

GUIDELINES FOR INTERNSHIP TRAINING PROGRAMME

for Final year B.Sc. MRIT

Introduction:

- ❖ Internship is a phase of training wherein a graduate is expected to conduct actual practice as a radiographer or Radiology technologist and acquire skills under supervision so that he/she may become capable of functioning independently.
- ❖ Internship is a phase of training where in a candidate is expected to conduct actual Radiography practice, with fair independence in clinical decision making in low risk cases where as to work under supervision at high risk areas; so that at the end of Internship he/ she is capable to practice Radiography independently.
- ❖ The Internship programme shall mainly focus on acquisition of specific skills listed in the major areas of training by hands on experience & also on ability to conduct a scientific project.

Proceeding of Internship :

- 1) Students must get the NOC from the parent institute and submit it to the place where they want to do their internship. At the same time students must get the approval NOC from the place they want to do an internship and submit it to the Parent institute and get approval to start the internship.
- 2) Compulsory Internship shall include rotational clinical assignments, administrative skills & a scientific project over a period of One year. Candidates are however encouraged to extend optional –Hands on practice for six additional months in the desired areas at the hospitals ; as per the Rules & Regulations applicable to Internees regarding attendance, attitude, performance & evaluation. Such clinical experience on successful completion & on passing in evaluation shall be documented & shall be strongly recommended for additional credits for higher education or employment.

OBJECTIVES :

Skills based outcomes and monitorable indicators for Medical Radiology and Imaging Technologist.

1. Should be able to undertake Mammography, CT scan and MRI procedures independently.
2. Assist in specialised radiological procedures.
3. Able to do the image processing.
4. Should be able to handle all radiological and imaging equipment independently.
5. Should ensure radiation protection and quality assurance
6. Undertake care and maintenance of all radiological and imaging equipment
7. Able to evaluate images for technical quality
8. Able to identify and manage emergency situations.
9. Able to receive and document verbal, written and electronic orders in the patient's medical record.
10. Implements health and safety procedures
11. Demonstrates ability to interpret, apply and disseminate information as a member of the medical imaging team
12. Ensures radiation protection legislation is adhered to
13. Demonstrates knowledge and skills to carry out the daily/weekly Quality Control (QC) checks
14. Participates in research activities

**INTERNSHIP – minimum 1440 hours -
(calculated based on 8 hours per day, if 180 working days in a year)**

Students have to undertake the rotational postings during which students have to work under supervision of an experienced staff in the following areas:

	Postings	Duration
1	Conventional radiography	2months
2	Radiographic special procedures including diagnostic and Therapeutic Interventional Procedures	2 months
3	CR, DR and PACS	2 month
4	Nuclear Medicine	1 month
5	Ultrasonography	1 month
6	Doppler Imaging	1 month
7	Computed Tomography	2 months
8	Magnetic Resonance Imaging	2 months

SCIENTIFIC PROJECT

- ❖ During the Internship, candidates shall undertake a One scientific project per week. Scientific projects may include case study, case presentation, assignment
- ❖ During the Internship, candidates shall undertake a One project (Form-G) and One case presentation (Form-F) however, case presentation will be conducted online on Saturday 10:00 am.
- ❖ The candidate shall submit the project one month before the last day of internship & the Program coordinator, Faculty of Medicine shall sign on the same if the project is up to her /his satisfaction.

EVALUATION

- ❖ During the rotational posting, students shall Investigate all kinds of patients & also undertake skills of maintaining administrative records & Maintenance of equipment.
- ❖ The candidate shall maintain a log book (Form-E) & record all the events of the respective posting. He /She shall be closely monitored by the senior Radiographer staff in charge throughout the posting & the same shall also sign in the Log book on completion of the assignment.
- ❖ There shall be formative & summative assessment at the end of each of the postings given in the schedule & score will be given by the student involved in supervision of the teacher during the respective assignment.
- ❖ Students shall repeat the respective assignment for a period of 25% of the period allotted to the respective posting, if he /she fails to score minimum 3 in the average of overall Formative + Summative score obtained during the respective posting.

START OF INTERNSHIP PROGRAMME

- ❖ The programme will commence within 15 days after the declaration of Final B.Sc result by the University. In special circumstances with the permission of the head of the institute, students can start an internship within 45 days of declaration of results.

LEAVE FOR INTERNS

- ❖ An internee shall be entitled for maximum 12 days leave during a One Year period of internship posting. An internee will not be permitted to avail more than 4 days leave in any department. Period of leave in excess of 4 days in a department will have to be extended in the same department. Under any circumstances this period will not be condoned by any authority.
- ❖ However if any student wants to attend any state/national/international conference, workshop or seminar then maximally 6 days study leave can be granted to the students with production of the proper documents or certificate. It should not be more than 6 days in any conditions.

