

Supplement to Call for DDLS Research School Courses to be given 2027

Here is an unedited compilation of course topics suggested for DDLS RS 2027. Suggestions come from DDLS RS PhD students, DDLS Fellows, DDLS Research School Management Group (RSMG)

Note that this list may serve as inspiration and is not vetted or endorsed by RS Directors nor RSMG. The list is in an ad-hoc and unprioritized order. You are not restricted to submit proposals within these topics. Your course proposal may be in a topic not listed.

- Introduction courses to even out knowledge gaps [RA specific]
- Introduction to biology - for students with non-biology background [RA specific]
- Introduction to structural biology
- Explainable AI in life sciences
- Interpretability of deep learning models in practice
- LLM - how does it work how to run them, architecture
- Unsupervised learning
- Swedish system course, how to be a (new) student in Sweden?
- Science communication
- Leadership in scientific context
- How to find and secure grants
- Biological network theory (graphs)
- Basics of probability theory
- Bayesian statistics, Markov chains...
- Data and plot visualization
- Next Generation Sequencing
- Spatial transcriptomics
- Bacterial bioinformatics, application/inspirational lecture
- Advance machine learning
- Basics of molecular biology and high-throughput technology for computer scientists
- Epidemiology, microbiome
- Machine learning/AI applied to medical images; approaches to omics data; machine learning in python; data visualization; translation
- Metagenomics
- AMR, One Health and systems thinking, experimental evolution, integrative data analysis, approaches to predicting ecology and evolution
- Systems bio, multi-scale modeling
- Microbial community analysis, Antibiotic resistance applications, Large-scale data analysis
- Omics Analysis/Integration, Modeling
- Industrial applications of data-driven life science
- Journal Clubs (RA specific)