

#### **ALTINBAŞ UNIVERSITY**

#### **FACULTY of PHARMACY**

#### **APPRENTICESHIP NOTEBOOK**

**PHAR 588 HOSPITAL PHARMACY PRACTICE APPRENTICESHIP I**

ISTANBUL- ………………..

**Photo**

#### **ALTINBAŞ UNIVERSITY**

#### **SCHOOL of PHARMACY**

#### **APPRENTICESHIP NOTEBOOK**

**Student's;**

**Name and Surname:** **.............................................................**

**No:** **.............................................................**

**Type of Apprenticeship: ..............................................................**

**Signature: .............................................................**

**APPRENTICESHIP INFORMATION**

|  |  |
| --- | --- |
| **Hospital;** | |
| **Name** |  |
| **Telephone Number** |  |
| **Address** |  |
| **Name and Surname of the Responsible Pharmacist** |  |
| **Apprenticeship Start Date** |  |
| **Apprenticeship End Date** |  |
| **Apprenticeship Period (Total Business Days)** |  |
| **Apprenticeship Attendance Status** | **Regularly attended to the apprenticeship ( )** |
| **Signature of the Responsible Pharmacist ; Stamp and Date** |  |

|  |  |
| --- | --- |
| **Course Coordinator :** | Asst. Prof. Nilay AKSOY |
| **Instructors :** | Asst. Prof. Nilay Aksoy  Asst. Prof. Gaye HAFEZ |
| **Assistants :** | Res. Asst. Serel Ulusoy  Res. Asst. Sefa Sönmez |
| **Sector Representative :** | Esra Karacabey (Hospital Pharmacist)  Ece Sucularlı (Hospital Pharmacist) |
| **Goals :** | This is an elective advanced apprenticeship that aims to provide opportunities for students to build on knowledge, skills acquired through didactic education experiences and apply them in direct patient care activities in a hospital setting. The students will participate in pharmacy operation and services including drug distribution and drug control as well as understanding the important role of the pharmacist in improving patient care in a hospital setting. |
| **Content** : | 7 weeks, full time (40 hours/week), hospital pharmacy apprenticeship, total 280 (7x 40) hours. |

|  |
| --- |
| **LEARNING OUTCOMES**  **By the end of this apprenticeship students;** |
| * Understand drug product procurement and inventory management. |
| * Classify prescription types. |
| * Dispense medication according to the prescription. |
| * Take part in preparing, packaging and labeling medication. |
| * Monitor medication delivery and usage. |
| * Evaluate the storage condition requirements for certain medications. |
| * Conduct cost-effectiveness, cost-minimisation, cost-utility, cost-benefit analysis to ensure the best utilisation of medical financial resources. |

# 

# PURPOSE OF THE TRAINING MANUAL

The purpose of this manual is to provide the information required in Hospital Pharmacy Training for Altınbaş University Faculty of Pharmacy students and preceptors.

# CURRICULAR PREREQUISITES

PHAR 588 Hospital Pharmacy Practice Apprenticeship 1 Prerequisites: To be eligible for hospital training, students must complete the forth year with success.

# SITE SCHEDULING /TIME and DURATION OF PHARMACY TRAINING ROTATION

* In order to schedule a site, students must submit the training form which will be available in the secretary office. This form is distributed at the end of the second semester. The secretary office will announce the date for distributing the forms and the deadline for submitting a form.
* Once the forms are submitted, no changes are acceptable unless the student submits a written formal request explaining the reasons for this change.
* The training site will be the hospital central pharmacy.

**Time and Duration of Pharmacy Training**

Students are required to complete 7 weeks of training (total 280 (7x 40) hours). Preceptors will be asked to verify if the students complete this period of training at the end of the rotation.

**RULES AND REGULATIONS**

## Attendance/Leave of Absence

Students are required to inform their preceptors of any absence due to illness or other unforeseen circumstances. Absences should be communicated to preceptor as early as possible, and prior to any scheduled start/on site time. Students who are absent from the site for more than two days due to illness must obtain a written physician’s documentation.

