

توصيف (برنامج دراسات عليا دكتوراه)

تخصص الجيولوجيا التركيبية والتكتونية

نموذج رقم (13)

جامعة: حلوان

كلية: العلوم

قسم: الجيولوجيا

توصيف برنامج دراسي للعام الجامعي 2016/2017

Program Specification for the Academic Year 2016/2017

(أ) معلومات أساسية

A- Basic Information

PhD in Structural geology and tectonics	أسم البرنامج (Program Name)
Single	طبيعة البرنامج (Program Type)
Geology	القسم المسئول عن البرنامج (Department)
قرار وزاري رقم (1234) بتاريخ 2009/6/11	تاريخ إقرار البرنامج (Date of program approval)
مجلس الكلية رقم (440) بتاريخ 2017/12/18	تاريخ توصيف البرنامج:
أ/د يحيى القزاز	المحكم الداخلي (Internal Evaluator)
أ/د مصطفى يوسف	المحكم الخارجي (External Evaluator)
Dr. Maysa Nabeh	أسم المنسق (Coordinator)

(ب) معلومات متخصصة

B- Professional Information

1- الأهداف العامة للبرنامج

1- Overall aims of the program

The Structural Geology and Tectonics Program aims to provide the PhD student with:

- 1- Modern theories in the field of structural geology and tectonics and some related scientific fields.
- 2- Advanced techniques and tools used in structural geology and tectonics investigations.
- 3- Recent contributions and scientific research trends in the field of structural geology and tectonics.
- 4- Skills of planning and conducting structural geology and tectonics research studies.
- 5- Ethics and legal principles of scientific research in the field of Structural geology and tectonics.

- 6- Fundamentals of writing scientific theses and papers and international publication.
- 7- The role of structural geology and tectonics studies to solve community problems and support national economy.
- 8- Ability of self-development through recognition of personal learning needs and continuous learning.
- 9- Diverse sources of information and knowledge.
- 10- Manner to work in research teams and manage time, cooperating with other researchers.

General Attributes of the Graduates of Structural geology and tectonics PhD Program

By the end of the study of Structural Geology and Tectonics PhD Program, the postgraduate must be able to:

- 1- Explain the basics and methodologies of scientific research in the field of structural geology and tectonics
- 2- Collect constantly more knowledge in the field of structural geology and tectonics.
- 3- Apply the analytical and critical approach to knowledge in the field of structural geology and tectonics and the related fields.
- 4- Integrate structural geology and tectonics knowledge with related knowledge, creating and developing their in-between relations.
- 5- Evaluate the ongoing problems and modern theories in the field of structural geology and tectonics.
- 6- Identify professional problems, proposing innovative solutions.
- 7- Apply perfectly wide range of professional skills in the field of structural geology and tectonics.
- 8- Develop new methods and tools of practicing professional.
- 9- Use the appropriate technological means to serve the professional practice.
- 10- Communicate effectively, leading team in various professional milieus.
- 11- Recommend a decision in light of the available information.
- 12- Employ the available resources efficiently with ability to develop them and to find new resources.

- 13- Discuss his role in developing the society and preserving the environment.
- 14- Apply the rules of the profession, reflecting the commitment to integrity and credibility.
- 15- Develop him/herself continuously, transferring his knowledge and experience to others.

2- المخرجات التعليمية المستهدفة من البرنامج

2- Intended Learning Outcomes of the Program (ILOs)

1/2 - المعرفة والفهم

a- Knowledge and Understanding

By the end of the study of Structural Geology and Tectonics PhD Program, the postgraduate must be able to:

- A1- Describe modern theories and information in the field of structural geology and tectonics and related fields.
- A2- Investigate different structural geology and tectonics
- A3- Define basics and ethics of scientific research in the field of structural geology and tectonics.
- A5- List ethical and legal principles of professional practice in the field of structural geology and tectonics
- A4- Describe the advanced methodologies and tools of structural geology and tectonics scientific research.
- A6- State the principles and basics of collecting high quality structural geology and tectonics data.
- A7- Investigate the role of structural geology and tectonics in conserving environment and national development.

2/2 - القدرات الذهنية

b- Intellectual Skills

By the end of the study of Structural Geology and Tectonics PhD Program, the postgraduate must be able to:

- B1- Evaluate structural geology and tectonics information.
- B2- Deduce results using available structural geology and tectonics information.
- B3- Interpret Structural geology and tectonics data.
- B4- Propose research plans and methods for structural geology and tectonics investigations.

B5- Solve industrial and environmental problems on the basis of the available data.

B6- Design structural geology and tectonics scientific papers.

B7- Assess the risks during field.

B8- Plan for the improvement of performance in professional practice.

B9- Propose decisions in different professional milieus.

B10- Discuss Structural geology and tectonics evidences and proofs.

3/2- المهارات
1/3/2- مهارات مهنية وعملية

c- Professional and Practical Skills

By the end of the study of Structural geology and tectonics PhD Program, the postgraduate must be able to:

C1- Criticize reports and publications in the field of structural geology and tectonics.

C2- Select suitable structural geology and tectonics methods and tools.

