

The University of Jordan
Faculty of Science
Department of Environment and applied Geology
Course Syllabus of Stratigraphy Course (0305711)

Credit Hours: Three credits, two lectures.

Lectures: **Monday & Wednesday** 17:00 - 18:30, room Geo. 108.

Office hours: **Monday and Wednesday 14:30-15:30.**

Dear students welcome in the *Stratigraphy Course* at the second semester of the **2018/2019** academic year. In about 28 lectures the light will be shed at the following subjects:

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| 1. Introduction-Historical Perspective | 1 lectures |
| - What is sequence stratigraphy | |
| - The evolution of sequence stratigraphy | |
| 2. Concepts and Principles of sequence stratigraphy | 5 lectures |
| - Introduction | |
| - Relative Sea-level, tectonics and eustasy | |
| - Sediment supply | |
| - Sequence and systems tracts | |
| - High-resolution sequence stratigraphy and parasequences | |
| 3. Seismic Stratigraphy | 4 lectures |
| - Seismic interpretation | |
| - Seismic reflection termination patterns | |
| - Recognition of systems tracts on seismic data | |
| - Pitfalls in interpretation | |
| 4. Outcrop and Well data | 4 lectures |
| - Introduction-Historical Perspective | |
| - Resolution of well data | |
| - Sequence stratigraphy of outcrop and cores | |
| - Sequence stratigraphy of wireline logs | |
| 5. Chronostratigraphic Charts | 5 lectures |
| - The purpose of chronostratigraphic charts | |
| - Constractions of chronostratigraphic charts from seismic data | |
| - Interpreting a chronostratigraphic charts | |
| - Costal onlap curves and relative sea level curves | |
| - Constructing chronostratigraphic charts from other data | |
| 6. Biostratigraphy | 5 lectures |
| - Introduction | |
| - Fossil groups and zonal schemes | |
| - Palaeoenvironmental analysis | |
| - Biostratigraphy and sequence stratigraphy | |
| - Conclusions | |
| 7. Biostratigraphy | 4 lectures |
| - Introduction | |
| - Controls on carbonate sedimentation | |
| - Carbonate slopes, platform classification and facies belt | |
| - Sequence stratigraphic models for carbonate platforms | |
| - Cyclicity and parasequences on carbonate platforms | |

Exams:

1st will be arranged with students
2nd will be arranged with students

Course Grade:

First exam: value will be 20% of the course grade.
Second exam: value will be 20% of the course grade
Student activities: value will be 20 % of the course grade as a project for each student.

Final exam: value will be 40% of the course grade.

Scale

60-65 C+
66-70 B-
71-75 B
76-80 B+
81-85 A-
86-100 A

References

Sequence Stratigraphy: Dominic Emery and Keith Myers. BP Exploration, 1998, London. 297pp.

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