

Course name: Ecological Engineering in daily lives**Course number:** Teaching: 85364, General Studies 11857**Lecturer:** Alon Dolev**Hours:** 2 hours a week**Credit points:** 2**Course aims:**

1. Utilization of engineering knowledge in daily life, with focus on ecological doing in private lives.
2. Introduction of ecological devices encountered in daily lives.
3. Understanding the engineering principles of ecological devices encountered in the home environment.

Course description:

The course is composed of weekly lectures. Each week a different topic will be introduced.

Grades:

- 80% Final work presentation
- 20% Home work

Recommended text:

Vallero D. A. & Brasier C., "Sustainable Design: The Science of Sustainability and Green Engineering", Wiley (2008)

Incropera, F. D. & De –Witt, D, "Fundamentals of Heat and Mass Transfer", 6th ed, Wiley. (2007)

Moran M.J & Shapiro N.H., "Fundamentals of Engineering Thermodynamics", 5th ed., Wiley (2004)

Topics by weeks:

Week	Topic	Week	Topic
1	Introduction	8	Photovoltaic panels
2	Air conditioning	9	Water
3	Desert coolers	10	House construction
4	Geothermal cooling	11	Solar cookers
5	Heat transfer mechanisms	12	Students presentations
6	Solar radiation	13	Students presentations
7	Solar water heating	14	Summary

סמסטר ב', תשע"ז

המכללה האקדמית להנדסה אורט בראודה
המחלקה להוראה, לימודים כלליים וספורט