

# ΣΤΟΥΝΤΙΟ 2

Συνοπτική παρουσίαση του  
μαθήματος

# Goals

- Cultivate high-level skills to students like:
  - a) critical thinking and reflection on the use of HCI and design methods,
  - b) working in groups, and
  - c) development of responsibility about learning;
- Develop an authentic project from ideation to evaluation that is related to practice.
  - Research, design (conceptual & detailed), prototyping, user evaluation
  - Use of methods
- Make constructive use of a number of technologies to improve students' digital design competence,
  - Virtual Worlds, Wiki, Online prototyping tools

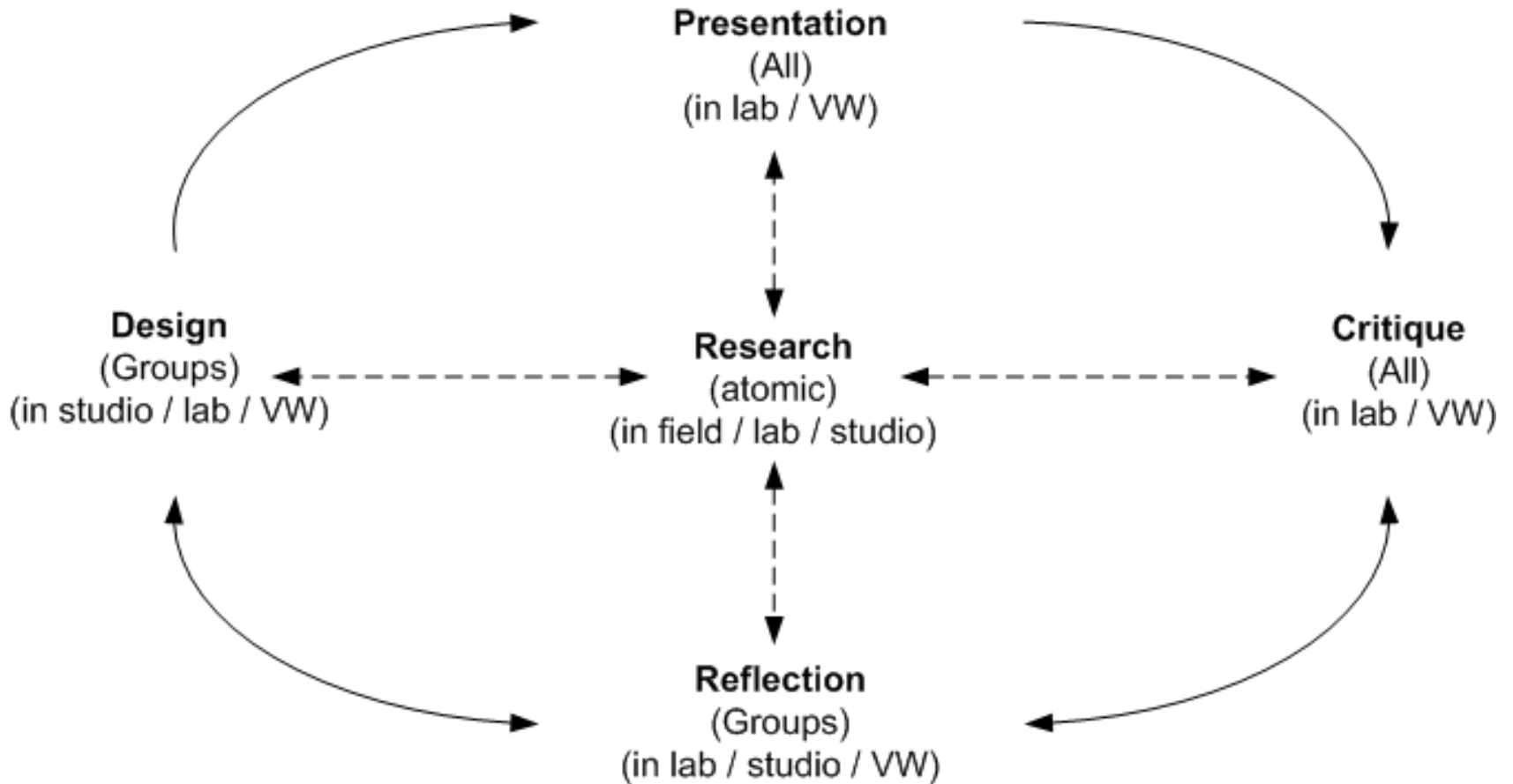
# Project

- Design:
- ... a gesture-based (i.e. multi-touch, kinesthetic, or gaze) interactive installation, ...
- ... for a public place where people gather (indoors or outdoors) to work and interact, e.g. cafeteria/cinema/theatre/university/museum.
- Consider alternative interaction styles, setups and types of services (e.g. business, entertainment, social interaction)...
- Reach to a functional prototype about form, ergonomics and user interface and interaction, ...
- Evaluate the prototype with user groups (simulation in the Virtual World, or prototyping tools)
- Make justified use of design methods throughout the lifecycle

