PhD courses 2021/2022, FCUL & IST

1st semester

FCUL

- Mathematical Analysis
  - Ordinary and Functional Differential Equations (Teresa Faria & Carlota Gonçalves)
  - Evolution Problems (José Francisco Rodrigues)
  - Dynamical Systems (M/D) (Jorge Buescu)
- Algebra
  - Inverse Semigroups (Gracinda Gomes)
  - Representation Theory of Groups (Carlos André)
  - Combinatorics (M/D) (Maria Manuel Torres & Luís Gouveia)
  - Semigroups, Automata and Languages (M/D) (Mário Branco)
- Geometry and Topology
  - Riemann Surfaces and Integrable Models (Davide Masoero)

IST

- Differential Equations and Dynamical Systems
  - Infinite Dimensional Dynamical Systems (João Paulo Teixeira)
  - Topics in Differential Equations and Dynamical Systems (Simão Correia)
- Algebra and Topology
  - Homotopy Theory (Michael Paluch)
- Geometry
  - Differential Geometry (João Pimentel Nunes)

- Mathematical Physics
  - Conformal Field Theory (Ricardo Schiappa)
- Real Analysis and Functional Analysis
  - Algebras of Operators (Amélia Bastos)
- Numerical Analysis and Applied Analysis
  - Mathematical and Numerical Methods in Fluid Dynamics (Ana Leonor Silvestre)
  - Numerical Methods for Ordinary Differential Equations (Pedro Lima)
  - Numerical Analysis of Integral Equations (Teresa Diogo)
- Probability and Statistics
  - Advanced Topics in Statistical Inference (Paulo Soares)
  - Advanced Topics in Multivariate Analysis (Rosário Oliveira)
  - Advanced Topics in Probabilities and Stochastic Processes (Manuel Morais)

2nd semester

FCUL

- Mathematical Analysis
  - Calculus of Variations (James Kennedy & Cristian Barbarosie & Nicolas Van Goethem)
  - Biomathematics (M/D) (Carlota Rebelo & Alessandro Margheri)
  - Partial Differential Equations (M/D) (José Francisco Rodrigues)
- Algebra
  - Quantum Groups (Ângela Mestre)
  - Rings, Algebras and Representations (M/D) (Carlos André)
- Geometry and Topology
  - Lie Groups and Lie Algebras (M/D) (Orlando Neto)
- Logic and Computation
  - Model Theory (Mário Edmundo)
  - Topics in Mathematical Logic (Fernando Ferreira)

IST

- Differential Equations and Dynamical Systems
  - Calculus of Variations and Partial Differential Equations (José Matias)
  - Harmonic Analysis (Diogo Silva)
  - Stochastic Differential Equations (Ana Bela Cruzeiro)
- Algebra and Topology
  - Category Theory (Pedro Resende)
  - Topics in Algebra and Topology (Pedro Resende)
- Geometry
  - Knot Theory (Pedro Lopes)
  - Symplectic Geometry (Leonardo Macarini)
  - Advanced Topics in Geometry (Leonardo Macarini)

- Mathematical Physics
  - Mathematical Relativity (José Natário & Jorge Silva)
  - String Theory (Gabriel Lopes Cardoso)
- Real Analysis and Functional Analysis
  - Topics in Operator Theory: Riemann-Hilbert problems (Cristina Câmara)
  - Topics in Operator Algebras: Gelfand non-commutative theories and algebras of operator sequences (Pedro A. Santos)