

# **Master of Arts in Statistics**

**Department of Statistics**  
**The Herta and Paul Amir**  
**Faculty of Social Sciences**  
Head of Program: **Prof. Ori Davidov**

## **Program description**

During the last decade there has been a dramatic increase in the size and complexity of data collected by both Industry and the Academic community. Examples include, genomic and proteomic data on one hand, and social media and electronic commerce data on the other. The availability of such vast quantities of data is having a large impact on both academic research and business practices. In particular, it is changing the nature and focus of the statistical profession.

The Department of Statistics at the University of Haifa is dedicated to providing its students with a rigorous, modern and up to date education in this exciting era for our profession. We focus on fundamentals while teaching the newest methods and applications. We emphasize computational know-how, the understanding of statistical ideas, and the ability to apply them. We train our graduates to analyze and draw meaningful conclusions from data, a skill that is becoming ever more important. Our goal is to see our graduates assume leading roles, within the profession, whatever their career choices may be.

## **What you will study**

The International Master of Arts program in Statistics at the University of Haifa in Israel is dedicated to providing you with a rigorous, modern, and up-to-date education in Statistics. You will be trained to analyze and draw meaningful conclusions from data collected in a variety of application areas. This includes clinical trials, finance, genomics, and social media and web/mobile applications. The ability to reason with data is a skill that is becoming ever more important in the current age of Big Data, Data Science and the Digital economy.

The cutting-edge curriculum emphasizes computational know-how and the fundamental and core themes of the statistical sciences. At the same time it is also mathematically rigorous and challenging. The program will prepare

you for further academic studies as well as for data related leadership roles in various industries including High-Tech, E-commerce, Healthcare, Research and Development and more.

The one-year program (non-thesis track) is taught in English over 3 consecutive semesters. A thesis track is also offered to those students who are interested in continuing to PhD. Your academic studies at the University of Haifa will be enhanced with networking opportunities with students from Israel and all over the world as well as by vibrant life on and off campus, which will acquaint you with Israeli culture, language, and start-up mentality.

### **Courses:**

The Non-Thesis Track lasts for three consecutive semesters over 12 months. In addition to a non-thesis track a Thesis Track is offered, which takes five semesters over 24 months. The courses include:

- ◆ Probability
- ◆ Applied statistics I
- ◆ Algorithms for data analysis
- ◆ Stochastic process with applications
- ◆ Statistical Inference
- ◆ Applied statistics II
- ◆ Statistical learning theory
- ◆ The analysis of large and high dimensional data sets
- ◆ Statistical Consulting Project

### **Program Duration:**

The duration of the program is one academic year, spread over three semesters, from October to the end of July. All coursework for the program should be completed during the first two semesters, while the third semester is dedicated to supervised independent projects.

### **Evaluation:**

The final grade will be assessed as follows

### **Thesis Track**

Course grades – 50%

Final project – 50%

### **Non-Thesis Track**

Course grades – 80%

Final project – 20%

### **Diploma:**

Master of Arts in Statistics

### **Further information regarding the program:**

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