C3- Use perfectly different structural geology and tectonics equipments.

C4- Improve methods used in the field of structural geology and tectonics.

C5- Develop structural geology and tectonics scientific research and professional practice.

C6- Apply the available information, techniques and data to solve research and community problems.

C7- Prepare professional scientific reports and high-quality papers on structural geology and tectonics issues.

2/3/2- مهارات عامة

d- General and Transferable Skills

By the end of the study of Structural geology and tectonics PhD Program, the postgraduate must be able to:

D1- Communicate effectively in different ways.

D2- Use information technology in order to serve the development of professional practice.

D3- Teach others, assessing their performance.

- D4- Assess him/herself with ability of continuous learning.
- D5- Use different sources to obtain information and knowledge.
- D6 Lead a team in professional contexts.
- D7- Explain the outcomes of work as a team.
- D8- Manage scientific meetings and time.

3- المعايير الأكاديمية للبرنامج

3- Academic Reference Standards

The Academic Reference Standards for post graduate programs of attributes and capabilities of the post graduates were based essentially on the General Academic Reference Standards (ARS) of post graduate studies published by the National Authority for Quality Assurance and Accreditation of Education (NAQAAE, 2009 and approved by the Faculty of Science Council in meeting No. 399 in 19/1/2016, and by Helwan University Council in meeting No. 433 in 24/2/2016.

ARS of PhD Structural geology and tectonics

1. Attributes of Graduates

Graduates of PhD Structural geology and tectonics Program should be able to:

- 1.1 Explain the basics and methodologies of scientific research in the field of Structural geology and tectonics
- 1.2 Collect constantly more knowledge in the field of Structural geology and tectonics
- 1.3 Apply the analytical and critical approach to knowledge in the field of Structural geology and tectonics and the related fields.
- 1.4 Integrate Structural geology and tectonics knowledge with related knowledge, creating and developing their in-between relations.
- 1.5 Evaluate the ongoing problems and modern theories in the field of Structural geology and tectonics.
- 1.6 Identify professional problems, proposing innovative solutions.
- 1.7 Apply perfectly wide range of professional skills in the field of Structural geology and tectonics
- 1.8 Develop new methods and tools of practicing professional.
- 1.9 Use the appropriate technological means to serve the professional practice.

- 1.10 Communicate effectively, leading team in various professional milieus.
- 1.11 Recommend a decision in light of the available information.
- 1.12 Employ the available resources efficiently with ability to develop them and to find new resources.
- 1.13 Discuss his role in developing the society and preserving the environment.
- 1.14 Apply the rules of the profession, reflecting the commitment to integrity and credibility.
- 1.15 Develop him/herself continuously transferring his knowledge and experience to others.

2. Academic standards

2.1. Knowledge and understanding

By the end of PhD Structural geology and tectonics Program, graduates should be able to:

- 2.1.1 Describe theories, basics and up-to-date information in the field of Structural geology and tectonics and related fields.
- 2.1.2 State basics, methodologies and ethics of scientific research in the field of Structural geology and tectonics and its various tools.
- 2.1.3 List ethical and legal principles of professional practice in the field of Structural geology and tectonics.
- 2.1.4 Summarize principles and basics of quality in the professional practice in the field of Structural geology and tectonics.
- 2.1.5 State information about the impacts of his professional practice on the environment and methods of developing and conserving it.

2.2. Intellectual skills

By the end of PhD Structural geology and tectonics Program, graduates should be able to:

- 2.2.1 Analyze the information in the field of Structural geology and tectonics, using it as a standard and a source of deduction.
- 2.2.2 Evaluate Structural geology and tectonics data.
- 2.2.3 Solve specialized problems on the basis of the available data.
- 2.2.4 Plan research studies that add to and enrich the knowledge.
- 2.2.5 Formulate scientific papers in the field of Structural geology and tectonics.
- 2.2.6 Assess the risks in the professional practices in the field of Structural geology and tectonics.
- 2.2.7 Plan for the development of performance in the field of Structural geology and tectonics

- 2.2.8 Propose professional decisions in different professional milieus.
- 2.2.9 Invent methods for structural geology and tectonics investigations.
- 2.2.10 Argue on the basis of Structural geology and tectonics evidences and proofs.

2.3. Practical and Professional Skills

By the end of PhD Structural geology and tectonics, graduates should be able to:

- 2.3.1 Apply perfectly the basic and modern professional skills in the field of Structural geology and tectonics.
- 2.3.2 Prepare professional reports in the field of Structural geology and tectonics
- 2.3.3 Evaluate reports and publications in the field of Structural geology and tectonics
- 2.3.4 Assess the methods and tools that exist in the field of Structural geology and tectonics
- 2.3.5 Develop methods used in the field of Structural geology and tectonics.
- 2.3.6 Use the technological means to serve the professional practice in the field of Structural geology and tectonics.
- 2.3.7 Plan for the development of professional practice and the development of the performance of others.

