Postgraduate Initiative in Project Engineering
IX7101: Definition Scope Engineering

IX7101 Aims

IX7101-AI:
- Specify and develop the critical skills for effective design reviews, including how to assure that a common view is shared of and within the project.

IX7101-A2:
- Specify and develop the critical skills required in directing projects, including how to assure project compliance.

IX7101-A3:
- Specify and develop the critical skills to define effective communication for project direction.

IX7101 Learning Outcomes

IX7101-LO1:
- Review and analyse tools to engineer compliance of the project at the tactical level of senior user (architect of final deliverable).

IX7101-LO2:
- Critically analyse, design and organize process to construct requirement baseline and definition baseline for the project.

IX7101-LO3:
- Evaluate communication for project tactical direction by senior user.

IX7101 Expected Student Learning Activity

Total Learning time 200 hours:
- 36 hours contact time
- 164 hours independent study (team construction and real case analysis)

Students are expected to attend all lectures/seminars and actively engage with online learning resources.

IX7101 Assessment

Learning outcome IX7101-LO1 is assessed through:
- individual construction (1,000 words) of requirement baseline and compliant definition baseline (25%),
- and individual critical analysis (1,000 words) of similar construction by someone else (25%).

Learning outcome IX7101-LO2 is assessed through:
- a group presentation (equivalent 1,000 words - 25 minutes presentation and 5 minutes Q&A) of project design review (25%).

Learning outcome IX7101-LO3 is assessed through:
- reflective report (1,000 words) to analyse group presentation (by other groups): 25%.

IX7101 Contents

IX7101-C1: Keys for projects
- Critical definition review for project final deliverable (targeted product, service or facility).
- Professional practices for adequate communication at project kick-off.
- Presentations, labs, discussions and preparation of independent study for scope definition.

IX7101-C2: Keys for project management
- Critical identification review of key stakeholders (user's versus supplier's perspective).
- Analysis of project commitment for project development versus execution.
- Review of project maturity through justification of project estimates.
- Presentations, labs, discussions and preparation of independent study for project stakeholder review.

IX7101-C3: Qualification of definition
- Construction process of definition baseline.
- Analysis of definition and verification review for approval by project board.
- Design and construction of expert based justification of scope definition.
- Presentations, labs, discussions and preparation of independent study for definition baseline review.

IX7101-C4: User driven scope analysis
- Construction process of requirement baseline.
- Analysis of requirement and validation review for approval by project board.
- Design and construction of expert based scope analysis.
- Presentations, labs, discussions and preparation of independent study for requirement baseline review.

IX7101-C5: Validation of definition scope
- Construction process of requirement validation.
- Analysis of validation scorecard for approval by project board.
- Presentations, labs, discussions and preparation of independent study for validation plan review.

IX7101-C6: Characterization of definition scope
- Professional practices for quality requirement.
- Analysis of usability for targeted product, service or facility.
- Presentations, labs, discussions and preparation of independent study for review of Service Level Agreement (SLA).

IX7101-C7: Economical justification of definition scope
- Evaluation and constructive approach for project's Return on Investment (ROI), Net Present Value (NPV) and Internal Return Rate (IRR).
- Critical review of assumptions for economical justification of project.
- Presentations, labs, discussions and preparation of independent study for project economics.

IX7101-C8: Strategic justification of definition scope
- Evaluation and constructive approach for alignment of requirement baseline with the strategy of the funding body.
- Critical review of assumptions for strategic justification of project.
- Presentations, labs, discussions and preparation of independent study for alignment of project to strategies.