



TEL AVIV  
UNIVERSITY

אוניברסיטת  
תל אביב

# Full Syllabus



## Course Title

EWB (Engineers without borders) – challenges in developing countries

## Lecturer

Prof. Alexander Golberg and Dr. Opher Mendelsohn

## Semester

A

## Course requirements

### Course components:

**Lectures** (1-2h a week) on theoretical aspects of food security, food production technology and community engagement.

**Practical workshops:** on: 1) academic research, writing and presentation, 2) team based project planning and management 3) Project impact analysis.

**Work groups:** students will form 3 work groups dealing with the three aspects of that topic 1) Food security, 2) Technology and 3) Community, and discuss relevant parts of the whole field project. A time for group work will be allocated as necessary.

**Seminar paper:** Each student will prepare a personal seminar paper, focused on an issue related to their work group topic. Each week some of the students will present their progress

**Field project:** The course will be focused on a real life project in Nakuru county (Kenya), based on setting of a regional demonstration and R&D center of Spirulina and other optional highly nutritious supplements for human food or animal feed

Independent material reading, presentation, and submission of seminar paper.

\*There is a requirement for 80% attendance

## Final grade components

**Individual paper presentation:** Students will present their personal seminar paper progress at least twice during the semester (15% score).

**Final paper presentation and report.** By the end of the seminar, the seminar paper (85%), based on at least 10 peer reviewed papers, will be submitted in accordance with each university's rules.

## Course schedule, subject to changes

### Date & Leading lecturers

7.11.2024

Prof. Alex Golberg

Dr. Opher Mendelsohn

Michal Dolev Hashimshony

Prof. Alex Golberg

### Subject and Requirements (assignments, reading materials, tasks, etc.)

Course structure and requirements (schedule, works structure, grades). Presentation of EWB and its activity in communities in developing countries to promote sustainable adoption of appropriate technologies.

**Practical workshop 1.** academic research, writing and presentation



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|------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>14.11.2024</b><br>Prof. Eliot Berry<br><br>Dr. Opher Mendelsohn<br>Michal Dolev Hashimshony       | Pandemics, Plenty and Poverty: combating food Insecurity & malnutrition in Developing Countries<br><b>Practical workshop 2. Team based project planning and management</b> |
| <b>21.11.2024</b><br>MKU<br>Dr. Opher Mendelsohn<br>Michal Dolev Hashimshony<br>Tova Makhani- Belkin | Food security challenges in rural Kenya, with special focus on Nakuru area<br><br><b>Practical workshop 3. Project impact analysis</b>                                     |
| <b>28.11.2024</b><br>MKU<br>Dr. Opher Mendelsohn<br>Michal Dolev Hashimshony                         | General and women entrepreneurship in Kenya<br>Guided work - seminar papers' preparation and students' presentations                                                       |
| <b>5.12.2024</b><br>MKU<br>Dr. Opher Mendelsohn<br>Michal Dolev Hashimshony                          | TBD<br>Guided work - seminar papers' preparation and students' presentations                                                                                               |
| <b>12.12.2024</b><br>Dr. Opher Mendelsohn<br>Michal Dolev Hashimshony                                | Promotion of highly nutritious supplements in Nakuru<br>Guided work - seminar papers' preparation and students' presentations                                              |
| <b>19.12.2024</b><br>Zipora Nusbaum<br>Dr. Opher Mendelsohn<br>Michal Dolev Hashimshony              | Women growing of mushrooms in Tanzania to beat poverty<br>Guided work - seminar papers' preparation and students' presentations                                            |
| <b>26.12.2024</b><br>TBD<br>Dr. Opher Mendelsohn<br>Michal Dolev Hashimshony                         | TBD<br>Guided work - seminar papers' preparation and students' presentations                                                                                               |
| <b>2.1.2025</b><br>Hagit Freund<br>Dr. Opher Mendelsohn<br>Michal Dolev Hashimshony                  | Bridging Israeli innovation and the developing world<br>Guided work - seminar papers' preparation and students' presentations                                              |
| <b>9.1.2025</b><br>Prof. Alex Golberg<br>Dr. Opher Mendelsohn<br>Michal Dolev Hashimshony            | Alternative proteins<br>Guided work - seminar papers' preparation and students' presentations                                                                              |
| <b>16.1.2025</b><br>Michal Bruck<br>Dr. Opher Mendelsohn<br>Michal Dolev Hashimshony                 | Community led fight against neglected tropical diseases<br>Guided work - seminar papers' preparation and students' presentations                                           |



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23.1.2025.

Prof. Alex Golberg  
Dr. Opher Mendelsohn  
Michal Dolev Hashimshony

Individual project presentations

30.1.2025.

Prof. Alex Golberg  
Dr. Opher Mendelsohn  
Michal Dolev Hashimshony

Individual project presentations

## Required course reading

**Rafael Pérez-Escamilla** (2015) Food Security and the 2015-2030 Sustainable Development Goals: From Human to Planetary Health: Perspectives and Opinions,  
**Akubue, A.** (2000). JOTS v26n1 - Appropriate Technology for Socioeconomic Development in Third World Countries. 1–20.  
**Alim, et al.** (2020). Suitability of roof harvested rainwater for potential potable water production: A scoping review. Journal of Cleaner Production, Vol. 248. <https://doi.org/10.1016/j.jclepro.2019.119226>  
**B. Amadei**, (2009) A model for sustainable humanitarian engineering projects.

## Comments

Changes may be made to the composition of instructors and lecturers