

DEPARTMENT OF PHARMACEUTICS



Prof. Dr. Cho Yi Myint

**B.Sc.(Zoology), DPMS(Pharmacy), BPharm
MPharm, Dip.Med.Ed.,
PhD (Pharmaceutics)
Professor and Head**

Township Hospital, Minbu, Magway Division	- 19. 3. 1987 - 31.7.1989
Township Hospital, Tharrawaddy, Bago Division	- 1. 8. 1989 - 31.1. 1995
Tutor, University of Pharmacy (Ygn)	- 7. 2 . 1995 - 3.7. 2003
Assistant Lecturer, University of Pharmacy (Ygn)	- 4. 7 . 2003 - 20.8. 2007
Lecturer and Head, University of Pharmacy (Mdy)	- 21. 8. 2007 - 4. 9. 2015
Associate Professor and Head, University of Pharmacy (Mdy)	- 4.9.2015 - 6.3.2019
Professor and Head, University of Pharmacy (Mdy)	-6.3.19..Till now

History of the Department

The Department of Pharmaceutics (Mandalay) was established by Prof. Dr. Mya Mya Than, Institute of Pharmacy (Mandalay), in 2000. Then, the Department was run under the guidance of Prof. Dr. Khin Maung Myint (Professor and Head) from 2002 to 2007. In later 2007, Prof. Dr. Cho Yi Myint was appointed as Lecturer and Head of the Department. Since August 2007, Department of Pharmaceutics (Mandalay) is run under the guidance of Prof. Dr. Cho Yi Myint, till now. From our department, we teach Under graduate students (Second year to Final year), Post graduate students (MPharm & PhD). The Post graduate programme for Master of Pharmacy was started in academic year of 1/2013 and then specialty for Master of Pharmacy (Pharmaceutics) is started in academic year of 1/2018. The programme for PhD (Pharmaceutics) was opened at 2014 January. There are fifteen members of teaching staff at present.



Prof. Dr. Cho Yi Myint
Professor and Head



Dr. San San Wai
Lecturer



Dr. Zar Chi Soe
Lecturer



Dr. Su Su Latt
Lecturer



Dr. Wai Wai Lwin
Assistant Lecturer



Daw Mya Thet Htar Swe
Assistant Lecturer



Daw Yin Phyu Thin
Assistant Lecturer



Daw Su Nandar Tin
Assistant Lecturer



Daw Ngu Wah Aung
Demonstrator



Daw Shwe Yi Win Hlyan Min
Demonstrator



Daw Hnin Wai Wai Linn
Demonstrator



Daw Mo Mo Ko Zin
Demonstrator



Daw Hay Marn Saung Hnin Soe
Demonstrator



Daw Khin Phone Myint
Demonstrator



Daw Khant Khant Nyein Kyaw
Demonstrator



Daw Sandar Lynn
Lab Assistant - 1



Daw Yee Yee Win
Lab Assistant - 2



Daw Thin Thin Khaing
Lab Assistant - 3

PROFILE FOR TEACHING STAFFS

Prof. Dr. Cho Yi Myint	Professor and Head	BPharm (Ygn), Dip. Med. Ed., MPharm (Ygn), PhD (Pharmaceutics) (Mdy)
Dr. San San Wai	Lecturer	BPharm (Ygn), Dip. Med. Ed., MPharm (Ygn), PhD (Pharmaceutics) (Mdy)
Dr. Zar Chi Soe	Lecturer	BPharm (Ygn), MPharm (Ygn), PhD (Pharmaceutics) (South Korea)
Dr. Su Su Latt	Lecturer	BPharm (Mdy), MPharm (Ygn), PhD (Pharmaceutical Engineering), Thailand
Dr. Wai Wai Lwin	Assistant Lecturer	BPharm (Mdy), MPharm (Ygn), PhD (Pharmaceutics) (Mdy)
Daw Mya Thet Htar Swe	Assistant Lecturer	BPharm (Mdy), MPharm (Ygn), PhD (Pharmaceutical Engineering) (Candidate) Silparkon University, Thailand

