



Rawalpindi Medical University

Curriculum

RMU Child Health Diploma Program

2021

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Mission Statement

The mission statement of **Child Health Diploma Program** of Rawalpindi Medical University is:

- To acquire the competence pertaining to children that is required to be practiced in the community and at all levels of health care systems
- To acquire the skills to manage the children's diseases effectively
- To acquire effective communication skills to counsel patients and their parents
- To have the desired interventional skills to perform procedures
- To be aware of recent advances in the field of pediatrics
- To orient to principles of research methodology
- To acquire skills in educating medical students juniors and paramedical professionals

Statues

- **Nomenclature:**

Name of the proposed course shall be **Child Health Diploma Program**

- **Training centers:**

Department of Pediatrics in Benazir Bhutto Hospital and Holy Family Hospital affiliated with Rawalpindi Medical University

- **Duration of course:**

The duration of Child Health Diploma Programme shall be two (2) years, with structured training in a recognized department under the guidance of an approved supervisor.

The clinical training shall be competency based. There shall be generic and specialty competencies and shall be assessed by continuous Internal Assessment.

- **Course Structure:**

It is a 2 years program which will be conducted in 17 modules.

Admission Criteria

For admission in Fellowship the candidate should have:

- MBBS Degree
- Completed one-year house job
- Registration with PMC

Registration & Enrolment

- The university will approve supervisors for the program.
- The candidates selected for the course shall be registered with the university as per prescribed registration regulations.

Aim & Objective of the Program

Competencies Required:

A. Pediatric Medicine Knowledge

1. The development of a basic understanding of core Pediatric Medicine concepts.
2. Etiology, clinical manifestation, disease course and prognosis, investigation and management of common pediatric diseases.
3. Scientific basis and recent advances in pathophysiology, diagnosis and management of pediatric diseases.
4. Spectrum of clinical manifestations and interaction of multiple pediatric diseases in the same patient.
5. Psychological and social aspects of pediatric illnesses.

6. Effective use and interpretation of investigation and special diagnostic procedures.
7. Critical analysis of the efficacy, cost-effectiveness and cost-utility of treatment modalities.
8. Patient safety and risk management
9. Medical audit and quality assurance
10. Ethical principles and medico legal issues related to pediatric illnesses.
11. Updated knowledge on evidenced-based medicine and its implications for diagnosis and treatment of pediatric patients.
12. Familiarity with different care approaches and types of health care facilities towards the patients care with pediatric illnesses, including convalescence, rehabilitation, palliation, long term care, and medical ethics.
13. Knowledge on patient safety and clinical risk management.
14. Awareness and concern for the cost-effectiveness and risk-benefits of various advanced treatment modalities.
15. Familiarity with the concepts of administration and management and overall forward planning for a general pediatric unit.

B. Skills

1. Ability to take a detailed history, gathers relevant data from patients, and assimilates the information to develop diagnostic and management plan.
2. Students are expected to effectively record an initial history and physical examination and follow-up notes as well as deliver comprehensive oral presentations to their team members based on these written documents
3. Competence in eliciting abnormal physical signs and interpreting their significance.
4. Ability to relate clinical abnormalities with pathophysiologic states and diagnosis of diseases.
5. Ability to select appropriate investigation and diagnostic procedures for confirmation of

diagnosis and patient management.

