4.2.2.13 Doctor of Pharmacy (PharmD) (Full-Time or Part-Time)

This programme is available in full-time and part-time mode.

In response to the changing health care environment, Pharmacy as a profession is continually evolving to expand its scope of services and responsibilities to meet the needs of patients, health care systems, and other professionals. Traditionally, the primary responsibility of the pharmacist was the safe and accurate dispensing of drugs prescribed by the physician. Today, pharmacists are involved in the clinical care of their patients. To face the challenges in the practice of pharmacy in Singapore and abroad, pharmacists have to be equipped with not only the knowledge, but also the skills, attitudes and values required to deliver high quality, consistent and safe treatments to patients in collaboration with other health care professionals.

The primary objective of the NUS Doctor of Pharmacy (PharmD) programme is to train pharmacy practitioners to possess leadership qualities, advanced expertise and clinical experience that enable them to be at the forefront of the Pharmacy profession and health care in a variety of settings – institutional, community practice, government, academia, industry, translational research and drug development. The curriculum emphasizes a patient-centred course of study and involves a structure that will enable the students to develop into reflective practitioners with skills and attitudes to evaluate critically and modify practices in a timely and effective manner.

Criteria for Admission

- Candidates must be holders of the following degree, or its equivalent:
  Bachelor of Science in Pharmacy (Honours).
- Candidates must have fulfilled the pre-registration pharmacist training requirements and registered to practise Pharmacy.
- Preference for those with relevant work experience as a pharmacist (hospital, community etc.)
- Candidates will also be evaluated based on an interview, their written statement of career goals and at least three letters of recommendation.

Special Criteria for Admission

- Candidates, who do not have Honours classification in the degree pre-requisites as stipulated above, may apply for admission with GRE results. Candidates, who hold equivalent degrees from overseas universities, may apply for admission with GRE and TOEFL results. Such candidates, if found to be suitable, would be submitted for approval by Board of Graduate Studies on a case-by-case basis.
- Candidates, who have not read and passed the following 6 essential Pharmacy modules or their equivalents, will have to read and obtain good passes for them prior to admission.
  - PR1103 Pharmacy Practice I
  - PR3105 Pharmacotherapy I
  - PR3107 Pharmacy Practice II
  - PR4101 Pharmacotherapy II
  - PR4102 Pharmacotherapy III
  - PR4104 Pharmacy Practice III
Programme Structure

1. Length of Study

Full-Time Programme may be completed over 2 academic years. The didactic component may be completed during the first 10-months followed by the clerkship rotations over the following 40-50 weeks.

Part-Time Programme may be completed over 4-6 academic years. The didactic component may be completed over a period of 22 to 34 months followed by the clerkship rotations during the following 2 to 3 academic years, by completing 2-3 rotations per academic year.

2. Curriculum

The didactic component of the programme consists of 12 modules, comprising 8 essential Level 5000 modules and 4 elective Level 5000 modules as described below:

Didactic Coursework

Essential Modules (28 MC)

- PR5113 Clinical Pharmacokinetics and Therapeutic Drug Monitoring (4 MC)
- PR5130 Advanced Pharmacotherapy I (Infectious Diseases, Neuropsychiatric Disorders) (4 MC)
- PR5131 Advanced Pharmacotherapy II (Thyroid Disorders, Fluid and Electrolyte Disorders, Cardiovascular Therapeutics, Toxicology, Emergency Medicine) (4 MC)
- PR5132 Advanced Pharmacotherapy III (Haematologic, Oncologic and Immunologic disorders) (4 MC)
- PR5133 Advanced Pharmacotherapy in Special Populations (Paediatric and Geriatric Diseases/Conditions) (2 MC)
- PR5134 Physical Assessment and Diagnostic Tests (Medication History, Communication Skills, Physical Assessment Skills) (4 MC)
- PR5135 Foundations in Advanced Pharmacy Practice (Literature Evaluation & Drug Information, Biostatistics, Research Methodology & Clinical Research) (4 MC)
- PR5136 PharmD Seminar (2 MC)

Elective Modules (16 MC) – undertake all coursework modules OR the clinical research project (PR5239) + coursework module(s)

- PR5230 Pharmacoeconomics and Outcomes Research (4 MC)
- PR5231 Complementary and Alternative Medicine (4 MC)
- PR5232 Nutrition, Disease Prevention and Health Promotion (2 MC)
- PR5233 Pharmacy Practice Management (4 MC)
- PR5234 Pharmacogenomics and Pharmacogenetics (4 MC)
- PR5235 Ethics in Pharmacy Practice (2 MC)
- PR5239 Clinical Pharmacy Research Project (12 MC)

Clerkships

All PharmD candidates must complete 40 weeks of clerkship consisting eight 5-week attachments at various practice settings. The clerkship component of the programme aims to provide hands-on
application of the knowledge gained in the first-year modules, and to develop the clinical skills necessary to provide advanced pharmaceutical care.

- Compulsory clerkships (25 MC) (5 weeks each, total of 25 weeks)
  This will consist of clerkships in the following areas:
  
  - PR5150  Ambulatory Care (5 MC)
  - PR5151  Adult Acute Care Medicine (5 MC)
  - PR5152  Adult General Medicine (5 MC)
  - PR5153  Critical Care Medicine (5MC)
  - PR5154  Drug Information (5 MC)

- Elective clerkships (15 MC) (5 weeks each, total of 15 weeks)
  This will consist of three 5-week attachments to allow students to gain exposure to a broad range of pharmacy practice settings, as well as to allow them to pursue areas of personal interest. Options for elective clerkships will depend on available resources and clerkship sites.
  
  - PR5250  Elective Clerkship I (5 MC)
  - PR5251  Elective Clerkship II (5 MC)
  - PR5252  Elective Clerkship III (5 MC)

**Graduation Requirements**

Candidates will need to complete 44 MC worth of modules plus clerkships (40 MC) as indicated in the curriculum. To graduate with the PharmD degree, the candidate must have achieved a CAP of at least 3.5 for all 12 modules, in addition to passes for all eight clinical clerkships.