

Ramat Hanegev | Theoretical Studies | General Information:

All students have access to our LMS, A Moodle based remote learning system which includes:

- 1. Username and personal password for each student.
- 2. Access to content presentations, submitting online tasks,
- 3. Chat groups/discussion group for communicating with the lecturer...
- 4. Evaluation tools tests, follow-ups, and reports.
- 5. Performance system and attendance monitoring.

*The system allows for a quick transition to remote learning when necessary, including recorded and/or online lessons.

Theoretical learning and evaluation:

In each course there is a final exam, and the possibility of a second date is given if necessary.

In the "Computer Applications" course, a complete presentation is reviewed and marked.

In the entrepreneurship course, a business plan is submitted – written with guidance of the teacher.

At the end of the academic year, the students submit a final research paper - the evaluation of the work is done by the professional advisor / lecturer.

At the end of the school year, students receive a graduation certificate and a grade sheet.



Courses:

	BGU Credit	Standard
	program*	program
orientation	8	8
entrepreneurship	24	16
Soil, water, and fertilizers	32	16
Plant physiology and biology	32	16
Israel	8	8
Computer skills and presentations	24	16
Poultry management	16	16
Aquaculture	16	16
Plant protection and Pesticides	32	16
Intro to plant genetics	16	16
Agricultural Finance	-	16
Organic Agriculture	32	24
Methods and standards in modern horticulture	16	24
Post-Harvest	16	16
Irrigation and New Technologies in Agriculture	16	24
Dairy farm management	16	24
Methodology (Final Project)	16	16



General Training

	Aacademic hours
Safety in agriculture/ Elisha Zurgil	3
Working in Heights/Vladimir ofegenden	3
Regulations and Prevention of Sexual Harassment / Jessica Pearlman	2
Multicultural associations /Avital Sharon	2

Study Related Trips:

Ramat Negev Desert Agro-Research Center.

- 1. Technology aspects and irrigation systems.
- 2. Soil types
- 3. Experiments and crops

The Jacob Blaustein Institutes for Desert Research

- 1. Labs and research
- 2. Greenhouses and experiments

Local Dairy farm

Local organic farm



Syllabus Outline

<u>Introduction to Israel</u> Iris Barazani | MSs Geography

- 1. Jewish History and Religion
- 2. The pioneers, the establishment of Israel and the Israeli-Palestinian Conflict
- 3. The Israeli Society
- 4. Israel landscapes, Types of tourism

Introduction to Israel Boaz Dreyer, MSs Business

- 1. geography, demography and politics and religion
- 2. time of the patriarchs

- 3. Israel history 1917 today
- 4. conflicts

Organic Agriculture Maya Toren Ms.c

- Introduction to organic agriculture,
 Sustainable methods and other practices in organic agriculture.
- 2. Health and fertility of the soil.
- 3. Nutrition, compost, and waste recycling.

- 4. Plant protection, pest and weed management.
- 5. Organic livestock.
- 6. Organic agriculture through the economic lens, Industry and regulation.



Methods in modern horticulture Anat Shahaf |B.Agr| shulabuli@gmail.com

- Introduction to tomato. History, classification, morphology, The different cultivars – determinate vs indeterminate, different varieties, pollination, and tomato plant protection.
- 2. Controlled environment:
 Greenhouse, net house, open field, irrigation, fertilizers and soil preparation, soil types Generally about undercover crops, with examples from tomato, pepper, cucumber, and strawberry.
- 3. Pepper (Capsicum) The different ways of growing, structures (greenhouse, net house). A sample for a growing protocol from beginning to end. periods of the year, water, fertilizers, shade net, bees. Pepper Plant protection.
- 4. Strawberry Tissue culture, new plants production, periods in the year, "Flying strawberry", irrigation, fertilizers, soil. Strawberry- plant-protection.
- 5. Field Trip

Soil, Water and Fertilizers Natalie De Falco | Ph.D

- 1. Basic soil concepts: Soil definition-(Geologic definition, Component definition, Traditional definition)
- 2. Soil composition -Soil Organic matter, soil formation, Soil physical properties. Fertilization and plant mineral nutrition
- 3. Introductions to fertilization:
 Types of fertilizers, Plant mineral
 nutrition, Deficiencies of minerals
 in plants, Fertilizer calculations.
- 4. Compost- use and production, soil health, Soil salinity, Soil erosion, Soil acidity, Soil compaction, waterlogging.



5. soil water, Water retention forces, Soil moisture content. Water flow in soils.

