# College of Dentistry & Pharmacy

| Program: | Bachelor's in Pharmaceutical sciences (B.Pharm) |
|---|---|
| Document: | Study Plan |

## A. Program Identification and General Information

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| **1. Program Main Location:** Buraydah, Qassim |
| **2. Branches Offering the Program:** NA |
| **3. Reasons for Establishing the Program:**<br>(Economic, social, cultural, and technological reasons, and national needs and development, etc.) |
| There is a large wealth of Literature that support the valuable role of pharmacists with such degree in improving patient care, minimizing drug adverse outcomes, and reducing health expenditure. In addition, B.Pharm holders had demonstrated a positive impact on improving patient education and knowledge of marketing and advertising the medications in industrial pharmacy. |
| **4. Total Credit Hours for Completing the Program:** 167 hrs. |
| **5. Professional Occupations/Jobs:** |
| Pharmacist in: Industry, Education, Community, Regulation, and Hospital. |
| **6. Major Tracks/Pathways** (if any)**:** NA |

## B. Mission, Goals, and Learning Outcomes

**1. Program Mission:**

The Pharmaceutical Sciences Program is committed to offer high quality education to its students and provide community services in different professional pharmacy settings.

**2. Program Goals:**

- Graduate high-quality pharmacist.
- Enabling the best teaching and learning practice.
- Improvement of research outcomes.
- Fostering community services.

**3. Relationship between Program Mission and Goals and the Mission and Goals of the Institution/College.**

The mission and goals of the Bachelor's in Pharmaceutical Sciences program are consistent with the mission and goals of BPC and the college. There is an alignment between mission and goals of BPharm program with that of the institutional mission and goals as well as that for the college.

**Program Mission:**

The Pharmaceutical Sciences Program is committed to offer high quality education to its students and provide community services in different professional pharmacy settings.

**BPC Mission:**

The colleges provide university education that meets the needs of the labor market and contributes effectively and permanently to achieving comprehensive development in the Kingdom by adhering to international standards of excellence in the fields of education, research, community service, and the integration of individuals, technology, business systems, and human capital development.

**4. Graduate Attributes:**

- The ability to apply "knowledge, critical thinking and problem-solving skills" in pharmacy practice.
- The ability to employ "effective communication skills" in dealing with individuals and health care providers.
- The ability to demonstrate "professionalism" in the workplace in accordance with values and code of ethics.
- The ability to possess "leadership and management skills" across different responsibilities in pharmacy practice.
- The ability to engage in "independent and life-long learning" from experiences to enhance continuous professional development.

| 5.Program learning Outcomes* | |
|---|---|
| **Knowledge and Understanding** | |
| **K1** | Demonstrate in depth and breadth knowledge in essential biomedical, pharmaceutical, social/behavioral/ administrative, and clinical sciences related to development and use of medications including natural remedies for the prevention and treatment of diseases |
| **K2** | Demonstrate knowledge of relationship between physicochemical and biological properties of drugs and procedures applied in relation to pharmaceutical research, drug development and manufacturing. |
| **K3** | Describe the role of pharmacists according to legal, ethical, and professional standards in health promotion. |
| **Skills** | |
| **S1** | Deliver evidence-based patient-centered care that is ethical and culturally sensitive to patient's needs. |
| **S2** | Critically evaluate scientific literature to be effectively applied in evidence-based practice, conducting research and complex problem-solving. |
| **S3** | Apply appropriate research methods including pharmaceutical, phytochemical, medicinal, pharmacological, and clinical techniques to effectively solve scientific and practice-related problems. |
| **S4** | Communicate effectively with healthcare professionals, patients, and the public in various settings. |
| **S5** | Operate within a quality and marketing management framework in pharmacy settings. |
| **S6** | Apply general and pharmacy-specific technologies and mathematical skills to optimize the medication use system. |
| **S7** | Demonstrate proficient fine and gross motor skills as measured by the successful performance of laboratory and technical tasks related to pharmacy practice. |
| **Values** | |
| **V1** | Collaborate and actively engage as an integral member of the interprofessional healthcare team showcasing effective leadership skills, a strong sense of responsibility and accountability in various settings. |
| **V2** | Demonstrate integrity, self-awareness, and potential of entrepreneurship and professional development in various settings. |

## C. Progarm Curriculum Structure

| Program Structure | Required/ Elective | No. of courses | Credit Hours | Percentage |
|---|---|---|---|---|
| **Institution Requirements** | Required | 10 | 27 | 16.2% |
| | Elective | 0 | 0 | 0% |
| **College Requirements** | Required | 5 | 14 | 8.4% |
| | Elective | 0 | 0 | 0% |
| **Program Requirements** | Required | 52 | 114 | 68.3% |
| | Elective | 2 | 4 | 2.4% |
| **Capstone Course/Project** | Required | 1 | 3 | 1.8% |
| **Field Experience/ Internship** | Required | 3 | 5 | 3.0% |
| **Others** | | 0 | 0 | 0% |
| **Total** | | **73** | **167** | **100%** |

