POZNAŃ UNIVERSITY OF ECONOMICS AND BUSINESS

Detailed Course Plan
for IT Project Management Postgraduate Studies

Group A Subjects: Certified Management Methodology Training | 40 hrs

Certified SCRUM® Master PSM I Training

1. **Introduction:**
   - The 12 principles of agile,
   - The origins of Scrum,
   - The pillars of Scrum (inspection, adaptation, and transparency),
   - The values of Scrum (commitment, focus, openness, respect, and courage).
2. **Scrum Events:** (product backlog grooming, sprint planning, execution, daily Scrum, review, and retrospective).
3. **Scrum Artifacts:**
   - Product backlog,
   - Sprint backlog,
   - Increment.
4. **Scrum Roles:**
   - Product Owner,
   - Scrum Master,
   - Development Team.
5. **Group processes in development teams.**
   - Building collaboration and communication.
6. **Coaching in Scrum.**
   - Coaching techniques to enhance team performance.
7. **Facilitation in Scrum.**
   - Facilitating productive Scrum events.
8. **Scaling Scrum.**
   - Methods for scaling Scrum in large projects.
9. **Exam Preparation:**
   - Exam structure,
   - Practice tests.

Accredited AGILE PM® and AGILE BA® Certification Training

A dual training course that prepares participants for two international certifications in project management and business analysis using agile methods, accredited by the APM GROUP Examination Institute.

1. **Concept of Project and Team Governance in an Organizational Environment:**
    - Strategy,
    - Portfolio governance,
    - Program and business activity areas.
2. **Agile Organization:**
    - Definition,
    - Advantages and disadvantages of the agile approach to project management,
    - Advantages and disadvantages of the waterfall approach to project management,
    - Criteria for choosing a methodology for a specific project.
3. **Anatomy of a Project:**
    - Principles,
    - Phases of the project lifecycle,
    - Management products,
    - Business products,
    - Role and responsibility structures at the Project and Solution Development Team level,
    - Methods for engaging stakeholders.
4. **Agile Project Management Practices:**
    - Selected business analysis techniques,
    - Methods for introducing agile project management methodology into the organization.
5. **Exam Preparation:**
    - Discussion of the exam process,
    - Solving sample tests.

Group B Subjects: Project Management | 48 hours

(Typical order within the group)

Fundamentals of Project Organization and Management

1. Overview of project management methodologies:
    - PMBOK - Project Management Institute,
    - Prince 2 - Office for Government Commerce (OGC),
    - IPMA – International Project Management Association,
    - Agile.
2. What is a project:
    - Characteristic features of projects,
    - Six components of process excellence.
3. Project and portfolio management:
    - Project manager and stakeholders,
    - Project structural plan and scheduling.

IT Tools Supporting Project Management (MS Project - Laboratory)

Case study sessions in the computer lab - scheduling and allocating resources to various stages of projects using MS Project and other tools.

Risk Management in a Project

1. Identifying risks.
2. Classifying risks.
3. Estimating the impact of risks.
4. Preventive risk management.
5. Project risk management.

Practical Application of UML Modeling in IT Project Management

Laboratory sessions:

1. What is Unified Modeling Language (UML).
2. Applications of UML:
    - Software development process,
    - Class diagrams, use case diagrams, activity diagrams, state diagrams, sequence diagrams, communication diagrams, deployment diagrams,
    - Tools.

Change Management

1. Cultural conditions for change:
    - Organizational culture pyramid,
    - Typology of organizational culture values,
    - Competing values model,
    - Research on organizational culture,
    - Managerial roles in organizational culture,
    - Boundary cultures,
    - Integral concept of organizational culture AQAL.
2. Designing and implementing changes:
    - Components of a change project,
    - Organizational experience in change,
    - Organizational complexity, complexity and depth of change,
    - Preparing a change project - 10CION model,
    - Resistance to change,
    - Conducting change.
3. Cooperation with employees in the change process:
    - Learning environment,
    - Action learning,
    - Diagnosis of employee needs and deficits.

Group C Subjects: Specificity of IT Projects | 40 hours

(Typical order within the group)

Application of IT Systems in an Organization

1. The role of information in management systems.
2. The ecosystem of IT systems in enterprises.
3. Architecture of integrated IT systems. MRPII/ERP-class IT systems.
4. Systems supporting customer relations – CRM class systems. Integration in ERP systems, SCM class systems, PLM systems.
5. Projects in the field of data analytics – Big Data vs. Business Intelligence.
6. Responsive and mobile solutions.
7. Building a community around the company: social media vs. dedicated solutions.

