**Session 1-A: Introduction and background**

- What is a project?
- What is a successful project?
- What is project management?
- Historical background?

**Session 1-B: Project roles and staffing**

- What are the major project roles?
- How are they specified?
- How do we fill them?

- Should he/she usually be:
  - a competent programmer?
  - a competent systems analyst?
  - an experienced user of computer applications?

- What must he/she know how to do?

- What results must he/she be accountable for?
Session 2:
A Phased Life Cycle (SDLC) for a modern system development project

The critical point in any version of the SDLC
- There must be a definite point at which:
  - We've specified (ESD) everything about what the new (or modified) application system must do.
  - We've specified nothing (or as little as possible) about how the system will do those things.

  Why?
- Our course used a 7-phase life cycle in which:
  - The end of phase 3 is that critical point.
- Objectory (UML) is a 4-phase iterative life cycle that contains no such point.
  - Therefore it's unsuitable if we expect to consider purchasing application software.

Session 3:
Project control
- status monitoring
- status reporting
- corrective action
- What else?

Specifying a task and its deliverables
- Manual specification, using a form
- Use of MS Project and similar project management software
- Estimating resources and duration
- Why must deliverables be specified?
Reporting task status

- How often?
- What information?
- How long can a task be?

Session 4: Project communications

- within the project team
- between the project team and others

Starting a New System Development Project

Defining the project charter
Establishing project communications
Determining Business Objectives
Justifying the project

Specifying Business Requirements for a New Application System

Phase 2 in our sample SDLC
Central to project justification
Often overlooked Why?
Specifying Requirements for a New Application System

Phase 3 in our sample SDLC

The critical point in the life cycle

Why?

Session 6a: The Data Dictionary

- relationship to systems analysis methodologies
- relationship to project management
- data definition vs. data representation
- taxonomy of data types

Session 6B

Estimating the first half of the life cycle (through ESD or detailed requirements)

Session 7a: Managing Change

- The critical point revisited
- Freezing the specifications
- Reasons for change
- Decision process
Session 7B: Staffing for programming & beyond

Roles during development
Selecting qualified programmers
Coping with weak programmers

Session 8: Testing

Special importance of testing
Stages of testing
Problems with estimating testing
Manual vs. automated testing
Continuous testing strategies

Session 9: Alternative Project Methodologies

What's wrong with mainstream project planning & control?
Recent fads
What does a Project Manager need to know about them?

Session 10: Project-level status tracking

What data do we collect?
What do we do with it?
How does the sponsoring user pay?
Session 11: Buying an application software Product

When does a project decide?
What short cuts can we take?
What specific tasks are needed?

Alternatives to the phased life cycle

Why change what works now?
But does it really work?
Do popular fad alternatives work any better?
If not, why?
What about UML? What about Agile? What about incremental?

Session 12: Odds & Ends

Documentation review
Justification review
Post-project review phase
Status reporting with MS-Project
Negotiations & compromises

Session 13: Professionalism in Project Management

The Project Management Institute
The Software Engineering Institute
Certification programs
Reference material
Chicago-area opportunities
Anything else?

What, if anything, did the course leave out that you hoped to learn about?

Would you feel comfortable next month:
   a. being given a system development project to plan and manage?
   b. working as a team member on a project managed by competent colleague?
   c. contributing to an organization's project-management methodology?
   d. teaching a course like this one?

Final comments:

Some bad news

Successful (functionally complete, high-quality, on time, within budget) I.S. projects remain rare in 2016.

How is that possible given today's technology?

Why?

- Lack of management discipline:
  - Caving in to pressure from managers or customers
  - Unwillingness to face disappointing estimates or status reports
  - Hoping for a miracle
- Ignorance
  - Lack of solid experience, mature judgment
  - Misplaced confidence in the latest breakthrough