

# Scheduling 1 Day Structure

## Session 1: Design and Structure your Road Map

1. Basic framework of a schedule
  - a. Purpose = communication not control
  - b. Understand audience
  - c. Role of the scheduler
2. Activities & Milestones
  - a. Milestones
  - b. Attributes of an activity
  - c. Durations
3. Logic Links
  - a. Rules of logic
  - b. Link types
    - i. FS/SS/FF/SF
    - ii. Progressive feed - AP and Ladders
    - iii. Mandatory/discretionary/external
  - c. Leads and Lags
  - d. Problems with links
4. **Construct Schedule – Exercise #1.**
5. Additional Resources:
  - a. Appendix 1: Good Scheduling Practice
  - b. Appendix 2: Attributes of a Scheduler
  - c. Appendix 3: Dynamic Scheduling
  - d. Appendix 4: Links Lags and Ladders

## Session 2: Analyse the Schedule

1. Schedule Design
  - a. Planning -v- scheduling
  - b. Optimum update cycle
  - c. Planning v Scheduling
  - d. Heuristics size
  - e. Schedule Levels
2. Basic schedule calculations
  - a. Forward Pass
  - b. Back Pass
  - c. Integers -v- elapsed time
3. **Analyse Schedule – Exercise #2.**
4. Free Float & Total Float
  - a. Calculations and definitions
  - b. Using float wisely
5. Constraints
6. Uncertainty
  - a. What-if scenarios
  - b. PERT and Monte Carlo
  - c. Probability and contingency
  - d. Logic and Duration issues
7. Additional Resources:
  - a. Appendix 5: Schedule Levels
  - b. Appendix 6: Schedule Float
  - c. Key papers:
    - i. Float - Is It Real?  
[http://www.mosaicprojects.com.au/Resources\\_Papers\\_043.html](http://www.mosaicprojects.com.au/Resources_Papers_043.html)

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- ii. The Cost of Time (Durations)  
[http://www.mosaicprojects.com.au/Resources\\_Papers\\_009.html](http://www.mosaicprojects.com.au/Resources_Papers_009.html)

### Session 3: Resources and Tools

- 2. What is a resource
  - a. Cost – using resources incurs costs
  - b. Capability – resources do the work
  - c. Stakeholder / team member – need communication and motivation
- 3. Resource levelling
  - a. Smoothing
  - b. Levelling
- 4. **Resource level Schedule – Exercise #3**
- 5. Resource problems
  - a. Resource schedule
    - i. No float – balanced by resource allocation
    - ii. Critical resources & resource float
  - b. Motivation & productivity – Critical Chain/Viper
  - c. Schedule compression
    - i. Fast tracking
    - ii. Crashing (Mythical Man Month)
- 6. Scheduling tools and methods
  - a. ADM / PDM / PERT
  - b. History of scheduling
  - c. Software tools
    - i. Presentation: Gui's / Cascade /Asta PP
    - ii. Project focus
    - iii. EPM focus
  - d. Schedule assessment – PMI Practice Standard for Scheduling
  - e. Emerging ideas
    - i. RDM
    - ii. Momentology
    - iii. Complexity
- 7. Additional Resources:
  - a. Key papers:
    - i. The VIPER Experience  
[www.mosaicprojects.com.au/Resources\\_Papers\\_012.html](http://www.mosaicprojects.com.au/Resources_Papers_012.html)
    - ii. A Brief History of Scheduling  
[www.mosaicprojects.com.au/Resources\\_Papers\\_042.html](http://www.mosaicprojects.com.au/Resources_Papers_042.html)
    - iii. The Origins of Modern Project Management  
[www.mosaicprojects.com.au/Resources\\_Papers\\_050.html](http://www.mosaicprojects.com.au/Resources_Papers_050.html)
    - iv. Scheduling in the Age of Complexity  
[www.mosaicprojects.com.au/Resources\\_Papers\\_089.html](http://www.mosaicprojects.com.au/Resources_Papers_089.html)
  - b. Books & Standards: [www.mosaicprojects.com.au/Books.html](http://www.mosaicprojects.com.au/Books.html)

### Session 4: Maintaining the Schedule

- 1. Schedule baselines

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2. Updating the schedule
  - a. Status the schedule
  - b. Update the schedule
3. **Update the Schedule – Exercise #4**
4. Reporting options
  - a. Variance reports
  - b. Trend reports – Earned Schedule
  - c. Management Reports – Milestone trends
  - d. Team reports
5. Data management
  - a. Version control
  - b. Change management
  - c. Photo diaries & records
6. Allied processes
  - a. WBS / OBS / Control Accounts
  - b. Earned Value
  - c. Line of Balance & Chainage Charts
7. Additional Resources:
  - a. Key Papers:
    - i. Papers on PMOs:  
[www.mosaicprojects.com.au/Resources\\_Papers.html#Proj\\_Off](http://www.mosaicprojects.com.au/Resources_Papers.html#Proj_Off)
    - ii. Managing for Success - The power of regular updates  
[www.mosaicprojects.com.au/Resources\\_Papers\\_002.html](http://www.mosaicprojects.com.au/Resources_Papers_002.html)