groups

3) Work backwards through schedule from ultimate deadline

4) Establish milestones for pieces

5) Evaluate against scope, schedule, and budget

Repeat: process is iterative and expansive – adjust and break into further detail

Work on large scale (overall and concepts) and details simultaneously

Monitor quality

Construction – schedule, budget, scope set / quality – any two
OH – types of decisions x 2

How do teams make decisions?

Unilateral: Advantage? Disadvantage?

Handclasp, minority, majority: also imposed on some who don’t buy in

Unanimity: everyone has veto

Consensus: most difficult to achieve but best quality and commitment.

Founded on cooperation, shared purpose, golden rule.

OH – stages of team development