

# HYDROLOGY AND WATER QUALITY

## TIME TABLE FOR THE SPRING SEMESTER (B)

### ACADEMIC YEAR 2021/2022

#### A. Mandatory Courses:

Students are required to complete the course below **in their second/third semester** of studies:

Course No.	Lecturer	Subject	Credits	Day	Time	Campus	Buildin g	Room	Remarks
001-2-0153	Prof. Shai Arnon, Dr. Scott Hansen	Writing a Scientific Paper	2	Mon	09:00-10:45	Sede Boqer	School	1	To be taken in the student's second semester
001-2-0153	Prof. Shai Arnon, Dr. Scott Hansen	Writing a Scientific Paper - Goup 2	2	Tue	13:15-15:00	Sede Boqer	School	1	To be taken in the student's second semester

Students are required to complete the courses from the list below during in their **first** semester of studies:

**900-5-5001** Educational Software on Getting to Know the Law for the Prevention of Sexual Harassment - MANDATORY for all students once per degree. The course is in the MOODLE system (**Hebrew** - <https://moodle2.bgu.ac.il/moodle/> ; **English** - <http://moodle2.bgu.ac.il/?lang=en>). Registration: **Hebrew** - <https://bgu4u.bgu.ac.il/pls/scwp!/app.gate?app=csh> ; **English** - <https://bgu4u.bgu.ac.il/pls/scwp!/app.gate?app=csh&lang=en> .

**900-5-2002** Training in Chemical & Biological Safety - MANDATORY for Students Who Work in Chemical and Biological Labs (Students should take the course every year). Registration for the course is in the first semester of each academic year. The course is in the MOODLE system **Hebrew** - <https://moodle2.bgu.ac.il/moodle/> and **English** - <http://moodle2.bgu.ac.il/?lang=en>.

**470-2-0100** The Care and Use of Animals in Research - MANDATORY for Students Who Work with Animals once per degree

# **MICROBIOLOGY AND WATER QUALITY**

## **B. Core Courses:**

Students are required to complete all courses from the list below\*.

Course No.	Lecturer	Subject	Credits	Day	Time	Campus	Building	Room	Remarks
001-2-0003	Dr. Oded Nir	Chemistry of Water	3	Tue	10:15-13:00	Sede Boqer	School	1	0

\* Students who previously completed courses that were similar/equivalent to certain courses listed above are required to complete the remainder of the required core course credits by enrolling in courses either from the list of Mandatory Core Courses (C) or from the list of Elective Courses (D) or from a combination of both (with the approval of the student's supervisor and the chairperson of the teaching committee).

## **C. Departmental Seminars, Student's Seminars and Thesis Writing - Mandatory Courses:**

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

Starting spring 2022, students will register to the same course number each semester

Course No.	Lecturer	Subject	Credits	Day	Time	Campus	Building	Room	Remarks
001-2-5555	Dr. Avner Ronen and Dr. Scott K. Hansen (Coordinator)	Departmental Seminar - Hydrology	0	Wed	13:00-14:00	Sede Boqer	Water Inst.	Seminar Room	0

Students are required to attend Student Seminars (one seminar per year, on the spring semester).

Course No.	Lecturer	Subject	Credits	Day	Time	Campus	Buildin	Room
001-2-9995	Prof. Zeev Ronen (Coordinator)	Students Seminar (first year)	0.5	Wed	09:00-10:00	Sede Boqer	Water Inst.	Seminar Room
001-2-9996		Student Seminar (second year)						

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

Course No.	Lecturer	Subject	Credits
001-2-9991	--	Thesis Writing A	6
001-2-9992	--	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 this course.

Course No.	Lecturer	Subject	Credits
001-2-1000	--	Thesis Writing - Continuation	0

**D. Mandatory Core Courses Within the Track of Study:**

Students are required to complete at least 7 credits\*\*.

