



UFRPE

Catálogo de Disciplinas Ofertadas – UFRPE *Courses Catalogue*

Mobilidade Virtual

Virtual Mobility

Sobre a modalidade Mobilidade Acadêmica Virtual

A Mobilidade Acadêmica Virtual oferecerá, em língua estrangeira, disciplinas da grade curricular da Graduação a estudantes de graduação da UFRPE e a estudantes de universidades parceiras internacionais, na modalidade virtual, de forma a proporcionar aos participantes uma experiência de internacionalização e vivência global.

On the Virtual Academic Mobility

The Virtual Academic Mobility Program will offer, in a foreign language, classes from the undergraduate curriculum to undergrad students from UFRPE and international partners, in the virtual modality, providing participants with international and global experience.

Sobre a modalidade Aula Global

A Aula Global tem o objetivo de oferecer disciplinas em língua estrangeira a estudantes de graduação da UFRPE e a estudantes de universidades parceiras internacionais, ministradas por docentes da UFRPE em parceria com docentes de instituições estrangeiras, de forma a proporcionar aos participantes uma experiência de imersão em diferentes aspectos acadêmicos e interculturais.

On the Global Classroom Modality

The objective of the Global Classroom modality is to offer classes in foreign languages to undergrad students from UFRPE and international partners, ministered by professors from UFRPE in partnership with professors from foreign institutions, providing participants with an immersive experience in different intercultural and academic aspects.

Mobilidade Acadêmica Virtual

Virtual Academic Mobility

Design principles applied to strategic innovation (Princípios do Design aplicados à inovação estratégica)

Unidade de Educação a Distância e Tecnologia

The subject has the pedagogical aim of analyzing design principles in the perspective of their applications to strategic innovation. Throughout the lessons, design methods and techniques will be presented to students and potential applications to businesses and organizations will be discussed, highlighting currently relevant notions to the fields of Management and Technology such as industry 4.0, entrepreneurial creativity and design for public services. Content will be delivered through online synchronous and asynchronous activities comprising reading and discussion of set texts in online forums, weekly zoom / google meetings, video lessons and the collaborative design of a business plan as the main class project.

Professor Felipe de Brito Lima

30 participants

30 class-hours

Wednesday, 19h30 – 21h30

Google Classroom

<https://forms.gle/8Gmoc7Gr14H9YNDx7>

Educational Entrepreneurship and innovation (Empreendedorismo e inovação educacional)

Unidade de Educação a Distância e Tecnologia

The subject has the pedagogical aim of assessing principles for promoting educational entrepreneurship and innovation. In the course of the lessons, key concepts related to educational entrepreneurship will be discussed with emphasis on socially impactful and pedagogically disruptive innovation, addressing global and currently relevant issues for Education such as EdTech companies and partnerships with industry and third sector organizations. Content will be delivered through online synchronous and asynchronous learning activities comprising reading and discussion of set texts in online forums, weekly zoom / google meetings, vídeo lessons and the collaborative design of a business plan as the main class project.

Professor Felipe de Brito Lima

30 participants

30 class-hours

Thursday, 19h30 – 21h30

Google Classroom

<https://forms.gle/JioLcXZFosTbCzMg7>

Mobilidade Acadêmica Virtual

Virtual Academic Mobility

General Physics 4 (Física Geral 4)

Departamento de Física

This course will cover the same subject as the regular “General Physics 4”;. It aims to develop in students the ability to understand the propagation of electromagnetic waves, the description of light propagation through geometric optics and the physical principles that govern physical optics. We will review the Maxwell equations leading to the wave equations. The properties of electromagnetic waves, such as polarization and transport of energy and linear momentum are addressed. Basic concepts, definitions and equations that govern the propagation, interference and diffraction of electromagnetic waves are presented and applied to practical optical devices and problems. We will emphasize the importance of optical devices and explore measurements applications in modern

Professor Martine Chevrollier

40 participants

45 class-hours

Zoom/ Sigaa

Tuesday, 8h-11h

<https://forms.gle/xQsc1JZy2MD5HJdR8>

Strategic Management Process (Administração Estratégica)

Unidade Acadêmica de Serra Talhada

This course aims to contribute to the learning of the strategic management process that involves the steps of analyzing the internal and external environment, establishing objectives, formulating strategies, implementing strategies and strategic control. All these steps will be presented seeking relevant elements for the endogenous and exogenous development of organizations focused on management, business, leadership, innovation, and entrepreneurship. At the end of the course, the student is expected to be able to describe a strategic management process, the relationships with the business environment and the tools necessary for the organization to become more competitive.

Professor Luiz Cláudio Ribeiro Machado

20 participants

15 class-hours

Google Classroom/
Youtube

<https://forms.gle/u8Z3B8PJW8pJwXCJ8>

Aula Global

Global Classroom

General Physics 2 (Física Geral 2)

Unidade Acadêmica do Cabo
de Santo Agostinho

In this subject, the students will learn the following concepts: mechanic of the fluids, oscillations, waves and fundamentals of thermodynamics.

The course introduces the fundamental concepts of optical engineering to undergraduate students in physics or engineering. Basic calculations and concepts are emphasized. This course introduces each of the following basic areas of optics, from an engineering point of view: geometrical optics, image quality, flux transfer, sources, detectors, and lasers. This course will enable the student to: compute the following image properties: size, location, fidelity, brightness; estimate diffraction-limited imaging performance; explain optical diagrams; describe the factors that affect flux transfer efficiency; compute the spectral distribution of a source; describe the difference between photon and thermal detectors; calculate the signal to noise performance of a sensor; differentiate between sensitivity and responsivity; explain the main characteristics of laser beams: monochromaticity, collimation, and propagation.

Fundamentals of Electro-Optics

Departamento de Física

**Professor
Mohammad Reza
Dousti**

40 participants
45 class-hours
Monday, 9h-11h
Google Meet/
Google Classroom
<https://forms.gle/JyLbAYC4erjQXsUe6>

**Professor Michael
Lee Sundheimer**

20 participants
15 class-hours
Friday, 15h-17h30
Google Classroom/
Zoom/ Google
Meet/WhatsApp
<https://forms.gle/1MiNqEEPByEZz2ZU8>