# Program: Master in Pharmaceutical Sciences
(*Pharmacognosy*)

# Program Report for Master of Pharmacognosy

## Academic Year:
## 2020/2021

رئيس القسم
أ.د/ منى جودة زغلول

**signature**

## A-Basic Information

| | | |
|---|---|---|
| **1.** | **Faculty** | Pharmacy |
| **2.** | **Program Title:** | Master in Pharmaceutical Sciences (*Pharmacognosy*) |
| **3.** | **Program Type:** | Single |
| **4.** | **Department responsible:** | *Pharmacognosy* |
| **5.** | **Final award of the Program:** | Master degree of Pharmaceutical Sciences (*Pharmacognosy*) |
| **6.** | **External Evaluator(s):** | Prof. Dr. Maged Abo Hashem |
| **7.** | **Year of operation:** | 2020/2021 |

## B-Statistical Information

| Item | Number of students |
|---|---|
| Started the program | 5 |
| Withdrawn | 0 |
| Absence | 0 |
| Attending the exam | 5 |
| Pass | 5 |
| Failed | 0 |
| % Pass (with respect to those attending the examination) | 100% |

1. **Number of students started the program 2020/2021:** 5 students.

**2. Percentage of students starting the program this year (relative to the previous year):**

| No. of students this year (2020/2021) | No. of students last year (2019/2020) | No. of students last year (2018/2019) |
|---|---|---|
| **5** | **8** | **7** |

## 3. Number of students completing the program:

| No. students completed the program 2020/2021 | Starting year of these students |
|---|---|
| 7 | **Alaa Emad Shams A: 2014/2015**<br>**Ghada Mahmoud Elsayed B: 2014/2015**<br>**Mennatallah Ebrahim Elshorbagy C: 2014/2015**<br>**May Salah Elhendawy D: 2014/2015**<br>**Walid Amir Sabry E: 2014/2015**<br>**Abdallah Mohamed Heikal F: Fall 2015**<br>**Nouran Hussein Raafat G: Fall 2016** |

## 4. Grades of students completed the program in the academic year 2020/2021:

| | Course title | Grade | |
|---|---|---|---|
| | | Student F | Student G |
| First Semester General courses: | ***Instrumental Analysis (GCM-201)*** | 82 (B) | 75 (B-) |
| | ***Statistics and biostatistics (GCM-202)*** | 93 (A+) | 81 (B) |
| | ***Physical chemistry (GCM-203)*** | 82 (B) | 86 (A) |
| | ***Bioinformatics (GCM-204)*** | 84 (B+) | 94 (A+) |
| | ***Research Methodology & Ethics (GCM-205)*** | 89 (A) | 92 (A+) |
| | ***Scientific writing and Seminar (GCM-206)*** | 92 (A+) | 96 (A+) |
| Second semester Special courses: | | | |
| | ***Modern applications of chromatographic analyses for natural products. PGM-201*** | 89 (A) | 90 (A+) |
| | ***Application of advanced spectroscopic techniques PGM-202*** | 92 (A+) | 87 (A) |
| | ***Herbal remedies PGM-204*** | 81 (B) | 84 (B+) |
| | ***Complementary, Alternative medicines and Aromatherapy PGM-205*** | 93 (A+) | 90 (A+) |
| General University requirements | | | |
| | TOEFL/IELTS | √ | √ |
| | Thesis Eligibility report | √ | √ |
| | One published manuscript | √ | √ |

- **Grades: no. and percentage of each grade:** Non applicable

## C. Professional information

### Academic standards

1. **Reference academic standards:** Academic reference standards (ARS) for graduate studies.

