



### INDUSTRIAL TOPICS IN MICROELECTRONICS AND PHOTONICS

<b>Anno immatricolazione</b>	2020/2021
<b>Anno offerta</b>	2021/2022
<b>Normativa</b>	DM270
<b>SSD</b>	ING-INF/01 (ELETTRONICA)
<b>Dipartimento</b>	DIPARTIMENTO DI INGEGNERIA INDUSTRIALE E DELL'INFORMAZIONE
<b>Corso di studio</b>	ELECTRONIC ENGINEERING
<b>Curriculum</b>	PERCORSO COMUNE
<b>Anno di corso</b>	2°
<b>Periodo didattico</b>	Annualità Singola (27/09/2021 - 17/06/2022)
<b>Crediti</b>	3
<b>Ore</b>	32 ore di attività frontale
<b>Lingua insegnamento</b>	English
<b>Tipo esame</b>	ORALE
<b>Docente</b>	GIULIANI GUIDO (titolare) - 1 CFU MANSTRETTA DANILO - 2 CFU
<b>Prerequisiti</b>	The course completes the training of electronic engineers specializing in microelectronics. Attendance of courses related to microelectronics is a recommended prerequisite.
<b>Obiettivi formativi</b>	The course has two main objectives. First and foremost, it wants to provide the students an introduction to the industrial reality that exists near the University of Pavia in the area of Microelectronics. This is done through a series of seminars held by Design Managers of several Multinational Semiconductor Companies that have established themselves in the Pavia/Milano area. The goal is to present the Company profile and explain the opportunity offered to the students and expectations the company has toward them. The second objective is to present some advanced topics in Microelectronics emphasizing the

	<p>practical designer approach that is typical of the industrial environment. This is done through a series of seminars given by the instructor.</p>
<b>Programma e contenuti</b>	<p>The course includes seminars from industrial managers and lectures from the instructor on advanced topics of relevance for industry.</p> <p>Seminars from industrial Managers Two hours seminars from Design Managers will be offered from e.g. the following companies: Huawei, TI, Maxim, AMS, STM, Infineon, Micron</p> <p>Lectures by the instructor Review, with an intuitive explanation, of the behavior of the MOS transistor including relevant second order effects and figures of merit, with emphasis on the designer perspective. Application to intuitive design of CMOS amplifiers Advanced topics on circuits and systems for frequency synthesis and clock generation. Seminars on research topics in the area of microelectronics, with examples of achievements from PhD students of the research labs of University of Pavia.</p>
<b>Metodi didattici</b>	<p>Lectures organized as seminars, either from the instructor or invited speakers.</p>
<b>Testi di riferimento</b>	<p>The adopted material is written in English and is made up of slides prepared by the instructor and provided by the invited speakers</p>
<b>Modalità verifica apprendimento</b>	<p>The exam consists in the evaluation of a report on one of the topics presented to the students and questions on the topics presented by the instructor.</p>
<b>Altre informazioni</b>	<p>=</p>
<b>Obiettivi Agenda 2030 per lo sviluppo sostenibile</b>	<p><a href="#">Gli obiettivi</a></p>