Objectives:
• To review design and usability projects
• To create instruments and documentation suitable for carrying out the projects

Readings:

Outline:
I. Carrying out user studies
Design studies – who are your users and what do they do?
Usability studies – do your users succeed with the prototype/final version?
Need to collect and analyze data
Collect data towards eventual goal – better result with focus
Creating documents that assist in focusing data collection
  Formal documents or guidelines to assist in studies
  Forms, surveys, notebooks, videotapes, audiotapes
  Constructing these for your work

II. User profiles
Who are the users and how do they relate to your software?
What are they like?
  Diverse or homogeneous?
  Differences in culture, knowledge, motivation
User profile document – list users and their characteristics
State your hypothesis before study, be ready to revise as data is collected

III. User/task matrix
User/task matrix – who does what in a general sense?
User/task matrix can guide fieldwork – make sure you study all categories
IV. Workplace profile
   Where is the software used? What are the characteristics?
   Distractions? Availability of documentation, assistance?
   Adequate workspace?
   Time available for tasks?
   Assemble list of questions before visiting workplace
   Consider notebook, photos, video for documentation and communication

V. Interviews
   Recruitment – who to ask?
   Demographics – who is this person?
   Interview outline/questions- what to ask?
   Focus groups – interviewing a group
   Consider notebook, audio or video recording

VI. Tasks lists or task inventory
   What are the likely tasks that the software needs to perform?
   Collated from observations, interviews.

VII. Use case analysis
   Part of UML toolbox
   Scenario of software use focused on one task or related collection
   Related issues: use case diagrams, generalization, inclusion, testing

IIX. Survey instruments
   Question design
      Start from goals – each question related to action item
      Pretesting questions
      Use of scales, open-ended questions,
   Survey instrument
   Selection of sample – size, randomness
   Sending and collecting surveys
   Recording data, including coding of open-ended responses
   Web-based surveys

IX. User testing
   Task based
   How to observe: passive, interactive, talk out loud
   How is to what you are testing – performance, mental models, etc.

IX. Expert heuristic review
   Heuristic evaluation, Guidelines review, Consistency inspection, Cognitive walkthrough, Formal usability inspection
   How to conduct each? (Heuristic evaluation most frequently used, see Vredenburg 2002)