

## Master of Pharmaceutical Sciences Program Graduation Requirements (33 Credit hours)

| Credit Hours for Master of Pharmaceutical Sciences (Comprehensive and Thesis Tracks)  |  |                  |                                |  |              |
|---|--|------------------|--------------------------------|--|--------------|
| Track   | Obligatory courses                                   | Elective courses | Thesis                         | Total  |              |
| Comprehensive   | 24   | 9                | -                              | 33   |              |
| Thesis  | 15   | 9                | 9                              | 33   |              |
| Comprehensive Track   |  |                  |                                |  |              |
| 1. Obligatory Courses (24 credit hours)   |  |                  |                                |  |              |
| Course No.  | Course Name  | Credit hours     | Theoretical                    | Practical  |              |
| 7091011   | Advanced Pharmaceutical Organic Chemistry            | 3                | 3                              | -  |              |
| 7091012   | Advanced Methods in Drug Analysis and Identification | 3                | 2                              | 1  |              |
| 7091013   | Advanced Methods in Drug Delivery                    | 3                | 3                              | -  |              |
| 7091014   | Advanced Biopharmaceutics and Pharmacokinetics       | 2                | 2                              | -  |              |
| 7091015   | Advanced Research Methodology                        | 2                | 2                              | -  |              |
| 7091016   | Advanced Biostatistics                               | 1                | 1                              | -  |              |
| 7091017   | Seminar  | 1                | 1                              | -  |              |
| 7091018   | Advanced Clinical Pharmacy and Therapeutics          | 3                | 3                              | -  |              |
| 7091019   | Advanced Physical Pharmacy                           | 3                | 3                              | -  |              |
| 7091020   | Advanced Pharmaceutical Biotechnology                | 3                | 3                              | -  |              |
| 2. Elective Courses (9 credit hours) from the following courses:                      |  |                  |                                |  |              |
| 7091021   | Advanced Aspects of Drug Discovery                   | 3                | 3                              | -  |              |
| 7091022   | Advanced Medicinal Chemistry                         | 3                | 3                              | -  |              |
| 7091023   | Advanced Pharmaceutical Microbiology                 | 3                | 3                              | -  |              |
| 7091024   | Research Project in Pharmaceutical Sciences          | 3                | 3                              | -  |              |
| 7091025   | Advanced Pharmaceutical Technology                   | 3                | 3                              | -  |              |
| 7091026   | Pharmaceutical Quality Assurance and Validation      | 3                | 3                              | -  |              |
| 7091027   | Advanced Phytotherapy                                | 3                | 3                              | -  |              |
| 7091028   | Advanced Natural Products Chemistry                  | 3                | 3                              | -  |              |
| 7091029   | Advanced Cancer Biology                              | 3                | 3                              | -  |              |
| 3. Comprehensive Exam (7091030)   |  |                  |                                |  |              |
| The Advisory Plan for Master in Pharmaceutical Sciences Program (Comprehensive Track) |  |                  |                                |  |              |
| First year ( first semester)  |  |                  | First year ( second semester)  |  |              |
| Course No.  | Course Name  | Credit hours     | Course No.                     | Course Name  | Credit hours |
| 7091011   | Advanced Pharmaceutical Organic Chemistry            | 3                | 7091012                        | Advanced Methods in Drug Analysis and Identification | 3            |
| 7091015   | Advanced Research Methodology                        | 2                | 7091013                        | Advanced Methods in Drug Delivery                    | 3            |
| 7091017   | Seminar  | 1                | 7091018                        | Advanced Clinical Pharmacy and Therapeutics          | 3            |
|   | Elective Course                                      | 3                |                                |  |              |
|   | Total  | 9                |                                | Total  | 9            |
| Second year ( first semester)   |  |                  | Second year ( second semester) |  |              |
| 7091014   | Advanced Biopharmaceutics and Pharmacokinetics       | 2                | 7091020                        | Advanced Pharmaceutical Biotechnology                | 3            |
| 7091016   | Advanced Biostatistics                               | 1                |                                | Elective Course                                      | 3            |
| 7091019   | Advanced Physical Pharmacy                           | 3                |                                |  |              |
|   | Elective Course                                      | 3                |                                |  |              |
|   | Total  | 9                |                                | Total  | 6            |
| Summer semester: Comprehensive Exam   |  |                  |                                |  |              |

