



DOCUMENT:	SYLLABUS	COURSE CODE: PHADISC1C	COPIES ISSUED TO: College of Allied Health
EFFECTIVITY:	3 rd TERM, AY 2023 - 2024	COURSE TITLE: DISPENSING 1	Learning Resource Center Faculty and Students

VISION

We are National University, a dynamic private institution committed to nationbuilding, recognized internationally in education and research.

MISSION

Guided by the core values and characterized by our cultural heritage of Dynamic Filipinism, National University is committed to providing relevant, innovative, and accessible quality education and other development programs.

We are committed to our:

STUDENTS, by molding them into life-long learners, ethical and spiritual citizens, and self-directed agents of change.

FACULTY and EMPLOYEES, by enhancing their competencies, stimulating their passions, cultivating their commitment, and providing a just and fulfilling work environment.

ALUMNI, by strengthening their sense of pride through engagement, loyalty, and love for their alma mater.

INDUSTRY PARTNERS and EMPLOYERS, through active collaborations, providing them Nationalians who will contribute to their growth and development.

COMMUNITY, by contributing to the improvement of life's conditions and well-being of its members.

CORE VALUES

1. Integrity 2. Compassion 3. Innovation 4. Resilience 5. Patriotism

GRADUATE ATTRIBUTES INTENDED FOR NATIONALIANS (GAINs)	INSTITUTIONAL LEARNING OUTCOMES (ILO)
Leadership and Teamwork	a. Exhibit moral, ethical, and competent leadership.
1. Leadership and Teamwork	b. Collaborate effectively in teams of different cultures.
Responsible Citizenship	 Participate actively in community-oriented advocacies that contribute to nation- building.
3. Innovative, Creative, and Critical	d. Develop an entrepreneurial mindset.
Thinking	Provide solutions to challenges in various fields of specialization and society in general.
Academic and Professional Competence	f. Demonstrate mastery of foundational skills and specific areas of specialization.
5. Effective Communication	g. Express ideas meaningfully, accurately, and appropriately in multicultural and multidisciplinary contexts.
Whole Person Character	h. Practice NU Core Values in personal and professional life.
	i. Engage in continuing personal and professional development.
7. Life and Career Skills Orientation	j. Exemplify the capacity for self-reflection.
7. Life and Career Skills Offeritation	 Demonstrate adaptability, flexibility, productivity, and accountability in diverse settings.
8. Technological Literacy	Exhibit mastery in navigating various technological tools and techniques.

Program Educational Objectives (PEO) After 3 to 5 years on the job, BS Pharmacy graduates of NU are expected to:				ILO									
				d	е	f	g	h	i	j	k	1	
Practice pharmacy in a professional and ethical manner	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	
Provide pharmaceutical care	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	
Conduct relevant research and disseminate findings	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	
Apply managerial and entrepreneurial skills	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
5. Communicate and facilitate effectively	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	

Program Outcomes (PO)		PEO						
At the time of graduation, the student must be able to:	1	2	3	4	5			
1. Adhere to legal requirements, practice standards and code of ethics for the pharmacy profession.	√							

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2. Apply knowledge & skills of mathematics, health sciences, social sciences, psycho-social sciences, physical sciences, environmental sciences, natural					
sciences, information technology and other advanced technologies to the practice of pharmacy.	V				
3. Apply suitable techniques and principles in the compounding, storage, manufacturing, distribution, administration and disposal of pharmaceutical (biologicals) products to ensure the quality, safety & efficacy of products.	✓				
4. Develop a drug therapy plan appropriate for the patient based on the evaluated patient's health and medication history		✓			
5. Provide relevant information in dispensing pharmaceutical products in accordance to practice standards.		✓			
6. Monitor the patient's progress in achieving specific outcomes and optimize the patient's health-related quality of life.		✓			
7. Collaborate effectively with the patients and other members of the health care team in accordance to practice standards.		✓			
8. Conduct and participate in research activities in accordance with scientific research guidelines and dissemination of findings for utilization			✓		
9. Demonstrate efficient and effective management skills in any organization.				✓	
10. Demonstrate entrepreneurial skills while ensuring patient safety.				✓	
11. Facilitate learning of selected learners for specific purposes (patients, students, peers, support staff, other health professionals)					✓
12. Communicate effectively using culturally appropriate language.					✓

COURSE DESCRIPTION

Rationale

This course is designed to introduce the concepts of basic dispensing and techniques to pharmacy students that govern this important facet of the professional practice of pharmacy.