Course No.	Lecturer	Subject	Credits	Day	Time	Campus	Building	Room	Remarks
001-2-0004	Prof. Noam Weisbrod	Vadose Zone Hydrology	2.5	Mon	08:30-11:00	Sede Boqer	Water Inst.	Seminar	The course will be taught if at least six students are enrolled
001-2-5060	Dr. Roy Bernstein	Membrane Preparation and Characterization	2	Thu	15:15-17:00	Sede Boqer	Water Inst.	Seminar	Substitute Lecturer
001-2-5062	Dr. Edo Bar-Zeev	Integrated Projects on Environmental Impacts 1	3	Tue	10:15-13:00	Sede Boqer	Water Inst.	Seminar	0

\*\* Mandatory Core Courses can be also selected as Elective Courses (on top of the required 7 credits).

**E. Elective Courses:**

This is a partial list.

The student is allowed to select other courses that are related to the area of his/her research with the approval of the supervisor.

Students are required to complete at least 8 credits.

Course No.	Lecturer	Subject	Credits	Day	Time	Campus	Building	Room	Remarks
001-2-0009	Prof. Avraham Be'er	Physics of Bacterial Communities	3	Mon	11:15-14:00	Sede Boqer	Water Inst.	Seminar Room	0
001-2-0015	Dr. Roy Bernstein	Membrane Preparation and Characterization	3	Tue	13:15-16:00	Sede Boqer	Water Inst.	Seminar Room	0
001-2-4033	Prof. Isaak Rubinstein	Electro-Diffusion of Ions and Membrane Desalination Processes	2	Flexible - according to the schedules of the students					0
001-2-5012	Prof. Zeev Ronen	Introduction for microorganisms in the environment	2	Thu	10:15-12:00	Sede Boqer	Water Inst.	Seminar Room	0
001-2-5034	Prof. Yoram Oren	Environmental Oriented Electrochemistry	2	Thu	09:15-11:00	Sede Boqer	Water Inst.	Seminar Room	0
001-2-5038	Prof. Amit Gross	Water Sanitation	3	Thu	12:15-15:00	Sede Boqer	Water Inst.	Seminar Room	0

**E. Elective Courses (Continuation):**

Course No.	Lecturer	Subject	Credits	Day	Time	Campus	Building	Room	Remarks
001-2-5040	Dr. Eli Zaady	Soil Microbial Ecology (upon the request of at least 5 students)	2	Thu	08:30-10:00	Sede Boqer	Water Inst.	Seminar Room	0
001-2-5063	Dr. Edo Bar-Zeev	Lab-course: New Methods in Biofilm Characterization	3	An intensive course offered during the SUMMER break, =====, Water Building, Seminar Room. Course registration takes place during the registration period for the <b>SUMMER</b> semester.					<b>Summer Course</b>
001-2-5069	Prof. Amit Gross, Prof. Osnat Gilor, Prof. Ron Kasher, Prof. Edo Bar-Zeev	Water & the Environment: Current challenges and solutions	3	Online course - Information was published					0
001-2-5070	Dr. Scott K. Hansen	Practical Data Science and Machine Learning	3	Wed	10:15-13:00	Sede Boqer	Water Inst.	Seminar Room	0
001-2-5071	Prof. Gideon Oron	Management and optimization of natural resources and water systems	2	Wed	14:15-16:00	Sede Boqer	Water Inst.	Seminar Room	0
001-2-5129	Prof. Noam Weisbrod	Rural Water Development (Field Trip) - Prerequisite: Course # 001-2-5029 Rural Water Development (minimum 12 students)	2	<b>Field Trip during the Summer Break. Course registration takes place during the registration period for the SPRING semester.</b>					<b>will be held assuming Covid-19 restrictions will allow</b>
001-2-6002	Dr. Aviva Peeters	Theory and Applications of Geographic Information Systems (GIS)	3	Thu	09:15-12:00	Sede Boqer	Water Inst.	Computer Room	0

### **F. General Courses:**

Students are required to complete no more than 2-3 credits.

Course No.	Lecturer	Subject	Credits	Day	Time	Campus	Building	Room	Remarks
001-2-1200	Prof. Simon Barak & Dr. Buzi Raviv	BGU Radio Academy	*2						*students must take two semesters beginning in Semester A and fulfil all course requirements

## **WATER RESOURCES**

### **B. Core Courses:**

Students are required to complete all courses from the list below\*.

