

Group: IMTH

Degree: Master

Course: Research in Revenue Management

1. Credits: 3

2. Grade & Semester: Second year, first semester

3. Prerequisites: N/A

4. Course objectives:

The primary goal of the course is to demonstrate how the core operations research tools (stochastic modeling, optimization, data analytics) come together in various pricing and revenue management problems. The course aims to teach students a variety of techniques that should prove useful across many diverse application domains. In terms of the fundamental methodologies, the course will also expose students to several fundamental operations research methodologies, including dynamic programming, approximation techniques, choice modeling, bandit paradigms and models of firm competition. Finally, in terms of research problems, this is an exciting time for pricing and revenue management, with new applications and e-commerce platforms driving a host of new research directions and providing data and testbeds for validation.

5. Course description/outline:

Revenue Management is defined as “the art and science of selling the right product to the right customer at the right time for the right price”. It is one of the youngest and yet, most influential disciplines of operations research. It combines probabilistic modeling, optimization techniques and data analytics to examine how different firms should make capacity and price decisions. The field is based on a well-developed body of research, which has proved successful in practice across many industries. Simultaneously however, with the advent of online commerce and increased use of smartphones, it is in the process of undergoing rapid transformation. The final goal of this course is to provide an introduction to the theory and practice of revenue management and also provide a glimpse of the frontiers of the field.