Focus

This course covers the introduction to dispensing, receiving prescriptions, prescription validation (initial professional and technical check), labelling, assembling of prescriptions and documentation.

Course Learning Outcomes

At the end of the course, the second-year students are expected to:

- 1. Demonstrate the different tasks within the dispensing process
- 2. Understand the basic principles of customer care
- 3. Understand the basic principles of good communication
- 4. Interpret and validate information on a prescription
- 5. Understand the process of receiving a prescription correctly
- 6. Outline the professional checking of prescriptions
- 7. Outline the technical checking of prescriptions
- 8. Identify the essential information on medication labels
- 9. Discuss the requirements for proper medicine labeling
- 10. Demonstrate the vaccination process and preparation

PRE-REQUISITE(S)

Drug Dosage Forms Introduction to Pharmacy

COURSE OUTCOMES (CO)

At the end of the course, the student must be able to:	PO											
At the end of the course, the student must be able to:		2	3	4	5	6	7	8	9	10	11	12
1. At the end of the second-year level, the students should be able to:												

			1				,				,
2.	Explain the preparation of drugs into various dosage forms to ensure quality of medicinal and pharmaceutical products	1	/	/		/					
3.	Demonstrate knowledge of drugs of biological origin, and the pharmacy and chemistry of pharmaceutical products	1		1							<u> </u>
4.	Read and interpret prescriptions correctly	1	1								
5.	Critically evaluate scientific evidence for research and decision-making	/	/	/							
6.	Practice alternative management and treatment modalities	1	1						ŀ		
7.	Relate biological and physiological concepts to pharmacy (drugs, biotechnology products, and diseases)	/	1	/					l	i	
8.	Investigate the harmful and beneficial effects of microorganisms (including antimicrobial resistance and its clinical impact) as	,		,					l	i	
	well as the helminths and measures to control these parasites	1		/							ĺ
9.	Demonstrate understanding of immunization process and types of immunobiologicals	/							l	i	
10.	Demonstrates appreciation of the major art forms								ŀ		
11.	Demonstrates an appreciation of history and cultural heritage								l	i	
12.	Demonstrate methods in utilizing instrumentation analyses as required by pharmacopeial standards	1		/					ŀ		
13.	Provide healthcare information to various clients (patients, healthcare professionals and public)	1			1	/				i	
	Recognize important elements of the patient's health profile and health promotion	/								1	

CREDIT

- [1] [Lecture] units
- [1] [Laboratory] units

TIME ALLOTMENT

- [1]-hour [20]-mins lecture per week
- [4]-hour laboratory per week

COURSE REQUIREMENTS

- Major Exams
- 2. Quizzes
- 3. Recitation
- 4. Laboratory Reports
- 5. Performance tasks
- 6. Written report

CLASS POLICIES

- 1. A Quiz notebook (Laboratory) is required per student. The instructor shall be responsible for safekeeping the notebooks and shall return them to the students every time a quiz will be given.
- 2. Punctuality is of utmost importance. A student who comes in late in class and misses a classroom activity (i.e. quiz, experiment) or some parts of it will not be given considerations.
- 3. In cases wherein a student misses a major examination, he/she should accomplish the "special examination form". He/she may be given a special examination upon the Dean's approval. The approved form must be presented within one week after the student returns. Otherwise, no special examination shall be granted. Students must follow the seat plan. A student may be marked as absent if not in his/her designated seat.

- 4. Strictly no communication, in any form, during quizzes and major examinations. (Please refer to the student handbook). Such communications may be treated as a case of cheating and the student/s shall receive a grade of zero (0) in that exam for the first offense and a grade of 0.00 in the subject for the succeeding violations. Students have the right to ask about their grades. The instructor will show the class record every end of the grading period. All clarifications/corrections/questions/complaints must be addressed to the instructor.
- 5. Quizzes usually cover previously discussed topics and shall be given before the start of the lecture during the next meeting.
- 6. Asynchronous and synchronous forms of learning environment will be used. MS Office 365 is the preferred platform. Faculty and students may also agree on some supplemental platforms (YouTube, Facebook Messenger, Email, Purpose Games, etc.) that suits their context.
- 7. Submission of requirements will be based on the timetable for activities. All required deliverables should be submitted within the given timeline. However, faculty may consider time, internet
 - accessibility, resources, and student difficulty when requiring students to submit their output.
- 8. Students have the right to ask about their grades. The instructor will show the class record at the end of the grading period. All clarifications must be addressed to the instructor.
- 9. Strictly no communication, in any form, during quizzes and major examinations. (Please refer to the student handbook) Actions include, but are not limited to looking at notes, searching the internet

for answers and taking screenshots of the questions while taking the examination are strictly prohibited. Such actions are considered cheating, and the student/s shall receive a grade of zero (0) in

the exam for the first offense and a grade of 0.00 in the course for the subsequent violations.