6. Lab: Soil-water demonstrations

Entrepreneurship

Boaz Dreyer, MSc Business

- 1. The entrepreneur, the business idea, and the family business
- 2. The business plan and the market

- 3. An introduction to the farming business
- 4. First steps in marketing
- 5. preparing an individual business plan

Advanced computer skills

Jessica Pearlman, B.A | lessica@mop-rng.org.il

- 1. Introduction and Basics.
- 2. Internet
- 3. Search engines-improve searching skills and Social Networks
- 4. Microsoft Office: Word Processing Basic:
- 5. Microsoft Office: Power point:
- 6. Microsoft Office: Excel
- 7. Writing a CV.

<u>Plant Breeding-Introduction to Genetics</u> Avner Levy, Ph.D.

- 1. Introduction to genetics
- 2. Plant genetics

3. Molecular biology and genetic engineering



Safety in agriculture

Elisha Zurgil, MSc Agronomy

- 1. Occupational safety and health at farm
- 2. Personal safety equipment and behavior
- 3. O.S.H institute Israel
- Workers of greenhouses and farms common accidents
- 5. Unique hazards for non-Hebrew speaking agriculture workers
- 6. Law aspects and insurance
- 7. Machines
- 8. Chemical safety
- 9. Transportation and loading safety
- 10. Fire and electric safety
- 11. Signs of safety, accident report

Plant protection

Mihal Blaschkauer | Ph.D. candidate, Ben- Gurion University

- 1. Introduction to plant protection
- 2. Abiotic and biotic factors effect on plants
- 3. Integrated pest management

- 4. Introduction to entomology
- 5. Bacterial plant diseases
- 6. plant viruses
- **7.** Diagnosis
- 8. Trip to BGU lab

Post-Harvest

Maya Toren, MSc Agronomy

- 1. Introduction, Aging and abscission
- 2. pathology after harvest
- 3. Storage and Cooling Methods, Softening and temperature
- 4. postharvest of fresh vegetable and fruits
- 5. postharvest technologies



Poultry Management

Yogev Pieston| PhD Poultry Science

- introduction to poultry management, poultry breeds / breeding layer flocks
- pullet /layers management: biosecurity / the importance of house layout/the causes for cannibalism/ beak trimming / lighting management
- **3.** brooding management: the critical period/ the first 48 hours/ building
- **4.** erformance/environmental factors to consider when brooding chicks/ thermoneutral zone

Agricultural Accounting for beginners Becky Vider | certified tax consultant

OR: Agricultural Finance Boaz Drever, MSs Business

- Introduction, Income, Expenses
- 2. Gross Profit, Net Profit, exercise

3. Profit and Loss statement, Depreciation.

Aquaculture

Evyatar Snir | MSc Life Sciences | snirevy@yahoo.com

- 1. Fish Farming Methods
- 2. Water Quality in Earthen Ponds
- 3. Fish feeding, Economy of Fish farming, RAS systems
- 4. Lab-Water Quality

New technologies in Agriculture

Or Shemer | MSc Agronomy

- 1. Introduction, Controlled environment
- 2. The Irrigation system

- 3. Monitoring
- 4. Building irrigation systems,



Plant physiology

Mihal Blaschkauer | Ph.D. candidate, Ben- Gurion University

- 1. Plant's structure and transpiration.
- 2. Photosynthesis, The processes of photosynthesis
- 3. Respirations and energy transfer.
- 4. Photo-morphogenesis.
- 5. Mineral uptake and deficiency signs.

- 6. Plant hormones and signal transduction.
- 7. Plant stress Focus on abiotic stress, defense mechanism.
- 8. Introduction for urban agriculture and agroforestry practices.

Dairy farm management

Einat Shavit, Doctor of Veterinary Medicine | sheepngoatclinic@gmail.com

- 1. Introduction: breeds, anatomy, pregnancy.
- 2. main illnesses in dairy: cause, management and detection, symptoms, treatment, and prevention
- 3. milk and products:
 composition, quality,
 Automation, Processing,
 pasteurization, artificial
 insemination in cows
- 4. Goats: breeds-Dairy and meat, nutrition, diseases.



Ramat Negev International Training center for Advanced Agriculture

*Plantation practices Elisha Zurgil, MSc Agronomy

- Introduction.
 Site Preparation-Practices and Material. Inputs , Labor, Equipment.
- 2. Planting.
 Training during the first three years.
- Fertilizing and Irrigation.
 Pollination.
 Pest Management.
- 4. considering an organic plantation.Harvest preparations and marketing