Course No.	Lecturer	Subject	Credits	Day	Time	Campus	Building	Room	Remarks
001-2-0003	Dr. Oded Nir	Chemistry of Water	3	Tue	10:15-13:00	Sede Boqer	School	1	0

\* Students who previously completed courses that were similar/equivalent to certain courses listed above are required to complete the remainder of the required core course credits by enrolling in courses either from the list of Mandatory Core Courses (C) or from the list of Elective Courses (D) or from a combination of both (with the approval of the student's supervisor and the chairperson of the teaching committee).

### **C. Departmental Seminars Student's Seminars and Thesis Writing - Mandatory Courses:**

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

Starting spring 2022, students will register the same course number each semester

Course No.	Lecturer	Subject	Credits	Day	Time	Campus	Building	Room	Remarks
001-2-5555	Dr. Avner Ronen and Dr. Scott K. Hansen (Coordinator)	Departmental Seminar - Hydrology	0	Wed	13:00-14:00	Sede Boqer	Water Inst.	Seminar Room	0

Students are required to attend Student's Seminars (one seminar per year, on the spring semester).

Course No.	Lecturer	Subject	Credits	Day	Time	Campus	Buildin	Room
001-2-9995	Prof. Zeev Ronen	Students Seminar (first year)	0.5	Wed	09:00-10:00	Sede Boqer	Water Inst.	Seminar Room
001-2-9996		Student Seminar (second year)						

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

Course No.	Lecturer	Subject	Credits
001-2-9991	--	Thesis Writing A	6
001-2-9992	--	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 this course.

Course No.	Lecturer	Subject	Credits
001-2-1000	--	Thesis Writing - Continuation	0

**D. Mandatory Core Courses Within the Track of Study:**

Students are required to complete at least 7 credits\*\*.

Course No.	Lecturer	Subject	Credits	Day	Time	Campus	Building	Room	Remarks
001-2-0004	Prof. Noam Weisbrod	Vadose Zone Hydrology	2.5	Mon	08:30-11:00	Sede Boqer	Water Inst.	Seminar Room	The course will be taught if at least six students are enrolled
001-2-5004	Prof. Ofer Dahan, Prof. Noam Weisbord	Field Methods in Hydrology	3	Mon	16:15-19:00	Sede Boqer	Water Inst.	Seminar Room	0
001-2-5060	Dr. Roy Bernstein	Membrane Preparation and Characterization	2	Thu	13:15-16:00	Sede Boqer	Water Inst.	Seminar Room	Substitute Lecturer

\*\* Mandatory Core Courses can be also selected as Elective Courses (on top of the required 7 credits).

**E. Elective Courses:**

This is a partial list.

The student is allowed to select other courses that are related to the area of his/her research with the approval of the supervisor.

Students are required to complete at least 8 credits.

Course No.	Lecturer	Subject	Credits	Day	Time	Campus	Building	Room	Remarks
001-2-0015	Dr. Roy Bernstein	Membrane Preparation and Characterization	3	Tue	13:15-16:00	Sede Boqer	Water Inst.	Seminar Room	0
001-2-2039	Prof. Jirka Simunek (coordinated by Prof. Naftali Lazarovitch)	Advanced Modeling of Water Flow and Contaminant Transport in Porous Media Using HYDRUS Software Packages	2	A 3-day intensive course offered during the fall break, 1-3.03.2022, 8:00-19:00. Course registration will be conducted by the Akis office.			The course will be held contingent upon arrival of the guest lecturer from abroad		
001-2-5034	Prof. Yoram Oren	Environmental Oriented Electrochemistry	2	Thu	09:15-11:00	Sede Boqer	Water In	Seminar Room	0
001-2-5038	Prof. Amit Gross	Water Sanitation	3	Thu	12:15-15:00	Sede Boqer	Water Inst.	Seminar Room	0
001-2-5062	Dr. Edo Bar-Zeev	Introduction to Biofilms	3	Tue	10:15-13:00	Sede Boqer	Water In	Seminar Room	0
001-2-5063	Dr. Edo Bar-Zeev	Lab-course: New Methods in Biofilm Characterization	3	An intensive course offered during the SUMMER break, =====, Water Building, Seminar Room. Course registration takes place during the registration period for the <b>SUMMER</b> semester.			<b>Summer Course</b>		
001-2-5070	Dr. Scott K. Hansen	Practical Data Science and Machine Learning	3	Wed	10:15-13:00	Sede Boqer	Water Inst.	Seminar Room	0
001-2-5071	Prof. Gideon Oron	Management and optimization of natural resources and water systems	2	Wed	14:15-16:00	Sede Boqer	Water Inst.	Seminar Room	0
001-2-5100	Dr. Genady Carmi	Introduction to Surface Hydrology	2	Tue	08:30-10:00	Sede Boqer	Water Inst.	Seminar Room	0
001-2-5129	Prof. Noam Weisbrod	Rural Water Development (Field Trip) - Prerequisite: Course # 001-2-5029 Rural Water Development (nimum 12 students)	2	<b>Field Trip during the Summer Break. Course registration takes place during the registration period for the SPRING semester.</b>			<b>will be held assuming Covid-19 restrictions will allow</b>		