- 10. No special quizzes, in general, shall be given. If a student misses a quiz due to a reasonable absence, he/she must immediately inform the instructor and present valid proof. Considerations are
 - subject to instructor discretion.
- 11. No special activity will be given to individual students for the purpose of grade enhancement.
- 12. Students are expected to be present for at least 80% of the synchronous sessions.
- 13. An open camera is required for major examinations and should be according to the prescribed setup of the department.

GRADING SYSTEM

*The grade for the entire course will be comprised of the following: Midterm = 50% Final = 50% *The breakdown of the grade is as follows:

Lecture (Midterm to Final)	Laboratory (Midterm to Final): 50%					
Major Examination	40%	Major Examination	30%			
Quizzes	40%	Quizzes	20%			
Performance	10%	Laboratory Exercises	30%			
Other Sources	5%	Performance	15%			
Reflective Journal	5%	Reflective Journal	5%			

Note: Passing grade is 60% on a base-0 Grading System

Grade	Equivalent	Grade	Equivalent
4.00	96 - 100	R	Repeat
3.50	90 - 95		Failure
3.00	84 - 89	0.00	Cheating
2.50	78 - 83		Excessive Absences
2.00	72 -77	Dr	Dropped
1.50	66 - 71	Inc	Incomplete
1.00	60 - 65		

COURSE CONTENTS / COURSE OUTLINE

	COURSE	ESSENTIAL	. LEARNING		CONSTRUCTIVE ALIGNMENT	
WEEK	OUTCOMES (Content Standards)	TOPIC OUTCOMES (Functional Knowledge)	TOPICS (Declarative Knowledge)	METHODOLOGY (Teaching/Learning Activities)	RESOURCES	ASSESSMENT
1	PLO 1 PLO 2 PLO 5 ILO 3 ILO 12	1. Defining dispensing and related terms 2. Interpreting the legal and ethical considerations in dispensing under: a. Philippine Pharmacy Act b. Generics Act of 1988 c. Comprehensive Dangerous drugs Act d. Special Law on Counterfeit drugs e. Universally Accessible Cheaper and Quality Medicines Act of 2008 f. Expanded Senior Citizens' Act g. National Athletes and Coaches Benefits and Incentives Act h. Universal Health Care Act	1. Dispensing a. Definition of terms b. Legal and ethical consideration in dispending R.A. 10918 R.A. 6675 R.A. 9165 R.A. 9203 R.A. 9502 R.A. 9257 R.A. 10699 R.A. 11223	Interactive lecture Journal Critique Assignment Group discussion	Textbooks/ Reference Books/ ebooks Powerpoint presentation slides Downloaded videos Lecture outline Laboratory manual Laboratory materials and equipment Internet Information Oxford Academic website (Others: Laptop)	Written Exams Quiz Recitation Assignments Lab sheets

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	001/205	ESSENTIAL	. LEARNING		CONSTRUCTIVE ALIGNMENT	
WEEK	COURSE OUTCOMES (Content Standards)	TOPIC OUTCOMES (Functional Knowledge)	TOPICS (Declarative Knowledge)	METHODOLOGY (Teaching/Learning Activities)	RESOURCES	ASSESSMENT
		others				
2	PLO 1 PLO 2 PLO 5 ILO 3 ILO 12	Defining drugs as OTC, prescription, dangerous drugs, pharmacist only OTC drugs, household remedies, food supplements, and cosmetics Discussing and interpreting dispensing requirements per type of drugs	Dispensing a. OTC drugs b. Prescription drugs c. Dangerous drugs d. Pharmacist only OTC drugs e. Household remedies f. Food supplements g. Cosmetics h. Antibiotic Stewardship others	Interactive lecture Journal Critique Assignment Group discussion Activity 1	Textbooks/ Reference Books/ ebooks Powerpoint presentation slides Downloaded videos Lecture outline Laboratory manual Laboratory materials and equipment	Written Exams Quiz Recitation Assignments Lab sheets
3-5	PLO 1 PLO 2 PLO 5 ILO 3 ILO 12	Defining prescription and medication order Identifying the parts of a prescription and medication order Enumerating the official/ acceptable abbreviations and acronyms used in prescription and medication order Memorizing the 10 banned abbreviations based on medication safety practices.	 Definition Prescription and Medication order (based on RA 10918) Different parts of the Prescription and pertinent information in the Medication Order Official abbreviation, acronyms and writing styles in prescription and medication orders. Banned abbreviations (BANDEM) based 	Interactive lecture Journal Critique Assignment Group discussion	Textbooks/ Reference Books/ ebooks Powerpoint presentation slides Downloaded videos Lecture outline Laboratory manual Laboratory materials and equipment	Written Exams Quiz Recitation Assignments Lab sheets