2. **Achievement of program Intended Learning Outcomes (ILOs):**

| Course Title | ILOs covered |
|---|---|
| ***Instrumental Analysis (GCM-201)*** | A1 B1, B5, B11 C1, C2 D1, D3, D4 |
| ***Statistics and biostatistics (GCM-202)*** | A1 B1, B5, B11 C1 D1, D2, D3, D5 |
| ***Physical chemistry (GCM-203)*** | A1 B1, B5, B11 C1, C2 D1, D3, D6 |
| ***Bioinformatics (GCM-204)*** | A1 B1, B5, B11 C1 D1, D3 |
| ***Research Methodology & Ethics (GCM-205)*** | A5 B1, B5, B11 C1, C2 D1, D3, D5, D8 |
| ***Scientific writing and Seminar (GCM-206)*** | A7 B1, B5, B11 C1, C2 D1, D3, D5 |
| ***Modern applications of chromatographic analyses for natural products. PGM-201*** | A3, A4, A6 B2, B4, B11 C1, C2, C4 D1, D3, D6 |
| ***Application of advanced spectroscopic techniques PGM-202*** | A3, A6, A9 B3, B5, B7 C1, C4 D2, D3, D4 |
| ***Herbal remedies PGM-204*** | A2, A4, A5, A8 B2, B6 C3, C4 D1, D2, D3 |
| ***Complementary, Alternative medicines and Aromatherapy PGM-205*** | A2, A4, A5 B2, B6 C3, C4 D1, D2, D3 |
| **Thesis** | A3, A4, A5, A6, A7, A9 B3, B4, B5, B6, B7, B8, B9, B10 C1, C2, C4, C5, C6, C7 D1, D2, D3, D4, D5, D6, D7, D8 |

## 3. Assessment methods:

| Assessment Method | Item assessed | ILOs assessed |
|---|---|---|
| **Written Assessment** (written exam, Thesis writing ) | **1- Courses**<br>**General 8 Credit Hours**<br>**Special 8 (6+2) Cr. Hours** | A1,A5, B1, B5, B11,C1, C2,C3 |
| **Oral Assessment** Oral exam,) | | A7, B1, C4, D8 |
| **Activity** | | |
| **Seminars** | **2- Thesis 30 Cr Hours** | A7, B1, C4, D8 |
| **Supervisors follow up reports** | | |
| **Practical Assessment** (practical work of thesis) | | A5, B5, C4, D1, D2, D3, D4, D5, D6, D7, D8 |
| **One published manuscript** | | |
| **Oral presentation of thesis.** | | A7, B1, C4, D8 |
| **Pass** | **3- General University Requirements:** including:<br>a- TOEFL / IELTS<br>b- Computer course | |

## 4. Learning resources:

**Adequacy of the number and specialty of the faculty members to the requirements of the program:**

-Number of department staff: 27

-Number of master students: 21

-Students/ staff ratio: 1:1.3

•**Regarding teaching general courses: staffs from different departments are** participating in courses delivery

•**Regarding teaching of special courses & thesis supervision:** Pharmacognosy staffs are responsible for courses delivery

•**Adequacy of facilities for thesis completion:**

-research laboratories in the department supported with different instruments in addition to central laboratory in the faculty.

Resources are available for the students such as:

- **Books: Text books as**

***"Introduction to Spectroscopy: A Guide For Students of Organic Chemistry", "Spectrometric Identification of Organic Compounds ", "Fundamentals of Analytical Chemistry",'' Braithwaite and F.J. Smith "Chromatographic Methods" Fifth edition,'' Dewick, P. M. Medicinal Natural Products, A biosynthetic approach.* 2002''**

- **References:** Scientific papers taken from international journals in the field of pharmacognosy, chemistry and structure elucidation of natural products.

**Others: web sites:**

- www.biomed central.com
- www.science direct.com
- www. medscape.com.
- www.Pubmed.com

## 5. The basis of formation of committees' examiners:

**For courses and seminars:** Teaching members and the head of department.

**For thesis:** The examiner committee is composed of:

- The principal supervisor with or without one supervisor from the co-supervision committee plus two evaluators at least one from outside the faculty.

## 6. System of external examiners: **Available** ☐ **Not available** ■

**Department response to student and external evaluation system:**

Department staff members usually respond to the interests of postgraduate students if they prefer to go deep in specific fields.