## E-mail Policy

It is possible to contact to instructors via student university e-mail portal:

[nilay.aksoy@altinbas.edu.tr](mailto:nilay.aksoy@altinbas.edu.tr)

**General Appearance**

The student’s general appearance and hair must be clean and well groomed. Students are required to wear a clean, pressed short white lab coat and their university badge.

# PHARMACY TRAINING PROGRAM –OVERVIEW

During the hospital pharmacy training, students will understand the different functions and services provided by the hospital pharmacist, will use different sources of drug information and and will gain knowledge and practical tools for their future professional career.

# EDUCATIONAL OUTCOMES FOR THE HOSPITAL PHARMACY TRAINING

At the end of the Hospital Pharmacy Practice Experience, under the supervision of the preceptor, the student should be able to:

**Participate In Accurate Prescription Process**

• interpret a medication order that is obtained in oral, electronic or in written form.

• be familiar with pharmacy role in transferring orders into the computerized processing system.

• correctly analyze orders for necessary components (a drug, dose, route and frequency) and be familiar with the order verification process.

• communicate to a patient, pharmacist, preceptor or other health care Professional about accurate and appropriate medical and drug information.

• participate in preparing prescription orders for administration, and be familiar with the hospital drug delivery system.

## Suggested Activities In Which Outcome Can Be Taught Or Evaluated:

• receive and interpret prescriptions (order entry).

• assess a prescription for necessary components (drug, dose, route and frequency) and safety (order verification).

• compare medication products versus labels for accuracy (checking).

• determine the appropriate means of communication for the situation.

• distribute prescriptions using the hospital delivery system.

## Demonstrate Knowledge Of A Unit Dose System

• identify key elements of a unit dose system.

• identify different services pharmacy provide and the role they play in hospital drug distribution.

• participate in medication storage, pre-packaging and distribution.

• identify relevant laws and standards regarding a unit dose system.

## Demonstrate Knowledge of an Intravenous Admixture System

• observe and describe proper procedures for dispensing sterile products.

• observe and describe special handling, preparation and administration procedures for IV drug products (chemotherapy, TPN, etc.)

• discuss technology in IV drug mixing.

• discuss different types of equipment used with IV therapy.

## Display Appropriate Professional Behavior and Ethical Work

• maintain professional attire, behavior and attitude.

• be reliable, responsible, rarely late, and finish the work that is started.

• initiate activities and utilize time effectively.

• demonstrate awareness of personal competence and limitations, and seek guidance from preceptors when appropriate.

• display appropriate and open-minded response to feedback.

• discuss the appropriate resolution of conflict in place of work

## Demonstrate Cultural and Social Competency

• respect different patient groups and cultural/ethnic/religious traditions.

• display an open-minded attitude to different cultural perspectives.

• demonstrate empathy and caring in interactions with others.

# 

# Central Pharmacy Training Excercise Sheet

## How are the temperature and humidity controls of the medicines stored in the different temperature(room temperature, refrigerator and freezer) in the hospital pharmacy monitored?

* What is the frequency of follow-up?
* What actions the pharmacist takes when a temperature deviation occurs?
* Please provide a general description of the hospital's cold chain action. (Your apprenticeship hospital)

**Please mention some of the magistral drugs prepared in the hospital pharmacy ( in your setting) ?**

* Which Department of the hospital mostly order magistral drugs?

• Clearly describe the method of preparation, the intended use, and the stability for 2 of the prepared magistral drugs.

**What are the notebooks that are obligatory in the hospital pharmacy?**

* In which hospital committees does the hospital pharmacist participate? Give examples of two committees and their main functions
* **Provide details about the following.**
* Managment of the surplus drugs:
* Management of drugs with close expiration dates:
* The concept of tendering
* Minimum and maximum stock values
* Critical stock values

**What is an infectious disease specialist approval?**

* Give 5 examples for the drugs that reqiure the approval of an infectious disease specialist.

