Studies Plan

EDPO - Photonics 2025-26

Core courses

Courses Language	Code	Section	Teacher	Exam	Credit
3D Printing with light *(Next time: Fall 2025)*					
E	*MICRO-722*	*EDPO*	*Moser* *Psaltis*	*Oral*	*1*
Advanced Photonics *(Next time June 2026)*					
E	*MICRO-725*	*EDPO*	*Achouri* *Bellouard* *Benea-Chelmus* *Fleury* *Invited lecturers* *Oguz*	*Written*	*2*
Introduction to wave scattering *(Next time: 2027)*					
E	*EE-737*	*EDPO*	*Fleury*	*Term paper*	*2*
Modern photovoltaic technologies *(Block course June 2026)*					
E	*PHYS-609*	*EDPO*	*Haug* *Heier* *Romanyuk*	*Oral presentation*	*2*
Nonlinear Optics in Waveguides *(November 17 to 28, 2025)*					
E	*PHYS-648*	*EDPO*	*Brès*	*Oral presentation*	*2*
Nonlinear Spectroscopy *(Next time Spring semester 2026 to be confirmed)*					
E	*PHYS-613*	*EDPO*	*Roke*	*Written*	*4*
Optical Computing *(Next time Spring semester 2026 to be confirmed)*					
E	*MICRO-608*	*EDPO*	*Moser* *Psaltis*	*Term paper*	*1*

Other doctoral courses (EDOC)

Courses Language	Code	Section	Teacher	Exam	Credit
Advanced biomedical imaging methods and instrumentation *(Next time: Fall)*					
E	*PHYS-719*	*EDPY*	*Hyacinthe* *Invited lecturers* *Mishkovsky*	*Term paper*	*4*
Fundamentals of superresolution optical microscopy and Scanning Probe Microscopy *(Next time: Spring)*					
E	*PHYS-631*	*EDPY*	*Sekatski*	*Multiple*	*2*
Optical MEMS and micro-optics *(Next time: in Winter 2025)*					
E	*MICRO-605*	*EDMI*	*Ataman*	*Written*	*1*
Physical Optics and Advanced Imaging *(Next time: Fall)*					
E	*PHYS-715*	*EDPY*	*Guizar* *Sicairos* *Invited lecturers*	*Oral presentation*	*3*
Research seminars in Electrical Engineering - FALL *(Next time: Fall 2025)*					
E	*EE-625(a)*	*EDEE*	*Yee*	*Oral presentation*	*1*
Research seminars in Electrical Engineering - SPRING *(Next time: Spring 2026; SAME COURSE EE-625 (a))*					
E	*EE-625(b)*	*EDEE*	*Yee*	*Oral presentation*	*1*

C : Courses, E : Exercice, P : Pratic courses, * : option courses / F : French courses, D : Deutsch courses, E : English Courses / Sum : Summer, Win : Winter

Master courses

Courses Language	Code	Section	Teacher	Exam	Credit
Applied Electromagnetics for Metamaterial Design *(.)*					
F	*MICRO-449*	*MT*	*Achouri*	*Oral*	*3*
Computational optical imaging					
E	*MICRO-421*	*MT*	*Psaltis*	*During the semester*	*4*
Deep learning for optical imaging *(Pas donné en 2025-26 Pas donné en 2024-25)*					
E	*MICRO-573*	*MT*		*During the semester*	*3*
Nonlinear Optics					
E	*PHYS-501*	*MT*	*Roke*	*Written*	*4*
Nonlinear optics for quantum technologies					
E	*PHYS-470*	*PH*	*Galland*	*Written*	*4*
Optical properties of materials					
E	*MSE-482*	*MX*	*Marchioro Nüesch*	*Written*	*3*
Photonic systems and technology					
E	*EE-440*	*EL*	*Brès*	*Written*	*4*
Physics of photonic semiconductor devices					
E	*PHYS-434*	*PH*	*Butté*	*Written*	*4*
Quantum optics and quantum information					
E	*PHYS-454*	*PH*	*Brantut*	*Written*	*6*
Selected topics in advanced optics					
E	*MICRO-420*	*MT*	*Martin*	*Oral*	*3*