**E. Elective Courses (Continuation):**

Course No.	Lecturer	Subject	Credits	Day	Time	Campus	Building	Room	Remarks
001-2-5069	Prof. Amit Gross, Prof. Osnat Gilor, Prof. Ron Kasher, Prof. Edo Bar-Zeev	Water & the Environment: Current challenges and solutions	3						Online course - Information was published 0
001-2-6002	Dr. Aviva Peeters	Theory and Applications of Geographic Information Systems (GIS)	3	Thu	09:15-12:00	Sede Boqer	Water Inst.	Computer Room	0

**F. General Courses:**

Students are required to complete no more than 2-3 credits.

Course No.	Lecturer	Subject	Credits	Day	Time	Campus	Building	Room	Remarks
001-2-1200	Prof. Simon Barak & Dr. Buzi Raviv	BGU Radio Academy	*2						A five day intensive course offered during the FALL break in Sede Boker, February 13-17, 2022 . Class No. 1, School Building 48 *students must take two semesters beginning in Semester A and fulfil all course requirements

# DESALINATION AND WATER TREATMENT

## B. Core Courses:

Students are required to complete all courses from the list below\*.

Course No.	Lecturer	Subject	Credits	Day	Time	Campus	Building	Room	Remarks
001-2-0003	Dr. Oded Nir	Chemistry of Water	3	Tue	10:15-13:00	Sede Boqer	School	1	0

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## C. Departmental Seminars and Thesis Writing - Mandatory Courses:

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

Starting spring 2022, students will to register the same course number each semester

Course No.	Lecturer	Subject	Credits	Day	Time	Campus	Building	Room	Remarks
001-2-5555	Dr. Avner Ronen and Dr. Scott K. Hansen (Coordinator)	Departmental Seminar - Hydrology	0	Wed	13:00-14:00	Sede Boqer	Water Inst.	Seminar Room	0

Students are required to attend Student's Seminars (one seminar per year, on the spring semester).

Course No.	Lecturer	Subject	Credits	Day	Time	Campus	Buildin	Room
001-2-9995	Prof. Zeev Ronen	Student Seminar (first year)	0.5	Wed	09:00-10:00	Sede Boqer	Water Inst.	Seminar Room
001-2-9996		Student Seminar (second year)						

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

Course No.	Lecturer	Subject	Credits
001-2-9991	--	Thesis Writing A	6
001-2-9992	--	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 this course.

Course No.	Lecturer	Subject	Credits
001-2-1000	--	Thesis Writing - Continuation	0

**D. Mandatory Core Courses Within the Track of Study:**

Students are required to complete at least 5 credits\*\*.

Course No.	Lecturer	Subject	Credits	Day	Time	Campus	Building	Room	Remarks
001-2-5038	Prof. Amit Gross	Water Sanitation	3	Thu	12:15-15:00	Sede Boqer	Water Inst.	Seminar Room	0
001-2-5060	Dr. Roy Bernstein	Membrane Preparation and Characterization	2	Thu	13:15-16:00	Sede Boqer	Water Inst.	Seminar Room	Substitute Lecturer

\*\* Mandatory Core Courses can be also selected as Elective Courses (on top of the required 5 credits).

