

# **MICROCREDENCIALES**

## **Hands-on Short Course on**

### **“3D Bioprinting for Pharmaceutical and Biomedical Applications”**

#### **Course Description:**

Three-dimensional (3D) bioprinting is an emerging technology with the potential to produce tissues, organs, and pharmaceutical products. As such, it is garnering significant interest in the field of human healthcare. This course aims to provide knowledge and technical skills in bioprinting that are suitable for pharmaceutical and biomedical applications. The course covers the fundamentals and latest advancements in bioprinting technology and its translational applications. The two-day program is ideal for students, researchers, clinicians, and industrial personnel interested in learning about this technology from global leaders in academia and industry and receiving hands-on training in bioprinting.

#### **Course Schedule:**

##### **Day 1 (October 23, 2025)**

Forenoon Session (10:00 to 13:00)

Module 1: An Introduction to Bioprinting

Module 2: Biomaterials, Cells and Bioink Formulation

Module 3: 3D Bioprinting Methods and Techniques

Afternoon Session (14:00 to 17:00)

Module 4: Extrusion-based Bioprinting and its Applications

Module 5: Bioprinting in Pharmaceuticals

Module 6: Bioprinting in Regenerative Medicine

##### **Day 2 (October 24, 2025)**

Forenoon Session (10:00 to 13:00)

Module 7: Bioprinting Demo-1

Afternoon Session (14:00 to 17:00)

Module 8: Bioprinting Demo-2

Closing Session: Assessment and Evaluation

#### **Key benefits of this course:**

- To acquire knowledge on bioprinting and their applications.
- To learn from experienced instructors from academia and industry.
- To experience the transformative power of hands-on learning.

- To identify new start-ups in healthcare areas.
- To initiate academic and industrial collaboration.

**Course Fee:**

84.96 euros

**Date:**

October 23-24, 2025.

**Venue:**

Centro de investigación Lascaray ikergunea

University of the Basque Country (UPV/EHU) - Campus de Álava.

Address: Avenida Miguel de Unamuno, 3, 01006 Vitoria-Gasteiz, Araba, Spain.

**Course Instructors:**

Dr. Murugan Ramalingam, UPV/EHU

Dr. Denis Scaini, UPV/EHU

Dr. Sandra Ruiz Alonso, UPV/EHU

Dr. Laura Saenz del Burgo, UPV/EHU

Dr. Jon Zarate, UPV/EHU

Dr. Shrike Zhang, Harvard University (on-line)

Dr. Sean Murphy, Wake Forest University (on-line)

Dr. Thomas Webster, InnoShapes Inc, USA (on-line)

**Course Directors:**

Dr. Murugan Ramalingam (murugan.ramalingam@ehu.eus)

Dr. Jose Luis Pedraz (joseluis.pedraz@ehu.eus)

Faculty of Pharmacy, UPV/EHU