6. Residents should be able to interpret basic as well as advanced laboratory data as related to the disorder/disease.
7. Basic understanding of routine laboratory and ancillary tests including complete blood count, chemistry panels, ECG, chest x-rays, pulmonary function tests, and body fluid cell counts. In addition, students will properly understand the necessity of incorporating sensitivity, specificity, pre-test probability and Bayes laws/theorem in the ordering of individual tests in the context of evaluating patients' signs and symptoms.
8. The formulation of a differential diagnosis with up-to—date scientific evidence and clinical judgment using history and physical examination data and the development of a prioritized problem list to select tests and make effective therapeutic decisions.
9. Assessing the risks, benefits, and costs of varying, effective treatment options; involving the parents/guardian in decision- making via open discussion; selecting drugs from within classes; and the design of basic treatment programs and using critical pathways when appropriate.
10. Residents must be able to perform competently all pediatric and invasive procedures essential for the practice of general Pediatric medicine. This includes technical proficiency in taking informed consent, performing by using appropriate indications, contraindications, interpretations of findings and evaluating the results and handling the complications of the related procedures mentioned in the syllabus.
11. Residents should be instructed in additional procedural skills that will be determined by the training environment, residents practice expectations, the availability of skilled teaching faculty, and privilege delineation.
12. Skills in performing important bedside diagnostic and therapeutic procedures and understanding of them indications. Trainee should acquire competence through supervised performance of their quired number of Skills in performing important bedside diagnostic and therapeutic procedures and understanding of their indications. Trainees should acquire competence through supervised performance of their quired number of each of the following procedures during the 3-year training period and should record them in the Trainee's Log Book at least 10 times during the three-year training period:
 - a. Cardiopulmonary resuscitation
 - b. Central venous cannulation
 - c. Marrow aspiration and trephine biopsy
 - d. Abdominal paracentesis
 - e. Pleural tapping and biopsy
 - f. Endotracheal intubation
 - g. Lumbar puncture
 - h. Chest drain insertion
 - i. Arterial Blood gases sampling

13. Ability to present clinical problems and literature review in grand rounds and seminars.
14. Good communication skills and interpersonal relationship with patients, families, pediatric colleagues, nursing and allied health professionals.
15. Ability to mobilize appropriate resources for management of patients at different stages of pediatric illnesses, including critical care, consultation of pediatric specialties and other disciplines, ambulatory and rehabilitative services, and community resources.
16. Competence in the diagnosis and management of emergency pediatric problems, in particular cardio respiratory problems, stroke, organ failures, infection and shock, gastrointestinal bleeding, metabolic disorders and poisoning.
17. Competence in the diagnosis and management of acute and chronic pediatric problems as secondary care in a regional/district hospital.
18. Diagnostic skills to effectively manage complex cases with unusual presentations.
19. Ability to implement strategies for preventive care and early detection of diseases in collaboration with primary and community care doctors.
20. Ability to understand pediatric statistics and critically appraise published work and clinical research on disease presentations and treatment outcomes. Experience in basic and/or clinical research within the training programme should lead to publications and/or presentation in seminars or conferences.
21. Practice evidence—based learning with reference to research and scientific knowledge pertaining to their discipline through comprehensive training in Research Methodology
22. Ability to recognize and appreciate the importance of cost-effectiveness of treatment modalities.
23. The identification of key information resources and the utilization of the pediatric literature to expand one's knowledge base and to search for answer to pediatric problems. They will keep abreast of the current literature and be able to integrate it to clinical practice

C. Attitudes

- A. The well-being and restoration of health of patients must be of paramount consideration.
- B. Empathy and good rapport with patient and relatives are essential attributes.
- C. An aspiration to be the team leader in total patient care involving nursing and allied pediatric professionals should be developed.
- D. The cost-effectiveness of various investigations and treatments in patient care should be recognized.
- E. The privacy and confidentiality of patients and the sanctity of life must be respected.
- F. The development of a functional understanding of informed consent, advanced directives, and the physician-patient relationship.
- G. Ability to appreciate the importance of the effect of disease on the psychological and socio-economic aspects of individual patients and to understand patients' psycho-social needs and rights, as well as the pediatric ethics involved in patient management.
- H. Willingness to keep up with advances in Pediatric Medicine and other Specialties.

- I. Willingness to refer patients to the appropriate specialty in a timely manner.
- J. Aspiration to be the team leader in total patient care involving nursing and allied pediatric professionals.
- K. The promotion of health via adult immunizations, periodic health screening, and risk factor assessment and modification.
- L. Recognition that teaching and research are important activities for the advancement of the profession.

