

Regulations & Syllabus

for the Residency Program in Clinical Pharmacy

1. Short title and Commencement:

These regulations shall be called as “The Regulations for the Residency Program in Clinical Pharmacy of the JSS University, Mysore”. The regulations and syllabi framed are subject to modifications from time to time by the authorities of the university.

2. Applicability:

These guidelines shall be applicable to all Constituent Colleges and the Departments of the JSS University engaged in residency programs. The Program Coordinator who proposes the program shall enclose the terms and conditions of the related statutory bodies of the respective program.

3. Stipend:

Every resident is entitled to get a stipend of Rs. 15000/- per month upon fulfilling minimum required working days.

4. Aims & Objectives of the Program:

The Residency Program in Clinical Pharmacy provides education and training with a primary emphasis on the development of practice skills in specialized pharmacy practice area. Pharmacists completing this program will be highly qualified independent practitioners able to provide and be responsible for improved drug therapy outcomes for individualized patients as an integral member of the multidisciplinary healthcare team.

In addition to clinical pharmacy activities, the residents will also be involved in educational activities which include pharmacy case presentations, journal club discussions and seminar presentations. Other teaching opportunities include co-precepting Pharm.D students who undergo clinical rotations in different wards. The residents will also be encouraged to enhance their research skills through a research project and to participate in international/national/state/local conferences and disseminate their research findings.

A multidisciplinary approach to patient care is highly emphasized in the residency program and the preceptors include several experienced clinical pharmacy practitioners and clinician preceptors. Upon successful completion of the residency, the resident will

be able to pursue positions in a variety of clinical practice settings as well as in academics.

In general, the resident's responsibilities will include:

Patient care (70%): The resident will work directly with the interdisciplinary healthcare teams under the supervision of a preceptor and provide direct patient care related clinical pharmacy services.

Teaching (15%): The resident will precept Pharm.D. students during their experiential training [i.e., Introductory Pharmacy Practice experiences (IPPEs) and Advanced Pharmacy Practice experiences (APPEs)], provide didactic instruction (i.e., lectures, team-based learning and case discussions), and extend continuing education to the pharmacy, medical and nursing staff.

Research (5%): The resident will be responsible for initiating and successfully completing a research project conducted in the area of specialization, which will be presented at a research symposium. Resident will also participate in other ongoing projects within the practices of the preceptors.

Practice management (10%): The resident will participate with the preceptors and pharmacy practice staff in the continuing development and management of opted specialty.

5. Duration of the Program:

The Residency Program in Clinical Pharmacy shall be of 24 months (two years) duration from the commencement of the academic term. This residency program shall be of annual system that includes 'Residency Program Year One' (RPY-1) extending for 12 months from the commencement of academic term which offers more generalized training, providing residents exposure to a broad range of clinical specialties. 'Residency Program Year Two' (RPY-2) of 12 months duration commencing from the successful completion of RPY-1 emphasizes specialty clinical pharmacy practice. In order to commence a RPY-2 residency, a RPY-1 program must be completed.

No exemption shall be given from this period of study and training for any other experience gained prior to the admission to the program.

The duration for the completion of the course shall be fixed as double the time of the course (48 months) and the residents have to successfully complete within the said period

otherwise they have to get fresh admission. However, the stipend will be paid only for the period of 24 months.

6. Eligibility for the Program:

A candidate who has successfully completed Pharm.D degree with minimum aggregate marks of 60% (aggregate of 5 years) from any Pharmacy College approved by Pharmacy Council of India, New Delhi and affiliated to a recognized university **AND** has registered himself or herself as a 'Registered Pharmacist' in the respective State Pharmacy Council.

7. Eligibility Certificate:

The Candidate who has completed the eligible academic program from any other Universities other than the JSS University, before seeking admission to any one of its constituent colleges shall obtain an Eligibility Certificate from the University by remitting the prescribed fees along with application form, which can be downloaded from the University website.

