

## *The Hebrew University of Jerusalem*

### *Syllabus*

## **INTRODUCTION TO OPERATIONS RESEARCH - 65520**

*Last update 19-08-2020*

*HU Credits:* 3

*Degree/Cycle:* 1st degree (Bachelor)

*Responsible Department:* Hotel, Food & Tourism Management

*Academic year:* 0

*Semester:* 1st Semester

*Teaching Languages:* Hebrew

*Campus:* Rehovot

*Course/Module Coordinator:* Dr. Yizhaq Minchuk

*Coordinator Email:* [Yizhaq.Minchuk@mail.huji.ac.il](mailto:Yizhaq.Minchuk@mail.huji.ac.il)

*Coordinator Office Hours:* mon. 16-17, by appointment

*Teaching Staff:*

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Dr. Yizhak Minchuk,  
Mr. Achiya Cohen

Course/Module description:

Techniques and models for managerial decision making, especially for the allocation of scarce resources to obtain maximum utility, e.g. profit. The course deals with decision making models, formulation and solution of linear programming problems, and models for planning service systems and their evaluation.

Course/Module aims:

The course object is to provide tools for formulation, solving and implementation of mathematical models, used for analysis of complex problems in industry and management. Students will know how to build models, use methods and algorithms to solve them, and use suitable computer programs.

Learning outcomes - On successful completion of this module, students should be able to:

Familiar with basic concepts and models for decision making, linear programming and queuing systems,  
Analyze the design, management  
Evaluate such systems

Attendance requirements(%):

20

Teaching arrangement and method of instruction: lectures and exercises

Course/Module Content:

Introduction to Operations Research  
Linear Programming  
Introduction to Decision Theory  
Introduction to Game Theory  
Systems Analysis Services

Required Reading:

Articles

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Additional Reading Material:

1. Hillier and Liebermann: Introduction to Operations Research.
2. Wagner: Principles of Operations Research.

Course/Module evaluation:

End of year written/oral examination 65 %

Presentation 0 %

Participation in Tutorials 0 %

Project work 0 %

Assignments 10 %

Reports 0 %

Research project 25 %

Quizzes 0 %

Other 0 %

Additional information:

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