Daw Yin Phyu Thin	Assistant Lecturer	BPharm (Ygn), MPharm (Ygn)
Daw Su Nandar Tin	Assistant Lecturer	BPharm (Ygn), MPharm (Ygn)
Daw Shwe Yi Win Hlyan Min	Demonstrator	BPharm (Mdy), MPharm (Candidate) (Mdy)
Daw Ngu Wah Aung	Demonstrator	BPharm (Mdy), MPharm (Candidate) (Mdy)
Daw Mo Mo Ko Zin	Demonstrator	BPharm (Ygn), M.Sc. (Pharmaceutical Science and Technology) (Candidate) (Chulalongkorn University)
Daw Hay Marn Saung Hnin Soe	Demonstrator	BPharm (Ygn), M.Sc. (Pharmaceutics) (Candidate) (Chulalongkorn University)
Daw Khant Khant Nyein Kyaw	Demonstrator	BPharm (Ygn), MPharm (Candidate) (Ygn)
Daw Khin Phone Myint	Demonstrator	BPharm (Mdy), MPharm (Candidate) (Mdy)
Daw Hnin Wai Wai Linn	Demonstrator	BPharm (Mdy), MPharm (Candidate) (Mdy)

DEPARTMENTAL OBJECTIVES

Objectives for Second year students

At the end of the course of instruction, the learner should be able to:

1. Acquire the knowledge of the different aspects of dosage form, design, drug delivery, manufacturing, packaging and quality assurance and general principle of microbiology used in pharmacy (K)
2. Gain familiarity with the equipment and techniques used in the manufacture of the drugs in different dosage forms (S)
3. Interpret correctly the prescription for dispensing (K)
4. Calculate correctly the proportions (by weight or volume)of the different ingredients needed to prepare a given volume of any pharmaceutical preparation (s)
5. Recognize the different class of disperse systems and their application in formulative pharmacy (K)
6. Recognize the various liquid preparations, their uses in pharmacy, and describe how to prepare the preparations (K)
7. Describe the fundamental properties of disperse systems used in pharmacy (K)
8. Acquire the principles of formulation and the applications of disperse system (K,S)

DEPARTMENTAL CURRICULUM

Curriculum for Second Year BPharm

Sr. No.	Topics
1	Weights and Measures Pharmaceutical Calculation Prescription Interpretation
2	Types of Dosage Forms
3	Fundamental Operations in Compounding and Dispensing
4	Good Pharmaceutical Practice in Compounding and Dispensing
5	Powders
6	Mixtures
7	Emulsion
8	Suppositories
9	Ointments, Creams, Pastes and Gels
10	Liquid Preparations
11	Pastilles and Lozenges
12	Physical Pharmacy - Solution - Fundamental Properties of Disperse (Colloidal) systems
13	Cosmeticology
14	Formulations of Dispensed Products
15	Packaging technology (Containers and closures)
Total Teaching Hours	310

Objectives for Third year students

At the end of the course of instruction, the learner should be able to:

1. Describe different aspects of pharmaceutical technology, dosage form, design and formulation of pharmaceutical products, manufacturing, packaging and quality assurance (K)
2. Perform skillful dispensing and formulation of pharmaceutical dosage forms (S)
3. Develop sound habits of self learning and thinking to problem solving regarding pharmaceuticals (S,A)
4. Apply principles of pharmaceutical technology used in industries (S)
5. Know the principles, properties and mode of action as well as condition under which different agents of the sterilization function (K)
6. Predict the effects of sterilization procedure on the chemical and physical properties of sterilized materials (K)
7. Detect any failure in the sterilization process (S)
8. Choose appropriate control mechanisms for different agents of sterilization (S)
9. Know the sources, treatment and preparation of water as a pharmaceutical vehicle (K)
10. Avoid pyrogens in IV solution and carry out pyrogen testing (K,S)
11. Appreciate the need for sterile medicament and medical appliances (K)
12. Determine and evaluate and appropriate sterilization process for any product (S)
13. Determine the necessary packaging (K)
14. Know the principle and practice for sterility testing (K)
15. Explain the basic principle to acquire the knowledge of microorganism of the pharmaceutical interest (cultivation, factors affecting the growth of microorganism, sterilization technique, laboratory technique in microbiology) (K)
16. Explain the scope of pharmacy services and responsibilities of hospital pharmacist (K)

Curriculum for Third Year BPharm (Pharmaceutics)