The foreign candidates who have completed the eligible academic program from foreign institutions, for admission to any of the residency program should obtain Eligibility Certificate from JSS University by paying the prescribed fee.

Every candidate before admission to the course shall submit to the Principal of the college a Certificate of Medical Fitness from an authorized Medical Officer that the candidate is physically fit to undergo the academic course and does not suffer from any disability or contagious disease.

8. Attendance:

Each academic year (RPY1 & RPY2) shall consist of not less than 300 working days. Duty hours must be limited to 60 hours per week, over 6 working days and not exceeding 12 working hours continuously per day.

i. Candidates pursuing residency program in clinical pharmacy shall study in the concerned pharmacy college/hospital (approved by JSS University for the Residency Program in Clinical Pharmacy) for the entire period as a full time resident. No candidate is permitted to work as an employee in any laboratory/college/industry/pharmacy, etc. while pursuing his or her residency program.

ii. Each clinical rotation in RPY1 and RPY2 shall be for the duration of two months.

iii. A resident is required to put in at least 95% attendance in individual rotation in each of RPY1 & RPY2 (i.e., 285 days each in RPY1 and RPY2). The candidate shall complete

the prescribed clinical pharmacy rotation “satisfactorily” to be eligible to progress for the next level of the program.

iv. Any resident who fails to complete the clinical pharmacy rotation assigned to him or her in the manner stated above shall not be permitted to move to the next rotation until the minimum percentage or number of working days is achieved in the individual rotation.

v. There shall be no condonation of lack of attendance in the residency program.

vi. Every resident shall maintain a prescribed logbook and record of his /her participation in the training program. The work diary/record shall be scrutinized and certified by the pharmacy / clinician preceptor, Head of the Department and Head of the Institution.

9. Selection of Candidates:

The candidates for the residency program in clinical pharmacy can be selected by the respective colleges on their own following the method of transparency. After selection of the candidates, the selected candidates list should be intimated to the University.

10. Eligibility to be Preceptor:

Pharmacy Preceptor:

- A candidate with M. Pharm (Pharmacy Practice)/ Pharm.D from any Pharmacy College approved by Pharmacy Council of India, New Delhi and affiliated to a recognized university.
- Registered himself / herself as a ‘Registered Pharmacist’ in the respective State Pharmacy Council AND has at least five years of clinical pharmacy practice experience for RPY1 and three years of specialty clinical pharmacy practice experience for RPY2.

Clinician Preceptor:

- A candidate with MBBS, MD in the respective clinical specialty, DM/DNB in case of super specialty from any Medical College approved by Medical Council of India, New Delhi and affiliated to a recognized university.
- Registered himself / herself as a ‘Registered Medical Practitioner’ in the respective State Medical Council AND has at least five years of clinical practice experience

11. Curriculum:

The detailed curriculum shall be framed by the Dean, Program Coordinator and the respective Board of Studies (BoS) in concurrence with the Academic Council to the University 06 (six) months prior to the commencement of the program.

RPY1 Curriculum (for 12 months):

<i>Clinical Rotation</i>	<i>Duration</i>
*General Medicine (GM)—Inpatient	2 months
*Paediatrics—Inpatient	2 months
*Drug distribution & Inventory Control	2 months
*Drug & Poison Information Service	2 months
<i>Electives</i>	
General Surgery (R)	2 months
Ambulatory Clinic (R)	2 months
Nephrology ---Inpatient	2 months
Psychiatry---Inpatient/Ambulatory	2 months
Cardiology---Inpatient	2 months
Pulmonology	2 months
Emergency Medicines	2 months
Oncology—Inpatient and ambulatory care	2 months

** Indicates Mandatory rotation(s), (R) indicates recommended rotation(s)*

Note: Maximum two electives are permitted.