	COURSE	ESSENTIAL	L LEARNING		CONSTRUCTIVE ALIGNMENT	
WEEK	OUTCOMES (Content Standards)	TOPIC OUTCOMES (Functional Knowledge)	TOPICS (Declarative Knowledge)	METHODOLOGY (Teaching/Learning Activities)	RESOURCES	ASSESSMENT
		5. Explaining the importance of Patent Medication Profile Identifying pertinent information in the patient medication profile	on medication safety practices. 5. Importance of Patient medication profile Pertinent information in the patient medication profile			
6	PLO 1 PLO 2 PLO 5 ILO 3 ILO 12 ILO 13	Definition of dose and related terms Review of different dose calculation formula (special populations, organ functions, dosedosage form calculation, antibiotic combination computation) Review of general consideration and special patient parameters during dose calculations	1. Defining dose and related terms 2. Reviewing of different dose calculation formula (special populations, organ functions, dosedosage form calculation, antibiotic combination computation) 3. Calculating doses for general consideration and special patient patients	Interactive lecture Journal Critique Assignment Group discussion	Textbooks/ Reference Books/ ebooks Powerpoint presentation slides Downloaded videos Lecture outline Laboratory manual Laboratory materials and equipment	Written Exams Quiz Recitation Assignments Lab sheets
7	MIDTERM EXAMINATION					
8	PLO 1 PLO 2 PLO 5 ILO 2 ILO 3 ILO 12 ILO 13	Describing proper labels for pharmaceutical; products as required by the Food and Drug administration. Describing proper containers for	Description of proper labels for pharmaceutical products as required by the Food and Drug administration. Description of proper containers for		Textbooks/ Reference Books/ ebooks Powerpoint presentation slides Downloaded videos Lecture outline Laboratory manual	Written Exams Quiz Recitation Assignments Lab sheets
		pharmaceutical;	pharmaceutical products		Laboratory materials and equipment	

ESSENTIAL LEARNING		CONSTRUCTIVE ALIGNMENT				
WEEK	COURSE OUTCOMES (Content Standards)	TOPIC OUTCOMES (Functional Knowledge)	TOPICS (Declarative Knowledge)	METHODOLOGY (Teaching/Learning Activities)	RESOURCES	ASSESSMENT
		products as required by the Food and Drug administration	as required by the Food and Drug administration			
9	PLO 1 PLO 2 PLO 5 ILO 2 ILO 3 ILO 12 ILO 13	Identifying the different pricing methods for pharmaceutical products Applying the pricing scheme for prescriptions	Identification of different pricing methods for pharmaceutical products Application of pricing schemes for prescriptions	Interactive lecture Journal Critique Assignment Group discussion	Textbooks/ Reference Books/ ebooks Powerpoint presentation slides Downloaded videos Lecture outline Laboratory manual Laboratory materials and equipment	Written Exams Quiz Recitation Assignments Lab sheets
10	PLO 2 PLO 5 ILO 12 ILO 13	 Identifying the roles of pharmacists in the healthcare setting Identifying the roles of other healthcare professionals Demonstrating collaboration of pharmacist with other healthcare professionals Identifying the different pharmacy supportive personnel Differentiating competencies for each pharmacy supportive personnel Identifying the importance of the roles of the pharmacy 	Pharmacist roles in the healthcare setting Roles of other healthcare professionals Collaboration of pharmacists with other healthcare professionals Pharmacy supportive personnel (pharmacy assistant, pharmacy technician) Competencies required for different pharmacy supportive personnel Importance of their roles in the dispensing process	Interactive lecture Journal Critique Assignment Group discussion	Textbooks/ Reference Books/ ebooks Powerpoint presentation slides Downloaded videos Lecture outline Laboratory manual Laboratory materials and equipment	Written Exams Quiz Recitation Assignments Lab sheets