C. Core Competencies:

1. Patient Care:

- Residents are expected to provide patient care that is compassionate, appropriate and effective for the promotion of health, prevention of illness, treatment of disease and at the end of life
- Gather accurate, essential information from all sources, including pediatric interviews, physical examinations, pediatric records and diagnostic/therapeutic procedures
- Make informed recommendations about preventive, diagnostic and therapeutic options and interventions based on clinical judgment, scientific evidence, and patient preference
- Develop, negotiate and implement effective patient management plans and integration of patient care.
- Perform competently the diagnostic and therapeutic procedures considered essential to the practice of Pediatric medicine

2. Interpersonal and Communication Skills

- Residents are expected to demonstrate interpersonal and communication skills that enable them to establish and maintain professional relationships with patients, families, and other members of health care teams.
- Provide effective and professional consultation to other physicians and health care professionals and sustain therapeutic and ethically sound professional relationships with patients, their families, and colleagues.
- Use effective listening, nonverbal, questioning, and narrative skills to communicate with patients and families.
- Interact with consultants in a respectful, appropriate manner.
- Maintain comprehensive, timely, and legible pediatric records

3. Professionalism

- Residents are expected to demonstrate behaviors that reflect a commitment to continuous professional developmental, ethical practice, an understanding and sensitivity to diversity and a responsible attitude toward their patients, their profession, and society
- Demonstrate respect, compassion, integrity, and altruism in relationships with patients, families, and colleagues.

- Demonstrate sensitivity and responsiveness to the gender, age, culture, religion, sexual preference, socioeconomic status, beliefs, behavior and disabilities of patients and professional colleagues.
- Adhere to principles of confidentiality, scientific/academic integrity, and informed consent.
- Recognize and identify deficiencies in peer performance.
- Understand and demonstrate the skill and art of end-of-life care

5. **Practice-Based Learning & Improvement**

- Residents are expected to be able to use scientific evidence and methods to investigate, evaluate, and improve patient care practices.
- Identify areas for improvement and implement strategies to enhance knowledge, skills, attitudes and processes of care.
- Analyze and evaluate practice experiences and implement strategies to continually improve the quality of patient practice.
- Develop and maintain a willingness to learn from errors and use errors to improve the system or processes of care.
- Use information of technology or other available methodologies to access and manage information, support patient care decisions and enhance both patient and physician education.

6. **Systems-Based Practice**

- Residents are expected to demonstrate both an understanding of the contexts and systems in which health care is provided, and the ability to apply this knowledge to improve and optimize healthcare.
- Understands accesses and utilizes the resources, providers and systems necessary to provide optimal care.
- Understand the limitations and opportunities inherent in various practice types and delivery systems, and develop strategies to optimize care for the individual patient.
- Apply evidence-based, cost-conscious strategies to prevention, diagnosis, and disease management.
- Collaborate with other members of the health care team to assist patients in dealing effectively with complex systems and to improve systematic processes of care.

Methods Of Teaching & Learning During Course Conduction

1. **Inpatient Services:** All residents will have rotations in intensive care, coronary care, emergency medicine, general medical wards, general medicine, ambulatory experiences etc. The required knowledge and skills pertaining to the ambulatory based training in following areas shall be demonstrated;
2. **Outpatient Experiences:** Residents should demonstrate expertise in diagnosis and management of patients in acute care clinics and longitudinal clinic and gain experience in Dermatology, Geriatrics, Clinical immunology and allergy, Endocrinology, Gastroenterology, Hematology Oncology, Neurology, Nephrology, Pulmonology, Rheumatology etc.

3. **Emergency Services:** Our residents take an early and active role in patient care and obtain decision-making roles quickly. Within the Emergency Department, residents direct the initial stabilization of all critical patients, manage airway interventions, and oversee all critical care.
4. **Electives/ Specialty Rotations:** In addition, the resident will elect rotations in a variety of electives including nutrition, nuclear medicine or any of the medicine subspecialty consultative services or clinics. They may choose electives from each medicine subspecialty and from offerings of other departments.