## 7. Proposals for program development

### a- Program stucture

- **Program duration:** At least 2 years from the date of enrollment or 18 months from the date of registration of the master thesis**.**
- **Program level:** Graduate
- **Structure of program hours:**

| | Code | Course Title | Lecture | Total Credit Hours |
|---|---|---|---|---|
| **Semester 1** | GCM-201 | Instrumental Analysis | 2 | 2 |
| | GCM-202 | Biostatistics | 2 | 2 |
| | GCM-203 | Physical Chemistry | 1 | 1 |
| | GCM-204 | Bioinformatics | 1 | 1 |
| | GCM-205 | Research Methodology & Ethics | 1 | 1 |
| | GCM-206 | Scientific writing and Seminar | 1 | 1 |
| **Semester 2** | PGM-201 | Modern applications of chromatographic analyses for natural products. | 2 | 2 |
| | PGM-202 | Application of advanced spectroscopic techniques | 2 | 2 |
| | PGM-204 | Herbal remedies | 2 | 2 |
| | | مقرر واحد اختيارى من المقررات التالية<br>**Elective** | | |
| | PGM-203 | Bench-top Biological Assay. | 2 | 2 |
| | PGM-205 | Complementary, Alternative medicines and Aromatherapy | 2 | 2 |
| **Total (courses)** | | | 16 | 16 |
| | | **Thesis** | 30 | 30 |
| **Total** | | | 46 | 46 |

### b. Distribution of program courses:

| | Course title | Credit hours | Degree | | | |
|---|---|---|---|---|---|---|
| | | | Written | Oral | Total | Exam time |
| **Semester 1** | Instrumental Analysis | 2 | 80 | 20 | 100 | 2 |
| | Biostatistics | 2 | 80 | 20 | 100 | 2 |
| | Physical Chemistry | 1 | 80 | 20 | 100 | 2 |
| | Bioinformatics | 1 | 80 | 20 | 100 | 2 |
| | Research Methodology & Ethics | 1 | 80 | 20 | 100 | 2 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | Scientific writing and Seminar | 1 | 80 | 20 | 100 | 2 |
| **Semester 2** | Modern applications of chromatographic analyses for natural products. | 2 | 90 | 10 | 100 | 2 |
| | Application of advanced spectroscopic techniques | 2 | 90 | 10 | 100 | 2 |
| | Herbal remedies | 2 | 90 | 10 | 100 | 2 |
| | Complementary, Alternative medicines and Aromatherapy | 2 | 90 | 10 | 100 | 2 |

## c. Completed Thesis details

| Title | Name of candidate | Supervised by | Date of master degree |
|---|---|---|---|
| Biotechnological studies on the production of tropane alkaloids from *Atropa belladonna* L. | Alaa Emad Shams | Prof.Dr. Souzan M. Ibrahim.<br>Prof. Dr. Kamelia Abou El-seoud.<br>Dr. Ahmed I. Abd El-Maksoud | 02/ 02/ 2021 |
| Biologically active compounds of the genus Paralymanalia and Vallozia Nagra | Ghada Mahmoud Elsayed | Dr. Mohammed Farid Ibrahim Mohammed Lahlob<br>Dr. Ashraf Taha Khalil (Principal Supervisor) | 13/ 06/ 2021 |
| Rosemary : A potential natural source for diverse bioactive compounds | Mennatallah Ebrahim Elshorbagy | Prof. Dr. Mohamed Farid Ibrahim Lahloub (main supervisor) Dr. Hani Nashaat Baraka Dr. Marwa Elsbaey Ali | 24/ 09/ 2020 |
| Chemical and biological study of Cuscuta campstris Yunck | May Salah Elhendawy | Prof. Dr. Mohamed Amer (main supervisor)<br>Prof. Dr. Mohamed Farid Ibrahim Lahloub<br>Dr. Zein Eabedeen Naeem | 27/ 06/ 2021 |
| Phytochemical investigation of Polyalthia longifolia, Annonaceae | Walid Amir Sabry | Prof. Dr. Saleh Hassan Elsharkawy Prof. Dr. Ashraf Taha Khalil (main supervisor) Dr. Mahmoud Fahmy Elsebai | 07/ 12/ 2020 |

| | | | |
|---|---|---|---|
| Investigation of Bioactive Compounds from Wild Plants Belonging to Family Lamiaceae . | Abdallah Mohamed Heikal | Prof. Dr. Ahmed Abu EL-Ghait Ahmed Gohar Prof. Dr. Madiha Amin Hassan Tawfek (main supervisor) Dr. Mona Farouk M. M. El-Neketi | 23/ 02/ 2021 |
| Phytochemical and biological study of *Lactuca Serriola* | Nouran Hussein Raafat | Dr. Ahmed Fouad Ahmed Halim<br>Dr. Hassan-Elrady Ali Saad (Principal Supervisor) Dr. / Fatima Mohammed AbdulRahman AbdulBar | 03/ 08/ 2021 |

