Studies Plan

EDNE - Neuroscience 2026-27

Core courses

Courses				Exam	Credit
Language	*Code*	*Section*	*Teacher*		
Lecture series on scientific machine learning *(Next time: Fall 2026)*					
E	*PHYS-754*	*EDPY*	*Bitbol Carleo Ceriotti Harvey Schrimpf Schwaller Zdeborová*	*Oral presentation*	*2*
Training Rotation (EDNE) *(All year long -Training rotations must be approved by the supervisor, by the host laboratory, as well as by the doctoral program director)*					
E	*BIO-699(o)*	*EDNE*	*Gräff Profs divers*	*Project report*	*1*
Training Rotation (EDNE) *(All year long -Training rotations must be approved by the supervisor, by the host laboratory, as well as by the doctoral program director)*					
E	*BIO-699(n)*	*EDNE*	*Gräff Profs divers*	*Project report*	*1*
Training Rotation (EDNE) *(All year long -Training rotations must be approved by the supervisor, by the host laboratory, as well as by the doctoral program director)*					
E	*BIO-699(n)*	*EDNE*	*Gräff Profs divers*	*Project report*	*1*

Other doctoral courses (EDOC)

Courses				Exam	Credit
Language	*Code*	*Section*	*Teacher*		
Advanced biomedical imaging methods and instrumentation *(Next time: Fall)*					
E	*PHYS-719*	*EDPY*	*Hyacinthe Invited lecturers Just*	*Term paper*	*4*
Advanced Microscopy for Life Science *(Every year in September. To register, contact EDMS Administration)*					
E	*BIO-659*	*EDMS*	*Seitz*	*Oral presentation*	*3*
Basic principles of drug action at the nervous system *(Spring 2027, Room TBA (Rue Bugnon, Lausanne))*					
E	*CH-603*	*EDCH*	*Crettol Favre Kellenberger Steullet*	*Written*	*1*
Building Brain Resilience Synapsy Symposium					
E	*BIO-633*	*EDNE*	*Gräff Hummel Sandi*	*Project report*	*1*
Dynamics in brain-inspired neural networks *(Participants need a strong math or physics background. Previous exposure to theoretical neuroscience is mandatory. PhD students from math, physics, or neuroscience are welcome)*					
E	*BIOENG-612*	*EDNE*	*Gerstner*	*Term paper*	*2*
Global Stress & Resilience Meeting *(February 3-5, 2027. Registration via https://stress-and-resilience-meeting27.epfl.ch)*					
E	*BIO-635*	*EDNE*	*Invited lecturers Sandi*	*Written*	*2*

Neuroscience, Neurotechnology and Neuro-AI
(Examination procedure: Reg. assessement)

E	*BIO-644*	*EDNE*	*Petersen*	*Term paper*	*1*

Optimization and simulation
(Next time: Spring 2027)

E	*MATH-600*	*EDCE*	*Bierlaire*	*Multiple*	*4*

Responsible Conduct in Biomedical Research (Fall)
(Next time: Fall 2026)

E	*BIO-664(A)*	*EDBB*	*Glousker*	*Oral*	*1*

Responsible Conduct in Biomedical Research (Spring)
(Next time: Spring 2027)

E	*BIO-664(B)*	*EDBB*	*Glousker*	*Multiple*	*1*

Scientific writing for biomedical articles (Fall)
(Next time Spring 2028)

E	*BIO-686(A)*	*EDBB*	*Bless* *Le Duc*	*Project report*	*1*

Master courses

Courses				***Exam***	***Credit***
Language	*Code*	*Section*	*Teacher*		
Computational neurosciences: neuronal dynamics					
E	*NX-465*	*NX*	*Gerstner*	*Written*	*5*
Neural signals and signal processing					
E	*NX-421*	*NX*	*Micera* *Van De Ville*	*Written*	*6*
Neuroscience: behavior and cognition					
E	*BIO-483*	*SV*	*Blanke* *Herzog* *Sandi*	*Written*	*5*
Neuroscience: cellular and circuit mechanisms					
E	*BIO-482*	*SV*	*Crochet* *Petersen*	*During the semester*	*5*
Neuroscience: from molecular mechanisms to disease					
E	*BIO-480*	*SV*	*Gräff* *Mahul* *Mellier* *Schneider*	*Written*	*5*
Understanding statistics and experimental design					
E	*BIO-449*	*SV*	*Herzog*	*Written*	*4*