Residents may also select electives at other institutions if the parent department does not offer the experiences they want.
5. **Inter disciplinary Medicine:** Adolescent Medicine, Dermatology, Emergency Medicine, General Surgery, Gynecology, Neurology, Occupational Medicine, Ophthalmology, Orthopedics and Sports Medicine, Otolaryngology, Physical Medicine and Rehabilitation, Urology.
6. **Community Practice:** Residents experience the practice of medicine in a non-academic, non-teaching hospital setting. The rotation may be used to try out a practice that the resident later joins, to learn the needs of referring physicians or to decide on a future career path.
7. **Mandatory Workshops:** residents achieve hands on training while participating in mandatory workshops of Research Methodology, Advanced Life Support, Communication Skills, Computer & Internet and Clinical Audit. Specific objectives are given in detail in the relevant section of Mandatory Workshops.
8. **Core Faculty Lectures (CFL):** The core faculty lecture's focus on monthly themes of the various specialty medicine topics for eleven months of the year, i.e., Cardiology, Gastroenterology, Hematology, etc. Lectures are still an efficient way of delivering information. Good lectures can introduce new material or synthesize concepts students have through text-, web-, or field-based activities. **Buzz groups** can be incorporated into the lectures in order to promote more active learning.
9. **Introductory Lecture Series (ILS):** Various introductory topics are presented by subspecialty and general medicine faculty to introduce interns to basic and essential topics in internal medicine.
10. **Long and Short Case Presentations:** – Giving an oral presentation on ward rounds is an important skill for medical student to learn. It is medical reporting which is terse and rapidly moving. After collecting the data, you must then be able both to document it in a written format and transmit it clearly to other health care providers. In order to do this successfully, you need to understand the patient's medical illnesses, the psycho social contributions to their History of Presenting Illness and their physical diagnosis findings. You then need to compress them into a concise, organized recitation of the most essential facts. The listener needs to be given all of the relevant information without the extraneous details and should be able to construct his/her own differential diagnosis as the story unfolds. Consider yourself an advocate who is attempting to persuade an informed, interested judge the merits of your argument, without distorting any of the facts. An oral case presentation is NOT a simple recitation of your write-up. It is a concise,

edited presentation of the most essential information. Basic structure for oral case presentations includes Identifying information/chief complaint (ID/CC), History of present illness (HPI) including relevant ROS (Review of systems) questions only, Other active medical problems, Medications/allergies/substance use (note: e. The complete ROS should not be presented in oral presentations, Brief social history (current situation and major issues only). Physical examination (pertinent findings only), One line summary & Assessment and plan.

11. **Seminar Presentation:** Seminar is held in a noon conference format. Upper-level residents present an in-depth review of a medical topic as well as their own research. Residents are formally critiqued by both the associate program director and their resident colleagues.
12. **Journal Club Meeting (JC):** A resident will be assigned to present, in depth, a research article or topic of his/her choice of actual or potential broad interest and/or application. Two hours per month should be allocated to discussion of any current articles or topics introduced by any participant. Faculty or outside researchers will be invited to present outline so results of current research activities. The article should be critically evaluated and its applicable results should be highlighted, which can be incorporated in clinical practice. Record of all such articles should be maintained in the relevant department
13. **Small Group Discussions/ Problem Based Learning/ Case Based Learning:** Traditionally small groups consist of 8-12 participants. Small groups can take on a variety of different tasks, including problem solving, role-play, discussion, brainstorming, debate, workshops and presentations. Generally, students prefer small group learning to other instructional methods. From the study of problem students develop principles and rules and generalize their applicability to a variety of situations PBL is said to develop problem solving skills and an integrated body of knowledge. It is a student-centered approach to learning, in which students determine what and how they learn. Case studies help learners identify problems and solutions, compare options and decide how to handle a real situation.
14. **Discussion/Debate:** There are several types of discussion tasks which would be used as learning method for residents including: guided discussion, in which the facilitator poses a discussion question to the group and learners offer responses or questions to each other's contributions as a means of broadening the discussion's scope; **inquiry-based discussion**, in which learners are guided through a series of questions to discover some relationship or principle; **exploratory discussion**, in which learners examine their personal opinions, suppositions or assumptions and then visualize alternatives to these assumptions; and debate in which students argue opposing sides of a controversial topic. With thoughtful and well-designed discussion tasks, learners can practice critical inquiry and reflection, developing their individual thinking, considering alternatives and negotiating meaning with other discussants to arrive at a shared understanding of the issues at hand
15. **Case Conference (CC):** These sessions are held three days each week; the focus of the discussion is selected by the presenting resident. For example, some cases may be presented to discuss a differential diagnosis, while others represented to discuss specific management issues.