Learning Goals:

1. General Medicine:

- To be able to develop and execute individualized patient treatment plan independently for common diseases.
- To be able to provide medicine information, medication therapy management and medication counselling independently to health care professionals and patients.
- To be able to report adverse drug reactions and provide appropriate management strategies independently.
- To be able to provide mentorship and guidance for trainee clinical pharmacists/ interns/ post graduate pharmacy students.
- To be able to strengthen the overall skills and knowledge as clinical pharmacy practitioner, trainer and researcher.

2. Pediatrics:

- To be able to develop and execute individualized patient treatment plan independently for common pediatric conditions.
- To be able to provide medicine information, medication therapy management and medication counselling independently to health care professionals and patients / care givers as appropriate.
- To be able to report adverse drug reactions / adverse events following immunization (AEFI) and provide appropriate management strategies independently.

- To be able to provide mentorship and guidance for trainee clinical pharmacists/ interns/ post graduate pharmacy students.
- To be able to strengthen the overall skills and knowledge as clinical pharmacy practitioner, trainer and researcher in pediatrics.

3. Drug distribution & Inventory Control:

- To be able to support/manage drug distribution system and inventory control for smooth operations and better planning.
- To be able to ensure that drug distribution systems work in compliance with hospital policies.
- To be able to participate in hospital formulary design, planning, revision and be able to support inventory control by applying pharmacoeconomic principles.
- To be able to develop strategies to improve drug distribution, drug accountability and drug use process in consultation with concerned hospital committees.

4. Drug & Poison Information Service:

- To be able to provide and monitor drug & poison information service as per request from healthcare professionals and patients.
- To be able to identify and use appropriate information resources based on type of queries.
- To be able to ensure that evidence based approach is followed (wherever applicable) to improve the quality of information provided.
- To be able to support trainee clinical pharmacists/interns/post graduate students in providing drugs & poison information service.
- To be able to collect feedback from health care professionals on the service to improvise it further.

5. General Surgery:

- To be able to provide medicine information, medication therapy management and medication counselling independently to health care professionals and patients as appropriate in the surgery department.
- To be able to report adverse drug reactions and provide appropriate management strategies independently.
- To be able to provide mentorship and guidance for trainee clinical pharmacists/interns/post graduate pharmacy students.
- To be able to strengthen the overall skills and knowledge as clinical pharmacy practitioner, trainer and researcher.

6. Ambulatory Clinic:

- To be able to provide medication therapy management to the clinicians and medication counselling to the patients at ambulatory clinic.

- To be able to report adverse drug reactions and provide appropriate management strategies independently.
- To support pharmacy interns by providing mentorship and guidance on ambulatory pharmacy services.
- To conduct a survey or research suggested by senior pharmacists or clinicians.

7. Psychiatry:

- To be able to develop and execute individualized treatment plan for common psychiatric disorders.
- To be able to provide and support medicine information, medication therapy management and medication counselling service in psychiatry.
- To be able to support adverse drug reaction reporting system and provide suggestions to improve the patient safety.
- To be able to study pattern of social drug use and educate public on its consequences.

Following activities should be performed along with RPY-1 rotations.

- Case discussion (Weekly once)
- Assisting in monitoring activities of Pharm.D interns and clerkship students
- Journal club (Fortnightly)
- Ward seminars on the given topic (to be decided by Preceptor and Residency in-charge) (at least one in each rotation)
- Presentation of observations in the conference of the related area
- Participation in at least two programs pertaining to social and community awareness
- Involve in designing therapeutic guidelines, promoting evidence based medicine and activities of pharmacy and therapeutics committee of the training site.

Expected Outcomes of the Residency Program Year One (RPY1)

Required/Primary Outcomes

- Serve as an authoritative resource on the optimal use of medications used to treat patient
- Optimize the outcomes of the care of individuals by providing evidence-based, patient-centered medication therapy as an integral part of an interdisciplinary team.
- Manage and improve the medication-use process in patient care areas.
- Demonstrate excellence in the provision of training or educational activities for health care professionals and medical/pharmacy/nursing students.
- Promote health improvement, wellness and prevention of diseases.
- Conduct pharmacy practice research in a diverse patient population.

