Ever since the dawn of the video- and computer-game era people have thought that the power of the games medium could be harnessed to the goals of education.

In this course you will learn how to create simple (think Pacman), Web-based games called gamelets to address specified learning objectives.

**Topic include:**

- **Introduction to object-oriented design and programming:** You will learn to create object-oriented designs for educational activities, and implement these in the Visual AgenTalk programming language. The presentation will be appropriate for students with and without prior programming experience.

- **Defining learning objectives.** How can games be used to address specific learning objectives.

- **Cognitive task analysis:** Determining what knowledge and skills are used in an interactive experience.

- **Theory of fun:** What makes an interactive experience motivating and engaging?

- **Inclusiveness:** How can computer activities be made appealing to girls and boys, and to children who have had limited computer access as well as those with extensive access?

- **Aesthetics of interactive experiences:** What makes an interactive experience attractive and pleasant? Design of graphics and sound are important to the game experience.

- **Gamelet implementation:** Using the AgentSheets programming environment to create gamelets that can be deployed on the Web.

- **Collaborating with teachers and students:** our gamelets will address educational objectives suggested by teachers, and will be playtested in the teachers’ classrooms.

- **How to work effectively in teams:** Work with others to storyboard, design, prototype, user test and deploy games.