# Schedule & Phases

- Introduction (1 week).
  - Explain the approach (Studio-based PBL) and technology (VWs and wiki),
  - Provide context to the design project for each group.
- Research & inquiry (~3 weeks)
  - Use of research methods for data gathering and sense-making.
- Design (conceptual & analytic) (~ 5 weeks)
  - Use of methods for articulating design concepts and gradually develop interactive prototypes.
- Evaluation (~ 2 weeks)
  - Set up and conduct a user-centred evaluation of your designed prototype.
- Final presentation and assessment (1 week).

# Course activities



—————→ Sequence in course process  
-----→ Feedback

# Focus

- Presentation
  - Results, not process
  - Keep it short! (5'-10' max)
- Critique
  - Peer review
  - Tutor review ('design review')
  - You keep track of all comments (you will have to present how you addressed them)

# Focus

- Reflection
  - Work in groups
  - Adaptation of the PBL whiteboard (Hmelo-Silver, 2004):
    - facts, learning issues, ideas and action plan
  - Other design thinking methods:
    - Brainstorming, scenario-based design
  - Tutors challenge student thinking ('desk crit')
- Design
  - Conceptual and Detailed
  - Action planning, or Sketching, or Modeling, or Prototyping
  - You start in class, and continue during the week

# Focus

- Research
  - You are expected to search on your own for study material (mainly scientific papers) on every aspect of your work!
    - E.g. Storyboards, concept models, etc: how to? Find a couple of good papers about it!
    - Also, go to the library... there is a whole lot of good books on HCI, user interface design, interaction design, etc.



# Technologies

- Virtual World (VW)
  - (see instructions on the wiki)
- Wiki
  - <http://hci-dpsd.wikispaces.com>
- Prototyping tools
  - You are expected to make use of the VW, or other prototyping tools - there are dozens out there.
    - But your decision will affect the outcome of your design – you need to be careful

# Assessment

- Design report = 60%
- Student skills 40%, i.e.
  - Peer review = 20%
  - Tutor review = 20%

# What is expected for next time?

- Design problem:
  - ‘Lock’ the problem context; identify problem owner, target user groups and place of application; talk to problem owners, if necessary.
- Design research
  - Do a preliminary research on related systems, projects, etc.
  - Think for purposeful innovation
- VW:
  - Read the tutorial
  - Download Imprudence and connect from your laptop
  - Set your appearance, get acquainted with the workplaces
  - Make use of the tools: projector, annotations, etc.
  - You will make use of the PBL whiteboard and brainstorming next week.

# 1<sup>st</sup> week – Feb 21

- Course session
  - Course presentation
  - Virtual Worlds tutorial
  - Formation in 3 groups of 3
  - Free-form discussion about the project for each team
- Homework
  - (Read the tutorials - wiki)
  - Use the VW : your avatar's appearance and the tools
  - Brief research about gesture-based interaction (wiki, AUIs)
  - Study about design research methods (this is for next week's activity): find papers and books and bring them with you
  - Discuss in your group about a specific context for the project.
  - 'Lock' the context until next time

# 2<sup>nd</sup> week – Feb 28

- Course session
  - 10' for each team: context of problem
  - Rest of the course: Plan your design research in detail! (action planning)
    - PBL whiteboard – in the VW
    - Refer to a list of methods for design research – which will you use and why?
    - Allocate methods and tasks to individual members of the group. (e.g. a Gantt chart of methods, tasks within method and person)
    - Arrange the schedule for each result
    - Place the PBL white board in the VW
- Homework
  - Conduct design research...
  - Place results (models) in the VW (group workspaces) by Monday night
  - Study about the methods you will use, before you use them! Use your books and find papers...

