

Course Specifications

Programme(s) on which the course is given: M.Sc. Stratigraphy and Sedimentation

Major or Minor element of programmes: Major

Department offering the programme: Geology

Department offering the course: Geology

Academic year / Level: 00/ Post Graduated

Date of specification approval:

a- Basic Information

Title: Advanced Lithostratigraphy

Code: G626

Credit Hours: 2 Credit
Hour

Lecture: 2 Credit

Tutorial:

Practical: None

Total: 2 Credit Hours

b- Professional Information

1 – Overall Aims of Course

- a. Knowing different stratigraphic units.
- b. Dividing outcrop sections into lithostratigraphic units, and correlate them with other sections.
- c. Determining lateral and vertical relationships among different lithostratigraphic units.
- d. Interpreting the data obtained and the geologic history of studied area.

2 – Intended Learning Outcomes of Course (ILOs)

- a- Knowledge and Understanding:** By the end of this course, the student should be able to:
- a1- Know how to measure the outcrop sections and presentation of data obtained.
 - a2- Illustrate correlation of rock units by different methods.
 - a3-
- b- Intellectual Skills:** By the end of this course, the student should be able to:
- b1- Differentiate and correlate different rock units.
 - b2- Evaluate the rock column subdivision.
 - b3- Construct and interpret different stratigraphic maps.
- c- Professional and Practical Skills:** By the end of this course, the student should be able to:
- c1- Draw columnar sections and dividing them into rock units.
 - c2- Use facies relationships as a tool for the interpretation of geologic history.
- d- General and Transferable Skills:** By the end of this course, the student should be able to:
- d1- Use internet critically for communication and searching on the course topics.
 - d2- Organize and work effectively within a team.
 - d3- Give effective presentations using appropriate methods.

3. Contents

Topic	Credit hours	Lecture
History of geology	4	2
Development of the geologic time scale	2	1
Stratigraphic nomenclature and stratigraphic code	2	1
Collecting the data (surface and subsurface stratigraphic sections)	2	1
Stratigraphic relationships(vertical and lateral relationships among	2	1

lithosomes)		
Presentation of data and interpretation	2	1
Principles of correlation and physical criteria of correlation	4	2
Biologic criteria of correlation and chrono-corelation	2	1
Geochronology-the concept of time and relative versus absolute dates.	4	2
Chronology based on salinity of seas, rate of sedimentation, growth increments, seasonal deposits, and radiometric dating	2	1
Unconformities (their recognition and significance)	2	1
Total	28	14

4 – Teaching and Learning Methods

4.1-Professional lectures

4.2- discussion sessions

5- Student Assessment Methods

5.1- Regular written exam.

to assess a1, a2

5.2- Mid-term exam.

to assess a2, c1

5.3- At the end of term exam.

to assess a1-a2, b1-b2, c1-c2, d1-d2

5.4- Reports and discussions

to assess d3-d4

Assessment Schedule

Assessment 1: short exam (class activities)

every two weeks

Assessment 2: mid-term (written and practical)

week 7

Assessment 3: final-term (written and practical)

week 15-16

Weighting of Assessments

Semester Work and discussions:

20 %

Mid-Term Examination :

20%

Final-term Examination :

60%

Total:

100%

6- List of References

6.1- Different articles provided by the course coordinator

North American Stratigraphic Commission on Stratigraphic Nomenclature, 1983, North American Stratigraphic Code: Am. Assoc. Petroleum Geologists, Bull., v.67, 841-875.

Hedberg, H. D. (ed), 1976: International Stratigraphic Guide: A guide to stratigraphic classification, terminology and procedure: International Subcommittee on stratigraphic classification of IUGS Commission on stratigraphy, John Wiley & Sons, New York, 200p.

Krumbein, WC. And Sloss, L.L. 1963: Stratigraphy and sedimentation. W. H. Freeman, San Francisco, 660p.

Sam boggs, J. c. 1987: Principles of sedimentology and stratigraphy. Merrill Publishing Company, Columbus, Ohio, 969p.

6.4- Periodicals, Web Sites, ... etc

Geol. Soc. Am. Bull.

Am. Assoc. Petroleum Geologist Bull.

7- Facilities Required for Teaching and Learning

Laptop, data show.

Course Coordinator: Prof. Hosny E. Soliman

Head of Department: Prof. Ahmed Al-Boghdady

Date: / / 2012