

## BIOELECTRONICS AND BIOMEDICAL MICROELECTRONICS

### COURSE ORGANIZATION

#### 1. COURSE ORGANIZATION 2025

“Bioelectronics and biomedical microelectronics” (EE519) is offered to master students registered in Génie électrique et électronique, Neuro-X, Microengineering, as well as in the minor in Internet of Things in EPFL and the minor in biomedical technologies as a regular and as an elective course, and is opened to master and doctoral students registered in other sections/programs upon request. EE519 is proposed in a weekly schedule consisting of three hours. The weekly time slot is allocated as class lectures, exercise sessions, or seminar sessions. The course topics are listed in the Course Book of EPFL.

##### 1.1 CLASS LECTURES

###### *Class schedule and documents*

Schedule	Room	Documents
Wednesday (12X) 13:15 - 15:00+	ELA2	A copy of lecture slides is handed out every week  Documents related to the course are available for download from following URL: <a href="http://moodle.epfl.ch/course/view.php?id=14535">http://moodle.epfl.ch/course/view.php?id=14535</a>  Course lectures are not based on a textbook; references are given for every topic.

##### 1.2 EXERCISES SESSIONS

Exercises are distributed on a regular basis, in order to complement class lectures. The exercises are recommended as homeworks following up a class lecture. Exercises are neither turned in, nor graded.

Nine exercise sessions are scheduled. Assistants will be available and answer questions during these sessions.

###### *Exercise sessions schedule*

Schedule	Room	Documents
Wednesday (9X) 15:15 - 16:00	DIA003 Zoom	Exercises are handed out at the beginning of class lectures, and are available for download from following URL: <a href="http://moodle.epfl.ch/course/view.php?id=14535">http://moodle.epfl.ch/course/view.php?id=14535</a>  Exercise solutions are handed out in class

A Q&A forum will be held; please check on the Moodle site.

#### 1.3 HOMEWORKS

The exercises including some simulation practice are proposed as homeworks.

In addition, readings will be assigned as weekly homeworks (Moodle course website). Homeworks are not corrected neither graded.

#### 1.4 SEMINAR SESSIONS

Two/three seminar sessions are scheduled. Students are given the opportunity of studying one selected topic into detail, and presenting the topic in class in the form of a short talk and short written report. Information related to the available topics and the corresponding literature will be given in class. Information regarding the detail organization of the seminar will be given in class (schedules, deliveries, etc.). The seminar short reports are part of the course teaching topics examined in the exam. Seminar sessions are graded.

###### *Seminar sessions schedule*

Schedule	Room	Documents
Wednesday (2/3X) 13:15 - 16:00	ELA2/DIA003  Zoom	Seminar sessions, preparation and seminars. Information pertaining to the seminar topics and organization, report templates, as well as the seminar reports will be available for download from following URL: <a href="http://moodle.epfl.ch/course/view.php?id=14535">http://moodle.epfl.ch/course/view.php?id=14535</a>

#### 1.5 COURSE GRADING

EE519 is graded based upon following elements:

- seminar sessions: 1/3 of the final grade;
- midterm (written exam, exercises only): 1/3 of the final grade;
- final examination (written exam, theory only): 1/3 of the final grade; held during the official winter examination session. The exact topics coverage and examination policy will be disclosed during the semester; please, read the comment related to the midterm.

COVID-19: a midterm will be permitted in 2025; should the EPFL Continuity Plan regarding operations under COVID-19 protection measures shift to a higher level than applied at the date of this document, then the midterm would become an independent part of the final written exam graded at 1/3 of the final course grade, and the final exam would consist of two parts, *i.e.*, part 1 (only practical exercises, graded 1/3) and part 2 (only theoretical questions, graded 1/3).

#### 1.6 INFORMATION AND COMMUNICATION

Following web site has been prepared to host documents, information, etc.:

<http://moodle.epfl.ch/course/view.php?id=14535>

Accessing this website will enroll you to the course. Your enrollment access code is: ee519xzY2025

You are kindly invited to check the updated content of the web site on a regular basis. Because of the uncertainty on the sanitary situation over the Fall of 2025, all information can only be provided using the Moodle website in the occurrence of shift of the EPFL Continuity Plan level.

Urgent and general significance information will be delivered by broadcast e-mail. Please make sure you have registered into IS-Academia, and have enrolled to the course.

## 1.7 DETAILED SCHEDULE

Please rigorously conform to following detail schedule. Lxx denotes the class lecture (first page of the slide set), HWxx denotes the homework,

Week	Date	Schedule	Location	On campus Group	Off-campus Groups	Part
1 (37)	10.09.2025	13:15-15:00	ELA2	N/A	N/A	Class lecture L01
		15:15-16:00	ELA2/DIA003	N/A	N/A	Class lecture L02
2 (38)	17.09.2025	13:15-15:00	ELA2	N/A	N/A	Class lecture L02
		15:15-16:00	DIA003	N/A	N/A	Exercise session HW01
3 (39)	24.09.2025	13:15-15:00	ELA2	N/A	N/A	Class lecture, L03a
		15:15-16:00	DIA003	N/A	N/A	Exercise session HW02
4 (40)	01.10.2025	13:15-15:00	ELA2	N/A	N/A	Class lecture L03b
		15:15-16:00	DIA003	N/A	N/A	Exercise session HW09
5 (41)	08.10.2025	13:15-15:00	ELA2	N/A	N/A	Class lecture L04
		15:15-16:00	DIA003	N/A	N/A	Exercise session HW03
6 (42)	15.10.2025	13:15-15:00	ELA2	N/A	N/A	Class lecture L04, L05
		15:15-16:00	ELA2/DIA003	N/A	N/A	L05, Selection of seminar topic
- (43)	22.10.2025	<i>School holiday</i>				
7 (44)	29.11.2025	13:15-15:00	ELA2	N/A	N/A	Class lecture L06
		15:15-16:00	DIA003	N/A	N/A	Exercise session HW04
8 (45)	05.11.2025	13:15-15:00	ELA2	N/A	N/A	Class lecture L06, (L08)
		15:15-16:00	DIA003	N/A	N/A	Exercise session HW05
9 (46)	12.11.2025	13:15-15:00	ELA2	N/A	N/A	Class lecture L08
		15:15-16:00	DIA003	N/A	N/A	Exercise session HW08
10 (47)	19.11.2025	13:15-15:00	INR219 / ELA2	N/A	N/A	Midterm written examination
		14:15-16:00	ELA2/DIA003	N/A	N/A	Exercise session HW06
11 (48)	26.11.2025	13:15-14:45	ELA2	N/A	N/A	Class lecture L08, L10b
		15:10-16:00	ELA2/DIA003	N/A	N/A	Seminars preparation
12 (49)	03.12.2025	13:15-16:00	ELA2	N/A	N/A	Seminars
		15:10-16:00	ELA2/DIA003	N/A	N/A	Seminars
13 (50)	10.12.2025	13:15-16:00	ELA2	N/A	N/A	Seminars
		15:10-16:00	ELA2/DIA003	N/A	N/A	Seminars
14 (51)	17.12.2025	13:15-16:00	ELA2	N/A	N/A	Seminars
		15:10-16:00	ELA2/DIA003	N/A	N/A	Seminars