- Participate in the ongoing clinical investigations of new drugs.

Elective/Secondary Outcome

- Publish the findings of the research in the reputed journal.

RPY2 Curriculum - Oncology Pharmacy (for 12 months):

Clinical Rotation	Duration
*Oncology- Inpatient (Solid tumor)	2 months
*Oncology-Inpatient (Hematology)	2 months
*Bone marrow transplant	2 months
*Chemotherapy infusion center & Ambulatory care	2 months
<i>Electives</i>	
Pain and Palliative Care (R)	2 months
Gynecology Oncology	2 months
Breast Clinic	2 months
Lung Cancer Clinic	2 months
Head & Neck Cancer Clinic	2 months

** Indicates Mandatory rotation(s), (R) indicates recommended rotation(s)*

Note: Maximum two electives are permitted.

Learning Goals:

1. Oncology-Inpatient (Solid tumor):

- To be able to develop and execute chemotherapy plan for patient with solid tumors in consultation with concerned oncologist.
- To be able to perform medication therapy management for patients with solid tumor.
- To be able to effectively monitor pharmacovigilance practice in the cancer patients and periodically prepare action plans.
- To be able to conduct research on common drug related problems, medication errors and inappropriate drug use processes and prepare strategies to improve the quality use of anti-cancer drugs.
- To be able to provide and support medication counseling process to patients on chemotherapy or chemo-radiation therapy.

2. Oncology-Inpatient (Hematology):

- To be able to develop and execute chemotherapy plan for patient with blood tumors in consultation with concerned oncologist.
- To be able to perform medication therapy management for patients with blood tumors.

- To be able to effectively monitor pharmacovigilance practice in the patients with blood tumors and periodically prepare action plans.
- To be able to conduct research on common drug related problems, medication errors and inappropriate drug use processes and prepare strategies to improve the quality use of anti-cancer drugs.
- To be able to provide and support medication counseling process to patients on anti-cancer drugs or chemo-radiation therapy.

3. Bone marrow transplant:

- To be able to understand and support the roles and responsibilities of oncology pharmacists in bone marrow transplant unit.
- To be able to perform and assist other pharmacists in performing medication therapy management of bone marrow transplant recipients.
- To be able to study patterns of infections and its management in the bone marrow recipients.
- To be able to follow pharmacovigilance practices and periodically summarize the findings to improve the safety of bone marrow transplant recipients.
- To be able to provide and assist other pharmacists in educating patients on importance of vaccination post transplant.
- To be able to conduct research on common drug related problems, medication errors and inappropriate drug use processes and prepare strategies to improve the quality use of medicines in bone marrow transplant unit.

4. Chemotherapy Infusion Center and Ambulatory Care:

- To be able to understand and support practicing oncology pharmacists in preparation of chemotherapy, biotherapy and Intravenous admixtures.
- To be able to understand and adhere the aseptic requirements for drug preparation at practice site.
- To be able to understand and follow the hospital policies for storage of anti-cancer drugs and its disposal.
- To be able to perform and assist other pharmacists in medication therapy management at ambulatory care unit.

5. Pain and Palliative Care:

- To be able to understand and participate in providing palliative care with other pharmacists.
- To be able to participate actively and understand the steps in managing cancer pain during palliative care.
- To be able to study the patterns of pain medications and its adverse events and periodically discuss with clinicians and other pharmacists to improve the use of pain medications.

- To be able to understand and assist other pharmacists in educating and sympathizing care givers during the terminal stage.

Following activities should be performed along with RPY-2.

- Case discussion (Weekly once)
- Assisting in monitoring activities of Pharm.D interns and clerkship students
- Journal club (Fortnightly)
- Ward seminars on the given topic (to be decided by Preceptor and Residency in-charge) (at least one in each rotation)
- Presentation of observation in the conference of the related area
- Participate in at least two programs for social and community awareness about cancer, its management and screening
- Involve in designing therapeutic guidelines, promoting evidence based medicine and activities of pharmacy and therapeutics committee of the training site.

