

Agriculture connecting People



Ramat Negev International Training Center

For Advanced Agriculture

Curriculum outline 2016

Introduction to Israel

Iris Barazani, MSs Geography

Lesson 1: Jewish History and Religion

Lesson 2: The pioneers, the establishment of Israel and the Israeli-Palestinian Conflict

Lesson 3: The Israeli Society

Lesson 4: Israel landscapes, Types of tourism

Introduction to Israel

Boaz Dreyer, MSs Business

Lecture 1: geography, demography and politics and religion

Lecture 2: time of the patriarchs

Lecture 3: Israel – history 1917 - today

Lecture 4: conflicts

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Organic Agriculture

Guy Don, B.A plant science

Lecture1: Introduction and soil science

Lecture2: Sustainable methods

Lecture3: Plant nutrition

Lecture 4: Plant protection

Methods in modern horticulture

Avrey Ben Arye, MSc Agronomy

Lecture 1: Introduction to tomato. History, classification, morphology,

The different cultivars – determinate vs indeterminate, different varieties, pollination, and tomato plant protection

Lecture2: Teaching about Greenhouse, net house, open field, irrigation, fertilizers and soil preparation, soil types – Generally about undercover crops, with examples from tomato, pepper, cucumber and strawberry.

Lecture 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.

Lecture 4: Strawberry – Tissue culture, new plants production, periods in the year, "Flying strawberry", irrigation, fertilizers, soil. Strawberry plant-protection.
Field Trip

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Soil, Water and Fertilizers

Itay Cohen, Ph.D. candidate, Ben Gurion University of the Negev

Lecture 1 – Basic soil concepts

Soil definition - (Geologic definition, Component definition, Traditional definition)

Soil composition - (clay, silt, sand)

Soil organic matter

Soil formation - (biological and chemical process)

Soil physical properties - (Soil texture, Soil structure, Soil color, Bulk density)

Lecture 2- fertilization and plant mineral nutrition

Introductions to fertilization

Types of fertilizers

Plant mineral nutrition

Deficiencies of minerals in plants

Fertilizer calculations

Compost- use and production

Lecture 3 – soil health

Soil salinity

Soil erosion

Soil acidity

Soil compaction

Waterlogging

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Lecture 4 - soil water

Water retention forces

Soil moisture content

Water flow in soils (saturated and unsaturated flow)

Soil-water demonstrations

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Entrepreneurship

Chami Zemach, B.A

Boaz Dreyer, MSc Business

Lecture 1: The entrepreneur, the business idea and the family business

Who is the entrepreneur and what does it mean to be a business person?

The business idea and the decision to open a business: how do we know if will be successful?

The family business and the development of the business: how can we bring an added value to the family business?

Lecture 2: The business plan and the market

The market – What are the forces that motivate it and who sets the price?

The business plan is the road map for our business. What are the questions we should ask and what are our goals?

Lecture 3: An introduction to the farming business

The unique specifications of the agricultural business: Risks, Labor and financing.

Understanding how it works - The cash flow of the agricultural business, the actual expanses and the overhead.

Lecture 4: First steps in marketing

The marketing plan: Understanding the characteristics of our products and services.

How can we mix all our marketing efforts in order to have a successful business?

The last lesson will include a final exam.

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Advanced computer skills

Jessica Pearlman, B.A

1. Introduction and Basics:

What is a computer?

Components of Computer Systems

Daily Maintenance and Safety

Basic Computer and Windows Terms

Operating Systems

Basics of Windows operating system

Opening and Saving Files, Creating and Renaming of files and folders

Status Bar, Start and Menu & Menu

Opening and closing of different Windows

Windows Setting: Control Panel, Wall paper /Screen Savers,

Backing Up Your Computer

Online backup services

2. Internet:

How Does the Internet Work?

The Web Browser

Web Address

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Search engines-improve your search skills

Social Networks

Different skills

Proper use

Safety

3. Microsoft Office. Word Processing Basic:

Basic tasks in Word 2010

Create a new document; Open a document, saving options

Acquaint yourself with the ribbon

Everyday tasks

Tools on demand

Keyboard shortcuts

Tables

Headers and Footers

How to Write a CV?

Printing options

Microsoft Office. Power point:

Open and Create a presentation

Apply a theme

Save a presentation: Saving options

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Insert a new slide

Add shapes to the slide, SmartArt graphics

View options

Create slides, format text

Design, animate, review

Headers and footers and slide numbers

Speaker's notes and Printing

Creating Greeting cards with power point

Topic Report

4. Excel:

Get to know the Workbook and Worksheet

Enter texts numbers and dates

Create Charts

Insert a Formula

Using basic functions

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Safety in agriculture

Elisha Zurgil, MSc Agronomy

Occupational safety and health at farm

Personal safety equipment and behavior

O.S.H institute israel

Workers of greenhouses and farms – common accidents

Unique hazards for non-Hebrew speaking agriculture workers

Law aspects and insurance

Machines

Chemical safety

Transportation and loading safety

Fire and electric safety

Signs of safety

Importance of accident report

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Plant Breeding

Avner Levy, Ph.D. Plant Sciences

Lecture1: Introduction to genetics

Lecture2: Plant genetics

Lecture3: Molecular biology and genetic engineering

Lecture4: Breeding

Plant protection

Noga Levy, Ph.D. candidate, Ben Gurion University of the Negev

Lecture1: Introduction to plant protection

Lecture2: Abiotic and biotic factors effect on plants

Lecture3: Integrated pest management

Lecture4: Introduction to entomology

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Post-Harvest

Maya Toren, MSc Agronomy

Lecture 1: Introduction, Aging and abscission

Lecture2: pathology after harvest

Lecture3: Storage and Cooling Methods, Softening and temperature

Lecture4: postharvest of fresh vegetable and fruits

Poultry Management

Ilan Arye, MSc Life Sciences

Lecture1: introduction to poultry management, poultry breeds / breeding layer flocks

lecture2: pullet /layers management: biosecurity / the importance of house layout/the causes for cannibalism/ beak trimming / lighting management

Lecture3: brooding management: the critical period/ the first 48 hours/ building performance/environmental factors to consider when brooding chicks/ thermoneutral zone

Lecture 4: Field Trip

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Agricultural Accounting for beginners

Becky Vider, certified tax consultant

Introduction

Income

Expenses

Gross Profit

Net Profit

Profit and Loss statement

Depreciation

Aquaculture

Evyatar Snir ,MSc Life Sciences

Lecture 1: Fish Farming Methods

Lecture2: Water Quality in Earthen Ponds

Lecture3: Fish feeding, Economy of Fish farming, RAS systems + final exam.

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New technologies in Agriculture Or Shemer, MSc Agronomy

Lecture1: Introduction, Controlled environment

Lecture 2: The Irrigation system

Lecture3: Monitoring

Lecture 4: Building irrigation system

Plant physiology

**Adi Perelman, Ph.D. candidate, Ben- Gurion University of the
Negev**

Lecture1: Definition of plant physiology/ differences between mono-cots and dicots/

Root and shoot structure and function/ transpiration

Lecture2: Root water uptake/minerals transport/ mineral deficiency signs in plants/ fertilizers /Rhizobium / crop rotation

Lecture3: Photosynthesis / respiration /C3, C4 and CAM plants / other photosynthetic organisms /Light depended reactions

Lecture 4: Plant hormones / main hormones in plants, effects and agricultural uses /signal transduction