16. **Noon Conference (NC):** The noon conferences focus on monthly themes of the various specialty medicine topics for eleven months of the year, i.e., Cardiology, Gastroenterology, Hematology, etc.
17. **Grand Rounds (GR):** The Department of Medicine hosts Grand Rounds on weekly basis. Speakers from local, regional and national medicine training programs are invited to present topics from the broad spectrum of internal medicine. All residents on inpatient floor teams, as well as those on ambulatory block rotations and electives are expected to attend
18. **Professionalism Curriculum (PC):** This is an organized series of recurring large and small group discussions focusing upon current issues and dilemmas in medical professionalism and ethics presented primarily by an associate program director. Lectures are usually presented in a noon conference format.
19. **Evening Teaching Rounds:** During these sign-out rounds, the inpatient Chief Resident makes a brief educational presentation on a topic related to a patient currently on service, often related to the discussion from morning report. Serious cases are mainly focused during evening rounds.
20. **Clinic-Pathological Conferences:** The clinic- pathological conference, popularly known as CPC primarily relies on case method of teaching medicine. It is a teaching tool that illustrates the logical, measured consideration of a differential diagnosis used to evaluate patients. The process involves case presentation, diagnostic data, discussion of differential diagnosis, logically narrowing the list to few selected probable diagnoses and eventually reaching a final diagnosis and its brief discussion. The idea was first practiced in Boston, back in 1900 by a Harvard internist, Dr. Richard C. Cabot who practiced this as an informal discussion session in his private office. Dr. Cabot incepted this from a resident, who in turn had received the idea from a roommate, primarily a law student.
21. **Evidence Based Medicine (EBM):** Residents are presented a series of noon monthly lectures presented to allow residents to learn how to critically appraise journal articles, stay current on statistics, etc. The lectures are presented by the program director.
22. **Clinical Audit based learning:** “Clinical audit is a quality improvement process that seeks to improve patient care and outcomes through systematic review of care against explicit criteria. Where indicated, changes are implemented and further monitoring is used to confirm improvement in healthcare delivery.” Principles for Best Practice in Clinical Audit (2002, NICE/CHI)
23. **Peer Assisted Learning:** Any situation where people learn from, or with, others of a similar level of training, background or other shared characteristic. Provides opportunities to reinforce and revise their learning. Encourages responsibility and increased self-confidence. Develops teaching and verbalization skills. Enhances communication skills, and empathy. Develops appraisal skills (of self and others) including the ability to give and receive appropriate feedback. Enhance organizational and team-working skills.