	COURCE	ESSENTIAL LEARNING		CONSTRUCTIVE ALIGNMENT		
WEEK	COURSE OUTCOMES (Content Standards)	TOPIC OUTCOMES (Functional Knowledge)	TOPICS (Declarative Knowledge)	METHODOLOGY (Teaching/Learning Activities)	RESOURCES	ASSESSMENT
		supportive personnel 7. Identifying the role of the pharmacist role as an immunizer 8. Demonstrate immunization process and preparation	Pharmacist role as an immunizer Immunization process and preparation			
s11	PLO 2 PLO 5 ILO 12 ILO 13	Principles of Good customer service Principles of interpersonal and intercultural communication Principles of handling different types of clients	Identifying the principles of good customer service Demonstrating interpersonal and intercultural communication Demonstrating handling of different types of clients		Textbooks/ Reference Books/ ebooks Powerpoint presentation slides Downloaded videos Lecture outline Laboratory manual Laboratory materials and equipment	Written Exams Quiz Recitation Assignments Lab sheets
12	PLO 1 PLO 2 PLO 5 ILO 2 ILO 3 ILO 12 ILO 13	Reviewing the completeness of the prescription Validating the appropriateness of the prescription Checking the availability of the medicine Applying the legal and ethical considerations in dispensing Securing proper label and	Review the completeness of the prescription Validate the appropriateness of the prescription Check the availability of the medicine Apply the legal and ethical considerations in dispensing Secure proper label and packaging Medication errors	Interactive lecture Journal Critique Assignment Group discussion	Textbooks/ Reference Books/ ebooks Powerpoint presentation slides Downloaded videos Lecture outline Laboratory manual Laboratory materials and equipment	Written Exams Quiz Recitation Assignments Lab sheets

WEEK	COURSE OUTCOMES (Content Standards)	ESSENTIAL LEARNING		CONSTRUCTIVE ALIGNMENT		
		TOPIC OUTCOMES (Functional Knowledge)	TOPICS (Declarative Knowledge)	METHODOLOGY (Teaching/Learning Activities)	RESOURCES	ASSESSMENT
		packaging, and appropriate pricing 6. Medication errors 7. Counterchecking of prepared prescription and medication order Providing patient counseling	7. Countercheck of the prepared prescription and medication order Patient counseling			
13.5	FINAL EXAMINATION					

RESOURCES

Learning Resources:

LCD projector, Powerpoint presentations, LED TV, Audio-visual materials (You may add resources as needed)

Basic Readings:

- 1. Schwinghammer, Terry (2017). Pharmacotherapy casebook: A patient-focused Approach. (10th ed). USA: McGraw-Hill Medical. [CN: GC RM 263 .P43 2017]
- 2. Stein, Susan M. (2015). Boh's Pharmacy Practice Manual: A Guide to the Clinical Experience. (4th ed). USA: Wolter's Kluwer. [Classic Reference] [CN: GC RS 122.5 .B64 2015]
- 3. Adejare, Adeboye (2021). Remington: the science and practice of pharmacy (23rd ed). Netherlands: Elsevier Inc. [CN: REF RS 91 .R46 2021]
- 4. Pickar, Gloria and Abernethy, Amy. (2016). Dosage calculations: a ratio-proportion approach. (4th ed.). Stamford, CT.: Cengage Learning [Classic Reference] [CN: GC RS 57 .P53 2016]

Extended Readings

- 1. Rantucii, Melanie J. (2007). Pharmacists Talking with Patients. A guide to patient counselling. (2nd ed.). USA: Lippincott Williams & Wilkins. [Classic Reference] [CN: GC RS 56 .R36 2007 c.1]
- 2. Felton, L. (2013) Essentials of Pharmaceutics. USA: Pharmaceutical Press [Classic Reference] [GC RS 200 .R46 2013]
- 3. DiPiro, J.T. (2014), Pharmacotherapy: A Pathophysiologic Approach, New York: McGraw-Hill Education Inc. [Classic Reference] [CN: RES RM 262 .P43 2002]
- 4. Ansel, Howard C. (2013). Pharmaceutical calculations. (14th ed.) USA: Wolter's Kluwer Health / Lippincott Williams & Wilkins. [Classic Reference] [CN: GC RS 57 .A57 2013]

Online Sources

- 1. www.fda.gov.ph
- 2. www.pdea.gov.ph

- 3. www.globalrph.com
- 4. www.medscape.com
- 5. www.medcalc.com
- 6. www.choosemyplate.gov
- 7. www.dohacademy.gov.ph

Course plan adapted from Philippine Association of Colleges of Pharmacy Course Specifications

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