**Master of Pharmaceutical Sciences Program  
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| Credit Hours for Master of Pharmaceutical Sciences (Comprehensive and Thesis Tracks) |                    |                  |        |       |
|--|--------------------|------------------|--------|-------|
| Track  | Obligatory courses | Elective courses | Thesis | Total |
| Comprehensive  | 24                 | 9                | -      | 33    |
| Thesis   | 15                 | 9                | 9      | 33    |

**Thesis Track**

**1. Obligatory Courses (15 credit hours)**

| Course No. | Course Name  | Credit hours | Theoretical | Practical |
|------------|--|--------------|-------------|-----------|
| 7091011    | Advanced Pharmaceutical Organic Chemistry            | 3            | 3           | -         |
| 7091012    | Advanced Methods in Drug Analysis and Identification | 3            | 2           | 1         |
| 7091013    | Advanced Methods in Drug Delivery                    | 3            | 3           | -         |
| 7091014    | Advanced Biopharmaceutics and Pharmacokinetics       | 2            | 2           | -         |
| 7091015    | Advanced Research Methodology                        | 2            | 2           | -         |
| 7091016    | Advanced Biostatistics                               | 1            | 1           | -         |
| 7091017    | Seminar  | 1            | 1           | -         |

**2. Elective Courses (9 credit hours) from the following courses:**

|         |   |   |   |   |
|---------|---|---|---|---|
| 7091018 | Advanced Clinical Pharmacy and Therapeutics     | 3 | 3 | - |
| 7091019 | Advanced Physical Pharmacy                      | 3 | 3 | - |
| 7091020 | Advanced Pharmaceutical Biotechnology           | 3 | 3 | - |
| 7091021 | Advanced Aspects of Drug Discovery              | 3 | 3 | - |
| 7091022 | Advanced Medicinal Chemistry                    | 3 | 3 | - |
| 7091023 | Advanced Pharmaceutical Microbiology            | 3 | 3 | - |
| 7091024 | Research Project in Pharmaceutical Sciences     | 3 | 3 | - |
| 7091025 | Advanced Pharmaceutical Technology              | 3 | 3 | - |
| 7091026 | Pharmaceutical Quality Assurance and Validation | 3 | 3 | - |
| 7091027 | Advanced Phytotherapy                           | 3 | 3 | - |
| 7091028 | Advanced Natural Products Chemistry             | 3 | 3 | - |
| 7091029 | Advanced Cancer Biology                         | 3 | 3 | - |

**3. Thesis (9 credit hours)**

|         |        |   |   |   |
|---------|--------|---|---|---|
| 7091091 | Thesis | 6 | - | 6 |
| 7091092 | Thesis | 3 | - | 3 |

**The Advisory Plan for Master in Pharmaceutical Sciences Program ( Thesis Track)**

| First year ( first semester) |  |              | First year ( second semester) |  |              |
|------------------------------|--|--------------|-------------------------------|--|--------------|
| Course No.                   | Course Name                                    | Credit Hours | Course No.                    | Course Name  | Credit Hours |
| 7091011                      | Advanced Pharmaceutical Organic Chemistry      | 3            | 7091012                       | Advanced Methods in Drug Analysis and Identification | 3            |
| 7091015                      | Advanced Research Methodology                  | 2            | 7091013                       | Advanced Methods in Drug Delivery                    | 3            |
| 7091017                      | Seminar  | 1            |                               | Elective Course                                      | 3            |
|                              | Elective Course                                | 3            |                               |  |              |
|                              | Total  | 9            |                               | Total  | 9            |
| Second year (first semester) |  |              | Second year (second semester) |  |              |
| 7091014                      | Advanced Biopharmaceutics and Pharmacokinetics | 2            | 7091091                       | Thesis   | 6            |
| 7091016                      | Advanced Biostatistics                         | 1            |                               |  |              |
| 7091092                      | Thesis   | 3            |                               |  |              |
|                              | Elective Course                                | 3            |                               |  |              |
|                              | Total  | 9            |                               | Total  | 6            |