IT Systems and Creating a Cyber-Physical Model

Laboratory sessions:

1. Overview of selected classes of IT systems.
   Lecture sessions:
2. Introduction to process organization.
3. Business process management (BPM) in an organization.
4. The process approach in managing the business structure of an enterprise.
5. Use of process analysis and modeling in the design of IT systems.
6. Modeling business processes (using EPC and BPMN techniques).
7. Principles of Business Process Reengineering (BPR).
8. BPR in BPM – application examples.
9. Decision rules in process modeling.
10. Principles of good process design.

Communication in IT Project Teams

1. Building teams in IT projects.
   - Criteria for selecting project team members,
   - Principles of work organization.
2. Internal communication tools:
   - Conducting project meetings, reporting, and archiving documentation.
3. Support systems and their effective use in project documentation and communication.
   - Discussion of example solutions (applications) supporting project communication.

IT Systems Integration

1. Roles in the team.
    - Defining a dedicated team for the integration project,
    - Division of roles based on required competencies.
2. Analysis of business and IT requirements.
    - Developing a list of business objectives,
    - Defining key areas of the project,
    - Discussing IT requirements (including the need to build connections; database; infrastructure requirements).
3. Functional and analytical specification.
    - Developing a document script,
    - Defining necessary terms and entries.
4. Defining reports generated from integrated data.
    - Discussing the business benefits of integration in terms of creating new data series.

Quality Management in an IT Project

1. Introduction:
    - What is quality?
    - Quality objectives in an IT project,
    - Quality from a formal perspective.
2. Ensuring quality in the project:
    - Organization of the project team,
    - Requirements management,
    - Testing methods,
    - Tools supporting quality management,
    - Error management,
    - Quality management when working with an external client,
    - Quality in the software integration process,
    - Quality audit.

Preparation of Tender Documentation and Conducting the Procedure

1. Legal aspects of the tender procedure:
    - Discussion of the rules for qualifying entities (invited) to the procedure.
2. Specificity of tender documentation:
    - Drafting the document,
    - Discussion of the components necessary for the contracting authority to prepare the documentation.
3. Roles and stages in the tender process:
    - Development of the procedure schedule,
    - The role of references and verification of the offeror’s competencies,
    - Communication during the procedure.
4. Preparation of a draft of the documentation and defining the expectations of the offering (contracting) team:
    - Real-time case study / preparation of documentation for a selected IT project.

Group D: Team Management and Personal Development | 32 hrs

Personal Development of Project Manager – Acting Workshops:

1. Voice Emission and Voice Awareness:
    - Voice warm-up,
    - Awareness of breathing and voice production,
    - Proper use of voice during speaking,
    - Confidence in voice.
2. Self-presentation:
    - Body Awareness during Presentations,
    - Gestures (Body Language),
    - Awareness of Gestures,
    - Appropriate Presence during Self-presentation,
    - Combating Stress when Speaking in Front of an Audience.

Psychology in Management:

- Group and Group Process, Team Problems, and Efficiency,
- Individual's Place in a Team: Roles, Talents, Behaviors,
- Leadership Styles and Their Proper Selection,
- Motivation and Encouragement in the Context of Employee Autonomy and Engagement:
    - Providing support, intrinsic motivation, persuasion, and participation.

Coaching in Project Management - Workshops:

- Choosing a Motivational Model Based on Organizational Culture and Individual Employee Characteristics,
- Techniques for Influencing People and Inspiring Motivation to Undertake the Challenge of Change (organizational, personal behavior),
- Organizing Consultation and Development Meetings for the Team,
- Conducting Disciplinary and Motivational Conversations with Team Members who Pose Communication Barriers.

Training and Motivation of System Users:

- Basic Assumptions of Consultation and Development Programs (PKR),
- Choosing Implementation Models Based on PKR Results,
- Basic Principles of Effective Training,
- Management Tools – Ensuring Implementation Continuity,
- Building Implementation and Control/Support Programs Based on Observations of Implementation Effects,
- Using Tools to Monitor the Continuity of IT System Implementation,
- Intervention Techniques – Maintaining Implementation Continuity.

IT Project Management postgraduate studies provide a comprehensive learning experience that covers agile and traditional project management methodologies, practical skills in using

project management tools like MS Project, effective risk management, change management strategies, and essential personal development and team leadership skills.