Stipulation for repeat posting in concerned discipline :

- i)** Unsatisfactory performance.
- ii)** Prolonged illness, Medical Certificate must be validated by a Medical Board set up by the Institution, where rotatory internship is being undertaken.
- iii)** To prevent Interns from prolonging the internship period due to extraneous reasons other than the above (i) and (ii) and taking extra leave beyond permitted leave, the repeat posting will be done.
- iv)** However, the head of the institute can allow 30 days more leave (other than 12 leave and 6 study leave) but students have to complete the extension for these 30 days leave at the end of the internship programme.
- v)** If a student takes leave more than these total leaves (12+6+30=48 days), he/she has to do the repeat posting at each place as prescribed and it will be considered as fresh internee. (Relaxation will be applicable in case of pregnancy on production of appropriate medical certificates.)

Form A

FORMAT OF INTERNSHIP EVALUATION (For office use only)

Name: - _____ duration from _____ to _____

Assignment: - _____

SUMMATIVE EVALUATION		FORMATIVE EVALUATION	
MAXIMUM SCORE	5 each	MAXIMUM SCORE	5 each
Punctuality		Cognitive (Problem solving / clinical decision & reasoning / planning Investigation	
Attitude towards patients & colleagues/ Character		Physical Assessment Skills	
Urge for learning / Initiative		Skills of Investigation maneuvers	
Accountability/ Responsibility		Skills of equipment handling	
Administrative ability (records / maintenance of equipment)		Participation in Academic activities	
Total		Total	

Grades range:

1: Poor

2: Below Average

3: Average

4: Good

5: Excellent

Head of the Department.

Dean/ Principal of the College

Minimum Grade required for passing – Average of Overall score obtained from the respective assignment is to be considered. Minimum score for passing shall be - 3: Average.

Form B

INTERNSHIP COMPLETION CERTIFICATE

Name of the College : FACULTY OF MEDICINE R.K.UNIVERSITY

Ref. No _____

Date _____

This is to certify that Mr. /Ms./Mrs. _____ has successfully completed the Rotational Internship from _____ To _____ Details of the posting are as follows:

No	Department	Name of Hospital	Period	Duration in Weeks	Grade
1	Conventional radiography		____ to ____		
2	Radiographic special procedures including diagnostic and Therapeutic Interventional Procedures		____ to ____		
3	CR, DR and PACS		____ to ____		
4	Nuclear Medicine		____ to ____		
5	Ultrasonography		____ to ____		
6	Doppler Imaging		____ to ____		
7	Computed Tomography		____ to ____		
8	Magnetic Resonance Imaging		____ to ____		

- Extension due to absentee / Unsatisfactory performance _____ to _____ at the Department _____
- Project _____

[sign]

[sign]

HOD Radiologist

Department Dean /Principal

Note : Grade must be given as Good/Fair/Poor

COURSE COMPLETION CERTIFICATE

Name of the College : FACULTY OF MEDICINE, R.K.UNIVERSITY

Ref. No _____

Date _____

This is to certify that Mr. /Ms./Mrs. _____ has
satisfactory completed four years of Bachelor of Science Medical Radiology & Imaging
Technology (B.Sc. MRIT) Course at Faculty of Medicine affiliated to RK University. .

[sign]

Department Dean /Principal

Form D

NOC from HOD, RADIOLOGY department allowing student to pursue INTERNSHIP

This is to certify that Mr./Miss _____

is allowed to pursue Internship at our renowned radiology department.

Name of the in

charge _____

M: _____

E: _____

Name of clinic / institute /hospital _____

Address: _____

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Duration of training: _____

to _____

Total hours: _____

In charge / HOD

Date:

Form E

Format for Logbook

SR.N O.	PATIENT NAME	GENDER	AGE	INVESTIGATION	DIAGNOSIS	DATE	INCHARGE NAME	INCHARG E SIGN.

Form F

CASE STUDY FORM

PATIENT PERSONAL INFORMATION

Name: _____ Contact No: _____

Age: _____ Gender: _____

Address: _____

Occupation: _____

Referred by: _____

Date of assessment: _____

Chief complaints:

SUBJECTIVE EXAMINATION

HISTORY:

Present History:

Past History:

Medical/ surgical History:

OBJECTIVE EXAMINATION

SPECIAL TEST

INVESTIGATIONS:

FUNCTIONAL DIAGNOSIS :

DATE:_____

NAME AND SIGNATURE:_____

Form : G

GUIDELINES OF PROJECT WORK

What type of topics students can select ?

- Any small research based topic that could be an observational or experimental study.

Components of the Project Work Writing :

The sequence of contents in the project should be as follows:

1. Cover Page & Title Page
2. Guide Certificate
3. Declaration
4. Acknowledgements
5. Table of Contents (please see sample, Annexure IV)
6. List of Tables (page: I)(in tabular form)
7. List of Figures (page: II ...)(in tabular form)
8. List of Symbols, Abbreviations and Nomenclature (page: III)
9. Structured Abstract (page IV....)
10. Introduction (page: 1, 2, 3....)
11. Need Of Study
12. Objectives Of The Study
13. Hypothesis
14. Review of literature
15. Materials and methods (Methodology)

What must be Included In ?

1. Statistical Analysis
2. Results
3. Discussion
4. Summary and Conclusion
5. References
6. Appendices

Introduction (page: 1, 2, 3....) :

- Background of the study
- Reference to the intervention
- Reference to the outcome measures
- Flow of the introduction maintained

Need Of Study :

- Need of study must be derived. Significance of the study must be proposed.

Objectives of the study :

- All study objectives must be mentioned.

Hypothesis of the study :

- Null and Experimental hypothesis must be postulated.

Review of literature :

- ROL must have sufficed evidence for methodology.
- ROL must have sufficed evidence for Outcome measures.
- Impact factor 1.0 -published references must be cited (or listed journal)
- Descending order of the citations must be maintained or component wise reviews can be arranged together.

Materials and methods (Methodology) :

- Study Design,
- Study Setting ,
- Sampling Technique,
- Study Population (Groups),
- Sample Size,
- Study Duration,
- Inclusion criteria
- Exclusion criteria
- Sampling technique
- Materials used
- Proper method of study conduct explained with relevant diagrams and/ flowcharts

Data Analysis :

- Demographical data analysis
- Appropriate statistical analysis done
- Interpretation of result
- Tabular presentation
- Graphical presentation
- Labeling of tables and graphs done.

Discussion :

- Mentions result and its inference
- Connecting statically significant with clinical reasoning (Clinical

implication)

- References conflicting the study results must be quoted
- References supporting the study quoted

Limitations :

- Limitations and challenges encountered during the study
- Further Recommendations
- Further recommendations/scopes of the study

Conclusion & Summary :

- Social / community advantage
- Prospective for further research
- Summarization of entire study

Bibliography :

- referencing in Vancouver format

Annexures :

- Consent form
- Data collection tool
- Assessment tool
- Measurement tool/outcome measure
- Master chart

Style & Format:

GENERAL:

- Project should be written in past tense, error-free English. The text of the entire project must be in black color, Arial fonts, size 12, justified.
- Fancy art work anywhere in the project which does not contribute to the methodology or outcome of the research work should be strictly avoided
- 1.5 line spacing should be kept throughout the text. No spacing should be there before or after the paragraph. However, single line spacing can be used for long tables and for figures with lengthy captions. Margin should be 1.5" from Left and 1" from Right, Top & Bottom. The text of the project must be justified unless necessary otherwise.

Header:

- Header (must have the name of the chapter on all pages, center-aligned)

Footer:

- Footer (page number in Arabic numerical, right aligned & title of study, left aligned) should be placed in Arial font, size 10 point, normal and sentence case.

Headings :

- All headings must be subsequently numbered and must be in Arial, 12, bold and

sentence case, left-aligned (for ex., **Study Design...**).

Sub-headings:

- All sub-headings must be subsequently numbered and must be in Arial, 12, normal and sentence case, left-aligned (for ex., **Procedure...**). The rest of the text should be in Arial, 12, justified

Annexure:

- Enter the details of various certificates/pages according to the templates provided in the respective annexure. Maintain the specifics of font type, font size and case in these templates

Acknowledgements:

- Should be brief. Student's signature should be made at the right bottom end of acknowledgements above his/her name typed in capitals.

Review of Literature:

- Should be arranged in point wise or areas wise,
- E.g. ROL supporting need of the study, Outcome measures, Methodology, probable conclusion...

Objectives:

- Should provide the complete rationale and objectives of study, point wise.

Methodology:

- It must mention project compounds / materials / etc.
- It must include Study design, study setting ,Sampling technique, study population (groups), sample size, study duration, inclusion and exclusion criterias, materials used and method.
- Write method in the form of a flowchart.

Tables and figures:

- They, along with their captions, should be centrally aligned and conform to the margin specifications. Large size figures should be photographically or otherwise reduced to the appropriate size before insertion.
- The list of tables & figures should use exactly the same captions as they appear in the text of the project.
- In the text, each caption of the table must be placed above the table in Arial, 12, bold and sentence case with each word capitalized and numbered in Arabic numerical (e.g., **Table 1. Abc Xyz**). Each caption of figure must be placed below the figure in Arial, 12, bold and sentence case with each word capitalized and numbered in Arabic numerical (e.g., **Figure 1. Abc Xyz**).
- While mentioning in the text, the tables and figures must be placed in curved brackets and mentioned as Table 1 or Fig. 1. at the end of the sentence. Equations appearing in each chapter or appendix should be numbered serially in Arabic numerical.

Referencing within the text:

- All references in the text must be in ascending numerical order only. No reference number should be out-of-sequence. They must be cited in superscript in square brackets before the full-stop with no spaces. In case of multiple references, cite them using first and last reference number. For example xx^[1]. Or xx^[1-4].

Referencing in the end:

- The references should be arranged number-wise in the reference page with a single blank line between each reference. The required reference style is as follows:

Appendices:

- They should be numbered using Arabic numerals (e.g. Appendix 1, Appendix 2, etc.) and should be referred to in appropriate places of the text of the project in curved brackets.
- The appendices should include consent form, assessment tool, data collection sheet, measurement tools used in study, master chart

Project report submission:

- The project should be filed in the white strip file in given format