24. **Morbidity and Mortality Conference (MM):** The M&M Conference is held occasionally at noon throughout the year. A case, with an adverse outcome, though not necessarily resulting in death, is discussed and thoroughly reviewed. Faculty members from various disciplines are invited to attend, especially if they were involved in the care of the patient. The discussion focuses on how care could have been improved.
25. **Clinical Case Conference:** Each resident, except when on vacation, will be responsible for at least one clinical case conference each month. The cases discussed may be those seen on either the consultation or clinic service ordering rotations in specialty areas. The resident, with the advice of the Attending Physician on the Consultation Service, will prepare and present the case(s) and review the relevant literature
26. SEQ as assignments on the content areas: SEQs assignments are given to the residents on regular basis to enhance their performance during written examinations.
27. Skill teaching in ICU, emergency, ward settings& skill laboratory: Two hours twice a month should be assigned for learning and practicing clinical skills.
28. List of skills to be learnt during these sessions is as follows:
 - Residents must develop a comprehensive understanding of the indications, contraindications, limitations, complications, techniques, and interpretation of results of those technical procedures integral to the discipline (mentioned in the Course outlines)
 - Residents must acquire knowledge of and skill in educating patients about the technique, rationale and ramifications of procedures and in obtaining procedure-specific informed consent. Faculty supervision of residents in their performance is required, and each resident's experience in such procedures must be documented by the program director
 - Resident smooth reinstruction in the evaluation of medical literature, clinical epidemiology, clinical study design, relative and absolute risks of disease, medical statistics and medical decision-making
 - Training must include cultural, social, family, behavioral and economic issues, such as confidentiality of information, indications for life support systems, and allocation of limited resources
 - Residents must be taught the social and economic impact of their decisions on patients, the primary care physician and society. This can be achieved by attending the bioethics lectures and becoming familiar with Project Professionalism Manual such as that of the American Board of Internal Medicine
 - Residents should have instruction and experience with patient counseling skills and community education
 - This training should emphasize effective communication techniques for diverse populations, as well as organizational resources useful for patient and community education
 - Residents may attend the series of lecture son Nuclear Medicine procedures (radio nuclides canning and localization tests and therapy) presented to the Radiology residents
 - Residents should have experience in the performance of clinical laboratory and radionuclide studies and basic laboratory techniques including quality control, quality assurance and proficiency standards.

29. Bedside teaching rounds inward: “To study the phenomenon of disease without books is to sail an
30. Uncharted sea whilst to study books without patients is not to go to sea at all” Sir William Osler
31. Bedside teaching is regularly included in the ward rounds. Learning activities include the physical exam, a discussion of particular medical diseases, psychosocial and ethical themes, and management issues
32. Directly Supervised Procedures-(DSP): Residents learn procedures under the direct supervision of an attending or fellow during some rotations. For example, in the Medical Intensive Care Unit the Pulmonary /Critical Care attending or fellow, or the MICU attending, observe the placement of central venous and arterial lines. Specific procedures used in patient care vary by rotation.
33. Self-directed learning: self-directed learning residents have primary responsibility for planning, implementing, and evaluating their effort. It is an adult learning technique that assumes that the learner knows best what their educational needs are. The facilitator’s role in self-directed learning is to support learners in identifying their needs and goals for the program, to contribute to clarifying the learners' directions and objectives and to provide timely feedback. Self-directed learning can be highly motivating, especially if the learner is focusing on problems of the immediate present, a potential positive outcome is anticipated and obtained and they are not threatened by taking responsibility for their own learning.
34. Follow up clinics: The main aims of our clinic for patients and relatives include
 - a) Explanation of patient's stay in ICU or Ward settings: Many patients do not remember their ICU stay, and this lack of recall can lead to misconceptions, frustration and having unrealistic expectations of themselves during their recovery. It is therefore preferable for patients to be aware of how well they have been and then they can understand why it is taking some time to recover.
 - b) Rehabilitation information and support: We discuss with patients and relatives their individualized recovery from critical illness. This includes expectations, realistic goals, change in family.
35. Dynamics and coming to terms with life style changes. (c)Identifying physical, psychological or social problems Some of our patients have problems either as a result of their critical illness or because of other underlying conditions. The follow-up team will refer patients to various specialties, if appropriate. (d)Promoting a quality service: By highlighting areas which require change in nursing and medical practice, we can improve the quality of patient and relative’s care. Feedback from patients and relatives about their ICU & ward experience is invaluable. It has initiated various audits and changes in clinical practice, for the benefit of patients and relatives in the future.
36. Core curriculum meeting: All the core topics of Medicine should be thoroughly discussed during these sessions. The duration of each session should be at least two hours once a month. It should be chaired by the chief resident (elected by the residents of the relevant discipline). Each resident should be given an opportunity to brain storm all topics included in the course and to generate new ideas regarding the improvement of the course structure.
37. Annual Grand Meeting Once a year all residents enrolled for MD Internal Medicine should be invited to the annual meeting at RMU. One full day will be allocated to this event. All the chief

residents from affiliated institutes will present their annual reports. Issues and concerns related to their relevant courses will be discussed. Feedback should be collected and suggestions should be sought in order to involve residents' indecision making. The research work done by residents and their literary work may be displayed. In the evening an informal gathering and dinner can be arranged. This will help in creating a sense of belonging and ownership among students and the faculty.

