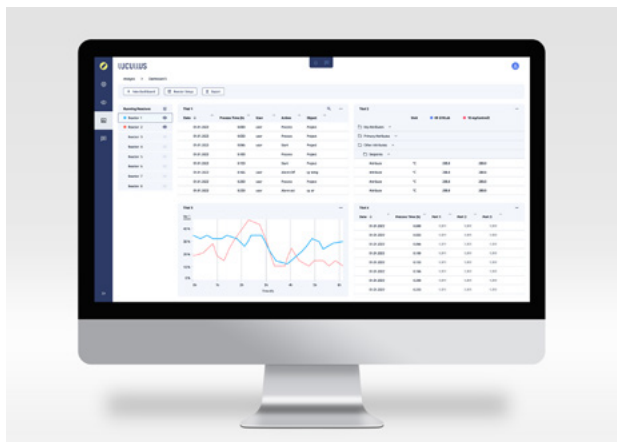


# Advancing Bioprocessing with Automation and Digitalization



## COURSE OVERVIEW

Bioprocessing is an increasingly important industry to meet the needs of humanity to produce complex biological medicines, to enable new disease treatments by means of cell and gene therapy or tackle the food production demographical and environmental challenges among others. Regardless of the application, the course *Advancing Bioprocessing with Automation and Digitalization* addresses a common factor for all: To fill the knowledge gap in bioprocessing environments stakeholders to reach automate and digitalize to embrace industry 4.0 standards (a.k.a Bioprocessing 4.0). These stakeholders may face barriers to implement automation and digitalization in their bioprocess workflows due to lack of knowledge in digital technology. Moreover, different regulations (such as GMP or ISO) apply to these environments, which can complicate things even more. Thus, this course is aimed to lab scientists, process engineers, or any stakeholder in a bioprocessing environment willing to explore the possibilities, benefits (and pitfalls) that embracing bioprocess

automation and digitalization has in their day-to-day operations and facilities. The course will reinforce these concepts by showcasing the usage of Lucullus as an automated and digitalized ecosystem, ultimately providing the attendees the tools to kickstart, extend or improve their current approach to bioprocessing 4.0.

## KEY TAKEAWAYS

Provide acquaintance and understanding of the benefits and possibilities of automation and digitalization applied to bioprocessing

Lucullus and/or Numera for bioprocess automation and digitalization. The benefits of an integrated Lucullus ecosystem

Use cases and practical exercises to inspire participants to apply the course content in their own bioprocess environments

## KEY TOPICS

Fundamentals of automation and digitalization. Towards bioprocessing 4.0.

Lucullus for hardware and software integration. The Lucullus ecosystem units and interfaces: REST API, AI/ML integration, cloud, data historians, electronic lab notebooks (ELNs)

Use cases of on-field bioprocess automation and digitalization.

Practical exercises to improve system-thinking

COURSE TYPE	NO. OF ATTENDEES	DURATION	PRICE
online	no limit	1 day	€ 750 / person