Expected Outcomes of the Residency Program Year Two (RPY2)

Required/Primary Outcomes

- Serve as an authoritative resource on the optimal use of anti-cancer drugs
- Optimize the outcomes of the care of individuals by providing evidence-based, patient-centered medication therapy of cancer as an integral part of an interdisciplinary team.
- Manage and improve the medication-use process in patient care areas.
- Demonstrate excellence in the provision of training or educational activities for health care professionals and health care professionals in training.
- Promote health improvement, wellness and prevention of diseases.
- Conduct pharmacy practice research in a diverse cancer patient population.
- Participate in the ongoing clinical investigations of new drugs.

Elective/Secondary Outcome

- Publish the findings of the research in the reputed journal.

12. Registration:

A Candidate admitted to the Residency Program in Clinical Pharmacy of the JSS University, Mysore, shall submit the prescribed duly filled application form along with prescribed fee and declaration in the required format, to this University through the pharmacy college within 60 days from the cut-off date prescribed for Residency Program in Clinical Pharmacy.

13. Examinations:

The examination shall be conducted by the University for all the candidates who have registered in the University for residency program in clinical pharmacy with duly appointed examiners as per existing norms of the university.

Residents' clinical rotation will be evaluated by Pharmacy / Clinician Preceptors, Program Coordinator and the Residency Review Committee. Evaluation of residents may take many forms viz. formative and summative evaluations as follows.

Formative Examination (50 marks):

Three internal examinations will be conducted, equally spacing, over a period of one full academic year (one internal assessment each at the end of two rotations of two months each) and an average of all three will be considered. Each of the internal examinations will consist of (i) Written examination (25 marks) and (ii) Comprehensive viva voce examination (25 marks). The comprehensive viva voce examination includes but not limited to: assessing the performance in inpatient units and in outpatient clinics, including assessment of professional ethics and behavior, communication skills with health care professionals and preceptors, ability to perform expected pharmaceutical care services, case discussions, journal clubs and clinical seminars.

Summative Examination (50 marks):

At the end of each year university examination will be conducted as follows: (i) written examination (25 marks) and Comprehensive viva voce examination (25 marks). Each resident should maintain the appropriate documentation of various clinical pharmacy activities carried out during each of the clinical rotations, and periodically each resident will be given a summary of evaluation by the preceptors. The final determination of performance and evaluation status rests with the Residency Review Committee (RRC).

12.2. Criteria for Successful Completion of residency program

The resident who scores minimum of 60% of marks in each of the internal assessments is eligible to take the annual examination. In case if any resident scores less than 60% in any of the internal assessments is however permitted to undergo the next rotation but passes all three internal assessments to be eligible to take the annual examination. Candidate who has failed in any of the internal assessments will be provided an opportunity to take the respective examination within a month of that particular internal assessment.

The minimum marks for pass in each year of the residency program shall be the aggregate of 60% out of 100 marks. Residents who have secured a minimum of 60% marks (including Internal assessments) in any clinical rotation(s) shall be declared to

have passed in that clinical rotation(s) and exempted from appearing in that clinical rotation(s) at subsequent examination. Those candidates who fail in one or more clinical rotation(s) shall have to appear only in the clinical rotation(s) so failed, in the subsequent examinations.

14. Question paper pattern:

The question paper pattern should be uniformly framed for the same type of program as mentioned above. The Program Coordinator should consult the Controller of Examinations, JSS University before finalizing question paper pattern.

15. Logbook:

The residents are required to maintain a logbook and document their daily activities pertaining to the residency program.

16. Vacation:

No vacation (winter/summer) will be given to the residents. Residents will have fifteen paid leaves in a year that they will not be scheduled to work.

Recognized holidays: The residents are entitled to get all the government holidays and one day off in a week (either on Sunday or any other day as per the administrative convenience of the hospital)