**Programme Inspection Proforma**


# **For**

# **M.Phil Biochemistry**

# **UNIVERSITY OF HEALTH SCIENCES, LAHORE**

**LEGAL REQUIREMENTS**

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| **Sr. #** | **PARAMETER**  | **REQUIRED**  | **ACTUAL / OBSERVED**  |
| 1 | Ownership  | Institution can vest ini. a body corporate registered under the relevant laws of companies ordinance / societies / trust.ii. Federal/ Provincial or Local Government1. A Pakistani University seeking affiliation for Medical/ Dental/Allied Health sciences courses

iv. An autonomous body promoted by Federal/provincial/local government by or under a statute for the purpose of nursing education;v. A public or private charitable trust registered under the related act. |  |
| 2 | Teaching Hospital  | Independent or Hospital based Radiology having workload of minimum 1000 laboratory tests per day as a total including different departments, chemistry, hematology, immunology, microbiology, histopathology and molecular biology. |  |
| 3 | Area of Premises  | Minimum 1 acre |  |
| 5 | Ownership / Possession of Land  | Ownership / Lease of 33 years  |  |

**FINANCIAL STATUS AND SUSTAINABILITY**

|  |  |  |  |
| --- | --- | --- | --- |
| **S #** | **PARAMETER**  | **REQUIRED**  | **ACTUAL / OBSERVED**  |
| 1 | Working Capital  | Min. Rupees 2.5 Million (For Private Institution) |  |

**COMMON FACILITIES**

**“INFRASTRUCTURE”**

**BASIC REQUIREMENTS FOR M.Phil BIOCHEMISTRY PROGRAMME**

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| **S #** | **PARAMETER**  | **REQUIRED**  | **SPECIFICATION/CAPACITY** | **ACTUAL / OBSERVED**  |
| 1 | **Offices**a) Teaching Staffb) Administrative Staff | a) 5 Minimumb) 2 Minimum |  |  |
| 2 | Seminar/meeting room | 1 | 25 Capacity |  |
| 3 | Refreshment/tea room | 1 | 20 Capacity |  |
| 4 | Library for PG Students | 1 | a) 20 Capacityb) Equipped with at least 3 computers with internet accessc) For two PG students at least one recommended biochemistry book d) Availability of E- books and indexed journals  |  |
| 5 | Biochemistry Laboratory | 1 | Optimum space for equipment and researchers with an area not less than 1000 sqft |  |
| 7 | Sample Collection/Patient Access |  | A tertiary hospital with minimum of daily 200 outdoor patients |  |
| 8 | Animal Research Facility/Laboratory | 1 | a) Animal House Rooms: 2 min with temperature and humidity monitor b) Office for Veterinary officerc) Designated space for house attendantd) Changing areae) Procedure room with proper OT lightf) 01 Colony breeding roomg) Cage washing areah) Feed preparation/storage roomi) Corridor to accommodate extra cage racks |  |

**ADMINISTRATIVE STAFF – ESSENTIAL**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **S.#** | **Categories of staff** | **Req No.** | **Qualification and responsibility** | **Actual / Observed**  |
| 1 | Program director  | 1 | * Faculty member
* (Professor, Associate Professor, Assistant Professor)
 |  |
| 2. | Librarian | 1 | * Graduate in library Science and Computer literate.
* B.Sc.
 |  |
| 3. | Administrative officer /Computer technician/operator/typist | 1 | - Diploma in computer- Fluent in language |  |
| 4. | BioStatistician | 1 | - M.Sc Biostatistics- Min two years experience |  |
| 6. | Lab Attendant | 2 | F.Sc in Biological Sciences with 2 year experience |  |
| 7. | Peon | 2 | - Matric |  |
| 8. | Security guards | 1 | - Matric |  |
| 9. | Cleaners | 1 | -  |  |