## D. Program Study Plan

| Level | Course Code | Course Title | Required or Elective | Pre-Requisite Courses | Credit Hours | Type of requirement (Institution, College or Department) |
|---|---|---|---|---|---|---|
| **Level 1** | CS 140 | Computer Skills | Required | | 3 | College |
| | ENG 100 | English (1) | Required | | 8 | Institution |
| | MATHM140 | Mathematics 1 | Required | | 2 | Program |
| | SCS140 | Communication Skills | Required | | 2 | College |
| **Level 2** | STAT 124 | Biostatistics | Required | | 2 | College |
| | BIOL 111 | General Biology | Required | | 3 | College |
| | PHYS 115 | General Physics | Required | | 3 | College |
| | CHEM 113 | General chemistry | Required | | 3 | College |
| | PHT 102 | Pharmaceutical Terminology | Required | | 2 | Program |
| | ENG 145 | English for Health Purposes | Required | | 3 | College |
| **Level 3** | IC101 | Intro to Islamic Culture | Required | | 2 | Institution |
| | ARB 101 | Linguistic Skills | Required | | 2 | Institution |
| | PHT 250 | Pharmaceutics-I | Required | Level 1 and 2 | 3 (2+1) | Program |
| | PHL 250 | Biochemistry-I | Required | | 2(2+0) | Program |
| | PHSL 115 | Principles of Physiology | Required | | 3 (3+0) | College |
| | PHC 250 | Pharmaceutical Organic Chemistry | Required | | 3 (2+1) | Program |
| | ANAT 114 | Principles of Anatomy | Required | | 3 (2+1) | College |
| **Level 4** | IC102 | Islam and Community Building | Required | IC 101 | 2 | Institution |
| | PHT 252 | Pharmaceutical Microbiology | Required | Level 1 & 2 | 3 (2+1) | Program |
| | PHL 253 | Biochemistry-II | Required | PHL 250 | 2 (2+0) | Program |
| | PHL 254 | Physiology-II | Required | PHSL 115 | 2 (2+0) | Program |
| | PHC 251 | Pharmaceutical Analytical Chemistry | Required | Level 1 and 2 | 3 (2+1) | Program |

| Level | Course Code | Course Title | Required or Elective | Pre-Requisite Courses | Credit Hours | Type of requirement (Institution, College or Department) |
|---|---|---|---|---|---|---|
| | TR 250 | Pharmacy Training-I | Required | Level 1 & 2 | 1 (0+1) | Program |
| | PHC 252 | Medicinal Chemistry I | Required | PHC 250 | 2 (2+0) | Program |
| Level 5 | IC103 | Economic System in Islam | Required | IC 102 | 2 | Institution |
| | PHT 350 | Pharmaceutics-II | Required | Level 3 | 3 (2+1) | Program |
| | PHT 351 | Immunology | Required | Level 3<br>PHL 253 | 2 (2+0) | Program |
| | PHG 350 | Pharmacognosy-I | Required | Level 3 | 3 (2+1) | Program |
| | PHL 350 | Pharmacology-I | Required | Level 3 | 3 (2+1) | Program |
| | PHC 350 | Medicinal Chemistry-II | Required | Level 3<br>PHC 252 | 2 (2+0) | Program |
| | PHCL 350 | Introduction to Pathophysiology | Required | Level 3<br>PHL 254 | 2 (2+0) | Program |
| | PHCL 357 | Drug information | Required | Level 3<br>TR 250 | 2 (1+1) | Program |
| Level 6 | IC104 | Political System in Islam | Required | IC 103 | 2 | Institution |
| | PHCL 351 | Self-care and community Pharmacy | Required | Level 4<br>Level 5 | 2 (1+1) | Program |
| | PHL 351 | Pharmacology-II | Required | Level 4<br>PHL 350 | 2 (2+0) | Program |
| | PHC 351 | Medicinal Chemistry-III | Required | Level 4 | 3 (2+1) | Program |
| | PHCL 354 | Pharmacotherapy-I | Required | Level 4<br>PHL 350<br>PHC 350 | 2 (2+0) | Program |
| | PHCL 355 | Pharmacy Practice Lab I | Required | Level 4<br>PHL 350<br>PHC 350 | 1 (0+1) | Program |
| | PHCL 356 | Pharmacotherapy-II | Required | Level 4<br>PHL 350<br>PHC 350 | 2 (2+0) | Program |
| | PHT 352 | Biopharmaceutics & Pharmacokinetics | Required | Level 4 | 3 (2+1) | Program |
| Summer | TR 351 | Pharmacy Training-II 250 Hours (Community Pharmacy) | Required | Level 5<br>PHCL 351 | 2 (0+2) | Program |
| Level 7 | ARB 103 | Arabic Writing | Required | ARB 101 | 2 | Institution |
| | PHT 450 | Sterile & Parental Preparations | Required | Level 5<br>PHT 352 | 2 (2+0) | Program |
| | PHCL 450 | Pharmacotherapy-III | Required | Level 5<br>PHL 351<br>PHC 351 | 2 (2+0) | Program |
| | PHCL 455 | Pharmacy Practice Lab II | Required | Level 5<br>PHL 351<br>PHC 351 | 1 (0+1) | Program |