2.4. General and transferable skills:

By the end of PhD Structural geology and tectonics Program, graduates should be able to:

- 2.4.1 Communicate effectively in different ways.
- 2.4.2 Use information technology in order to serve the development of professional practice.
- 2.4.3 Teach others, assessing their performance.
- 2.4.4 Assess him/herself with ability of continuous learning.
- 2.4.5 Use different sources to obtain information and knowledge.
- 2.4.6 Lead a team in professional contexts.
- 2.4.7 Explain the outcomes of work as a team.
- 2.4.8 Manage scientific meetings and time.

4- العلامات المرجعية

4- External Reference for Standard (Benchmark)

Not Applied

5- هيكل ومكونات البرنامج

5- Curriculum structure and content

أ) مدة البرنامج

5a. Program duration: 4 essential semesters and up to 12 essential semesters.

ب) هيكل البرنامج

5b. Program structure: The program consists of 60 credit hours distributed as follows:

i) Courses (مقررات دراسية): 24 credit hours (40%)

-Essential Courses (متطلبات أساسية): 18 credit hours

-Elective Courses (متطلبات اختيارية): 6 credit hours

ii) Thesis (رسالة): 36 credit hours (60%)

ج) مستويات البرنامج (في نظام الساعات المعتمدة)

5c. Program Levels (credit hour's system)

1) المستوى الأول

i) First level

The student should pass 24 credit hours distributed as follows:

Essential Courses (مقررات أساسية): 18 credit hours

Elective Courses (مقررات اختيارية): 6 credit hours

2) المستوى الثاني

ii) Second level

Compulsory: 36 credit hours in thesis preparation.

د) مقررات البرنامج

5d. Program Courses

أ- إلزامي:

i) Essential Courses

Code	Course	Credit Hours	Lecture	Semester
146701	اساسي	3	3 hours	First
146702	مرتبط	3	3 hours	First
146703	تخصصي	3	3 hours	First
146707	اساسي	3	3 hours	Second
146708	مرتبط	3	3 hours	Second
146709	تخصصي	3	3 hours	Second

ب- إختياري:

ii) Elective Courses

Code	Course	Credit Hours	Lecture	Semester
146704	إختياري اساسي	3	3 hours	First
146705	إختياري مرتبط	3	3 hours	First
146706	إختياري تخصصي	3	3 hours	First
146710	إختياري اساسي	3	3 hours	Second
146711	إختياري مرتبط	3	3 hours	Second
146712	إختياري تخصصي	3	3 hours	Second

هـ) محتويات المقررات

iv) Content of Courses

The content of each course is proposed by the professor responsible for teaching and approved by the Department Council.

و) الرسالة

v) Thesis

After completion the courses and passing the courses exam, the student should prepare an original thesis in a topic related to **Structural geology and tectonics** and submit his/her thesis in partial fulfillment of the PhD degree. The research of the PhD thesis is conducted through field studies, laboratory work and data interpretation and presentation under the supervision of up to 4 of staff members in the same specialization or in collaboration with people from other specializations depending on the topic of the research point. After thesis writing and submission, the members of Geology Department Council approve the proposed referees of the thesis. The committee of referees should contain 3 evaluators: the supervisor and two external referees. Based on the reports of the three referees the members of Geology Department Council agree to award the student the PhD degree, suggest making modifications or decide to re-submit the thesis.

6- متطلبات الإلتحاق بالبرنامج

6- Program Admission Requirements

To be admitted to the PhD **Structural Geology and Tectonics** Program, the candidate must hold a Master Degree in **Structural Geology and Tectonics** from any Egyptian University or equivalent degree from another recognized institute. Additionally, He/She should have published paper in peer-reviewed journal.

7- القواعد المنظمة لإستكمال البرنامج

7- Regulations for Progression and Program Completion

To be awarded the PhD of Science, the students should:

- 1- Study courses equivalent to 24 credit hours and successfully pass exams with minimum GPA of C+.
- 2- Prepare a thesis (equivalent to 36 credit hours) on innovative research point approved by the Faculty Council based on the proposal of Geology Department Council.
- 3- Achieve the required level of foreign language.
- 4- Present at least two papers extracted from the thesis and accepted for publication in the reference periodicals.
- 5- Successfully pass public discussion (defense) on the thesis research point.

8- طرق وقواعد تقييم المتحقيين بالبرنامج

8- Assessment of Program Intended Learning Outcomes

Tool or method	ILOs
1- Written	Knowledge and understanding & Intellectual skills.
2- Student activity (seminars and scientific reports).	General and transferable skills.
3- Thesis	Knowledge and understanding & Intellectual skills & Practical and professional skills & General and transferable skills.
4- Published papers	Intellectual skills & Practical and professional skills & General and transferable skills.

9- طرق تقويم البرنامج

9- Program Evaluation Method

Evaluator	Method	Sample nature
1- Senior Students	Questionnaire	Representative sample
2- Alumni	Questionnaire	Representative sample
3- Stakeholders (Employers)	Personal Interview	Approximate sample
4- External Evaluator(s) (External Examiner(s))	Review	Approximate sample
5- Academic Staff	Interview	Participants in the program

Program Coordinator

Dr. Maysa Nabeh

Head of Department

Prof. Moustafa I. Gharib