**E. Elective Courses:**

This is a partial list. The student is allowed to select other courses that are related to the area of his/her research with the

Students are required to complete at least 5 credits.

Course No.	Lecturer	Subject	Credits	Day	Time	Campus	Building	Room	Remarks
001-2-0004	Prof. Noam Weisbrod	Vadose Zone Hydrology	2.5	Mon	08:30-11:00	Sede Boqer	Water Inst.	Seminar Room	The course will be taught if at least six students are enrolled
001-2-0009	Prof. Avraham Be'er	Physics of Bacterial Communities	3	Mon	11:15-14:00	Sede Boqer	Water Inst.	Seminar Room	0
001-2-0015	Dr. Roy Bernstein	Membrane Preparation and Characterization	3	Tue	13:15-16:00	Sede Boqer	Water Inst.	Seminar Room	0
001-2-5004	Prof. Ofer Dahan, Prof. Noam Weisbord	Field Methods in Hydrology	3	Mon	16:15-19:00	Sede Boqer	Water Inst.	Seminar Room	0
001-2-5012	Prof. Zeev Ronen	Biodegradation Process of Synthetic Organic Compound in Water Soil	2	Thu	10:15-12:00	Sede Boqer	Water Inst.	Seminar Room	0
001-2-5034	Prof. Yoram Oren	Environmental Oriented Electrochemistry	2	Thu	09:15-11:00	Sede Boqer	Water Inst.	Seminar Room	0

**E. Elective Courses (Continuation):**

Course No.	Lecturer	Subject	Credits	Day	Time	Campus	Building	Room	Remarks
001-2-5040	Dr. Eli Zaady	Soil Microbial Ecology (upon the request of at least 5 students)	2	Thu	08:30-10:00	Sede Boqer	Water Inst.	Seminar Room	0
001-2-5062	Dr. Edo Bar-Zeev	Introduction to Biofilms	3	Tue	10:15-13:00	Sede Boqer	Water Inst.	Seminar Room	0
001-2-5070	Dr. Scott K. Hansen	Practical Data Science and Machine Learning	3	Wed	10:15-13:00	Sede Boqer	Water Inst.	Seminar Room	0
001-2-5071	Prof. Gideon Oron	Management and optimization of natural resources and water systems	2	Wed	14:15-16:00	Sede Boqer	Water Inst.	Seminar Room	0
001-2-5100	Dr. Genady Carmi	Introduction to Surface Hydrology	2	Tue	08:30-10:00	Sede Boqer	Water Inst.	Seminar Room	0
001-2-5129	Prof. Noam Weisbrod	Rural Water Development (Field Trip) - Prerequisite: Course # 001-2-5029 Rural Water Development (nimum 12 students)	2	<b>Field Trip during the Summer Break. Course registration takes place during the registration period for the SPRING semester.</b>					<b>will be held assuming Covid-19 restrictions will allow</b>
001-2-6002	Dr. Aviva Peeters	Theory and Applications of Geographic Information Systems (GIS)	3	Thu	09:15-12:00	Sede Boqer	Water Inst.	Computer Room	0

**E. Elective Courses (Continuation):**

Course No.	Lecturer	Subject	Credits	Day	Time	Campus	Building	Room	Remarks
001-2-5069	Prof. Amit Gross, Prof. Osnat Gilor, Prof. Ron Kasher, Prof. Edo Bar-Zeev	Water & the Environmnet: Current challeneges and solotions	3	Online course - Information was published					0

**F. General Courses:**

Students are required to complete up to 4 credits.

Course No.	Lecturer	Subject	Credits	Day	Time	Campus	Building	Room	Remarks
001-2-1103	Dr. Hadas Hawlena	Introduction to Dryland Ecology	4	Wed	12:30-15:30	Sede Boqer	School	1	0
001-2-1200	Prof. Simon Barak & Dr. Buzi Raviv	BGU Radio Academy	*2		A five day intensive course offered during the FALL break in Sede Boker, February 13-17, 2022 . Class No. 1, School Building 48				*students must take two semesters beginning in Semester A and fulfil all course requirements