# 3<sup>rd</sup> week March 6

- Course session
  - Presentation of design research findings: 10' for each team + 10' discussion
    - Tutors add questions and comments in the VW, next to the models presented
  - Review of action plan in the PBL whiteboard
- Homework
  - Continue the conduction of design research according to your action plan
  - Place results (models) in the VW (group workspaces) by Monday night
  - Study about the design research methods you will use in the next course, before you use them! Use your books and find papers...

# 4<sup>th</sup> week – March 13

- Course activities
  - Final presentation of design research: 10' presentation + 10' discussion
    - Tutors add questions and comments in the VW, next to the models presented
  - Brainstorming activity for conceptual design
- Homework
  - Provide corrections to your design research findings
  - Place main ideas out of brain storming in the VW by Monday night
  - Study about the methods you will use in the next course (scenarios/storyboards), before you use them! Use your books and find papers...

# 5<sup>th</sup> week – 20 March

- Course session
  - Present main ideas – 10' + 10' discussion for each group
  - Scenario-based design:
    - For each persona / user group...
      - Prepare 1 or 2 scenarios
      - Write them up
      - Make storyboards of future use
- Homework
  - Draw your storyboards in Google draw and place them in the VW by Monday night.
    - (or make a machinima in the VW!)
  - Study about the methods you will use in the next course (concept models/flow charts), before you use them! Use your books and find papers...



# 6<sup>th</sup> week – 27 March

- Course session
  - Presentations of storyboards (or machinima) – 10' + 10 discussion
  - Concept model and/or flow chart; follow guidelines (books and papers)
- Homework
  - Place concept model and/or flow chart in the VW by Monday night.
  - Study about the methods you will use in the next course (wireframes and online prototyping tools), before you use them! Use your books and find papers...

# 7<sup>th</sup> week – 3 April

- Course Session
  - Presentations of concept models/flow charts – 10' + 10 discussion
  - Detailed design and prototyping kick-off:
    - Sketch on paper; Try to reach to wireframes
    - Sketch user interfaces and user interactions (gestures, gaze) !
    - Follow flow chart and concept model; break up the work: start from 'main (home) screen'.
    - Adjust the brainstorming method; (a) at first sketch alone; (b) show main ideas without critique; (c) re-design;
- Homework
  - Place your design in an online prototyping tool and connect it to the VW by Monday night (23 April).
    - We will probably need a VW session within Easter Holidays.

# 8<sup>th</sup> week – 24 April

- Course Session
  - Pluralistic walkthrough (if many screens / flow is available) and comments – 15' for each group
  - Continue with detailed design and prototyping
    - More screens, corrections, etc.
    - More interactions (gestures, gaze)
    - Break up the work: vertical/horizontal prototyping? (by service, or flow chart level?)
- Homework
  - Place your prototype in an online prototyping tool and connect it to the VW by Monday night.

# 9<sup>th</sup> week – 1 May

- Course Session

- Pluralistic walkthrough (if many screens / flow is available) and comments – 15' for each group
- Continue with detailed design and prototyping
  - More screens, corrections, etc.
  - More interactions (gestures, gaze)
  - Break up the work: vertical/horizontal prototyping? (by service, or flow chart level?)

- Homework

- Place Place your prototype in an online prototyping tool and connect it to the VW by Monday night.
- Study about the usability evaluation methods you will use in the next course, before you use them! Use your books and find papers...

# 10<sup>th</sup> week – 8 May

- Course Session
  - Pluralistic walkthrough and comments – 15' for each group
  - Plan your usability evaluation
    - Goals and metrics, procedure, participants, tasks, instruments, practical issues (dates, availability, etc), reporting
- Homework
  - Place your usability evaluation plan and instruments (e.g. questionnaires) in the VW by Monday night.

# 11<sup>th</sup> week – 15 May

- Course Session
  - Review of the Usability evaluation plan and instruments - 15' for each group
  - If possible start user tests in class with tutors as users. Or plan your Final Project Report
    - To be delivered at the final course session
- Homework
  - Place your Final Project Report in the VW by Monday night.
  - Start user tests.
  - Prepare for conducting a couple of user tests in class (with tutors as users)

# 12<sup>th</sup> week – 22 May

- Course Session
  - Review of the Usability evaluation plan and instruments - 15' for each group
  - If possible start user tests in class with tutors as users. Or plan your Final Project Report
    - To be delivered at the final course session
- Homework
  - Place your Final Project Report in the VW by Monday night.
  - Start user tests.
  - Prepare for conducting a couple of user tests in class (with tutors as users)

# 13<sup>th</sup> week – 30 May

- Final presentation
- Course evaluation