## d. Course, deletions, additions and modifications

***More advanced techniques in chromatographic and spectroscopic analysis will be added to the course.**

## e. Staff development requirements:

- **More advanced text books are needed.**
- **Improvement of IT facilities.**

## 8. Action plan

The following action plan will be acted upon throughout year (2021/2022)

| Action | Completion date | Responsible party |
|---|---|---|
| **Updating the course according to the most up-to-date scientific research.** | **September 2022** | **All members of the staff team.** |

**Program coordinator / Head of the department:**

**Prof. Dr. Mona Zaghloul**

**Vice dean of graduate studies and research**

**Prof. Dr. Khaled B. Selim**

## Department of : Pharmacognosy

Program: PhD in Pharmaceutical Sciences
(*specialization*)

**Course: Modern applications of chromatographic analyses for natural products**
**Code: (PGM-201)**

# Course Report

**Academic year: *2020/2021***
**Second Semester**

| البرنامج | تقرير مقرر |
|---|---|
| ماجستير العقاقيـــر | Modern applications of chromatographic analyses for natural products |

| رئيس القسم | منسق المقرر |
|---|---|
| أ د. منى جودة زغلول | ا. د. احمد محمد زغلول |

**University: Mansoura**

**Faculty: pharmacy**

**Department: Pharmacognosy**

## A. Basic Information

| | |
|---|---|
| **Course Title and code:** | **Modern applications of chromatographic analyses for natural products (PGM-201)** |
| **Program on which this course is given:** | Master in pharmaceutical science (pharmacognosy) |
| **Total Credit hours:** | 2 |
| **Lectures: 2** | **Tutorial/Practical: 0** |
| **Academic Level** | Postgraduate – master degree |
| **Academic year** | 2020/2021 - second semester |
| **Name of lecturers contributed to the delivery of this course** | |

1.

| | |
|---|---|
| **Name of lecturers contributed to the delivery of this course** | 1.Prof. Dr. Ahmed Mohamed Zaghlol<br>2. Dr. Kadria F.Ahmed<br>3. Dr.Mona Faroul EL-Neketi |
| **Course co-coordinator:** | Prof. dr. Ahmed Mohamed Khalel Zaghlol |
| **External evaluator:** | Prof. Dr. Hany N. Baraka |
| **Date of Department Council Approval** | 15/8/2021 |
| **Date of Faculty Council Approval** | 25/8/2021 |

## B. Statistical Information:

**No. of students attending the course : 3**

**No. of students completing the course: 3**

**Exam Results**

**Passed No.: 3** **percentage: 100%**

**Failed No.: 0** **percentage: 0%**

**Grading of successful students (%) :**

| | | | | | |
|---|---|---|---|---|---|
| **A+** | **33.33** | **A** | | **A-** | |
| **B+** | | **B** | | **B-** | **33.33** |
| **C+** | | **C** | **33.33** | **C-** | |
| **D+** | | **D** | | **D-** | |

# C. Professional Information:

## 1. Course teaching:

| No. | Topics actually taught |
|---|---|
| 1. | Introduction to chromatography, Chromatographic terms and Classification of chromatography |
| 2. | Column Chromatography |
| 3. | Bonded phase, Diol, and Reversed Phase |
| 4. | Ion exchange chromatography and<br>Size exclusion chromatography |
| 5. | Separation techniques and quantitative analysis using TLC |
| 6. | Separation techniques using paper chromatography (PC) |
| 7. | Gas Chromatography (GC) |
| 8. | High Performance Liquid Chromatography (HPLC) |

**Topics taught as a percentage of the content specified:**

| | | |
|---|---|---|
| √ **> 90 %** | **70 - 90 %** | **< 70 %** |

**Lecturers commitment of the course content:**

| | | |
|---|---|---|
| √ **> 90 %** | **70 - 90 %** | **< 70 %** |

**Coverage of exam topics to course content:**

| | | |
|---|---|---|
| √ **> 90 %** | **70 - 90 %** | **< 70 %** |

## 2. Used teaching and Learning Methods:

| | |
|---|---|
| **Lectures:** | + |
| **Practical Training/ Laboratory:** | - |
| **Seminar / Work shop:** | + |
| **Class Activity:** | - |
| **Case Study:** | - |
| **Other assignments / home work:** | + |