| Level | Course Code | Course Title | Required or Elective | Pre-Requisite Courses | Credit Hours | Type of requirement (Institution, College or Department) |
|---|---|---|---|---|---|---|
| | PHCL 451 | Pharmacotherapy-IV | Required | Level 5<br>PHL 351<br>PHC 351 | 2 (2+0) | Program |
| | PHL 450 | Pharmacology-III | Required | Level 5 | 2 (2+0) | Program |
| | PHC 450 | Medicinal Chemistry-IV | Required | Level 5 | 2 (2+0) | Program |
| | PHG 450 | Pharmacognosy-II | Required | Level 5 | 3 (2+1) | Program |
| Level 8 | PHCL 453 | Research Design & Pharmacoepidemiology | Required | Level 6<br>TR 351 | 3 (2+1) | Program |
| | PHT 451 | Pharmaceutical Biotechnology | Required | Level 6<br>PHT 450 | 2 (2+0) | Program |
| | PHG 460 | Pharmacognosy-III | Required | Level 6<br>PHG 450 | 1 (1+0) | Program |
| | PHCL 460 | Pharmacotherapy-V | Required | Level 6<br>PHL 450<br>PHC 450 | 2 (2+0) | Program |
| | PHCL 456 | Pharmacy Practice Lab III | Required | Level 6<br>PHL 450<br>PHC 450 | 1 (0+1) | Program |
| | PHCL 461 | Pharmacotherapy-VI | Required | Level 6<br>PHL 450<br>PHC 450 | 2 (2+0) | Program |
| | PHL 451 | Antimicrobial agents | Required | Level 6 | 2 (2+0) | Program |
| | PHL 452 | Toxicology | Required | Level 6<br>PHT 401 | 2 (2+0) | Program |
| Summer | TR 450 | Pharmacy Training-III 250 Hours (Hospital Pharmacy) | Required | Level 7<br>TR 351 | 2 (0+2) | Program |
| Level 9 | PHCL 462 | Pharmacoeconomics | Required | Level 7 | 2 (2+0) | Program |
| | PHCL 463 | Pharmacy Regulations & Ethics | Required | Level 7 | 2 (2+0) | Program |
| | PHL 460 | Pharmacology-IV | Required | Level 7<br>PHL 402 | 2 (2+0) | Program |
| | PHT 460 | Cosmetics | Required | Level 7 | 1 (1+0) | Program |
| | PHG 463 | Recent Approaches in Medicinal Plants Analyses | Required | Level 7<br>PHG 460 | 3 (2+1) | Program |
| | PHCL 465 | Health informatics | Required | Level 7<br>TR 450 | 1 (1+0) | Program |
| | PHCL 464 | Pharmacy Management | Required | Level 7 | 2 (2+0) | Program |
| | | Free course | Elective | | 2 (2+0) | Program |
| Level 10 | PHT 465 | Pharmaceutical Quality Control and Good Manufacturing Practice(GMP) | Required | Level 8 | 3 (2+1) | Program |
| | PHG 465 | Dietary supplement | Required | Level 8 | 2 (2+0) | Program |
| | PHT 490 | Industrial Pharmacy | Required | Level 8 | 2 (2+0) | Program |

| Level | Course Code | Course Title | Required or Elective | Pre-Requisite Courses | Credit Hours | Type of requirement (Institution, College or Department) |
|---|---|---|---|---|---|---|
| | PHC 495 | Pharmaceutical Instrumental Analysis | Required | Level 8 | 3 (2+1) | Program |
| | PHCL 466 | Pharmaceutical Marketing | Required | Level 8 PHCL 462 | 2 (2+0) | Program |
| | PHARM 450 | Research project$ | Required | TR 450 | 3 (0+3) | Program |
| | | Free course | Elective | | 2 (2+0) | Program |

* Include additional levels if needed
** Add a table for each track (if any)
PHARM 450: will be taken starting level 8 and end in level 10

**College of Dentistry & Pharmacy**
**Buraydah Colleges,**
P.O. Box 31717 | Buraydah 51418
Kingdom of Saudi Arabia
www.bpc.edu.sa

**Dean office,**
Phone number: 0163800085, Ext Number: 169
Email: Dean_PD@bpc.edu.sa

**Vice Dean office,**
Phone number: 0163800085, Ext Number: 303
Email: ViceDean_DP@bpc.edu.sa

**Program Director (Pharmaceutical Sciences) office,**
Phone number: 0163800085, Ext Number: 422
Email: majid.ahmad@bpc.edu.sa