The course aims to teach students how to use computational methods to solve and analyze dynamic economic models. The first part of the course covers standard tools of numerical analysis that are useful in economics (minimization of functions, root-finding, interpolation, approximation of functions, integration, simulation). The second part shows how to use these tools to study dynamic economic problems in macroeconomics, finance, labor economics, public finance, and industrial organization. This part of the course pays special attention to methods for solving stochastic dynamic programming problems and for computing equilibria in economic models with heterogeneous actors.

**Semester offered:** Spring