## 3. Student Assessment:

| a. Method of Assessment | Percentage of total |
|---|---|
| **Written examination** | **90%** |

| | |
|---|---|
| **Oral examination** | **10 %** |
| **Practical / laboratory work** | **-** |
| **Semester Work** | **-** |

**b. Members of examination committee:**

**1. Prof. Dr. Ahmed Zaghloul**
**2. Assistant Prof. Dr. Kadria Fawzia.**
**3. Assistant Prof. Dr. Mona Farouk El-Neketi**

**c. Role of external evaluator (If any):**

1. Revision of course contents, and suggest new topics.
2. Revision of teaching and learning strategy.
3. Revision of course notes and suggest enhancement plan
4. Revision of Exam and related assignments

## 4. Facilities and Teaching Materials

| | |
|---|---|
| **Totally adequate** | √ |
| **Adequate to some extent** | |
| **Inadequate** | |
| **List any inadequacies:** | |

## 5. Administrative constraints

**List any difficulties encountered: non**

## 6. Student evaluation of the course: ….

**List any criticisms and response of course team**

| criticisms | response of course team |
|---|---|
| - | |

## 7. Comments from external evaluator(s) (if exists) and response of course team:

| Comment | Response |
|---|---|
| The method of assessment should be modified to enable adding semester work marks | Vice dean for post graduate studies will consider this comment in bylaw modifications |

## 8. Course enhancement suggestions:

**Progress on actions identified in the previous year's action plan:**

| Action | Completed | Not completed | Why not completed? |
|---|---|---|---|
| Upgrade course note and Upgrading teaching strategy to include part as self-learning | √ | | |

## 9. Action plan for academic year 2021 - 2022:

| Action Required | Person responsible | Completion Date |
|---|---|---|
| Upgrading teaching strategy to include part as self-learning | **Teaching committee** | **Every year** |
| Update the course content | **Teaching committee** | **next year** |
| The method of assessment should be modified to enable adding semester work marks | **Vice dean for post graduate studies** | **2 year for bylaw modifications** |

| | Name | Signature |
|---|---|---|
| **Course Coordinator** | Ahmed Mohamed Khalel Zaghlol | |
| **Head of Department** | Mona Goudah Zaghloul | |

**Department of :Phrmacognosy**

Program: Master degree in Pharmaceutical Sciences
(**Pharmacognosy**)

**Course: Biological Assays**
**Code: (PGM-203)**

**Course Report**

**Academic year: *2020/2021***
**Second Semester**

| | |
|---|---|
| **البرنامج** | **تقرير عن مقرر** |
| **ماجستير** | **الاختبارات البيولوجية** |

| | |
|---|---|
| **رئيس القسم** | **منسق المقرر** |
| **أ. د. منى زغلول** | **ا. د. فريد عبدالرحيم بدريه** |

**University: Mansoura University**

**Faculty: Pharmacy**

**Department: Pharmacognosy**

## A. Basic Information

| | |
|---|---|
| **Course Title and code:** | Biological Assays (PGM 203) |
| **Program on which this course is given:** | Master program |
| **Total Credit hours:** | |
| **Lectures:** | **Tutorial/Practical:** |
| **Academic Level** | Postgraduate |
| **Academic year** | 2020/2021 - Second Semester |
| **Name of lecturers contributed to the delivery of this course** | 1. Prof. Dr. Farid A. Badria<br>2. Dr. Sara A. Abouzeid |
| **Course co-coordinator:** | Dr. Sara A. Abouzeid |
| **External evaluator:** | not Available |
| **Date of Department Council Approval** | مجلس قسم شهر 4<br>او مجلس قسم شهر 7 |
| **Date of Faculty Council Approval** | |