**How are drug-drug and drug-food interactions controlled during the order approval process in the hospital where you do your internship?**

* What are the resources used to control these interactions?

**Give five examples of drugs that must be kept in the hospital pharmacy at all times.**

**How are the hospital pharmacy's devices calibrated?**

* How often do these calibrations need to be done?
* What should be done in the case of the value being out of range?

**In the hospital pharmacy, how are adverse effects reported? Explain in detail the process that occurred between the appearance of the adverse effect and the notification to TÜFAM.**

**Explain the routine inspections in the hospital pharmacy and the role of the pharmacist in these inspections.**

**Explain “high-risk drugs” and the special procedures applied to them (packaging, labeling with special warnings, etc.) and other special labels, if any (to be kept in the refrigerator, etc.) with examples.**

**What are the types of labels used in hospital pharmacy? What are the drugs that must be labeled? Consider what happens if these drugs are administered without labeling in terms of patient safety.**

**How are cytotoxic drugs prepared? Explain the measures taken for patient and employee safety.**

* Why is it dangerous to work with cytotoxic drugs?
* Describe the personal protective equipment used for chemotherapy preparation.
* What are the working principles of fully automatic and semi-automatic devices used in the preparation of chemotherapeutic drugs?
* Who prepares cytotoxic drugs in the hospital where you do your internship?

**What are the values that must be followed in terms of SUT conditions and the clinical condition of the patient during usage? Regarding this, give examples of special-use drugs.**

**How are multiple dose medications managed in the pharmacy? Where are these drugs located? Give 5 examples to drugs with limited stability time after opening (cream, pomade, suspension etc.).**

# Evaluation of Worksheet For Hospital Pharmacy Training

To assist the preceptor and the student to monitor progress as they work together to meet the hospital pharmacy training outcomes

**How to fill the worksheet?**

Mark each outcome with either **🗸** if done or **X** if not done or **NA** if Not Applicable to that area

**Note:** This checklist is for academic preceptor in order to follow-up student activities

* **Student ID Number: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
* **Training Site: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
* **Training Dates: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

|  |  |
| --- | --- |
|  | **Outcome 1. Participate in Accurate Prescription Processing** |
|  | Receive and interpret prescriptions (order entry). |
|  | Assess a prescription for necessary components (drug, dose, route, frequency and safety) |
|  | Follow an order through all phases of the medication use process |
|  | Compare medication products against labels for accuracy (checking). |
|  | Actively listen to patients, peers, and other health care professionals. |
|  | Determine the appropriate means of communication for the situation. |
|  | Distribute prescriptions using automation, robotics, a tube system, or direct unit delivery. |
|  | **Comments:** |
|  | **Outcome 2. Demonstrate Knowledge of a Unit Dose System** |
|  | Provide various technician services, with a technician. |
|  | Perform prepackaging procedures. |
|  | Retrieve and label products. |
|  | Check an emergency cart or drug kit for contents and expiration date. |
|  | Restock the hospital distribution system. |
|  | Discuss relevant laws and standards regarding a unit dose system. |
|  | **Comments:** |
|  | **Outcome 3. Demonstrate Knowledge of an Intravenous Admixture System** |
|  | Participation in reviewing IV admixture orders for compatibility and stability |
|  | Observe preparation, storage, and dispensing of parenteral products using aseptic techniques. |
|  | Observe techniques for chemotherapy and TPN orders. |
|  | Prepare and/or update compatibility charts |
|  | **Comments:** |
|  | **Outcome 4. Demonstrate Knowledge of Current Standards of Institutional Pharmacy Practice** |
|  | Discuss the role and scope of the hospital quality assurance program. |
|  | Discuss the role of pharmaceutical representatives in the hospital setting |
|  | Discuss patient safety issues with the preceptor and other health care professionals |
|  | **Comments:** |
|  | **Outcome 5. Display Appropriate Professional Behavior and Ethical Work** |
|  | Student observation of pharmacist role model. |
|  | Establish professional rapport with patients and healthcare professionals. |
|  | Prioritize workload appropriately. |
|  | One on one interaction with preceptor and/or other health care professional. |
|  | **Comments:** |