Sr. No.	Topics
1	Sterilisation
2	Sterilisation Control
3	Aseptic Technique
4	Formulation of Injections
5	Ophthalmic Products
6	Pharmaceutical Biotechnology
7	Hospital Pharmacy
Total Teaching Hour	249

Curriculum for Third Year BPharm (Pharmaceutical Microbiology)

Sr. No.	Topics
1	Pharmaceutical Microbiology
2	Cultivation and Growth of Micro-organisms
3	Properties of Selected Microorganisms for Pharmaceutical
4	Bacterial Reproduction
5	Identification and Isolation of Microorganisms
6	Viruses
7	Mould and Yeast (Industrial Importance of Fungi)
8	Contamination of Non-sterile Products in Hospital and Community Environments
9	Production of therapeutically useful substances by recombinant DNA technology
Total Teaching Hour	76

Objectives for Final year students

At the end of the course of instruction, the learner should be able to:

1. Acquire principles and practice of pharmaceutical technology, dosage form, design, drug delivery, manufacturing, packaging and quality assurance (K,S,A)
2. Adopt principles of pharmacy administration including management, marketing, pharmacy law and ethical principles pertaining to professional practice of pharmacy (S,A)
3. Disseminate drug information to other health professionals, patients and the general public (S,A)
4. Be aware of the importance of effective communication skill to be applied in primary health care system (A)
5. Describe the principles of important GMP guidelines to be used in drug manufacturing (K)
6. Describe and perform the test methods in detail for quality control of different solid dosage forms (tablets and capsules) (K,S)
7. Explain the evaluation of different antimicrobial agents for their antimicrobial action before and after formulation (K)
8. List the advantages of tablets as a dosage form (K)
9. Show understanding of the production of the various types of capsules (K)
10. Enumerate the different types of tablet that can be produced (K)
11. Describe in detail the preparation of good quality tablets (S)
12. Carry out simple evaluation techniques on a given batch of tablets (S)
13. Acquire the properties, mechanisms of action and uses of the different classes of disinfectants and antiseptics that are in pharmaceutical practice (K)
14. Relate Good Manufacturing Practice (GMP) to the preparation of effectively preserved pharmaceutical products (S)

Curriculum for Final Year BPharm (Paper I)

Sr. No.	Topics
1	Vaporization and Evaporation
2	Size Reduction and Classification
3	Mixing
4	Drying
5	Extraction and Galenicals
6	Compressed Tablets
7	Tablet Coating
8	Capsules
9	Good Manufacturing Practice (GMP)
10	Biopharmaceutics
11	Drug Stability
12	Sustained Released Dosage Form
Total Teaching Hour	240

Curriculum for Final Year BPharm (Paper II)

Sr. No.	Topics
1.	Disinfection
2.	Manufacture of Antibiotics
3.	Assessment of a New Antibiotic
4.	Pharmaceutical aspect of immunological product production
5.	Vaccines
6.	Immune Sera
7.	Communication Skills in Pharmacy Practice
8.	The Dimension of Drug Supply
9.	Planning and Implementing Change
10.	The Selection of Drugs
11.	Quality Assurance
12.	Predicting Drug Requirements

13	The Procurement Cycle
14	Pharmaceutical Marketing
15	Law & Ethics
16	Notification
17	Guideline for Drug registration
18	Guide line for notification of cosmetics
19	Drug distribution in hospitals
Total Teaching Hour	
240	

PhD (Pharmaceutics)

Specific Learning Objectives

At the end of the course the learners should be able to

- Design, evaluate and modify if necessary, the delivery strategies for dosage forms
- Apply the advanced techniques in production of safe and effective pharmaceuticals with acceptable quality in proper dosage forms by Good Manufacturing Practice
- Strengthen the practice skill in pharmacy management
- Apply ethical principles and law of pharmacy and practice according to rules and regulations

Contents

1. Advanced drug delivery system
2. Biopharmaceutics
3. Advanced pharmaceutical technology
4. Industrial microbiology
5. Cell culture
6. Pharmaceutical biological products and non-biological products
7. Fermentation technology and antibiotics production
8. Pharmaceutical biotechnology
 - Formulations, preparations and safe handling
9. Microbiological analysis
 - Preparation and standardization of immunological products
10. Pilot Plant scale up technology
11. Quality management system in drug manufacturing
12. Community pharmacy
13. Forensic pharmacy