## B. Statistical Information:

**No. of students attending the course : 3**

**No. of students completing the course: 3**

**Exam Results**

**Passed No.:3** **percentage: 100%**

**Failed No.** **percentage: 0%**

**Grading of successful students (%) :**

| | | | | | |
|---|---|---|---|---|---|
| **A+** | **-** | **A** | **-** | **A-** | **-** |
| **B+** | **-** | **B** | **-** | **B-** | **33.33** |
| **C+** | **-** | **C** | **66.67** | **C-** | **-** |
| **D+** | **-** | **D** | **-** | **D-** | **-** |

# C. Professional Information:

## 1. Course teaching:

| No. | Topics actually taught |
|---|---|
| | **A. Biological Assays**<br>1. Bioassay Techniques for Drug Development By Atta-Ur-Rahman<br>2. Examples of Farid Badria's and FAB-Lab (Liver Research Lab) Publications and Drug Discovery:<br>i. How to Design A biological Assays and Biological Models:<br>ii. Designing a biological assays and Establishing a model for testing natural Products:<br>iii. Antimutagens, , Immune-Modulatory and Cancer, Schistosomiasis, Clinical Trials, Histochemical Localization:, Enzymes Inhibitors, Antiviral, Click Chemistry, Green Chemistry, Hepatoprotective and Liver fibrosis, Iron Chelation |
| | **B. Modulation of Secondary Metabolites in Medicinal Plants**<br>1. Thoughts and the criteria for selecting plant material for drug development<br>2. Elicitation, a new tool for plant chemodiversity and phytochemical drug discovery<br>3. The modern chemical screening techniques for plant extracts<br>4. Phytoalexin-enriched functional foods |

**Topics taught as a percentage of the content specified:**

| | | |
|---|---|---|
| √ **> 90 %** | **70 - 90 %** | **< 70 %** |

**Lecturers commitment of the course content:**

| | | |
|---|---|---|
| √ **> 90 %** | **70 - 90 %** | **< 70 %** |

**Coverage of exam topics to course content:**

| | | |
|---|---|---|
| √ **> 90 %** | **70 - 90 %** | **< 70 %** |

## 2. Used teaching and Learning Methods:

| | |
|---|---|
| **Lectures:** | + |
| **Practical Training/ Laboratory:** | - |
| **Seminar / Work shop:** | - |
| **Class Activity:** | - |
| **Case Study:** | - |
| **Other assignments / home work:** | - |

## 3. Student Assessment:

| a. Method of Assessment | Percentage of total |
|---|---|
| **Written examination** | **90%** |
| **Oral examination** | **10%** |
| **Practical / laboratory work** | **--** |
| **Semester Work** | **--** |

**b. Members of examination committee:**

**1. Prof. Dr. Farid A. Badria**

**2. Dr. Sara A. Abouzeid**

**c. Role of external evaluator (If any):**

Please make paraphrasing to the following sentences, or suggest new one

1. Revision of course contents, and suggest new topics.
2. Revision of teaching and learning strategy.
3. Revision of course notes and suggest enhancement plan
4. Revision of Exam and related assignments

## 4. Facilities and Teaching Materials

| | |
|---|---|
| **Totally adequate** | √ |
| **Adequate to some extent** | |
| **Inadequate** | |
| **List any inadequacies:** | |

## 5. Administrative constraints

**List any difficulties encountered: ----------**

## 6. Student evaluation of the course: ….

**List any criticisms and response of course team**

| criticisms | response of course team |
|---|---|
| ---------- | ---------- |

## 7. Comments from external evaluator(s) (if exists) and response of course team:

| Comment | Response |
|---|---|
| ---------- | ---------- |

## 8. Course enhancement suggestions:

**Progress on actions identified in the previous year's action plan:**

| Action | Completed | Not completed | Why not completed? |
|---|---|---|---|
| Ex: Upgrade course note<br>Or<br>Upgrading teaching strategy in practical sessions from drawing and illustration to presentations<br>…….<br>…… | √ | | |

## 9. Action plan for academic year 2021 - 2022:

| Action Required | Person responsible | Completion Date |
|---|---|---|
| ---------- | ---------- | ---------- |

| | Name | Signature |
|---|---|---|
| **Course Coordinator** | Prof. Dr. Farid A. Badria | |
| **Head of Department** | Mona Goudah Mohamed Zaghlol | |