Course program and reading list
Semester 0 Year 2023

School: Baruch Ivcher School of Psychology

Guided Research Group project course in the Advanced Reality Lab

Lecturer:
Prof. Doron Friedman  doronf@runi.ac.il

Course No. : 8933  Course Type : Elective  Weekly Hours : 2  Credit: 2

Course Requirements : Final Paper  Group Code : 230893301  Language: English

Prerequisites

Prerequisite:
8000 - Introduction To Psychology

Students who took one of the courses listed below will not be allowed to register to the course Guided Research Group project course in the Advanced Reality Lab (8933):

3451 - Guided Research- Brain Research
8157 - Guided Research - Infant Development - Development of the caregiver, the infant and the relationship between the two.
8928 - Close relationships and sexuality: The new era; 2015-2016
8929 - Guided Research on social defense theory and its implication to interpersonal relationships
8930 - Guided Research cognition and aging
8931 - Guided Research research conducted by the members of DICE@IDC research center
8932 - Guided research on the psychology of intergroup conflict
8965 - Interpersonal synchrony and neuroscience
8966 - Attachment processes
8967 - Guided Research - Intervention for suicide prevention and strength development among students in middle and high schools in Israel
8968 - Hormones, Behavior and Chemo-Signaling
8969 - Guided Research - Yes we can communication aging and neuro
8970 - Guided Research - Mindfulness, psychological flexibility and the brain

Course Description

The Advanced Reality Lab (http://arl.idc.ac.il) is engaged in research and development of advanced social applications based on novel technologies, mostly virtual reality and artificial intelligence. The research is conducted in collaboration with researchers and industry partners as part of local and international projects. The laboratory is multidisciplinary and employs researchers and students from Computer Science, Psychology and Communication.

The Psychology students will be integrated in the laboratory as part of the projects operating at that time and will be integrated in all stages of the research: literature review, planning, running experiments and analyzing results. Students will receive instruction and guidance from the head of the lab or from the researchers in the lab. During the work, students will acquire basic knowledge in virtual reality and use virtual reality for research in the social sciences.

At the beginning of the year, students will receive instruction in the laboratory to experience and activate virtual reality experiences that we use for research. The laboratory maintains a record of protocols for running software for testing and analyzing results.

Students will be able to work alone or in pairs. At an early stage each student or couple will choose a project to integrate into, subject to logistical constraints (e.g., the availability of the researchers leading the project to certain days and hours). Students will be integrated throughout the study. In the second semester, a sub-study or sub-question from the general study will be defined for each student (or staff), and the student will have to submit a written report on the subject, similar to a seminar paper of 2 credits. The submission date is September 1. Empirical no later than the second semester and it is possible to leave the writing of the report for the summer.

No prior technical knowledge is required, but integration in the laboratory is not recommended for "technophobic" as virtual reality and artificial intelligence technologies developed in the laboratory are used, and patience and ability to resolve
faults and know how to seek relevant support from the laboratory technical staff are required.

**Expected projects 2022-2023 for psychology students (there will be a few more options):**

- Innovative therapeutic intervention through a dialogue with yourself in virtual reality (in collaboration with researchers from Europe, see link )
- Security and resilience program for depression and suicide (in collaboration with Prof. Anat Klomek Bronstein )
- Training of mental candidates for functioning in daily life (applied project with the Public Health Association)
- Human responses to artificial intelligence agents (text based and VR)
- Reducing stereotypes towards the elderly in the workplace

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**Course Goals**

The course will introduce Psychology students to using virtual reality as a ‘human behavior lab’, for both research and applications, such as training and therapy.

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**Grading**

50% – participation in project work throughout the year

50% – final report

Students will be required to serve as participants in VR experiments carried out in the lab throughout the year – 6 credits (each credit is a 20 minute experiment slot, most studies are 2-3 credits).

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**Reading List**

Reading material will be allocated per project.
General background:

