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RAJIV GANDHI UNIVERSITY OF HEALTH SCIENCES, KARNATAKA, BENGALURU

4th T Block, Jayanagar, Bengaluru - 560 041

No. RGU/AUTH/176th Syndicate/145(1)/AHS-INT-GL/2022-23

Date. 14.02.2023

REVISED NOTIFICATION

Sub: Approval Internship for Allied Health Sciences course guidelines

- Ref : 1) Proceedings of BOS Meeting AHS held on 26.09.2022
2) Proceedings of Academic council meeting held on 27.10.2022
3) Proceedings of 176th Syndicate meeting held on 24.11.2022

In pursuance of the decision of the Syndicate in its 176th meeting held on 24.11.2022, the final Internship guidelines for Allied Health Science courses has been approved and is effective from 2019 batch. The details of the guidelines will be available on the RGUHS website with immediate effect.

- | | |
|---|----------------------------|
| 1. B.Sc. Medical Laboratory Technology | (B.Sc MLT) |
| 2. B.Sc. Renal Dialysis Technology | (B.Sc RDT) |
| 3. B.Sc. Respiratory Care Technology | (B.Sc RCT) |
| 4. B.Sc. Radiotherapy Technology | (B.Sc RT) |
| 5. B.Sc. Anaesthesia & Operation Theatre Technology | (B.Sc AT &OT) |
| 6. B.Sc. Perfusion Technology | (B.Sc PT) |
| 7. B.Sc. Neuroscience Technology | (B.SC Neurosciences) |
| 8. B.Sc. Medical Imaging Technology | (B.SC MIT) |
| 9. B.Sc. Cardiac Care Technology | (B.Sc CCT) |
| 10. B.Sc. Emergency & Trauma Care Technology | (B.Sc Emergency Medicine) |
| 11. Bachelor of Occupational Therapy | (BOT) |
| 12. B.Sc. Optometry | Optometry |
| 13. Bachelors in prosthetics and orthotics | (BPO) |


REGISTRAR

To

The principals of all affiliated Allied Health Sciences institutions of RGUHS.

Copy to :-

1. PA to Vice-Chancellor/PA to Registrar/Registrar(Eva)/Finance officer RGUHS, Bangalore
2. Deputy Registrar, Admission/Affiliation/Examination, RGUHS, Bangalore
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RAJIVGANDHIUNIVERSITYOFHEALTHSCIENCES, KARNATAKA



INTERNSHIP GUIDELINES

APPLICABLE FROM THE 2019 BATCH

BSc ANAESTHESIA & OPERATION THEATRE TECHNOLOGY

**(Schedule annexed to University Notification No. RGU/AUTH/176th
Syndicate/145(1)/AHS-INT-GL/2022-23, Dated: 14/02/2023)**

**Internship Guidelines applicable from the batch of 2019
for BSc ANAESTHESIA & OPERATION THEATRE TECHNOLOGY**

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1. DESCRIPTION

Internship is a phase of training where in an Anaesthesia & Operation Theatre Technology graduate will acquire the skills and competencies in all the departments pertaining to operative surgery (Anaesthesia, General Surgery, Orthopaedics, OBG, other speciality surgeries, CSSD, SICU etc) and work efficiently in Operation Theatres in India and abroad.

2. OBJECTIVES

At the end of internship period the A & OTT graduate will possess all competencies required for practicing in the Dept of operation theatre such as

- 2.1 Assist in providing Anaesthesia to patients posted for surgery
- 2.2 Assist the operating surgeons for smooth conduct of surgeries
- 2.3 Handle instruments of OT, perform Quality control and basic trouble shooting procedures
- 2.4 Effectively use of HIS/LIS and maintain log books and registers

3. GENERAL GUIDELINES

- 3.1. Every candidate, after passing the final semester exams (should not have any back papers), is required to undergo a compulsory rotatory internship for a period of 12 months (365 calendar days) to be eligible for the award of the degree.
- 3.2. Internship is in partial fulfillment of the requirements of the course, and no candidate shall be declared to have completed the course otherwise.
- 3.3. Internship is in partial fulfillment of the requirements of the course, and no candidate shall be declared to have completed the course otherwise.
- 3.4. All parts of the internship shall be done in the teaching hospital under a National Medical Commission/National Accreditation Board for Testing and Calibration Laboratories/Joint Commission International /College of American Pathologists /National Board of Examination recognized Hospital /Diagnostics
- 3.5. Internship shall be completed within 13 months of the date of passing final examinations including the leaves and holidays.
- 3.6. Students are eligible to commence internship from next day of results; however, the commencement will be considered from the day of reporting.
- 3.7. Interns should complete postings in all specialties as decided by the department
- 3.8. The interns should conduct themselves in a manner befitting the profession and should dress appropriately in their respective work areas.
- 3.9. Each intern should maintain a logbook wherever he/she is posted. The intern has to get a signature from the supervising staff at the end of each posting.
- 3.10. Assignments/presentations/ duties during the internship must be duly undertaken and performed.
- 3.11. The intern in the parent institute may be provided a monthly stipend/allowance where ever possible. Stipend may not be paid during any period of extension is left to the discretion of the institute / diagnostics offering internship.
- 3.12. The intern is allowed to take his internship from other than the parent institution, provided there is a NOC obtained from both the parent institution and the institution offering the internship. Principal has to permit the student for internship after verifying the NOC.

4. GUIDELINES FOR COMPLETION, LEAVE & REPETITION

4.1.COMPLETION

The internship shall be completed within 13 months of passing the final semester examination whenever in force but not limited to

LEAVE

4.1.1. Normal Leave: Intern shall be permitted a maximum of 15 days leave with prior permission during the entire period of internship.

4.1.2. The entire period of 15 days cannot be availed during any one-week / two week postings applicable to a single department as indicated under section 3 table :1.

4.1.3. Maternity Leave: Lady interns may be permitted Maternity leave according to prevailing rules and regulations of the state government as may be applicable. Medical Leave: Medical leave shall be included within the 15 days of normal leave. Any medical leave beyond this period shall be recommended only by a duly constituted committee at the college level, which consists of the Principal, HOD, and medical practitioner.

The internship shall be extended if the leave of absence extends beyond this period.

REPETITION/ EXTENSION

4.1.4. The minimum internship duration may be extended appropriately for a reasonable period on recommendation by the college for reasons including but not limited to

- a. Insufficient period of attendance
- b. Unsatisfactory acquisition of required competency
- c. Unsuccessful qualification on assessment
- d. Any exigency such as disasters or unforeseen circumstances in the country as notified by the government of India or any competent authority

4.1.5. The internship shall be extended if the leave of absence extends beyond this period.

4.1.6. The period shall be extended if the leave of absence extends beyond the permitted leaves.

4.1.7. The internship shall be repeated only in the department where the above extension is necessary.

5. TIME DISTRIBUTION

TABLE 1: Required area of posting with the required time duration		
Sl. No	Posting Area	Period Spent in postings
1	Dept of Anaesthesiology	3 months
2	General Surgery including Laparoscopic surgery	2 months
3	Orthopedic surgery	2 months
4	Obstetrics & Gynaecology	2 months
5	Speciality Surgery (Speciality surgery – Cardiothoracic & Vascular surgery / Neurosurgery/ Urology/ Paediatric surgery/ Plastic Surgery/ ENT Surgery/ Ophthalmic surgery/Oncosurgery/ other super speciality surgery and CSSD)	2 months
6	Surgical ICU	1 month
	Total	12 Months

6. COMPETENCIES TO BE ACQUIRED DURING INTERNSHIP

Interns must be able to assist independently the following procedures at the end of their postings

6.1 Department of Anaesthesiology

6.1.1. Pre anaesthesia checkup

6.1.2. Phlebotomy & IV cannulation

6.1.3. Basic routine checkup of anaesthesia workstation, pipelines & cylinders and anaesthesia equipments

6.1.4. Assisting in regional anaesthesia

- Local Anaesthesia
- Nerve blocks
- Field blocks
- Spinal anaesthesia
- Epidural anaesthesia

6.1.5. Assisting in General anaesthesia

- Induction, Maintenance and Recovery

6.1.6. Assisting in insertion of lines – Central Venous Catheter, Arterial Line

- 6.1.7. Assisting in procedures – Percutaneous dilatational Tracheostomy/ Open Tracheostomy
- 6.1.8. Managing complications during anaesthesia
- 6.1.9. Safe Blood transfusion

6.2. Dept of General Surgery

- 6.2.1. Setting up of a trolley for general cases;
- 6.2.2. Interns should get well versed in assisting general surgery cases like
 - Hernia surgeries
 - Appendectomy
 - Laparotomy
 - Head & neck surgeries
 - Lower limb surgeries like varicose vein surgeries
 - Hemorrhoidectomy/fissurectomy/fistula surger
- 6.2.3. Should know the following about laparoscopic surgeries –
 - Setting up of a Laparoscopy tower
 - Should know the working mechanism of Light source, Camera & Telescope, Insufflators settings
 - Assist Lap surgeries like Lap Cholecystectomy, Lap Appendectomy, Lap Hysterectomy & others
 - Cleaning and maintenance of Lap instruments
- 6.2.4. Importance of WHO Surgical Safety Checklist
- 6.2.5. Cleaning & packing of instrument sets after surgery

6.3. Dept of Orthopaedic Surgery

- 6.3.1. Interns should get well versed in assisting orthopaedic surgery cases like
 - CRIF and ORIF of long bone fractures
 - Hemiarthroplasty
 - External fixator application
 - Joint replacement surgeries
 - Arthroscopic procedures
 - Spine surgeries
 - Closed reduction & POP plaster application
 - Basic functioning of C-Arm and fluoroscopy

6.4. Dept of Obstetrics & Gynaecology

- 6.4.1. Interns should get well versed in assisting OBG surgery cases like
 - LSCS
 - Hysterectomy – Vaginal & Abdominal
 - D & C
 - Hysteroscopy
 - MTP
 - Sterilization – Lap & Open
 - Lap Hysterectomy, Ovarian cyst excision etc

6.5. Speciality surgery:

- 6.5.1. Interns can be posted in the available super speciality surgery departments for at least two weeks, so that they will get used to various speciality department surgeries
- 6.5.2. CSSD: The main intent for posting the interns in CSSD dept is to make sure that they have an orientation of functioning of CSSD and various sterilization procedures

6.6. Surgical ICU

- 6.6.1. Managing postoperative patients and identify various postoperative complications & their management

7. DAILY LOGS AND DOCUMENTATION

Each student must record their daily activities. This includes documentation of instrumentation utilized, test names, abnormal results seen, approximate numbers performed or observed, and a brief description of problem-solving and troubleshooting incidents. Time of arrival and departure, special incidents, concerns, problems, instrumentation, and other pertinent items should also be recorded. Logbook to submit to the principal by the end of the internship.

8. ASSESSMENT OF INTERNSHIP

The intern shall maintain a record of work which is to be verified and certified by the faculty under whom he works. Based on the record of work and date of evaluation, the Head of the institution will issue a certificate of satisfactory completion of internship, following which the student becomes eligible to receive the award of B.Sc. ANAESTHESIA & OPERATION THEATRE TECHNOLOGY degree or declare him eligible for it.

RAJIVGANDHIUNIVERSITYOFHEALTHSCIENCES, KARNATAKA



INTERNSHIP GUIDELINES

APPLICABLE FROM THE 2019 BATCH

BACHELOR OF OCCUPATIONAL THERAPY

**(Schedule annexed to University Notification No. RGU/AUTH/176th
Syndicate/145(1)/AHS-INT-GL/2022-23, Dated: 14/02/2023)**

**Internship Guidelines applicable from the batch of 2019
for BSc Medical Laboratory Technology**

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1. DESCRIPTION

Internship is a phase of training where in the Occupational Therapy graduate will utilize skills and competencies acquired during the 4 year training of all fields of Occupational Therapy practice and work efficiently in rehabilitation settings in India and abroad

2. OBJECTIVES

At the end of internship period the OT graduate will possess all competencies required for practicing in different settings - hospitals, rehabilitation units, schools, CBR set-ups, etc, such as

- 2.1. Independently conduct OT assessment on any client requiring rehabilitation
- 2.2. Create a treatment protocol using OT framework and methodology
- 2.3. Independently conduct required OT intervention
- 2.4. Participate in case discussions

3. GENERAL GUIDELINES

- 3.1. Every candidate, after passing the final semester exams (should not have any back papers), is required to undergo a compulsory rotatory internship for a period of 12 months (365 calendar days) to be eligible for the award of the degree.
- 3.2. Internship is in partial fulfillment of the requirements of the course, and no candidate shall be declared to have completed the course otherwise.
- 3.3. Internship is in partial fulfillment of the requirements of the course, and no candidate shall be declared to have completed the course otherwise.
- 3.4. All parts of the internship shall be done in the teaching hospital under a National Medical Commission/National Accreditation Board for Testing and Calibration Laboratories/Joint Commission International /College of American Pathologists /National Board of Examination recognized Hospital /Diagnostics
- 3.5. Internship shall be completed within 13 months of the date of passing final examinations including the leaves and holidays.
- 3.6. Students are eligible to commence internship from next day of results; however, the commencement will be considered from the day of reporting.
- 3.7. Interns should complete postings in all specialties as decided by the department
- 3.8. The interns should conduct themselves in a manner befitting the profession and should dress appropriately in their respective work areas.
- 3.9. Each intern should maintain a logbook wherever he/she is posted. The intern has to get a signature from the supervising staff at the end of each posting.
- 3.10. Assignments/presentations/ duties during the internship must be duly undertaken and performed.
- 3.11. The intern in the parent institute may be provided a monthly stipend/allowance where ever possible. Stipend may not be paid during any period of extension is left to the discretion of the institute / diagnostics offering internship.

- 3.12. The intern is allowed to take his internship from other than the parent institution, provided there is a NOC obtained from both the parent institution and the institution offering the internship. Principal has to permit the student for internship after verifying the NOC.

4. GUIDELINES FOR COMPLETION, LEAVE & REPETITION

4.1.COMPLETION

The internship shall be completed within 13 months of passing the final semester examination whenever in force but not limited to

LEAVE

- 4.1.1. Normal Leave: Intern shall be permitted a maximum of 15 days leave with prior permission during the entire period of internship.
- 4.1.2. The entire period of 15 days cannot be availed during any one-week / two week postings applicable to a single department as indicated under section 3 table :1.
- 4.1.3. Maternity Leave: Lady interns may be permitted Maternity leave according to prevailing rules and regulations of the state government as may be applicable. Medical Leave: Medical leave shall be included within the 15 days of normal leave. Any medical leave beyond this period shall be recommended only by a duly constituted committee at the college level, which consists of the Principal, HOD, and medical practitioner. The internship shall be extended if the leave of absence extends beyond this period.

REPETITION/ EXTENSION

- 4.1.4. The minimum internship duration may be extended appropriately for a reasonable period on recommendation by the college for reasons including but not limited to
- a. Insufficient period of attendance
 - b. Unsatisfactory acquisition of required competency
 - c. Unsuccessful qualification on assessment
 - d. Any exigency such as disasters or unforeseen circumstances in the country as notified by the government of India or any competent authority
- 4.1.5. The internship shall be extended if the leave of absence extends beyond this period.
- 4.1.6. The period shall be extended if the leave of absence extends beyond the permitted leaves.

4.1.7. The internship shall be repeated only in the department where the above extension is necessary.

5. TIME DISTRIBUTION

TABLE 1: Required area of posting with the required time duration		
Sl. No	Posting Area	Period Spent in postings
1	Medicine- General medicine, Cardiology, Pulmonology, Neurology, Nephrology, Pediatrics	1.5 months
2	Surgery- General surgery, Plastic Surgery, Cardiac Surgery, ENT, OB/GYN, Orthopedics	1.5 months
3	Mental Health- Psychiatry	1.5 months
4	Elective- Any of the above for an extended period of 1.5 months (by preference of the student)	1.5 months
	Total	6 months

6. COMPETENCIES TO BE ACQUIRED DURING INTERNSHIP

- 6.1. Complete assessment of each client to be done using appropriate Occupational Therapy framework
- 6.2. Appropriate goal setting for each client of the posting using appropriate Occupational Therapy framework and ICF scales
- 6.3. Conduct Occupational Therapy intervention under the guidance of the tutor/JuniorSenior Demonstrators/Lecturers
- 6.4. Write report for intervention done with each client
- 6.5. Participate in case discussions

7. DAILY LOGS AND DOCUMENTATION

Each student must record their daily activities. This includes documentation of instrumentation utilized, test names, abnormal results seen, approximate numbers performed or observed, and a brief description of problem-solving and troubleshooting incidents. Time of arrival and departure, special incidents, concerns, problems, instrumentation, and other pertinent items should also be recorded. Logbook to submit to the principal by the end of the internship.

8. ASSESSMENT OF INTERNSHIP

The intern shall maintain a record of work which is to be verified and certified by the faculty under whom he works. Based on the record of work and date of evaluation, the Head of the institution will issue a certificate of satisfactory completion of internship, following which the student becomes eligible to receive the award of Bachelor of Occupational Therapy degree or declare him eligible for it.

RAJIVGANDHIUNIVERSITYOFHEALTHSCIENCES, KARNATAKA



INTERNSHIP GUIDELINES

APPLICABLE FROM THE 2019 BATCH

BACHELOR OF PROSTHETICS & ORTHOTICS

**(Schedule annexed to University Notification No. RGU/AUTH/176th
Syndicate/145(1)/AHS-INT-GL/2022-23, Dated: 14/02/2023)**

**Internship Guidelines applicable from the batch of 2019 for
BSc Medical Laboratory Technology**

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1. DESCRIPTION

Prosthetics and Orthotics (P&O) program will be for six months after the successful completion of final year exams by the students. In this period, students will carry out clinical work under minimum supervision by Rehabilitation Council registered experienced professionals. They will be encouraged to do the technical, clinical, administrative and communication task independently or with less supervision following the professional ethics. They will be working under P&O professional within training institute, P&O and other rehabilitation Centers within India and/or other countries as per RGUHS guidelines of voluntary placement.

Students who would undergo internship have already learn about prescription of orthoses and prostheses, fabrication of lower and upper extremity prosthesis and orthosis, spinal orthoses and few critical cases during their four years of study.

2. OBJECTIVES

At the end of internship period the prosthetic & orthotic graduate will possess all competencies required for practicing in the Department of Prosthetics & Orthotics. The objectives of internships are as follows:

- 2.1. To have opportunities to interact and work with other professionals to understand total rehabilitation and multidisciplinary team
- 2.2. To support and encourage the student's learning through "hands on" experience in a real situation
- 2.3. To provide the student with experience of clinical management and to prepare a Prosthetist/Orthotist professional who can take part with the clinical team.
- 2.4. To ensure students practice to behave in an ethical manners.
- 2.5. To provide opportunity to assess, prescribe, fabricate and fit the devices by direct involvement of patient.
- 2.6. To ensure students have gained enough experience to fabricate the device from assessment to delivery independently.
- 2.7. To demonstrate the communication process and to reflect on their own communication skills.
- 2.8. To maintain the Log book to gain experience in clinical documentation as well practice reflective skills

3. GENERAL GUIDELINES

- 3.1. Every candidate, after passing the final semester exams (should not have any back papers), is required to undergo a compulsory rotatory internship for a period of 12 months (365 calendar days) to be eligible for the award of the degree.
- 3.2. Internship is in partial fulfillment of the requirements of the course and no candidate shall be declared to have completed the course otherwise.
- 3.3. Internship is in partial fulfilment of the requirements of the course, and no candidate shall be declared to have completed the course otherwise.
- 3.4. All parts of the internship shall be done in the teaching hospital under a National Medical Commission/National Accreditation Board for Testing and Calibration Laboratories/Joint Commission International /College of American Pathologists /National Board of Examination recognized Hospital /Diagnostics
- 3.5. Internship shall be completed within 13 months of the date of passing final examinations including the leaves and holidays.
- 3.6. Students are eligible to commence internship from next day of results; however, the commencement will be considered from the day of reporting.
- 3.7. Interns should complete postings in all specialties as decided by the department

- 3.8. The interns should conduct themselves in a manner befitting the profession and should dress appropriately in their respective work areas.
- 3.9. Each intern should maintain a logbook wherever he/she is posted. The intern has to get a signature from the supervising staff at the end of each posting.
- 3.10. Assignments/presentations/ duties during the internship must be duly undertaken and performed.
- 3.11. The intern in the parent institute may be provided a monthly stipend/allowance where ever possible. Stipend may not be paid during any period of extension is left to the discretion of the institute / diagnostics offering internship.
- 3.12. The intern is allowed to take his internship from other than the parent institution, provided there is a NOC obtained from both the parent institution and the institution offering the internship. Principal has to permit the student for internship after verifying the NOC.

4. GUIDELINES FOR COMPLETION, LEAVE & REPETITION

4.1. COMPLETION

The internship shall be completed within 13 months of passing the final semester examination whenever in force but not limited to

LEAVE

- 4.1.1. Normal Leave: Intern shall be permitted a maximum of 15 days leave with prior permission during the entire period of internship.
- 4.1.2. The entire period of 15 days cannot be availed during any one-week / two-week postings applicable to a single department as indicated under section 3 table :1.
- 4.1.3. Maternity Leave: Lady interns may be permitted Maternity leave according to prevailing rules and regulations of the state government as may be applicable. Medical Leave: Medical leave shall be included within the 15 days of normal leave. Any medical leave beyond this period shall be recommended only by a duly constituted committee at the college level, which consists of the Principal, HOD, and medical practitioner.
The internship shall be extended if the leave of absence extends beyond this period.

REPETITION/ EXTENSION

- 4.1.4. The minimum internship duration may be extended appropriately for a reasonable period on recommendation by the college for reasons including but not limited to

- a. Insufficient period of attendance
- b. Unsatisfactory acquisition of required competency
- c. Unsuccessful qualification on assessment
- d. Any exigency such as disasters or unforeseen circumstances in the country as notified by the government of India or any competent authority

4.1.5. The internship shall be extended if the leave of absence extends beyond this period.

4.1.6. The period shall be extended if the leave of absence extends beyond the permitted leaves.

4.1.7. The internship shall be repeated only in the department where the above extension is necessary.

5. TIME DISTRIBUTION

TABLE 1: Required area of posting with the required time duration		
Sl. No	Posting Area	Period Spent in postings
1	Clinical Practice/ Placement/ visit to other organization.	145
2	Clinical presentation	6
3	Evidence based information in P&O clinical topics	6
4	Workshop Management	6
5	Documentation	6
6	Training & Organizational Skill	6
	TOTAL	175 Hours

6. COMPETENCIES TO BE ACQUIRED DURING INTERNSHIP

6.1. Assessment

Assessment should be done altogether with the Prosthetist & Orthotist and other rehabilitation team members available to identify any problems that the service user might face and decide the right treatment options. All

information related to assessment must be written clearly. During assessment, do steps to be performed:

- 6.1.1. Introduce yourself properly to the client
- 6.1.2. Inform the service user of the procedures going to happen and the purpose.
- 6.1.3. A proper assessment has to be done (Refer format of Assessments)**
- 6.1.4. Inform and discuss your treatment plan and prescription with service user for consensus (and clinical supervisor).
- 6.1.5. Inform service user about duration of treatment

6.2. Casting

After deciding the prescription, measurement should be taken by using appropriate tools and should be recorded correctly; casting stage to be performed to get the mould for producing prosthesis/orthosis. Casting can be done independently or with assistant but students need to take responsible for the outcome of the cast. Do the following points in casting stage:

- 6.2.1. Inform the service user about 'what you are doing';
- 6.2.2. Prepare the casting table & required tools and material for casting
- 6.2.3. Take casting in most appropriate position where comfort of service user and yourself has to be taken care.
- 6.2.4. Make a fitting appointment with the client.
- 6.2.5. Fill in the fitting date on the client card also remember to fill in the casting date and your name on the client card and in the workshop diary

6.3. Pouring

Correct method of pouring is followed with all necessary precautions to get the best mould for rectification

6.4. Rectification

Rectification should be done based on prescription and independently. All positive casts are marked with your name as well as service user name. In case you want to preserve the mould, you need to mention your name and date of final delivery

6.5. Fabrication

Fabrication of the devices should be made with appropriate use of machinery and safety rule. Materials must be used properly without

wasting. All assembling and alignment are needed to follow as the way it was taught by the faculty

6.6. Fitting

All devices must be completed before the appointment date. During fitting, students need to ensure service user safety and take care of them. All aspects of device fitting checking and alignments are carefully analyzed to ensure maximum comfort for the service user. Any problems, student needs to try to find a solution before seeking help from the faculty

6.7. Delivery

- 6.7.1. Before delivering the devices to the service user, students should perform checkout procedure, which has to be checked by the supervisor to ensure that it matches the acceptable standard for delivery
- 6.7.2. Any necessary significant intervention of supervising faculty should be noted in log book /Record of achievement/progress report.
- 6.7.3. After completion of the device, students will take the comments and sign from supervisor

7. DAILY LOGS AND DOCUMENTATION

Each student must record their daily activities. This includes documentation of instrumentation utilized, test names, abnormal results seen, approximate numbers performed or observed, and a brief description of problem-solving and troubleshooting incidents. Time of arrival and departure, special incidents, concerns, problems, instrumentation, and other pertinent items should also be recorded. Logbook to submit to the principal by the end of the internship.

8. ASSESSMENT OF INTERNSHIP

The intern shall maintain a record of work which is to be verified and certified by the faculty under whom he works. Based on the record of work and date of evaluation, the Head of the institution will issue a certificate of satisfactory completion of internship, following which the student becomes eligible to receive the award of B.Sc. Medical Laboratory Technology degree or declare him eligible for it.

RAJIVGANDHIUNIVERSITYOFHEALTHSCIENCES, KARNATAKA



INTERNSHIP GUIDELINES

APPLICABLE FROM THE 2019 BATCH

BSc CARDIAC CARE TECHNOLOGY

**(Schedule annexed to University Notification No.RGU/AUTH/176th
Syndicate/145(1)/AHS-INT-GL/2022-23, Dated: 14/02/2023)**

**Internship Guidelines applicable from the batch of 2019
for BSc Cardiac Care Technology**

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1. DESCRIPTION

The internship is a phase of training where a BSc Cardiac Care Technology graduate will acquire the skills and competencies in all fields of CCT and work efficiently in Hospital in India and abroad

2. OBJECTIVES

At the end of the internship period, the CCT graduate will possess all competencies required for practicing in hospitals, such as

Non-invasive

1. Perform and interpret ECG
2. Perform and diagnose 2D and 3D TTE
3. Basics and diagnosis of TEE
4. Perform and interpret pharmacological and exercise stress echo
5. HOLTER assessment and connection
6. Basics of fetal echo- probe positioning, basic views and diagnosis

Invasive

1. Haemodynamic monitoring and cathlab table Management
2. Basic understanding of pacemakers, programming.
3. Basic understanding of EP- Waveforms, Arrhythmia basic understanding, maneuvers and induction.
4. Understanding of ROTA, IVUS, OCT and other modules.

3. GENERAL GUIDELINES

- 3.1. Every candidate, after passing the final semester exams (should not have any back papers), is required to undergo a compulsory rotatory internship for a period of 12 months (365 calendar days) to be eligible for the award of the degree.
- 3.2. Internship is in partial fulfillment of the requirements of the course, and no candidate shall be declared to have completed the course otherwise.
- 3.3. Internship is in partial fulfillment of the requirements of the course, and no candidate shall be declared to have completed the course otherwise.
- 3.4. All parts of the internship shall be done in the teaching hospital under a National Medical Commission/National Accreditation Board for Testing and Calibration Laboratories/Joint Commission International /College of American Pathologists /National Board of Examination recognized Hospital /Diagnostics
- 3.5. Internship shall be completed within 13 months of the date of passing final examinations including the leaves and holidays.
- 3.6. Students are eligible to commence internship from next day of results; however, the commencement will be considered from the day of reporting.
- 3.7. Interns should complete postings in all specialties as decided by the department

- 3.8. The interns should conduct themselves in a manner befitting the profession and should dress appropriately in their respective work areas.
- 3.9. Each intern should maintain a logbook wherever he/she is posted. The intern has to get a signature from the supervising staff at the end of each posting.
- 3.10. Assignments/presentations/ duties during the internship must be duly undertaken and performed.
- 3.11. The intern in the parent institute may be provided a monthly stipend/allowance where ever possible. Stipend may not be paid during any period of extension is left to the discretion of the institute / diagnostics offering internship.
- 3.12. The intern is allowed to take his internship from other than the parent institution, provided there is a NOC obtained from both the parent institution and the institution offering the internship. Principal has to permit the student for internship after verifying the NOC.

4. GUIDELINES FOR COMPLETION, LEAVE & REPETITION

4.1.COMPLETION

The internship shall be completed within 13 months of passing the final semester examination whenever in force but not limited to

LEAVE

- 4.1.1. Normal Leave: Intern shall be permitted a maximum of 15 days leave with prior permission during the entire period of internship.
- 4.1.2. The entire period of 15 days cannot be availed during any one-week / two week postings applicable to a single department as indicated under section 3 table :1.
- 4.1.3. Maternity Leave: Lady interns may be permitted Maternity leave according to prevailing rules and regulations of the state government as may be applicable.
Medical Leave: Medical leave shall be included within the 15 days of normal leave. Any medical leave beyond this period shall be recommended only by a

duly constituted committee at the college level, which consists of the Principal, HOD, and medical practitioner.
The internship shall be extended if the leave of absence extends beyond this period.

REPETITION/ EXTENSION

4.1.4. The minimum internship duration may be extended appropriately for a reasonable period on recommendation by the college for reasons including but not limited to

- a. Insufficient period of attendance
- b. Unsatisfactory acquisition of required competency
- c. Unsuccessful qualification on assessment
- d. Any exigency such as disasters or unforeseen circumstances in the country as notified by the government of India or any competent authority

4.1.5. The internship shall be extended if the leave of absence extends beyond this period.

4.1.6. The period shall be extended if the leave of absence extends beyond the permitted leaves.

4.1.7. The internship shall be repeated only in the department where the above extension is necessary.

5. TIME DISTRIBUTION

TABLE 1: Required area of posting with the required time duration		
Sl. No	Posting Area	Period Spent in postings
1	ECG	2 weeks
2	ECHO	2 months
	- ADULT	2 months
	- PEDIATRIC	2 months
	TEE / STRESS ECHO	2weeks

3	CATHLAB ANGIOGRAM/ANGIOPLASTY PROCEDURES DEVICE PROCEDURES EPS PACEMAKER IMPLANTATION/PROGRAMMING IABP/ROTA/IVUS/OCT	6months
4	TMT / HOLTER / Tilt table	1 month
6	Total	12 months

6. COMPETENCIES TO BE ACQUIRED DURING INTERNSHIP

In addition to Basic life support (BLS) and advanced cardiac life support (ACLS), the intern should be competent in the following areas:

6.1. ECG

- 6.1.1. Check patient ID and Registration
- 6.1.2. Electrodes Placement
- 6.1.3. Connect the 12 lead ECG
- 6.1.4. Record the ECG in machine
- 6.1.5. Identify the ECG abnormality or find any rhythm abnormality
- 6.1.6. Lead placement in dextrocardia patients
- 6.1.7. Ecg in Pacemaker patients.
- 6.1.8. Cross checking to avoid technical errors like technical dextrocardia
- 6.1.9. Transfer the recorded ECG to computer/print

6.2. ECHO LAB

- 6.2.1. Follow the department protocol;
- 6.2.2. Organize equipment like start up and shut down machines
- 6.2.3. Perform 2D Echo according to the latest guidelines.
- 6.2.4. Identify the analytical errors and artifact
- 6.2.5. Perform exercise stress echo, pharmacological stress echo, contrast echo & assist the physician during TEE
- 6.2.6. Recognize abnormal values, correlate with previous echo reports

6.3. CATHLAB

- 6.3.1. Handling the Cath lab table and C-arm movement
- 6.3.2. Compression of the puncture site after procedure for hemostasis
- 6.3.3. Work with physicians to diagnose heart disease and hemodynamic changes during cardiac catheterization.
- 6.3.4. Prepare patients for procedures, maintain technical equipment and provide materials needed for the procedure.
- 6.3.5. Record the test results and finalize the report(CD)
- 6.3.6. Assist physicians during procedures by monitor the patients' heart rate/rhythm and inform Physicians any reading outside normal ranges
- 6.3.7. valvular and device deployment and IABP during elective and emergency procedures
- 6.3.8. Maintain cathlab equipment and supplies with daily cleanings and adjustments.
- 6.3.9. Maintenance and primary troubleshooting of the equipment in case of a problem
- 6.3.10. Electrophysiology procedures -support and programming of pacemakers and devices
- 6.3.11. Scrubbing in during diagnostic and interventional procedures
- 6.3.12. Observation of Consumption recording and restocking the supply store room accordingly
- 6.3.13. Assist in procedures like Stent placement, Fractional flow reserve, Intravascular ultrasound (IVUS), OCT, ROTA

6.4. TMT

- 6.4.1. Before conducting the test, the patient's consent must be obtained
- 6.4.2. Prior to the test the patient's blood pressure should be checked.

- 6.4.3. Patient has to be prepared for the test in such a way which avoids artifacts
- 6.4.4. Monitoring of BP, ECG and symptoms throughout the procedure
- 6.4.5. Snapshots of the ECG at every stage to be taken

6.5. HOLTER

- 6.5.1. Holter module needs to be prepared prior to the connection
- 6.5.2. Respective patient details must be saved in the module with procedure type
- 6.5.3. Prepared Holter machine with ECG leads has to be connected to the patient
- 6.5.4. Analysis of holter report and interpretation of the final report in the presence of physician
- 6.5.5. Holter monitor report, including the maximum, minimum, and average heart rate, the total number of premature atrial complexes (PACs) and premature ventricular complexes (PVCs), tachycardia and bradycardia, and any episodes of possible ischemia.
- 6.5.6. Identify rhythm abnormalities and conduction blocks

6.6. TILT TABLE

- 6.6.1. Crashcart should be ready prior to the procedure.
- 6.6.2. Assisting the experienced technician or physician
- 6.6.3. Giving instructions to the patients
- 6.6.4. Preparing the patients like connecting ECG electrodes, BP cuff
- 6.6.5. Electrocardiographic monitoring continuously during symptoms or haemodynamic changes and every minute otherwise. Blood pressure should similarly be recorded continuously during symptoms and at one-minute intervals otherwise.
- 6.6.6. Setting up the drug dosage and operating the syringe pump
- 6.6.7. Administering drugs through an IV line

7. DAILY LOGS AND DOCUMENTATION

Each student must record their daily activities. This includes documentation of instrumentation utilized, test names, abnormal results seen, approximate numbers performed or observed, and a brief description of problem-solving and troubleshooting incidents. Time of arrival and departure, special incidents, concerns, problems,

instrumentation, and other pertinent items should also be recorded. Logbook to submit to the principal by the end of the internship.

8. ASSESSMENT OF INTERNSHIP

The intern shall maintain a record of work which is to be verified and certified by the faculty under whom he works. Based on the record of work and date of evaluation, the Head of the institution will issue a certificate of satisfactory completion of internship, following which the student becomes eligible to receive the award of B.Sc. Medical Laboratory Technology degree or declare him eligible for it.

RAJIVGANDHIUNIVERSITYOFHEALTHSCIENCES, KARNATAKA



INTERNSHIP GUIDELINES

APPLICABLE FROM THE 2019 BATCH

BSc EMERGENCY & TRAUMA CARE

TECHNOLOGY

**(Schedule annexed to University Notification No. RGU/AUTH/176th
Syndicate/143(1)/AHS-INT-GL/2022-23, Dated: 14/02/2023)**

**Internship Guidelines applicable from the batch of 2019
for BSc Emergency and Trauma care technology**

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6.	Competencies to be acquired during the internship	6
7.	Daily logs and other documents	7
8.	Assessment of internship	7

1. DESCRIPTION

Internship is a phase of training where in a Emergency and Trauma care technology graduate will acquire the skills and competencies all fields of emergency and trauma care technology and work efficiently in medical colleges and hospital in India and abroad

2. OBJECTIVES

At the end of internship period the Emergency and Trauma Care Technology graduate will possess all competencies required for practicing in hospitals such as

- 2.1. Pre hospital care
- 2.2. Triage in Emergency Department
- 2.3. Management of patients and patient care in emergency department

3. GENERAL GUIDELINES

- 3.1. Every candidate, after passing the final semester exams (should not have any back papers), is required to undergo a compulsory rotatory internship for a period of 12 months (365 calendar days) to be eligible for the award of the degree.
- 3.2. Internship is in partial fulfillment of the requirements of the course, and no candidate shall be declared to have completed the course otherwise.
- 3.3. Internship is in partial fulfilment of the requirements of the course, and no candidate shall be declared to have completed the course otherwise.
- 3.4. All parts of the internship shall be done in the teaching hospital under a National Medical Commission/National Accreditation Board for Testing and Calibration Laboratories/Joint Commission International /College of American Pathologists /National Board of Examination recognized Hospital /Diagnostics
- 3.5. Internship shall be completed within 13 months of the date of passing final examinations including the leaves and holidays.
- 3.6. Students are eligible to commence internship from next day of results; however, the commencement will be considered from the day of reporting.
- 3.7. Interns should complete postings in all specialties as decided by the department
- 3.8. The interns should conduct themselves in a manner befitting the profession and should dress appropriately in their respective work areas.
- 3.9. Each intern should maintain a logbook wherever he/she is posted. The intern has to get a signature from the supervising staff at the end of each posting.
- 3.10. Assignments/presentations/ duties during the internship must be duly undertaken and performed. The intern in the parent institute may be provided a monthly stipend/allowance where ever possible. Stipend may not be paid during any

period of extension is left to the discretion of the institute / diagnostics offering internship.

- 3.11. The intern is allowed to take his internship from other than the parent institution, provided there is a NOC obtained from both the parent institution and the institution offering the internship. Principal has to permit the student for internship after verifying the NOC.

4. GUIDELINES FOR COMPLETION, LEAVE & REPETITION

4.1.COMPLETION

The internship shall be completed within 13 months of passing the final semester examination whenever in force but not limited to

LEAVE

- 4.1.1. Normal Leave: Intern shall be permitted a maximum of 15 days leave with prior permission during the entire period of internship.
- 4.1.2. The entire period of 15 days cannot be availed during any one-week / two week postings applicable to a single department as indicated under section 3 table :1.
- 4.1.3. Maternity Leave: Lady interns may be permitted Maternity leave according to prevailing rules and regulations of the state government as may be applicable. Medical Leave: Medical leave shall be included within the 15 days of normal leave. Any medical leave beyond this period shall be recommended only by a duly constituted committee at the college level, which consists of the Principal, HOD, and medical practitioner. The internship shall be extended if the leave of absence extends beyond this period.

REPETITION/ EXTENSION

- 4.1.4. The minimum internship duration may be extended appropriately for a reasonable period on recommendation by the college for reasons including but not limited to
- a. Insufficient period of attendance
 - b. Unsatisfactory acquisition of required competency
 - c. Unsuccessful qualification on assessment

- d. Any exigency such as disasters or unforeseen circumstances in the country as notified by the government of India or any competent authority

4.1.5. The internship shall be extended if the leave of absence extends beyond this period.

4.1.6. The period shall be extended if the leave of absence extends beyond the permitted leaves.

4.1.7. The internship shall be repeated only in the department where the above extension is necessary.

5. TIME DISTRIBUTION

TABLE 1: Required area of posting with the required time duration		
Sl. No	Posting Area	Period Spent in postings
1	Emergency Medicine department	9 Months
2	Paediatric ICU	15 Days
3	Cardiac ICU	15 Days
4	Anesthesia Posting	15 Days
5	OBG Posting	15 Days
6	Medical ICU	15 Days
7	Surgical ICU	15 Days
	Total	12 months

6. COMPETENCIES TO BE ACQUIRED DURING INTERNSHIP

Students must be able to assist independently the following procedures at the end of their posting

- 6.1 Observe and Practice the basic role of EMT in emergency department – Patient transportation, connecting patients to monitor, to assess vitals of the patient.
- 6.2 Observe, learn and practice triaging
- 6.3 Observe, learn and practice to check vitals – Blood pressure, pulse rate, temperature and GRBS.
- 6.4 Observe and practice to do primary assessment – ABCD approach.
- 6.5 Observe and practice to identify life threatening situations in emergency department.
- 6.6 Observe and practice to take 12 lead ECG
- 6.7 Observe and practice to interpret normal ECG waves
- 6.8 Observe and practice to secure IV cannula, to practice splinting and to apply cervical collar
- 6.9 Observe and practice to interpret the life threatening ECG changed.
- 6.10 Observe and practice multi para monitoring of patients and use different oxygen delivery devices based on the indication. 6.11 Observe and practice to use defibrillator and AED.
- 6.12 Observe and practice the procedures of urinary catheterization, nasogastric tube insertion and to prepare infusions. 6.13 Documentation of vitals
- 6.14 Practice triage scoring system
- 6.15 To learn, observe and practice to maintain crash cart, arrangement of crash cart medication
- 6.16 To learn, observe and practice route of drug administration – intramuscular, intravenous, intradermal and subcutaneous
- 6.17 To learn and observe the working of x-rays, CT and MRI machines.
- 6.18 To learn, observe and practice the interpretation of x-rays, CT and MRI scans

6.19 To learn, observe and practice the initial assessment, primary assessment and secondary assessment of patients with trauma.

6.20 To learn, observe and practice the Emergency management and monitoring of trauma patients

7. DAILY LOGS AND DOCUMENTATION

Each student must record their daily activities. This includes documentation of instrumentation utilized, test names, abnormal results seen, approximate numbers performed or observed, and a brief description of problem-solving and troubleshooting incidents. Time of arrival and departure, special incidents, concerns, problems, instrumentation, and other pertinent items should also be recorded. Logbook to submit to the principal by the end of the internship.

8. ASSESSMENT OF INTERNSHIP

The intern shall maintain a record of work which is to be verified and certified by the faculty under whom he works. Based on the record of work and date of evaluation, the Head of the institution will issue a certificate of satisfactory completion of internship, following which the student becomes eligible to receive the award of B.Sc. Emergency and Trauma care technology degree or declare him eligible for it.

RAJIVGANDHIUNIVERSITYOFHEALTHSCIENCES, KARNATAKA



INTERNSHIP GUIDELINES

APPLICABLE FROM THE 2019 BATCH

BSc MEDICAL IMAGING TECHNOLOGY

**(Schedule annexed to University Notification No. RGU/AUTH/176th
Syndicate/145(1)/AHS-INT-GL/2022-23, Dated: 14/02/2023)**

**Internship Guidelines applicable from the batch of 2019
for BSc Medical Imaging Technology**

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1. DESCRIPTION

Internship is a phase of training where in a Medical Imaging Technology graduate will acquire the skills and competencies all fields of x-ray, fluoroscopy procedures,

mammography, CT,Ultrasound,MRI modality respectively and work efficiently in radiology department in India and abroad

2. OBJECTIVES

At the end of internship period the MIT graduate will possess all competencies required for practicing in a such as

- 2.1. Perform radiographic procedures ensuring safety of patients and personnel involved
- 2.2. Demonstrate knowledge of specified imaging modalities, relevant anatomy, image quality assurance and diagnostic decision making

3. GENERAL GUIDELINES

- 3.1. Every candidate, after passing the final semester exams (should not have any back papers), is required to undergo a compulsory rotatory internship for a period of 12 months (365 calendar days) to be eligible for the award of the degree.
- 3.2. Internship is in partial fulfillment of the requirements of the course, and no candidate shall be declared to have completed the course otherwise.
- 3.3. Internship is in partial fulfilment of the requirements of the course, and no candidate shall be declared to have completed the course otherwise.
- 3.4. All parts of the internship shall be done in the teaching hospital under a National Medical Commission/National Accreditation Board for Testing and Calibration Laboratories/Joint Commission International /College of American Pathologists /National Board of Examination recognized Hospital /Diagnostics
- 3.5. Internship shall be completed within 13 months of the date of passing final examinations including the leaves and holidays.
- 3.6. Students are eligible to commence internship from next day of results; however, the commencement will be considered from the day of reporting.
- 3.7. Interns should complete postings in all specialties as decided by the department
- 3.8. The interns should conduct themselves in a manner befitting the profession and should dress appropriately in their respective work areas.
- 3.9. Each intern should maintain a logbook wherever he/she is posted. The intern has to get a signature from the supervising staff at the end of each posting.
- 3.10. Assignments/presentations/ duties during the internship must be duly undertaken and performed.
- 3.11. The intern in the parent institute may be provided a monthly stipend/allowance where ever possible. Stipend may not be paid during any period of extension is left to the discretion of the institute / diagnostics offering internship.
- 3.12. The intern is allowed to take his internship from other than the parent institution, provided there is a NOC obtained from both the parent institution and the institution offering the internship. Principal has to permit the student for internship after verifying the NOC.

4. GUIDELINES FOR COMPLETION, LEAVE & REPETITION

4.1.COMPLETION

The internship shall be completed within 13 months of passing the final semester examination whenever in force but not limited to

LEAVE

- 4.1.1. Normal Leave: Intern shall be permitted a maximum of 15 days leave with prior permission during the entire period of internship.
- 4.1.2. The entire period of 15 days cannot be availed during any one-week / twoweek postings applicable to a single department as indicated under section 3 table :1.
- 4.1.3. Maternity Leave: Lady interns may be permitted Maternity leave according to prevailing rules and regulations of the state government as may be applicable. Medical Leave: Medical leave shall be included within the 15 days of normal leave. Any medical leave beyond this period shall be recommended only by a duly constituted committee at the college level, which consists of the Principal, HOD, and medical practitioner. The internship shall be extended if the leave of absence extends beyond this period.

REPETITION/ EXTENSION

- 4.1.4. The minimum internship duration may be extended appropriately for a reasonable period on recommendation by the college for reasons including but not limited to
 - a. Insufficient period of attendance
 - b. Unsatisfactory acquisition of required competency
 - c. Unsuccessful qualification on assessment
 - d. Any exigency such as disasters or unforeseen circumstances in the country as notified by the government of India or any competent authority
- 4.1.5. The internship shall be extended if the leave of absence extends beyond this period.
- 4.1.6. The period shall be extended if the leave of absence extends beyond the permitted leaves.
- 4.1.7. The internship shall be repeated only in the department where the above extension is necessary.

5. TIME DISTRIBUTION

TABLE 1: Required area of posting with the required time duration		
Sl. No	Posting Area	Period Spent in postings
1	X-RAY Conventional Radiography (CR), Radiographic Special Procedures, Digital Radiography (DR), Mobile Radiography	4 months
2	Computed Tomography (CT)	3months
3	Ultrasonography, Doppler studies	2 months
4	Magnetic Resonance Imaging (MRI)	2months
5	PACS (Picture Archiving & Communication System)	1 month
	Total	12 months

6. COMPETENCIES TO BE ACQUIRED DURING INTERNSHIP

Students must be able to assist independently the following procedures at the end of their postings

6.1. X-RAY- Conventional Radiography (CR), Radiographic Special Procedures, Digital Radiography (DR), Mobile Radiography

- 6.1.1. Basic and special projections Shoulder non-trauma routine and trauma routine
- 6.1.2. Chest - Related radiological anatomy, Basic & special projections
- 6.1.3. Abdomen & KUB - Related radiological anatomy, Basic & special projection
- 6.1.4. Paediatric radiography - Positioning, care and radiation protection while handling babies
- 6.1.5. Pelvic girdle and proximal femur - Related radiological anatomy Basic & special projections
- 6.1.6. Cervical spine, Thoracic spine, Lumbar spine, sacrum and coccyx - Related radiological anatomy Basic & special projections
- 6.1.7. Lower limb and upper limb - Related radiological anatomy Basic & special projections
- 6.1.8. Understand the pharmacology of the contrast media and its administration for various procedures

6.2. Special procedures –

- 6.2.1. Gastrointestinal Tract: Barium swallow, Barium meal and follow through, Hypotonic duodenography, small bowel enema, Barium Enema, colostomy
- 6.2.2. Salivary glands: Routine technique, procedure–sialography
- 6.2.3. Biliary system: Intravenous cholangiography, Percutaneous cholangiography, Endoscopic retrograde cholangio-pancreatography (ERCP), Operative cholangiography, post-Operative cholangiography (T - tube Cholangiography)
- 6.2.4. Urinary system: Intravenous urography, Retrograde pyelography, Antegrade pyelography , Cystography and micturating cystourethrography , Urethrography (ascending) ,Renal puncture
- 6.2.5. Female reproductive system: Hysterosalpingography.
- 6.2.6. Sinogram
- 6.2.7. Dacrocystography
- 6.2.8. Mammography - Patient preparation & Different techniques
- 6.2.9. DR-advancements

6.3. Computed Tomography (CT)

- 6.3.1. CT Protocols: Patient preparation, Imaging techniques and protocols for various parts of body, CT contrast enhanced protocols – CT angiography: Selective angiogram head, neck and peripheral
- 6.3.2. CT guided procedures Protocols: Both invasive and non- invasive
- 6.3.3. Advancements: Multi Detector CT, spiral CT scan: Slip ring technology, CBCT geometry, Reconstruction of CT images, 4D CT, HRCT, Post Processing Techniques: MPR, MIP, Min IP, Rendering software's -SSD and VR.

6.4. Ultrasonography, Doppler studies (USG)

- 6.4.1. Techniques: Techniques for imaging different anatomic areas, Patient preparation for various ultrasound imaging
- 6.4.2. Doppler Ultrasound: Doppler Effect, Doppler ultrasound techniques: Continuous Wave Doppler, Pulsed Doppler, Duplex scanning, Doppler spectrum, Color Doppler, Power Doppler, stress and shear wave doppler, B flow imaging

6.5. Magnetic Resonance Imaging (MRI)

- 6.5.1. MRI Protocols: Patient preparation, Imaging techniques and protocols for various parts of body, Gadolinium contrast enhanced protocols – MR angiography: Selective angiogram head, neck and peripheral
- 6.5.2. Advanced imaging techniques
- 6.5.3. Spectroscopy
- 6.5.4. Diffusion imaging
- 6.5.5. Perfusion imaging
- 6.5.6. Functional imaging
- 6.5.7. Interventional MRI

6.6. PACS (Picture Archiving & Communication System)

- 6.6.1. Introduction
- 6.6.2. Work flow
- 6.6.3. Components
- 6.6.4. Types
- 6.6.5. Storage Advantages and disadvantages

7. DAILY LOGS AND DOCUMENTATION

Each student must record their daily activities. This includes documentation of instrumentation utilized, test names, abnormal results seen, approximate numbers performed or observed, and a brief description of problem-solving and troubleshooting incidents. Time of arrival and departure, special incidents, concerns, problems, instrumentation, and other pertinent items should also be recorded. Logbook to submit to the principal by the end of the internship.

8. ASSESSMENT OF INTERNSHIP

The intern shall maintain a record of work which is to be verified and certified by the faculty under whom he works. Based on the record of work and date of evaluation, the Head of the institution will issue a certificate of satisfactory completion of internship, following which the student becomes eligible to receive the award of B.Sc. Medical Imaging Technology degree or declare him eligible for it.

RAJIVGANDHIUNIVERSITYOFHEALTHSCIENCES, KARNATAKA



INTERNSHIP GUIDELINES

APPLICABLE FROM THE 2019 BATCH

BSc MEDICAL LABORATORY TECHNOLOGY

**(Schedule annexed to University Notification No. RGU/AUTH/176th
Syndicate/145(1)/AHS-INT-GL/2022-23, Dated: 14/02/2023)**

**Internship Guidelines applicable from the batch of 2019
for BSc Medical Laboratory Technology**

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1. DESCRIPTION

The internship is a phase of training where a BSc Medical lab technology graduate will acquire the skills and competencies in all fields of laboratory medicine (Biochemistry, Microbiology, Pathology, and Blood bank departments, respectively) and work efficiently in medical laboratories in India and abroad

2. OBJECTIVES

At the end of the internship period, the MLT graduate will possess all competencies required for practicing in a lab, such as

- 2.1. Collect and prepare the sample
- 2.2. Handle fully automated analyzers, perform Quality control and troubleshooting procedures
- 2.3. Effectively use the Health Information System (HIS) / Laboratory Information System (LIS) and maintain log books and registers

3. GENERAL GUIDELINES

- 3.1. Every candidate, after passing the final semester exams (should not have any back papers), is required to undergo a compulsory rotatory internship for a period of 12 months (365 calendar days) to be eligible for the award of the degree.
- 3.2. Internship is in partial fulfillment of the requirements of the course, and no candidate shall be declared to have completed the course otherwise.
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- 3.5. Internship shall be completed within 13 months of the date of passing final examinations including the leaves and holidays.
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The internship shall be extended if the leave of absence extends beyond this period.

REPETITION/ EXTENSION

- 4.1.4. The minimum internship duration may be extended appropriately for a reasonable period on recommendation by the college for reasons including but not limited to
- a. Insufficient period of attendance
 - b. Unsatisfactory acquisition of required competency
 - c. Unsuccessful qualification on assessment
 - d. Any exigency such as disasters or unforeseen circumstances in the country as notified by the government of India or any competent authority

- 4.1.5. The internship shall be extended if the leave of absence extends beyond this period.
- 4.1.6. The period shall be extended if the leave of absence extends beyond the permitted leaves.
- 4.1.7. The internship shall be repeated only in the department where the above extension is necessary.

5. TIME DISTRIBUTION

TABLE 1: Required area of posting with the required time duration		
Sl. No	Posting Area	Period Spent in postings
1	Orientation / Billing/Dispatch/BMW	1 month
2	Phlebotomy	1 month
3	Pathology	
	a. Blood Bank	1 month
	b. Histopathology/Cytopathology	1 month
	c. Haematology	1 month
	d. Clinical pathology	1 month
4	Biochemistry	
	a. Clinical Biochemistry	2 months
	b. Higher Chemistry	1 month
5	Microbiology	
	a. Clinical Microbiology	1 month
	b. Serology	1 month
	c. Molecular biology	1 month
6	Total	12 months

6. COMPETENCIES TO BE ACQUIRED DURING INTERNSHIP

6.1. ORIENTATION / BILLING/DISPATCH/BMW

- 6.1.1. Orients to all departments of the Lab
- 6.1.2. Able to handle the software for billing and dispatch
- 6.1.3. Can identify the test orders and guides the patients
- 6.1.4. Orients to Biomedical Waste management
- 6.1.5. Able to Dispatch reports appropriately
- 6.1.6. Maintains documents in Billing and Dispatch

6.2. PHLEBOTOMY

- 6.2.1. Patient ID and test verification;
- 6.2.2. Bedside labeling Specimen Collection/Special Test Indications (light, temperature, timed, fasting)
- 6.2.3. Venipuncture –
 - Routine draws
 - Difficult sticks
 - Requiring physician order (foot draw)
- 6.2.4. Specimen Processing/Handling
- 6.2.5. Specimen transport
- 6.2.6. Specimen receipt, patient verification, and bar code labeling
- 6.2.7. Accessioning – Individual specimens
- 6.2.8. Batching Specimen collection
- 6.2.9. Pipetting
- 6.2.10. Referral to reference lab (proper collection and storage)

6.3. BIOCHEMISTRY

- 6.3.1. Performs QC on routinely used chemistry analyzers
- 6.3.2. Evaluates Levey-Jennings charts for Westgard Rule
- 6.3.3. Reviews and evaluates quality control data.
- 6.3.4. Discuss/observe calibration procedure and protocol of different analytes
- 6.3.5. Discuss the reasons and follow-up procedures for sample rejection according to department protocol.
- 6.3.6. Identifies preanalytical errors and/or physiological conditions which will interfere with specific tests, i.e., hemolysis, lipemia, icterus, incorrect tube additive, etc
- 6.3.7. Validate clinical specimens, including specimen I.D., proper anticoagulation, and rejection of inappropriate samples.
- 6.3.8. Organize samples, specimen log, reagents, and equipment
- 6.3.9. Perform instrument start-up and/or shutdown.
- 6.3.10. Perform testing procedures.
- 6.3.11. Appropriately act on results beyond the linearity and/or reportable range of the instrument
- 6.3.12. Discuss and perform dilutions when necessary.
- 6.3.13. Discuss “critical” or “panic” values and reporting protocol
- 6.3.14. Recognize abnormal values, correlate with other laboratory results, and explain the clinical significance

6.4. HEMATOLOGY/COAGULATION

- 6.4.1. Analyzer – General use; knowledge of controls and reference ranges
- 6.4.2. Whole blood/Serum (CBCs; PT/PTT; etc.)
- 6.4.3. CBC Manual Differential
- 6.4.4. Reticulocyte Count (If not automated)
- 6.4.5. Manual CSF and Body fluids: Cell count Calculations for dilutions
Differential (if indicated)
- 6.4.6. Reporting of results Rapid tests (Sickle cell; fibrin split products/FDP)
- 6.4.7. Bleeding Time
- 6.4.8. LE Cell Prep
- 6.4.9. Occult Blood
- 6.4.10. Malarial Examination

6.5. URINALYSIS

- 6.5.1. Analyzer – General use; knowledge of controls and reference ranges
- 6.5.2. Manual macroscopic UA
- 6.5.3. Microscopic UA
- 6.5.4. Crystal Identification
- 6.5.5. Semen analysis
- 6.5.6. Stool examination

6.6. BLOOD BANK

- 6.6.1. Blood banking procedures (Specimen acceptability; storing; release; etc.)
- 6.6.2. ABO/Rh typing/Antibody screen (Indirect Coombs)
- 6.6.3. Crossmatch
- 6.6.4. Donor interview
- 6.6.5. Donor phlebotomy/collection

6.7. CLINICAL MICROBIOLOGY

- 6.7.1. Analyzers – General use; knowledge of controls and reference ranges
- 6.7.2. Sample collection and macroscopy of all clinical samples

MICROSCOPY

- 6.7.3. Gram stain and its interpretation
- 6.7.4. Albert's stain and its interpretation
- 6.7.5. Acid Fast Staining, its interpretation and RNTCP grading
- 6.7.6. Fluorescent microscopy for MTB (optional)
- 6.7.7. KOH mounting
- 6.7.8. LPCB tease mount

- 6.7.9. Negative staining (optional)
- 6.7.10. Other staining techniques (optional)
- 6.7.11. Saline and iodine mount for parasites
- 6.7.12. Concentration methods for stool examination
- 6.7.13. Peripheral smear examination for parasites
- 6.7.14. Urine wet mount microscopy

CULTURE

- 6.7.15. Sterilization techniques: Autoclaving and Use of Hot air oven
- 6.7.16. Media preparation
- 6.7.17. Culture inoculation- bacteria and fungi
- 6.7.18. Identification test- cultural characteristics, biochemical tests, and its serogrouping
- 6.7.19. Automation in identification
- 6.7.20. Antimicrobial susceptibility testing
- 6.7.21. Slide culture techniques
- 6.7.22. Knowledge about EQAS and Internal quality control

6.8. SEROLOGY

- 6.8.1. Analysers – General use; knowledge of controls and reference ranges
- 6.8.2. Latex agglutination tests- qualitative and quantitative methods and their interpretation
- 6.8.3. Immunochromatographic tests-procedure and interpretation
- 6.8.4. Agglutination tests -Slide and tube method (E.g., Widal, Weil- Felix reaction)
- 6.8.5. Other Antigen-Antibody reactions (optional)
- 6.8.6. ELISA
- 6.8.7. Assists senior technician in processing samples for advanced testing
- 6.8.8. Knowledge about EQAS and Internal quality control

6.9. MOLECULAR BIOLOGY

- 6.9.1. Use of PPE
- 6.9.2. Sample collection
- 6.9.3. Sample handling
- 6.9.4. Transportation / storing samples
- 6.9.5. Assists the senior technician in processing samples
- 6.9.6. Preparation and Dispatch of reports

7. DAILY LOGS AND DOCUMENTATION

Each student must record their daily activities. This includes documentation of instrumentation utilized, test names, abnormal results seen, approximate numbers performed or observed, and a brief description of problem-solving and troubleshooting

incidents. Time of arrival and departure, special incidents, concerns, problems, instrumentation, and other pertinent items should also be recorded. Logbook to submit to the principal by the end of the internship.

8. ASSESSMENT OF INTERNSHIP

The intern shall maintain a record of work which is to be verified and certified by the faculty under whom he works. Based on the record of work and date of evaluation, the Head of the institution will issue a certificate of satisfactory completion of internship, following which the student becomes eligible to receive the award of B.Sc. Medical Laboratory Technology degree or declare him eligible for it.

RAJIVGANDHIUNIVERSITYOFHEALTHSCIENCES, KARNATAKA



INTERNSHIP GUIDELINES

APPLICABLE FROM THE 2019 BATCH

BSc NEUROSCIENCE TECHNOLOGY

**(Schedule annexed to University Notification No. RGU/AUTH/176th
Syndicate/145(1)/AHS-INT-GL/2022-23, Dated: 14/02/2023)**

**Internship Guidelines applicable from the batch of 2019
for BSc Neuroscience Technology**

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1. DESCRIPTION

Internship is a phase of training where in a Neuroscience technology graduate will acquire the skills and competencies all fields of Neuroelectrophysiological labs work efficiently in India and abroad

2. OBJECTIVES

At the end of internship period the Neuroscience graduate will possess all competencies required for practicing in a lab such as

- 2.1. To perform EEG and NCS cases individually
- 2.2. The student will be able to perform all neuroelectrophysiological procedures
- 2.3. Effectively use of learning all procedure and maintain log books and registers

3. GENERAL GUIDELINES

- 3.1. Every candidate, after passing the final semester exams (should not have any back papers), is required to undergo a compulsory rotatory internship for a period of 12 months (365 calendar days) to be eligible for the award of the degree.
- 3.2. Internship is in partial fulfillment of the requirements of the course, and no candidate shall be declared to have completed the course otherwise.
- 3.3. Internship is in partial fulfilment of the requirements of the course, and no candidate shall be declared to have completed the course otherwise.
- 3.4. All parts of the internship shall be done in the teaching hospital under a National Medical Commission/National Accreditation Board for Testing and Calibration Laboratories/Joint Commission International /College of American Pathologists /National Board of Examination recognized Hospital /Diagnostics
- 3.5. Internship shall be completed within 13 months of the date of passing final examinations including the leaves and holidays.
- 3.6. Students are eligible to commence internship from next day of results; however, the commencement will be considered from the day of reporting.
- 3.7. Interns should complete postings in all specialties as decided by the department
- 3.8. The interns should conduct themselves in a manner befitting the profession and should dress appropriately in their respective work areas.
- 3.9. Each intern should maintain a logbook wherever he/she is posted. The intern has to get a signature from the supervising staff at the end of each posting.
- 3.10. Assignments/presentations/ duties during the internship must be duly undertaken and performed.
- 3.11. The intern in the parent institute may be provided a monthly stipend/allowance where ever possible. Stipend may not be paid during any period of extension is left to the discretion of the institute / diagnostics offering internship.
- 3.12. The intern is allowed to take his internship from other than the parent institution, provided there is a NOC obtained from both the parent institution and the institution offering the internship. Principal has to permit the student for internship after verifying the NOC.

4. GUIDELINES FOR COMPLETION, LEAVE & REPETITION

4.1.COMPLETION

The internship shall be completed within 13 months of passing the final semester examination whenever in force but not limited to

LEAVE

4.1.1. Normal Leave: Intern shall be permitted a maximum of 15 days leave with prior permission during the entire period of internship.

4.1.2. The entire period of 15 days cannot be availed during any one-week / two week postings applicable to a single department as indicated under section 3 table :1.

4.1.3. Maternity Leave: Lady interns may be permitted Maternity leave according to prevailing rules and regulations of the state government as may be applicable. Medical Leave: Medical leave shall be included within the 15 days of normal leave. Any medical leave beyond this period shall be recommended only by a duly constituted committee at the college level, which consists of the Principal, HOD, and medical practitioner.

The internship shall be extended if the leave of absence extends beyond this period.

REPETITION/ EXTENSION

4.1.4. The minimum internship duration may be extended appropriately for a reasonable period on recommendation by the college for reasons including but not limited to

- a. Insufficient period of attendance
- b. Unsatisfactory acquisition of required competency
- c. Unsuccessful qualification on assessment
- d. Any exigency such as disasters or unforeseen circumstances in the country as notified by the government of India or any competent authority

4.1.5. The internship shall be extended if the leave of absence extends beyond this period.

4.1.6. The period shall be extended if the leave of absence extends beyond the permitted leaves.

4.1.7. The internship shall be repeated only in the department where the above extension is necessary.

5. TIME DISTRIBUTION

TABLE 1: Required area of posting with the required time duration		
Sl. No	Posting Area	Period Spent in postings
1	Neuromedicine ICU	2 months
2	Neurosurgical ICU	2months
3	Neuromedicine and Neurosurgery OPD	2 months
4	BED -SIDE EEG	2 months
5	EEG AND NCS	2 months
6	EMG, EP'S & POLYSOMNOGRAPHY	2 months
	Total	12 months

6. COMPETENCIES TO BE ACQUIRED DURING INTERNSHIP

6.1. INFECTION CONTROL PRACTICES

- 6.1.1. Standard precautions
- 6.1.2. Isolation protocols
- 6.1.3. Bundles of care

6.2. ASSESSMENT OF PATIENT

- 6.2.1. Checking all the vital signs
- 6.2.2. Checking the reflexes
- 6.2.3. Examining the GCS SCALE
- 6.2.4. Evaluation of all the cranial nerve

6.3. DIAGNOSTIC PROCEDURE

- 6.3.1. Electroencephalogram
- 6.3.2. Nerve conduction study
- 6.3.3. Evoked potential
- 6.3.4. Electromyogram

6.3.5. MRI scan

6.3.6. CT scan

7. DAILY LOGS AND DOCUMENTATION

Each student must record their daily activities. This includes documentation of instrumentation utilized, test names, abnormal results seen, approximate numbers performed or observed, and a brief description of problem-solving and troubleshooting incidents. Time of arrival and departure, special incidents, concerns, problems, instrumentation, and other pertinent items should also be recorded. Logbook to submit to the principal by the end of the internship.

8. ASSESSMENT OF INTERNSHIP

The intern shall maintain a record of work which is to be verified and certified by the faculty under whom he works. Based on the record of work and date of evaluation, the Head of the institution will issue a certificate of satisfactory completion of internship, following which the student becomes eligible to receive the award of B.Sc. Medical Laboratory Technology degree or declare him eligible for it.

RAJIVGANDHIUNIVERSITYOFHEALTHSCIENCES, KARNATAKA



INTERNSHIP GUIDELINES

APPLICABLE FROM THE 2019 BATCH

BSc RENAL DIALYSIS TECHNOLOGY

**(Schedule annexed to University Notification No. RGU/AUTH/176th
Syndicate/145(1)/AHS-INT-GL/2022-23, Dated: 14/02/2023)**

**Internship Guidelines applicable from the batch of 2019
for BSc Renal Dialysis Technology**

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1. DESCRIPTION

Internship is a phase of training where in a RenalDialysisTechnology graduate will acquire the skills and competencies of various modalities of renal replacement therapy and work efficiently in nephrology department in India and abroad

2. OBJECTIVES

At the end of internship period the RDT graduate will gain all competencies required for practicing in a such as

- 2.1. Perform dialysis procedures ensuring safety of patients and personnel involved
- 2.2. Assisting renal biopsy & also assist transplant coordinator

3. GENERAL GUIDELINES

- 3.1. Every candidate, after passing the final semester exams (should not have any back papers), is required to undergo a compulsory rotatory internship for a period of 12 months (365 calendar days) to be eligible for the award of the degree.
- 3.2. Internship is in partial fulfillment of the requirements of the course, and no candidate shall be declared to have completed the course otherwise.
- 3.3. Internship is in partial fulfilment of the requirements of the course, and no candidate shall be declared to have completed the course otherwise.
- 3.4. All parts of the internship shall be done in the teaching hospital under a National Medical Commission/National Accreditation Board for Testing and Calibration Laboratories/Joint Commission International /College of American Pathologists /National Board of Examination recognized Hospital /Diagnostics
- 3.5. Internship shall be completed within 13 months of the date of passing final examinations including the leaves and holidays.
- 3.6. Students are eligible to commence internship from next day of results; however, the commencement will be considered from the day of reporting.
- 3.7. Interns should complete postings in all specialties as decided by the department
- 3.8. The interns should conduct themselves in a manner befitting the profession and should dress appropriately in their respective work areas.
- 3.9. Each intern should maintain a logbook wherever he/she is posted. The intern has to get a signature from the supervising staff at the end of each posting.
- 3.10. Assignments/presentations/ duties during the internship must be duly undertaken and performed.
- 3.11. The intern in the parent institute may be provided a monthly stipend/allowance where ever possible. Stipend may not be paid during any period of extension is left to the discretion of the institute / diagnostics offering internship.
- 3.12. The intern is allowed to take his internship from other than the parent institution, provided there is a NOC obtained from both the parent institution and the

institution offering the internship. Principal has to permit the student for internship after verifying the NOC.

4. GUIDELINES FOR COMPLETION, LEAVE & REPETITION

4.1.COMPLETION

The internship shall be completed within 13 months of passing the final semester examination whenever in force but not limited to

LEAVE

4.1.1. Normal Leave: Intern shall be permitted a maximum of 15 days leave with prior permission during the entire period of internship.

4.1.2. The entire period of 15 days cannot be availed during any one-week / two week postings applicable to a single department as indicated under section 3 table :1.

4.1.3. Maternity Leave: Lady interns may be permitted Maternity leave according to prevailing rules and regulations of the state government as may be applicable. Medical Leave: Medical leave shall be included within the 15 days of normal leave. Any medical leave beyond this period shall be recommended only by a duly constituted committee at the college level, which consists of the Principal, HOD, and medical practitioner. The internship shall be extended if the leave of absence extends beyond this period.

REPETITION/ EXTENSION

4.1.4. The minimum internship duration may be extended appropriately for a reasonable period on recommendation by the college for reasons including but not limited to

- a. Insufficient period of attendance
- b. Unsatisfactory acquisition of required competency
- c. Unsuccessful qualification on assessment
- d. Any exigency such as disasters or unforeseen circumstances in the country as notified by the government of India or any competent authority

4.1.5. The internship shall be extended if the leave of absence extends beyond this period.

4.1.6. The period shall be extended if the leave of absence extends beyond the permitted leaves.

4.1.7. The internship shall be repeated only in the department where the above extension is necessary.

5. TIME DISTRIBUTION

TABLE 1: Required area of posting with the required time duration		
Sl. No	Posting Area	Period Spent in postings
1	Dialysis unit (Hemodialysis, Peritoneal dialysis, Plasmapheresis & Pediatric dialysis)	9 months
2	ICU dialysis (CRRT, Hemoperfusion)	1month
3	Nephrology procedure room	1month
4	Emergency department	1 month
	Total	12 months

6. COMPETENCIES TO BE ACQUIRED DURING INTERNSHIP

Students must be able to assist independently the following procedures at the end of their postings

6.1. Dialysis Unit, ICU's, Nephrology procedure room & Emergency department

- 6.1.1. Priming and setting parameters for starting dialysis
- 6.1.2. Perform dialyzer reuse procedure
- 6.1.3. Describe and handle water treatment components
- 6.1.4. Prepare dialysate solution
- 6.1.5. Dialysis catheter care, dressing and removal
- 6.1.6. Handling of alarms
- 6.1.7. Sets up, operates and cleans the hemodialysis machine
- 6.1.8. Connects patients to the hemodialysis machines, with aseptic precautions.
Performs cannulation, handles AV shunts, jugular, subclavian and femoral catheters
- 6.1.9. Managing various intra-dialytic complications, notifies shift supervisor of any unusual change in the patient's condition and performing related duties as assigned under the supervision of dialysis technologist, physician or nephrologist
- 6.1.10. Patient education, psychosocial and diet counseling of dialysis patients. Maintaining and monitoring dialysis adequacy, clinical quality practices and infection control within the dialysis unit as per unit policies
- 6.1.11. Performing peritoneal dialysis

- 6.1.12. Performing plasmapheresis.
- 6.1.13. Performing hemoperfusion & CRRT in ICU
- 6.1.14. Assisting Kidney biopsy & catheter insertion procedure
- 6.1.15. Documentation of patient data on charts as per unit policies

7. DAILY LOGS AND DOCUMENTATION

Each student must record their daily activities. This includes documentation of instrumentation utilized, test names, abnormal results seen, approximate numbers performed or observed, and a brief description of problem-solving and troubleshooting incidents. Time of arrival and departure, special incidents, concerns, problems, instrumentation, and other pertinent items should also be recorded. Logbook to submit to the principal by the end of the internship.

8. ASSESSMENT OF INTERNSHIP

The intern shall maintain a record of work which is to be verified and certified by the faculty under whom he works. Based on the record of work and date of evaluation, the Head of the institution will issue a certificate of satisfactory completion of internship, following which the student becomes eligible to receive the award of B.Sc. Renal Dialysis Technology degree or declare him eligible for it.

RAJIVGANDHIUNIVERSITYOFHEALTHSCIENCES, KARNATAKA



INTERNSHIP GUIDELINES

APPLICABLE FROM THE 2019 BATCH

BSc OPTOMETREY

**(Schedule annexed to University Notification No. RGU/AUTH/176th
Syndicate/145(1)/AHS-INT-GL/2022-23, Dated: 14/02/2023)**

**Internship Guidelines applicable from the batch of 2019
for BSc Optometry**

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1. DESCRIPTION

Internship is a phase of training where in a BSc Optometry student will acquire the skills and competencies all fields of optometry and work efficiently in India and abroad

2. OBJECTIVES

At the end of internship period optometry graduate will possess all competencies required for practicing in a hospital such as

- 2.1. Be able to develop skills to provide Comprehensive eye examination
- 2.2. Be able to correct refraction error and provide spectacle prescription.
- 2.3. To carry out ophthalmic investigations.
- 2.4. To impart knowledge with regard to common ocular diseases.
- 2.5. To acquire knowledge about the referral guidelines for Ocular and systemic conditions.
- 2.6. Be able to have adequate knowledge to fit, assess, prescribe and dispense Contact lenses for refractive corrections
- 2.7. Be able to assess low vision and provide comprehensive low vision care.
- 2.8. Be able to do basic binocular vision assessment, help co-manage non-strabismic binocular vision anomalies

3. GENERAL GUIDELINES

- 3.1. Every candidate, after passing the final semester exams (should not have any back papers), is required to undergo a compulsory rotatory internship for a period of 12 months (365 calendar days) to be eligible for the award of the degree.
- 3.2. Internship is in partial fulfillment of the requirements of the course, and no candidate shall be declared to have completed the course otherwise.
- 3.3. Internship is in partial fulfilment of the requirements of the course, and no candidate shall be declared to have completed the course otherwise.
- 3.4. All parts of the internship shall be done in the teaching hospital under a National Medical Commission/National Accreditation Board for Testing and Calibration Laboratories/Joint Commission International /College of American Pathologists /National Board of Examination recognized Hospital /Diagnostics
- 3.5. Internship shall be completed within 13 months of the date of passing final examinations including the leaves and holidays.
- 3.6. Students are eligible to commence internship from next day of results; however, the commencement will be considered from the day of reporting.
- 3.7. Interns should complete postings in all specialties as decided by the department
- 3.8. The interns should conduct themselves in a manner befitting the profession and should dress appropriately in their respective work areas.
- 3.9. Each intern should maintain a logbook wherever he/she is posted. The intern has to get a signature from the supervising staff at the end of each posting.

- 3.10. Assignments/presentations/ duties during the internship must be duly undertaken and performed.
- 3.11. The intern in the parent institute may be provided a monthly stipend/allowance where ever possible. Stipend may not be paid during any period of extension is left to the discretion of the institute / diagnostics offering internship.
- 3.12. The intern is allowed to take his internship from other than the parent institution, provided there is a NOC obtained from both the parent institution and the institution offering the internship. Principal has to permit the student for internship after verifying the NOC.

4. GUIDELINES FOR COMPLETION, LEAVE & REPETITION

4.1.COMPLETION

The internship shall be completed within 13 months of passing the final semester examination whenever in force but not limited to

LEAVE

- 4.1.1. Normal Leave: Intern shall be permitted a maximum of 15 days leave with prior permission during the entire period of internship.
- 4.1.2. The entire period of 15 days cannot be availed during any one-week / two week postings applicable to a single department as indicated under section 3 table :1.
- 4.1.3. Maternity Leave: Lady interns may be permitted Maternity leave according to prevailing rules and regulations of the state government as may be applicable.
Medical Leave: Medical leave shall be included within the 15 days of normal leave. Any medical leave beyond this period shall be recommended only by a duly constituted committee at the college level, which consists of the Principal, HOD, and medical practitioner.
The internship shall be extended if the leave of absence extends beyond this period.

REPETITION/ EXTENSION

- 4.1.4. The minimum internship duration may be extended appropriately for a reasonable period on recommendation by the college for reasons including but not limited to
 - a. Insufficient period of attendance
 - b. Unsatisfactory acquisition of required competency
 - c. Unsuccessful qualification on assessment

- d. Any exigency such as disasters or unforeseen circumstances in the country as notified by the government of India or any competent authority

4.1.5. The internship shall be extended if the leave of absence extends beyond this period.

4.1.6. The period shall be extended if the leave of absence extends beyond the permitted leaves.

4.1.7. The internship shall be repeated only in the department where the above extension is necessary.

5. TIME DISTRIBUTION

TABLE 1: Required area of posting with the required time duration		
Sl. No	Posting Area	Period Spent in postings
1	General Optometry department and General Ophthalmology department	1month
2	Speciality refraction with Retina and Cornea Ophthalmology department	1month
3	Paediatric refraction with Paediatric ophthalmology	1month
4	LASIK investigation	1month
5	Cataract investigation	1month
6	HFA and Glaucoma ophthalmology department	1month
7	Contact lens	1month
8	Low vision and Rehabilitation department	1month
9	Vision therapy	1month
10	Ocularistry and Electrodiagnostics	1month
11	Opticals	1month
12	Community Refraction	1month
	Total	12 months

6. COMPETENCIES TO BE ACQUIRED DURING INTERNSHIP

Students must be able to assist independently the following procedures at the end of their postings

6.1. General Optometry department, Community refraction and General Ophthalmology department

Students should get well versed in handling refraction cases like

- 6.1.1. General Refraction
- 6.1.2. Aphakia
- 6.1.3. Emergency cases like redness/trauma
- 6.1.4. Refract all kinds of refractive error
- 6.1.5. Refract ectatic conditions of cornea
- 6.1.6. Post-Operative refraction
- 6.1.7. Follow up cases of any infection – Chalazion/Stye/Conjunctivitis
- 6.1.8. Differential diagnosis and diagnosis of anterior chamber infections
- 6.1.9. Troubleshoot
- 6.1.10. Appropriate referral

6.2. Speciality refraction with Retina and Cornea Ophthalmology department

- 6.2.1. Complete speciality refraction work-up;
- 6.2.2. Differential diagnosis and diagnosis of retinal conditions
- 6.2.3. Differential diagnosis and diagnosis of corneal conditions
- 6.2.4. Refraction for all post-operative retinal and corneal conditions
- 6.2.5. To know the management for retinal and corneal condition
- 6.2.6. To understand and decide the prognosis of every condition
- 6.2.7. Appropriate referral

6.3. Paediatric refraction with Paediatric ophthalmology

- 6.3.1. Complete paediatric work-up
- 6.3.2. All syndromes
- 6.3.3. Aphakia
- 6.3.4. Hereditary conditions
- 6.3.5. Pedigree charting
- 6.3.6. Cycloplegic refraction
- 6.3.7. Decide about prescription for paediatric age groups

6.4. LASIK investigation and Cataract investigation

- 6.4.1. Appropriate history taking
- 6.4.2. Able to perform the investigation using appropriate diagnostic tool
- 6.4.3. Able to interpret the reports post investigation
- 6.4.4. To decide if the patient can undergo LASIK or cataract surgery

6.5. HFA and Glaucoma ophthalmology department

- 6.5.1. Able to perform the HFA for all kinds of patients with any HFA strategy
- 6.5.2. Able to interpret the HFA reports and understand the prognosis of Glaucoma
- 6.5.3. To diagnose the type of Glaucoma
- 6.5.4. To know the management of all types of Glaucoma
- 6.5.5. Appropriate referral

6.6. Contact lens

- 6.6.1. Soft lens/Soft toric.
- 6.6.2. RGP CL
- 6.6.3. ROSE K
- 6.6.4. Miniscleral CL
- 6.6.5. Cosmetic CL
- 6.6.6. Bandage CL
- 6.6.7. Troubleshoot
- 6.6.8. Steven Johnson's syndrome
- 6.6.9. Sjogren syndrome
- 6.6.10. Aphakia
- 6.6.11. Post-surgery
- 6.6.12. High astigmatism – Keratoconus/PMD
- 6.6.13. Patient care and maintenance

6.7. Low vision and Rehabilitation

- 6.7.1. Complete low vision work-up
- 6.7.2. Distance and near magnification trial
- 6.7.3. Prescribe appropriate devices according to the condition
- 6.7.4. Appropriate referral
- 6.7.5. To understand and know to rehabilitate a low vision patient according to their needs

6.8. Vision therapy

- 6.8.1. Complete Binocular vision work up
- 6.8.2. To diagnose every condition appropriately
- 6.8.3. To decide about the appropriate therapy for every condition
- 6.8.4. Diplopia charting and Hess charting
- 6.8.5. DMR and Prism trial for diplopia
- 6.8.6. Perceptual skill assessment
- 6.8.7. To work on defective perceptual skill appropriately

6.9. Ocularist and Electrodiagnostics

- 6.9.1. Orbital diseases
- 6.9.2. Evisceration, Enucleation and Exenteration
- 6.9.3. Fitting and Removal of customised eye – Fitting assessment
- 6.9.4. Materials used
- 6.9.5. Processing and Fabrication techniques
- 6.9.6. Patient care and hygiene

6.10. Opticals

- 6.10.1. To decide and choose the appropriate spectacle lens and frame according to the power
- 6.10.2. Ocular measurements
- 6.10.3. Lens coatings
- 6.10.4. Frame fitting and adjustments
- 6.10.5. Dispensing

7. DAILY LOGS AND DOCUMENTATION

Each student must record their daily activities. This includes documentation of instrumentation utilized, test names, abnormal results seen, approximate numbers performed or observed, and a brief description of problem-solving and troubleshooting incidents. Time of arrival and departure, special incidents, concerns, problems, instrumentation, and other pertinent items should also be recorded. Logbook to submit to the principal by the end of the internship.

8. ASSESSMENT OF INTERNSHIP

The intern shall maintain a record of work which is to be verified and certified by the faculty under whom he works. Based on the record of work and date of evaluation, the Head of the institution will issue a certificate of satisfactory completion of internship, following which the student becomes eligible to receive the award of B.Sc. Optometry degree or declare him eligible for it.

RAJIVGANDHIUNIVERSITYOFHEALTHSCIENCES, KARNATAKA



INTERNSHIP GUIDELINES

APPLICABLE FROM THE 2019 BATCH

BSc PERFUSION TECHNOLOGY

**(Schedule annexed to University Notification No. RGU/AUTH/176th
Syndicate/145(1)/AHS-INT-GL/2022-23, Dated: 14/02/2023)**

**Internship Guidelines applicable from the batch of 2019
for BSc Perfusion Technology**

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8.	Assessment of internship	7

1. DESCRIPTION

The internship is a phase of training where a BSc Perfusion technology graduate will acquire the skills and competencies in the field of perfusion technology and work efficiently in hospitals in India and abroad

2. OBJECTIVES

At the end of the internship period, the PT graduate will possess all competencies required for , such as

2.1.

3. GENERAL GUIDELINES

- 3.1. Every candidate, after passing the final semester exams (should not have any back papers), is required to undergo a compulsory rotatory internship for a period of 12 months (365 calendar days) to be eligible for the award of the degree.
- 3.2. Internship is in partial fulfillment of the requirements of the course, and no candidate shall be declared to have completed the course otherwise.
- 3.3. Internship is in partial fulfilment of the requirements of the course, and no candidate shall be declared to have completed the course otherwise.
- 3.4. All parts of the internship shall be done in the teaching hospital under a National Medical Commission/National Accreditation Board for Testing and Calibration Laboratories/Joint Commission International /College of American Pathologists /National Board of Examination recognized Hospital /Diagnostics
- 3.5. Internship shall be completed within 13 months of the date of passing final examinations including the leaves and holidays.
- 3.6. Students are eligible to commence internship from next day of results; however, the commencement will be considered from the day of reporting.
- 3.7. Interns should complete postings in all specialties as decided by the department
- 3.8. The interns should conduct themselves in a manner befitting the profession and should dress appropriately in their respective work areas.
- 3.9. Each intern should maintain a logbook wherever he/she is posted. The intern has to get a signature from the supervising staff at the end of each posting.
- 3.10. Assignments/presentations/ duties during the internship must be duly undertaken and performed.
- 3.11. The intern in the parent institute may be provided a monthly stipend/allowance where ever possible. Stipend may not be paid during any period of extension is left to the discretion of the institute / diagnostics offering internship.
- 3.12. The intern is allowed to take his internship from other than the parent institution, provided there is a NOC obtained from both the parent institution and the institution offering the internship. Principal has to permit the student for internship after verifying the NOC.

4. GUIDELINES FOR COMPLETION, LEAVE & REPETITION

4.1.COMPLETION

The internship shall be completed within 13 months of passing the final semester examination whenever in force but not limited to

LEAVE

4.1.1. Normal Leave: Intern shall be permitted a maximum of 15 days leave with prior permission during the entire period of internship.

4.1.2. The entire period of 15 days cannot be availed during any one-week / two week postings applicable to a single department as indicated under section 3 table :1.

4.1.3. Maternity Leave: Lady interns may be permitted Maternity leave according to prevailing rules and regulations of the state government as may be applicable. Medical Leave: Medical leave shall be included within the 15 days of normal leave. Any medical leave beyond this period shall be recommended only by a duly constituted committee at the college level, which consists of the Principal, HOD, and medical practitioner. The internship shall be extended if the leave of absence extends beyond this period.

REPETITION/ EXTENSION

4.1.4. The minimum internship duration may be extended appropriately for a reasonable period on recommendation by the college for reasons including but not limited to

- a. Insufficient period of attendance
- b. Unsatisfactory acquisition of required competency
- c. Unsuccessful qualification on assessment

- d. Any exigency such as disasters or unforeseen circumstances in the country as notified by the government of India or any competent authority

4.1.5. The internship shall be extended if the leave of absence extends beyond this period.

4.1.6. The period shall be extended if the leave of absence extends beyond the permitted leaves.

4.1.7. The internship shall be repeated only in the department where the above extension is necessary.

5. TIME DISTRIBUTION

TABLE 1: Required area of posting with the required time duration		
Sl. No	Posting Area	Period Spent in postings
1	Cardiac Surgery OT	7 months (Minimum)
2	Intensive Care Unit	2 months
3	Cath Lab	1 months
4	ECMO /Transplant Postings (Optional)	1 Month
5	Biomedical (optional)	1 Month
6	Total	12 months

6. COMPETENCIES TO BE ACQUIRED DURING INTERNSHIP

Students must be able to perform independently the following procedures at the end of their postings

6.1.1. To Assemble the Heart Lung Machine in an Aseptic and sterile environment

6.1.2. Circuit Selection and Disposable selection according to Patient weight

6.1.3. Inventory Management for the Case

6.1.4. To Prime and Circulate the Heart Lung Machine Circuit and Oxygenator

6.1.5. To deair the circuit and keep it ready for the surgery.

6.1.6. To Know all the calculations for Blood and blood product additions in the Heart

Lung Machine

- 6.1.7. To calibrate and keep the Pressure transducers ready for the surgery
- 6.1.8. To calibrate and check the Heart Lung Machine .
- 6.1.9. To Conduct the Cardio Pulmonary Bypass under Supervision
- 6.1.10. To Prepare Cardioplegia for Myocardial Protection
- 6.1.11. To transfuse all the residual blood from the machine to the patient after the Main Procedure
- 6.1.12. Basic Trouble shooting of the Heart Lung machine and Heater cooler unit
- 6.1.13. Cleaning of the Heart Lung Machine and Heater cooler unit on regular Periodical Maintenance
- 6.1.14. Disposable of the CPB circuit under the guidance of Biomedical waste management
- 6.1.15. To Document all the CPB data in system and in register
- 6.1.16. To Operate Intra Aortic Balloon Pump Under Supervision
- 6.1.17. To Prime and Manage ECMO if available (Optional)
- 6.1.18. To Check the Patient status and Hemodynamic Parameters of the Patient in the Postop ICU
- 6.1.19. To help in the organ retrieval (Heart and Lung Transplant) if Provision/option is available

7. DAILY LOGS AND DOCUMENTATION

Each student must record their daily activities. This includes documentation of instrumentation utilized, test names, abnormal results seen, approximate numbers performed or observed, and a brief description of problem-solving and troubleshooting incidents. Time of arrival and departure, special incidents, concerns, problems, instrumentation, and other pertinent items should also be recorded. Logbook to submit to the principal by the end of the internship.

8. ASSESSMENT OF INTERNSHIP

The intern shall maintain a record of work which is to be verified and certified by the faculty under whom he works. Based on the record of work and date of evaluation, the Head of the institution will issue a certificate of satisfactory completion of internship, following which the student becomes eligible to receive the award of B.Sc. Medical Laboratory Technology degree or declare him eligible for it.

RAJIVGANDHIUNIVERSITYOFHEALTHSCIENCES, KARNATAKA



INTERNSHIP GUIDELINES

APPLICABLE FROM THE 2019 BATCH

BSc RESPIRATORY CARE TECHNOLOGY

**(Schedule annexed to University Notification No. RGU/AUTH/176th
Syndicate/145(1)/AHS-INT-GL/2022-23, Dated: 14/02/2023)**

**Internship Guidelines applicable from the batch of 2019
for BSc Respiratory Care Technology**

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7.	Daily logs and other documents	9
8.	Assessment of internship	9

1. DESCRIPTION

Internship is a phase of training wherein a Respiratory Therapy(RT) graduate will acquire the skills and competencies pertaining to airway and ventilatory management in

critical care units, emergency management, pulmonary diagnostics, neonatal and pediatric respiratory care, and Cardiopulmonary rehabilitation. These skills will allow the student to work in any department of respiratory /critical care/emergency medicine/cardiopulmonary rehabilitation centres across India and abroad

2. OBJECTIVES

At the end of internship period the RT graduate will possess all competencies required for practicing in a hospital such as :

- 2.1. Reproduce related knowledge to guide related respiratory diagnostics, therapeutics and modification of respiratory care plans
- 2.2. Recognize bioethical concepts and workflow policy and procedure of health care system
- 2.3. Perform respiratory care diagnostics procedures.
- 2.4. Interpret patient data to plan and justify respiratory care therapeutics.
- 2.5. Assess and analyze patients' outcomes with other health care providers to modify and reconstruct respiratory care plan. Demonstrate professional behavior including, but not limited to, integrity, empathy, self-motivation
- 2.6. Personal hygiene, self-confidence, communications, time management, teamwork, diplomacy, respect, patient advocacy and careful delivery of service

3. GENERAL GUIDELINES

- 3.1. Every candidate, after passing the final semester exams (should not have any back papers), is required to undergo a compulsory rotatory internship for a period of 12 months (365 calendar days) to be eligible for the award of the degree.
- 3.2. Internship is in partial fulfillment of the requirements of the course, and no candidate shall be declared to have completed the course otherwise.
- 3.3. Internship is in partial fulfilment of the requirements of the course, and no candidate shall be declared to have completed the course otherwise.
- 3.4. All parts of the internship shall be done in the teaching hospital under a National Medical Commission/National Accreditation Board for Testing and Calibration Laboratories/Joint Commission International /College of American Pathologists /National Board of Examination recognized Hospital /Diagnostics
- 3.5. Internship shall be completed within 13 months of the date of passing final examinations including the leaves and holidays.
- 3.6. Students are eligible to commence internship from next day of results; however, the commencement will be considered from the day of reporting.
- 3.7. Interns should complete postings in all specialties as decided by the department
- 3.8. The interns should conduct themselves in a manner befitting the profession and should dress appropriately in their respective work areas.
- 3.9. Each intern should maintain a logbook wherever he/she is posted. The intern has to get a signature from the supervising staff at the end of each posting.

- 3.10. Assignments/presentations/ duties during the internship must be duly undertaken and performed.
- 3.11. The intern in the parent institute may be provided a monthly stipend/allowance where ever possible. Stipend may not be paid during any period of extension is left to the discretion of the institute / diagnostics offering internship.
- 3.12. The intern is allowed to take his internship from other than the parent institution, provided there is a NOC obtained from both the parent institution and the institution offering the internship. Principal has to permit the student for internship after verifying the NOC.

4. GUIDELINES FOR COMPLETION, LEAVE & REPETITION

4.1.COMPLETION

The internship shall be completed within 13 months of passing the final semester examination whenever in force but not limited to

LEAVE

- 4.1.1. Normal Leave: Intern shall be permitted a maximum of 15 days leave with prior permission during the entire period of internship.
- 4.1.2. The entire period of 15 days cannot be availed during any one-week / two week postings applicable to a single department as indicated under section 3 table :1.
- 4.1.3. Maternity Leave: Lady interns may be permitted Maternity leave according to prevailing rules and regulations of the state government as may be applicable. Medical Leave: Medical leave shall be included within the 15 days of normal leave. Any medical leave beyond this period shall be recommended only by a duly constituted committee at the college level, which consists of the Principal, HOD, and medical practitioner.
The internship shall be extended if the leave of absence extends beyond this period.

REPETITION/ EXTENSION

- 4.1.4. The minimum internship duration may be extended appropriately for a reasonable period on recommendation by the college for reasons including but not limited to
 - a. Insufficient period of attendance
 - b. Unsatisfactory acquisition of required competency
 - c. Unsuccessful qualification on assessment

- d. Any exigency such as disasters or unforeseen circumstances in the country as notified by the government of India or any competent authority

- 4.1.5. The internship shall be extended if the leave of absence extends beyond this period.
- 4.1.6. The period shall be extended if the leave of absence extends beyond the permitted leaves.
- 4.1.7. The internship shall be repeated only in the department where the above extension is necessary.

5. TIME DISTRIBUTION

TABLE 1: Required area of posting with the required time duration		
Sl. No	Posting Area	Period Spent in postings
1	Adult intensive care unit (mandatory) <ul style="list-style-type: none"> Medical ICU(mandatory) • Adult ICU(mandatory) • Cardiac care unit (preferably) 	6 months
2	Pediatric / neonatal intensive care unit(mandatory)	2 months
3	Pulmonology • Pulmonary function test laboratory(mandatory) • Bronchoscopy(mandatory) • Polysomnography(preferably)	1 month
4	Emergency Department(mandatory) &Rapid response team(mandatory)	1 month
5	Pulmonology ward	2 month
6	Total	12 months

6. COMPETENCIES TO BE ACQUIRED DURING INTERNSHIP

6.1. Infection control practices

- 6.1.1. Infection prevention Strategies
- 6.1.2. Standard Precautions
- 6.1.3. Isolation Protocols
- 6.1.4. Bundles of Care
- 6.1.5. Biomedical Waste Management

6.2. Initial assessment and patient monitoring

Assessment of Respiratory System

- 6.2.1. Inspection;
- 6.2.2. Percussion
- 6.2.3. Palpation
- 6.2.4. Auscultation
 - Examination of other body systems
 - Hemodynamic Monitoring
 - Monitoring Trends in Vital Signs

6.3. Diagnostic procedures

- 6.3.1. Bronchoscopy
- 6.3.2. Bronchoalveolar Lavage
- 6.3.3. Pulmonary Function Tests
- 6.3.4. Arterial Blood Gas Sampling and Interpretation
- 6.3.5. Chest Xray
- 6.3.6. CT Lung and Thorax

6.4. Respiratorycare procedures

- 6.4.1. Lung Expansion Therapy
- 6.4.2. Aerosol Therapy
- 6.4.3. Bronchial Hygiene Therapy
- 6.4.4. Humidification Therapy
- 6.4.5. Airway clearance techniques

6.5. Airway management skills (Adult, pediatric & Neonatal)

- 6.5.1. Intubation
- 6.5.2. Extubation
- 6.5.3. Adjunct Airway Devices
- 6.5.4. Techniques to maintain patent airway

- 6.5.5. Cuff Pressure Management
- 6.5.6. Percutaneous Tracheostomy
- 6.5.7. Difficult Airway Management

6.6. Oxygen therapy(Adult, pediatric , neonatal)

- 6.6.1. Goals of oxygen therapy
- 6.6.2. Application of Fixed and variable oxygen flow devices
- 6.6.3. Application of Low,Reservior and high flow devices.
- 6.6.4. Interfaces.
- 6.6.5. Documentation
- 6.6.6. Hyperbaric oxygen therapy

6.7. Non- invasive ventilation

- 6.7.1. Goals, Indications and contraindications of NIV
- 6.7.2. Steps of initiation of NIV
- 6.7.3. Selection Criteria
- 6.7.4. Non invasive Interfaces
- 6.7.5. Weaning

6.8. Initiation of mechanical ventilation and disease specificventilation(Adult/pediatric/neonatal)

- 6.8.1. Indications
- 6.8.2. Goals of mechanical ventilation
- 6.8.3. Disease specific approach in mechanical ventilation
- 6.8.4. Ventilator waveforms
- 6.8.5. Identify the abnormal ventilator waveforms and troubleshoot it accordingly
- 6.8.6. Recruitment manuevers
- 6.8.7. Normal ventilator parameters
- 6.8.8. Troubleshooting ventilator Alarms

6.9. Bedsideweaning assessment and extubation

- 6.9.1. Spontaneous breathing trials
- 6.9.2. Weaning types
- 6.9.3. Weaning strategies
- 6.9.4. Application of weaning indices
- 6.9.5. Extubation- reaadiness assessment via ultrasound

6.9.6. Extubation

6.10. **Basic life support , Advanced Cardiac life support, Neonatal Resuscitation program**

- 6.10.1. CPR(adult, pediatric, neonate)
- 6.10.2. Foreign body aspiration(choking) algorithm (adult, infant)
- 6.10.3. Automated external defibrillator(AED)
- 6.10.4. ECG rhythm interpretation.
- 6.10.5. Defibrillation.
- 6.10.6. Crash cart.
- 6.10.7. Emergency drugs.
- 6.10.8. ACLS algorithms

6.11. **Cardiopulmonary rehabilitation**

- 6.11.1. Indication of cardiopulmonary rehabilitation
- 6.11.2. Enrolment to pulmonary rehabilitation program
- 6.11.3. HolisticCareplan approach
- 6.11.4. Secretion clearance techniques.
- 6.11.5. Cardiopulmonary exercise testing.
- 6.11.6. Screening tests.
- 6.11.7. Disease specific rehabilitation careplan in non pulmonary conditions.
- 6.11.8. Respiratory muscle strength and endurance training.
- 6.11.9. Outcome measuring tools .
- 6.11.10. Documentation of events

6.12. **Evidence based practices**

- 6.12.1. Updated about the recent clinical trials related to respiratory care management of the patient

6.13. **Ethical principles and guidelines**

- 6.13.1.** Knowledge on ethical principles and guidelines pertaining to the patient care

7. DAILY LOGS AND DOCUMENTATION

Each student must record their daily activities. This includes documentation of instrumentation utilized, test names, abnormal results seen, approximate numbers performed or observed, and a brief description of problem-solving and troubleshooting incidents. Time of arrival and departure, special incidents, concerns, problems,

instrumentation, and other pertinent items should also be recorded. Logbook to submit to the principal by the end of the internship.

8. ASSESSMENT OF INTERNSHIP

The intern shall maintain a record of work which is to be verified and certified by the faculty under whom he works. Based on the record of work and date of evaluation, the Head of the institution will issue a certificate of satisfactory completion of internship, following which the student becomes eligible to receive the award of B.Sc. Respiratory Care Technology degree or declare him eligible for it.

RAJIVGANDHIUNIVERSITYOFHEALTHSCIENCES, KARNATAKA



INTERNSHIP GUIDELINES

APPLICABLE FROM THE 2019 BATCH

BSc RADIOTHERAPY TECHNOLOGY

**(Schedule annexed to University Notification No. RGU/AUTH/176th
Syndicate/145(1)/AHS-INT-GL/2022-23, Dated: 14/02/2023)**

**Internship Guidelines applicable from the batch of 2019
for BSc Radiotherapy Technology**

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1. DESCRIPTION

Internship is a phase of training where in a Radiotherapy technology graduate will acquire the skills and competencies all fields of Radiotherapy (External beam therapy, Brachytherapy, Radiation dosimetry, Radiation safety respectively) and work efficiently in Radiotherapy in India and abroad

2. OBJECTIVES

At the end of internship period the Radiotherapy technology graduate will possess all competencies required for practicing in Patient treatment such as

- 2.1. Handling of Radiotherapy equipment
- 2.2. Delivering of correct treatment to Cancer patients
- 2.3. Effectively use of treatment record and verification system, maintain log books and registers

3. GENERAL GUIDELINES

- 3.1. Every candidate, after passing the final semester exams (should not have any back papers), is required to undergo a compulsory rotatory internship for a period of 12 months (365 calendar days) to be eligible for the award of the degree.
- 3.2. Internship is in partial fulfillment of the requirements of the course, and no candidate shall be declared to have completed the course otherwise.
- 3.3. Internship is in partial fulfillment of the requirements of the course, and no candidate shall be declared to have completed the course otherwise.
- 3.4. All parts of the internship shall be done in the teaching hospital under a National Medical Commission/National Accreditation Board for Testing and Calibration Laboratories/Joint Commission International /College of American Pathologists /National Board of Examination recognized Hospital /Diagnostics
- 3.5. Internship shall be completed within 13 months of the date of passing final examinations including the leaves and holidays.
- 3.6. Students are eligible to commence internship from next day of results; however, the commencement will be considered from the day of reporting.
- 3.7. Interns should complete postings in all specialties as decided by the department
- 3.8. The interns should conduct themselves in a manner befitting the profession and should dress appropriately in their respective work areas.
- 3.9. Each intern should maintain a logbook wherever he/she is posted. The intern has to get a signature from the supervising staff at the end of each posting.
- 3.10. Assignments/presentations/ duties during the internship must be duly undertaken and performed.

- 3.11. The intern in the parent institute may be provided a monthly stipend/allowance where ever possible. Stipend may not be paid during any period of extension is left to the discretion of the institute / diagnostics offering internship.
- 3.12. The intern is allowed to take his internship from other than the parent institution, provided there is a NOC obtained from both the parent institution and the institution offering the internship. Principal has to permit the student for internship after verifying the NOC.

4. GUIDELINES FOR COMPLETION, LEAVE & REPETITION

4.1.COMPLETION

The internship shall be completed within 13 months of passing the final semester examination whenever in force but not limited to

LEAVE

- 4.1.1. Normal Leave: Intern shall be permitted a maximum of 15 days leave with prior permission during the entire period of internship.
- 4.1.2. The entire period of 15 days cannot be availed during any one-week / two week postings applicable to a single department as indicated under section 3 table :1.
- 4.1.3. Maternity Leave: Lady interns may be permitted Maternity leave according to prevailing rules and regulations of the state government as may be applicable. Medical Leave: Medical leave shall be included within the 15 days of normal leave. Any medical leave beyond this period shall be recommended only by a duly constituted committee at the college level, which consists of the Principal, HOD, and medical practitioner.
The internship shall be extended if the leave of absence extends beyond this period.

REPETITION/ EXTENSION

- 4.1.4. The minimum internship duration may be extended appropriately for a reasonable period on recommendation by the college for reasons including but not limited to
- a. Insufficient period of attendance
 - b. Unsatisfactory acquisition of required competency
 - c. Unsuccessful qualification on assessment
 - d. Any exigency such as disasters or unforeseen circumstances in the country as notified by the government of India or any competent authority

- 4.1.5. The internship shall be extended if the leave of absence extends beyond this period.
- 4.1.6. The period shall be extended if the leave of absence extends beyond the permitted leaves.
- 4.1.7. The internship shall be repeated only in the department where the above extension is necessary.

5. TIME DISTRIBUTION

TABLE 1: Required area of posting with the required time duration		
Sl. No	Posting Area	Period Spent in postings
1	Orientation / Billing/Dispatch	1 month
2	Radiotherapy OPD	1 month
3	Mould Room	2 months
4	Simulation – Simulator, CT-Simulator, MRI	2 month
5	Treatment panning	1 month
6	Teletherapy Treatment	5 months
	Total	12 months

6. COMPETENCIES TO BE ACQUIRED DURING INTERNSHIP

During this clinical education the students shall visit various Radiotherapy units and shall observe operations of the radiation oncology clinic and will understand very basic aspects of dealing with patients and radiotherapy techniques used for treatment / wellbeing of cancer patients. Students will observe the basic operations of the radiation oncology clinic while interacting with the multidisciplinary team members involved in providing optimal care to cancer patients. The interns are expected to know various oncology terminology, equipment, and techniques used for treatment

6.1. ORIENTATION / BILLING/DISPATCH/BMW

- 6.1.1. Orients to all departments
- 6.1.2. Able to handle the software for billing and dispatch
- 6.1.3. Can identify the test orders and guides the patients

- 6.1.4. Orients to Biomedical Waste management
- 6.1.5. Able to Dispatch reports appropriately
- 6.1.6. Maintains documents in Billing and Dispatch

6.2. RADIOTHERAPY OPD

Interns should understand the following aspects in RT OPD

- 6.2.1. Patient registry;
- 6.2.2. Interacting with the multidisciplinary team members
- 6.2.3. Clinical/treatment site
- 6.2.4. Cancer staging
- 6.2.5. Treatment option
- 6.2.6. Handling of emergency

6.3. MOULD ROOM

During the mould room posting interns shall understand the operation of mould room equipments including Preparation of

- 6.3.1. Thermoplastic mask
- 6.3.2. Perspex cast
- 6.3.3. Orifit/Aqua plast immobilization cast and others
- 6.3.4. Preparation of shield (use of Styro foam Cutter)
- 6.3.5. Alloy melting
- 6.3.6. Tissue Compensators
- 6.3.7. Electron Lead Cutout
- 6.3.8. Mouth Bite
- 6.3.9. Bolus preparation
- 6.3.10. Vac-lock
- 6.3.11. Use of Breast boards, Lung boards, Belly boards and Head andneck fixation devices

6.4. SIMULATION

- 6.4.1. Interns should understand the operation of simulator/CT simulator
- 6.4.2. Patient positioning
- 6.4.3. Use of moulds in the simulator
- 6.4.4. Simulation of tangential field of a case of Ca. Breast
- 6.4.5. Pre simulation verification of vital signs
- 6.4.6. Pre simulation preparation of bladder and rectum
- 6.4.7. Routine X-ray Chest, Abdomen, Extremities& Patient Positioning and decubitus.
- 6.4.8. Barium Swallow Radiology Technique, Barium meal, Barium follow through Intravenous pyelography
- 6.4.9. Image acquisition for planning
- 6.4.10. Knowledge of simulation techniques for a broad range of indications
- 6.4.11. Use of contrast media

- 6.4.12. Contour taking techniques and reference marking
- 6.4.13. Recording and transfer of Moulds for Brachytherapy
- 6.4.14. Special Techniques patient preparation – SRS, SRT, SBRT, TBI, TEST

6.5. TREATMENT PLANNING

- 6.5.1. Iso-dose plotting
- 6.5.2. Studying of dose distribution of tumor and Normal tissues
- 6.5.3. Calculations of Teletherapy& Brachytherapy treatment time.
- 6.5.4. 3D and IMRT Planning
- 6.5.5. Use of Computers and TPS
- 6.5.6. Understating the networking in Radiotherapy department

6.6. TELETHERAPY TREATMENT

- 6.6.1. Identification of correct patient for treatment
- 6.6.2. Correct positioning of the patient for treatment
- 6.6.3. Use of Teletherapy equipments and its accessories
- 6.6.4. Usage of the various Emergency buttons
- 6.6.5. Handling of emergency situation
- 6.6.6. Use of various treatment parameters in treatment machine
- 6.6.7. Delivery of correct treatment to correct patient
- 6.6.8. Transferring of patient treatment parameters from TPS to treatment machine
- 6.6.9. Maintenance of log book in treatment room

6.7. BRACHYTHERAPY TREATMENT

- 6.7.1. Observing the Brachytherapy procedure in OT
- 6.7.2. Simulation of Brachytherapy patient
- 6.7.3. Treatment planning using TPS
- 6.7.4. Transferring of patient treatment parameters from TPS to treatment machine
- 6.7.5. Handling of Brachytherapy unit for patient treatment
- 6.7.6. Handling of manual Brachytherapy sources (optional)
- 6.7.7. Preparation of mould for Brachytherapy treatment

7. DAILY LOGS AND DOCUMENTATION

Each student must record their daily activities. This includes documentation of instrumentation utilized, test names, abnormal results seen, approximate numbers performed or observed, and a brief description of problem-solving and troubleshooting incidents. Time of arrival and departure, special incidents, concerns, problems, instrumentation, and other pertinent items should also be recorded. Logbook to submit to the principal by the end of the internship.

8. ASSESSMENT OF INTERNSHIP

The intern shall maintain a record of work which is to be verified and certified by the faculty under whom he works. Based on the record of work and date of evaluation, the Head of the institution will issue a certificate of satisfactory completion of internship, following which the student becomes eligible to receive the award of B.Sc. Radiotherapy Technology degree or declare him eligible for it.