**TEACHING STAFF – FACULTY**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Designation**  | **Requirements/****Qualifications** | **Available**  | **Deficiency**  | **Names with Qualifications** | **No of Mphil supervised** | **Number of Publications in last three years**  |
| Professor or Associate Professor of Biochemistry | MBBS with PhD, FCPS, MPhil, FRCPath, D(ABCC) or equivalent |  |  |  |  |  |
| Assistant Professor of Biochemistry | MBBS with PhD, FCPS, MPhil, FRCPath, D(ABCC) or equivalent |  |  |  |  |  |
| Senior Demonstrator Biochemistry | MBBS and having attended and passed the theory examination for MPhil (Biochemistry), pending defense of thesis. |  |  |  |  |  |
| Laboratory Manager | MSc (MLT) or Graduate (4 years program) with 2 years’ experience |  |  |  |  |  |
| Laboratory Technologists (01) | Graduate (4 years program) |  |  |  |  |  |
| Computer Education | Bachelor of Computer Sciences |  |  |  |  |  |
| Biostatistics & Research Methodology | MSc (Biostatistics) or MPH |  |  |  |  |  |

\*According to HEC there should be at least 2 relevant full time Ph.D. Faculty members in a department to launch the M.Phil programme.

**PART III**

**EQUIPMENT**

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| **Biochemistry (Equipment)** |
|  | **Section** | **Min Required** | **Deficiency** | **Remarks Working/Not working** |
|  |
|  | Spectrophotometer (visible and UV Range) | 1 |  |  |
|  | Water Bath with stirrer, temperature control and display | 1 |  |  |
|  | Incubator | 1 |  |  |
|  | Analytical balance | 1 |  |  |
|  | pH Meter | 1 |  |  |
|  | Hot plate with magnetic stirrer | 1 |  |  |
|  | ELISA washer and reader automated with UPS | 1 |  |  |
|  | Refrigerator | 1 |  |  |
|  | Freezer (- 80°C)  | 1 |  |  |
|  | Manual/Automated adjustable pipette set 0.15ul-1000ul  | 2 |  |  |
|  | Tabletop Micro-centrifuge with speed upto 14000 rpm | 1 |  |  |
|  | Centrifuge for 50 ml tubes with speed upto 4000 rpm | 1 |  |  |
|  | PCR Machine with UPS | 1 |  |  |
|  | Agarose Gel electrophoresis with power supply | 1 |  |  |
|  | Glass pipettes (5 & 10ml) | 50  |  |  |
|  | Pipette glass(Pyrex) graduated 10 m1 | 2 each  |  |  |
|  | Glass beakers (Pyrex) (10, 100,500,1000 ml)  | 5 each  |  |  |
|  | Glass cylinder (Pyrex) 100, 250, 500, 1000 ml graduated | 5 each  |  |  |
|  | Flask conical glass(Pyrex) 100,500, 1000 ml | 5 each  |  |  |
|  | Tips for pipettes (Blue, Yellow, White) | ~ 1000 each |  |  |
|  | Ice box | 2 |  |  |
|  | Reagent Bottles (100, 500, 1000 ml) | 5 each |  |  |
|  | Cryo Boxes | 10 |  |  |
|  | Eppendorf tubes | ~ 1000 |  |  |
|  | Screw cap tubes | ~ 1000 |  |  |
|  | Falcon tubes (15 & 50 ml) | ~ 500 each |  |  |

**Recommended Books**

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| **Book name** | **Author** |
| Biochemistry | Berg  |
| Harper’s Biochemistry | Robert K. Murray |
| Marks Basic Medical Biochemistry  | Smith Collen  |
| Clinical Chemistry  | Michael l. Bishop  |
| Biochemistry | Donald Voet |
| Clinical Chemistry | Carl A Burtis |
| Lehninger Principles of Biochemistry | David L Nelson |
| Cell and Molecular Biology | Gerald Karp |
| Clinical Chemistry and Molecular Diagnostics  | Norbert W. Teitz  |
| Clinical Chemistry  | William J Marshal  |
| Biochemistry and Molecular Biology | Eliott DC |
| Essential of nutrition and diet therapy | Sue Rod Well Wiliance |
| Biochemistry | Pamela Champ |
| Molecular Cell Biology  | Lodish |