

M2 - Systems & synthetic biology

- ▶ formation initiale
- ▶ formation continue



Présentation

[Consulter la page du Master 2 sur le site de l'Université Paris-Saclay](#)

Programme

Semestre 3

Refresher Courses

- Introduction to Biology
- Introduction to Mathematics and Computer Science for Biology

Core Modules 17.5 ECTS

- Genome Engineering 3.5 ECTS
- Metabolic Engineering 3.5 ECTS
- Biosafety and Ethical Questions on Synthetic Biology 2 ECTS
- Synthetic Biology Practical Course 5 ECTS
- Biological Parts and Devices 3.5 ECTS

Elective Modules 12.5 ECTS

- Choix 1

1 option(s) au choix parmi 11

- Computational Inference and Modeling of Biological Networks 2.5 ECTS
- Design of Experiments and Machine Learning in Synthetic 2.5 ECTS
- Network Systems : Modeling and Analysis 2.5 ECTS
- Environmental Biotech and Upstream Processing 2.5 ECTS
- Statistical Analysis of Large Scale Gene Expression Data 2.5 ECTS
- Chips for Molecular Evolution 2.5 ECTS
- Nanobiology 2.5 ECTS
- Rational Protein Engineering 2.5 ECTS
- Computational Protein Design 2.5 ECTS
- Cell Factory Design 2.5 ECTS
- Industrial Biotech and Downstream 2.5 ECTS
- Choix 2

1 option(s) au choix parmi 11

- Computational Inference and Modeling of Biological Networks 2.5 ECTS
- Design of Experiments and Machine Learning in Synthetic 2.5 ECTS
- Network Systems : Modeling and Analysis 2.5 ECTS
- Environmental Biotech and Upstream Processing 2.5 ECTS

- Statistical Analysis of Large Scale Gene Expression Data 2.5 ECTS
- Chips for Molecular Evolution 2.5 ECTS
- Nanobiology 2.5 ECTS
- Rational Protein Engineering 2.5 ECTS
- Computational Protein Design 2.5 ECTS
- Cell Factory Design 2.5 ECTS
- Industrial Biotech and Downstream 2.5 ECTS
- Choix 3

1 option(s) au choix parmi 11

- Computational Inference and Modeling of Biological Networks 2.5 ECTS
- Design of Experiments and Machine Learning in Synthetic 2.5 ECTS
- Network Systems : Modeling and Analysis 2.5 ECTS
- Environmental Biotech and Upstream Processing 2.5 ECTS
- Statistical Analysis of Large Scale Gene Expression Data 2.5 ECTS
- Chips for Molecular Evolution 2.5 ECTS
- Nanobiology 2.5 ECTS
- Rational Protein Engineering 2.5 ECTS
- Computational Protein Design 2.5 ECTS
- Cell Factory Design 2.5 ECTS
- Industrial Biotech and Downstream 2.5 ECTS
- Choix 5

1 option(s) au choix parmi 11

- Computational Inference and Modeling of Biological Networks 2.5 ECTS
- Design of Experiments and Machine Learning in Synthetic 2.5 ECTS
- Network Systems : Modeling and Analysis 2.5 ECTS
- Environmental Biotech and Upstream Processing 2.5 ECTS
- Statistical Analysis of Large Scale Gene Expression Data 2.5 ECTS
- Chips for Molecular Evolution 2.5 ECTS
- Nanobiology 2.5 ECTS
- Rational Protein Engineering 2.5 ECTS
- Computational Protein Design 2.5 ECTS
- Cell Factory Design 2.5 ECTS
- Industrial Biotech and Downstream 2.5 ECTS
- Choix 4

1 option(s) au choix parmi 11

- Computational Inference and Modeling of Biological Networks 2.5 ECTS
- Design of Experiments and Machine Learning in Synthetic 2.5 ECTS
- Network Systems : Modeling and Analysis 2.5 ECTS
- Environmental Biotech and Upstream Processing 2.5 ECTS
- Statistical Analysis of Large Scale Gene Expression Data 2.5 ECTS
- Chips for Molecular Evolution 2.5 ECTS
- Nanobiology 2.5 ECTS
- Rational Protein Engineering 2.5 ECTS

- Computational Protein Design	2.5 ECTS
- Cell Factory Design	2.5 ECTS
- Industrial Biotech and Downstream	2.5 ECTS

Semestre 4

Research Internship	30 ECTS
- Research Internship	30 ECTS