



 POLITECNICO DI MILANO

Dipartimento di
Elettronica e Informazione

Planning and Managing Software Projects 2012-13

Midterm Review Preview

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Format

- 11 questions
- most 2-5 points each

- Projects, programs, products
- McConnell's four dimensions
- Classic mistakes
 - Know a set of these
 - Remember by “type”
 - People, process, product, technology related
 - see <http://www.stevemcconnell.com/rdenum.htm>

- Trade-offs & constraints
 - The triangle
 - Cost, Time, Scope

- PMI processes and knowledge areas
 - Process groups
 - Which knowledge areas are need for which process?
 - http://emanueledellavalle.org/slides/P&MSP2013_03_Understanding-Software-Project-Management.pdf
 - Slide 25

- Organizational structures
 - Advantages & disadvantages of each form
 - Role of PM in each
 - http://emanueledellavalle.org/slides/P&MSP2013_04_More-on-Software-Project-Management.pdf
 - Slide 11

- Classic project phases
 - http://emanueledellavalle.org/slides/P&MSP2013_05a_Planning-Part-I.pdf
 - Slide 5

- Key documents at each phase
 - SOW, Charter
 - Project Management Plan
 - Identify key planning documents
 - Potential Deliverables by Phase
 - http://emanueledellavalle.org/slides/P&MSP2013_05a_Planning-Part-I.pdf
 - Slide 9

- Methodologies
 - Trade-offs
 - Basic Pros & Cons
- Given a specific scenario decide what SDLC is most appropriate
 - http://emanueledellavalle.org/slides/P&MSP2013_06a_Planning-Part-II.pdf
 - Slide 8 and 9
- Waterfall process
 - Challenges of each phase
- Requirements
 - Criticality
 - Issues
 - Functional & Non-functional

- Four primary steps
 - Define work to be done (WBS)
 - Estimate size
 - Estimate effort
 - Build schedule

- Types: Process, product, hybrid
- Formats: Outline or graphical org chart
- Shows hierarchical task relationships
- High-level version does not show dependencies or durations
- What hurts most is what's missing
- Becomes input to many things, esp. schedule

- Size Estimation Techniques
 - Bottom-up vs. Top-down
 - Analogy
 - Expert Judgment
 - Parametric (not the formulas, just the gist)
 - Function Points
 - LOC

- Schedule presentation techniques
 - Q3, 6-8 months, best/worst case

- Dependencies
 - Relationships: FS, SS, FF, SF
 - Lag and Lead time
 - Free and Total Slack
 - Types: Mandatory, etc.
- Network Diagrams and Bar Charts
 - CPM
 - PERT
 - GANTT
- Schedule Optimization Techniques

General Recommendations

- Wherever I presented you say 5 types of ‘things’
 - Like estimation techniques or methodologies
- I may ask ‘Tell me two approaches to X’
- Especially interested in the pros & cons
- You did your Class slides readings, yes?

Things I Won't Ask

- Ambiguous terminology
 - Tasks vs. Activities vs. Work Packages
 - WBS: does it start at 0 or 1
 - Details of Function Point calculation method

Questions?