This course aims at giving an overview of the different pathological contexts leading to sensory defects. The physiological conditions of the diseases will be explored with an emphasis on how research advances can lead to therapeutic progress.

Themes addressed:
- Neuropathology of diseases affecting vision: age-related macular degeneration, retinitis pigmentosa, dystrophies, and other retinal diseases, glaucoma, corneal diseases, Usher syndrome, and aging. New therapeutic avenues will be considered: cell therapy, gene therapy, implants, medical devices. Finally, handicap evaluation and rehabilitation techniques will be addressed.

Competences acquired at the end of the UE (concepts, methodology and tools):
Thanks to the involvement of contributors from academic research, clinical medicine, or the industry, participants will gain an understanding in the translational process underlining the transition from fundamental research to the development of therapeutic advances.

Prerequisites:
Basic knowledge in Neuroscience. This course is part of the Neuroscience program of the Master of Integrative Biology. This course is taking place during the second year of the program.

Evaluation modalities/100:
Ecrit: 70-100, Oral: 0-30
The evaluation should be conducted through a formal written examination. However, according to the number of participants, oral presentations could be organized.

Languages used:
- Dans les cours, TD, TP: English
- Dans les documents, supports: English

Localisation: Campus Pierre et Marie Curie