# Preceptor Evaluation For The Student

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Exceeds Expectations** | **Meets Expectations** | **Does Not Meet Expectations** |
| **Exhibit the highest standards of professional and ethical behavior in pharmacy practice (e.g. honesty, integrity, tolerance, confidentiality, care and compassion, respect for others, responsibility)** | | | |
| Make and defend rational, ethical decisions within the context of professional and personal values |  |  |  |
| Demonstrate caring, ethical, and professional behavior when interacting with peers, professionals, patients, and caregivers |  |  |  |
| Respect and protect patient privacy |  |  |  |
| Develop and maintain professional relationships with patients |  |  |  |
| Comments: |  |  |  |
| **Maintain professional competency and professional stewardship** | | | |
| Self-identifies deficiencies in one’s own performance and self-motivates to improve performance; incorporates provided feedback into work and performance |  |  |  |
| Comments: |  | | |
| **Communicate effectively using multiple strategies to improve health outcomes** | | | |
| Provide accurate and succinct verbal or written information that is appropriate for the target audience (e.g. patient, caregiver, or other health care professionals) |  |  |  |
| Display verbal and non-verbal mannerism that promote empathetic, respectful, and compassionate communication |  |  |  |
| Utilize effective communication strategies to optimize health care interactions between patients and/or members of the care team |  |  |  |
| Demonstrate sensitivity and responsiveness to aspects of diversity and identity (culture, race, socioeconomic status, health literacy, etc) that influence effective communication when interacting with patients, caregivers, and other health professionals |  |  |  |
| Comments: |  | | |

Contents

[PURPOSE OF THE TRAINING MANUAL 5](#_Toc419156414)

[CURRICULAR PREREQUISITES 5](#_Toc419156415)

[SITE SCHEDULING /TIME and DURATION OF PHARMACY TRAINING ROTATION 5](#_Toc419156416)

[Time and Duration of Pharmacy Training 5](#_Toc419156417)

[RULES AND REGULATIONS 5](#_Toc419156418)

[Attendance/Leave of Absence 5](#_Toc419156419)

[Email Policy 5](#_Toc419156420)

[General Appearance 6](#_Toc419156421)

[PHARMACY TRAINING PROGRAM –OVERVIEW 6](#_Toc419156422)

[EDUCATIONAL OUTCOMES FOR THE HOSPITAL PHARMACY TRAINING 6](#_Toc419156423)

[Participate in Accurate Prescription Processing 6](#_Toc419156424)

[Suggested Activities in which Outcome can be Taught or Evaluated: 6](#_Toc419156425)

[Demonstrate Knowledge of a Unit Dose System 6](#_Toc419156426)

[Demonstrate Knowledge of an Intravenous Admixture System 7](#_Toc419156427)

[Display Appropriate Professional Behavior and Ethical Work 7](#_Toc419156428)

[Demonstrate Cultural and Social Competency 7](#_Toc419156429)

[Central Pharmacy Training Excercise Sheet 8](#_Toc419156430)

[1. Institutional Site 8](#_Toc419156431)

[Prescription Process 10](#_Toc419156432)

[Medication Storage 11](#_Toc419156433)

[Floor stock 12](#_Toc419156434)

[Medication Administration 12](#_Toc419156435)

[2. Describe how the pharmacist manage blood product and purple prescription 13](#_Toc419156436)

[Evaluation of Worksheet for Hospital Pharmacy Training 14](#_Toc419156437)

[Preceptor Evaluation For The Student 1](#_Toc419156520)5

# Will Continue to Follow,

# Signature:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Pager:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_