

## Academic Program

- The M.Sc. program is a two-year program.
- The chairperson of the teaching committee is:  
**Dr. Iris Visoli-Fisher**
- Students are required to complete the following courses during the two-year program:

Subject	Credits
<b>A. Mandatory course:</b> Academic Writing	2
<b>B. Mandatory Courses within the Track of Study</b>	
1. Mandatory Courses	3
2. Seminars	1
3. Thesis Writing	12
<b>C. Elective Courses Within the Track of Study</b> (including General Courses such as Math, Statistics etc.)	20
<b>D. Courses outside the track of study or Introductory Courses</b>	4
<b>Total</b>	42

### A. Mandatory Course:

Course #	Lecturer	Subject	Credits
001-2-7006	Dr. Shai Arnon and Prof. Jack Gilron	Summarizing, Writing and Presenting Scientific Data	2

or

Course #	Lecturer	Subject	Credits
001-2-0153	Dr. Chris Arnush and Prof. Jack Gilron	Writing a Scientific Paper	2

### B. Mandatory Courses within the Track of Study:

#### 1. Mandatory Courses

Course #	Lecturer	Subject	Credits
001-2-7004	Prof. Yair Zarmi	Solution Methods in Mathematics (Mandatory course for students who will begin their master's studies on October 2017 and on)	3

## B. Mandatory Courses within the Track of Study (Continuation):

### 2. Seminars

Students are required to attend Departmental Seminars (one seminar per semester).

Course #	Lecturer	Subject	Credits
001-2-4444	Prof. Golan Bel (coordinator)	Departmental Seminar A (first year)	0.25
001-2-4454		Departmental Seminar B (first year)	0.25
001-2-4464		Departmental Seminar A (second year)	0.25
001-2-4474		Departmental Seminar B (second year)	0.25

### 3. Thesis Writing

In the third and fourth semester, students must register for Thesis Writing.

Course #	Lecturer	Subject	Credits
001-2-9991		Thesis Writing A	6
002-2-9992		Thesis Writing B	6

Students who have completed the above Thesis Writing courses and who continue their studies for a fifth semester must register for the following course:

Course #	Lecturer	Subject	Credits
001-2-1000		Thesis Writing – Continuation	0

## C. Elective Courses Within the Track of Study:

Course #	Lecturer	Subject	Credits
001-2-4010	Prof. Georgy Burde	Topics in Environmental Fluid Mechanics – A	3
001-2-4012	Prof. Isaak Rubinstein	Electro-Diffusion of Ions and Membrane Desalination Processes	3

### C. Elective Courses Within the Track of Study (Continuation):

Course #	Lecturer	Subject	Credits
001-2-4010	Prof. Georgy Burde	Topics in Environmental Fluid Mechanics – A	3
001-2-4012	Prof. Isaak Rubinstein	Electro-Diffusion of Ions and Membrane Desalination Processes	3
001-2-4013	Prof. Boris Zaltzman	Partial Differential Equations in Mathematical Physics	3.5
001-2-4016	Dr. Leah Orlovsky	Geography of Desertification	2
001-2-4019	Prof. Georgy Burde	Application of Symmetry Methods to Problems in Mathematical Physics	3
001-2-4022	Prof. Ehud Meron	Pattern Formation and Spatial Ecology	3
001-2-4024	Prof. Karnieli & Dr. Panov	Satellite Image Processing	3
001-2-4026	Prof. Yossi Ashkenazy	Introduction to the Physics of Atmospheres	3
001-2-4027	Prof. Yossi Ashkenazy	Introduction to Geophysical Fluid Dynamic	3
001-2-4028	Prof. Arnon Karnieli	Remote Sensing for Agriculture, Rangelands, and Forestry (no prerequisites required)	3
001-2-4029	Prof. Yossi Ashkenazy	Introduction to Statistics and Probability	3
001-2-4031	Prof. Isaak Rubinstein	Topics in Physico-Chemical Hydrodynamics and Electrodifusion (A)	2
001-2-4033	Prof. Isaak Rubinstein	Topics in Physico-Chemical Hydrodynamics and Electrodifusion (B)	2
001-2-4034	Prof. Georgy Burde	Application of Symmetry Methods to Problems in Mathematical Physics - Continuation Course	3
001-2-4036	Prof. Georgy Burde	Topics in Environmental Fluid Mechanics – B	3
001-2-4037	Prof. Amos Zemel	Optimization Methods	3

### C. Elective Courses Within the Track of Study (Continuation):

Course #	Lecturer	Subject	Credits
001-2-4040	Prof. Arnon Karnieli	Remote Sensing in the Changing Environment	3
001-2-4043	Prof. Leonid Prigozhin	Introduction to Numerical Solutions of Partial Differential Equations	3
001-2-4045	Prof. Eugene Katz	Physics of Solar Cells	3
001-2-4046	Prof. Eugene Katz	Advanced Concepts in Photovoltaic Devices	3
001-2-4047	Dr. Iris Visoli-Fisher	Surface Science for the Environment	3
001-2-4048	Dr. Avi Niv	Physical Optics – Outline	3
001-2-4049	Dr. Arik Yochelis	Nonlinear Dynamical Aspects of Electrochemical Systems	3
001-2-4050	Dr. Iris Visoli-Fisher	Nano-Materials and Nano-Technology for Sustainable Energy	3
001-2-4051	Dr. Avi Niv	Physical Optics	2
001-2-4053	Dr. Avi Niv	Thermodynamics of Radiating Systems and the Optics of Solar Cells	3
001-2-4054	Prof. Golan Bel	Statistical analysis	3
001-2-4055	Prof. Golan Bel	Random Walks	3
001-2-5030	Dr. Nurit Agam	Hydrometeorology	3
001-2-7004	Prof. Yair Zarmi	Solution Methods in Mathematics	3
001-2-7007	Prof. Amos Zemel	Statistical Methods	3
001-2-7717	Prof. Yossi Askenazy	Topics in Physical Oceanography. Intensive course at The Interuniversity Institute for Marine Sciences, Eilat-IUI	2

## D. Courses outside the track of study or Introductory Courses

Students are required to complete 4 credits either from other tracks of study or from the list of introductory courses below:

Course #	Lecturer	Subject	Credits
001-2-1103	Dr. Hadas Hawlena	Introduction to Dryland Ecology	4
001-2-0017	Prof. Ron Kasher	Polymer Science and Polymeric Membranes	3
001-2-5041	Dr. Menachem Sklartz	Practical Bioinformatics for Environmental Studies	3
001-2-7010	Dr. Menachem Sklartz	Hands-on Introduction to R: Programming, Graphing and Statistical Exploration	3