Psychophysiology and eye-tracking 2023/2024

Course title	Psychophysiology and eye-tracking
Instructor(s)	Magdalena Szmytke, MSc. (m.szmytke2@uw.edu.pl) Zuzanna Laudańska, MSc. (z.laudanska@uw.edu.pl)
Department:	Faculty of Psychology
Language	English
Course format	class + lab
Brief course description	The course covers methods used in psychophysiological research, including methods for measuring electrodermal and cardiac system responses, as well as eye-tracking methods. During the course, students will learn how to properly plan and conduct experiments employing the bespoke methods, and to analyze and report the results.
Literature	Holmqvist, K. Nyström, M., Andersson, R., Dewhurst, R., Jarodzka, H., van de Weijer, J. (2011). Eye tracking: A comprehensive guide to methods and measures. Oxford: Oxford University Press. Duchowski, A. T. (2007). Eye Tracking Methodology: Theory and Practice. London: Springer. Pasqualette, L., Kulke, L. Effects of emotional content on social inhibition of gaze in live social and non-social situations. Sci Rep 13, 14151 (2023). https://doi.org/10.1038/s41598-023-41154-w Bylianto, L.O., Chan, K.Q. Face masks inhibit facial cues for approachability and trustworthiness: an eyetracking study. Curr Psychol (2022). https://doi.org/10.1007/s12144-022-03705-8 Manuals for Tobii Studio software Pupil Labs NEON and Pupil Cloud online documentation https://docs.pupil-labs.com/neon/

Full description:	1. Class: Introduction to EEG (09.10.2023) M.Szmytke 2. Lab session: EEG data collection (16.10.2023) M.Szmytke 3. Class: The visual system & Introduction to eye tracking (23.10.2023) Z.Laudańska 4. Lab session & Class: Screen-based (Tobii XL60) and wearable (Pupil Labs Neon) eye trackers demonstration (30.10.2023) M.Szmytke & Z.Laudańska 5. Class: Planning eye-tracking experiments (06.11.2023) M.Szmytke 6. Lab session: Groups A and B preparing eye-tracking experiments & pilot data collection (13.11.2023) M.Szmytke 7. Lab session: Groups C and D preparing eye-tracking experiments & pilot data collection (20.11.2023) Z.Laudańska 8. Lab session: Groups A and B data collection (27.11.2023) Z.Laudańska 9. Lab session: Groups C and D data collection (04.12.2023 M.Szmytke 10. Lab session: Groups A and B data preprocessing & export (11.12.2023) M.Szmytke 11. Lab session: Groups C and D data preprocessing & export (18.12.2023) M.Szmytke 12. Lab session: Wearable eye-tracking data collection with Pupil Labs Neon (08.01.2024) Z.Laudańska 13. Lab session: Wearable eye-tracking data processing using Pupil Cloud (15.01.2024) Z.Laudańska 14. Presentation of results & Deadline for research reports submission (22.01.2024) M.Szmytke & Z.Laudańska

Learning outcomes	- students will to discuss the basis of psychophysiological responses and the relations between mental and psychophysiological processes (K_W05, K_W08) - be able to test hypotheses regarding the relations between psychophysiological and mental processes (K_W01; K_W02; K_W03; K_W06; K_W07; K_U01; K_K01) - be able to perform psychophysiological data collection (K_K02) - develop the skills required to process and analyze these data (K_0U3, K_U04) - present results of psychophysiological experiments in written format (K_U06, K_U07)
Assessment methods and assessment criteria:	Research report prepared in groups Presentation of the results (in groups)
Notes:	Attendance: 2 unexcused absences are allowed. Students may submit short written work to make up for one additional missed classes. Students must respect the principles of academic integrity. Cheating and plagiarism (including copying work from other students, internet or other sources) are serious violations that are punishable and instructors are required to report all cases to the administration.