

2020-2021

**224.5001 – From the Tethys to the Mediterranean**  
**Second semester**

**Time:**

**Instructor:** Dr. Nicolas Waldmann

**Office Hours:** Monday from 12:00 until 12:00, Room 130, 04-8280736

**Teaching Assistants & Office Hours:** No teaching assistance was requested

**Course Type:** Two lectures followed by 3 days fieldtrip

**Course Level:** MSc

**Pre-Requisites:** No pre-requisites required

**Course Overview:**

This course aim to provide the students with the knowledge on the evolution of the region from the Tethys Ocean to the present day Mediterranean Sea. The course includes preliminary frontal lectures on the general geology of the region, which will provide the necessary background information to be learned prior to a 3 days fieldtrip. The fieldtrip will include visits to key geological sites in northern Israel, which chronologically start in Jurassic outcrops at the footsteps of Mt Hermon and end in Holocene kurkar ridges exposed along the Mediterranean coast. The students will learn about the different processes occurring through time, from the evolution of the carbonate platform to its demise and replacement by a siliciclastic environment. Furthermore, emphasis will be made to understanding deep-water marine processes as identified in the

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geological record, such as mass transport deposits (e.g. Eocene outcrops), sedimentary facies in reef settings (e.g. Carmel Mountain) and deep-water diagenetic processes (e.g. Upper Galilee). Apart of understanding the evolution of the region from the Jurassic onwards, the students will learn about the interplay between the geology, landscape evolution and a pinch of human settlements, which have left important impacts in the region's history.

**Topics:**

1. Geological history of the Levant region from the Jurassic until the present.

**At the end of the course students will be able to:**

1. Understand and learn about the general geological framework of the Levantine region since the Jurassic until present day.
2. Correlate the information gathered from the outcrop with the geological setting of the deep Levant Basin in the East Mediterranean.
3. Learn about the evolution of the landscape in light of changing climate and tectonic conditions.

**Requirements:** Report and synthesis of a specific subject in a frontal class presentation.

**Grading:** Report.

**Website:** *no website*

**Reading List:**

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1. Homberg, C. and Bachmann, M. eds., 2010. Evolution of the Levant margin and western Arabia platform since the Mesozoic. Geological Society of London.
  2. Gardosh, M., Druckman, Y., Buchbinder, B. and Rybakov, M., 2008. The Levant Basin offshore Israel: stratigraphy, structure, tectonic evolution and implications for hydrocarbon exploration (p. 118). Geophysical Institute of Israel.
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