38. Learning through maintaining log book: it is used to list the core clinical problems to be seen during the attachment and to document the student activity and learning achieved with each patient contact.
39. Learning through maintaining portfolio: Personal Reflection is one of the most important adult educational tools available. Many theorists have argued that without reflection, knowledge translation and thus genuine "deep" learning cannot occur. One of the Individual reflection tools maintaining portfolios, Personal Reflection Allows students to take inventory of their current knowledge skills and attitudes, to integrate concepts from various experiences, to transform current ideas and experiences into new knowledge and actions and to complete the experiential learning cycle.
40. Task-based-learning: A list of tasks is given to the students: participate in consultation with the attending staff, interview and examine patients, review a number of new radiographs with the radiologist.
41. Teaching in the ambulatory care setting: A wide range of clinical conditions may be seen. There are large numbers of new and return patients. Students have the opportunity to experience a multi-professional approach to patient care. Unlike ward teaching, increased numbers of students can be accommodated without exhausting the limited No. of suitable patients.
42. Community Based Medical Education: CBME refers to medical education that is based outside a tertiary or large secondary level hospital. Learning in the fields of epidemiology, preventive health, public health principles, community development, and the social impact of illness and understanding how patients interact with the health care system. Also used for learning basic clinical skills, especially communication skills.
43. Audio visual laboratory: audio visual material for teaching skills to the residents is used specifically in teaching gastroenterology procedure details.
44. 40.E-learning/web-based medical education/computer-assisted instruction: Computer technologies, including the Internet, can support a wide range of learning activities from dissemination of lectures and materials, access to live or recorded presentations, real-time discussions, self-instruction modules and virtual patient simulations. Distance-independence, flexible scheduling, the creation of reusable learning materials that are easily shared and updated, the ability to individualize instruction through adaptive instruction technologies and automated recordkeeping for assessment purposes.

45. Research based learning: All residents in the categorical program are required to complete an academic outcomes-based research project during their training. This project can consist of original bench top laboratory research, clinical research or a combination of both. The research work shall be compiled in the form of a thesis which is to be submitted for evaluation by each resident before end of the training. The designated Faculty will organize and mentor the residents through the process, as well as journal clubs to teach critical appraisal of the literature.
46. Other teaching strategies specific for different specialties as mentioned in the relevant parts of the curriculum some of the other teaching strategies which are specific for certain domains of internal medicine are given along with relevant modules.

Scheme of the Course

A summary of 2 years course is:

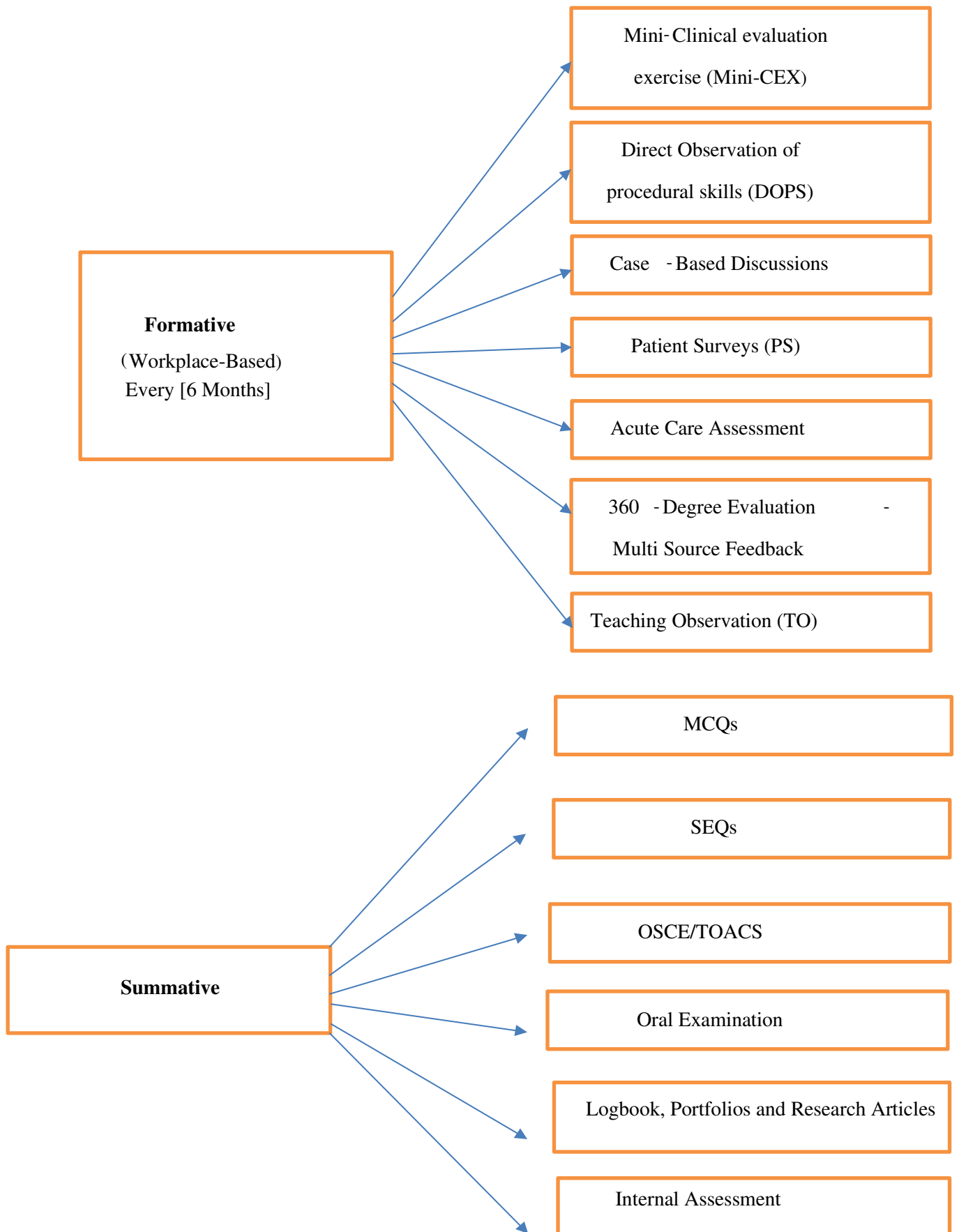
First Year

| Sr. No | Topic | Duration |
|--------|---|----------|
| 1. | Introduction/ community Pediatrics | 4 Weeks |
| 2. | Infections | 6 Weeks |
| 3. | Emergency Pediatrics and Toxicology | 8 Weeks |
| 4. | Neonatology | 10 Week |
| 5. | Child Psychiatry/ Behavior sciences/ Development Pediatrics | 4 Weeks |
| 6. | Dermatology | 4 Weeks |
| 7. | Respiratory | 8 Weeks |
| 8. | Introduction to biostatistics and research | 4 Weeks |

Second Year

| Sr. No | Topic | Duration |
|--------|------------------------------------|----------|
| 1. | Hematology/ Oncology | 4 Weeks |
| 2. | Gastroenterology | 8 Weeks |
| 3. | Pediatric Surgery | 6 Weeks |
| 4. | Cardiology | 8 Weeks |
| 5. | Nephrology | 4 Weeks |
| 6. | Endocrinology | 4 Weeks |
| 7. | Rheumatology & Orthopedics | 4 Weeks |
| 8. | Neurology | 6 Weeks |
| 9. | Metabolic Storage genetic disorder | 4 Weeks |

Assessment Scheme



Assessment

End of first year:

- Theory paper of 100 Macq's (passing criteria 60 %)
- Logbook/portfolio

End of second year:

- summative exam at the end of second year

Methods of Assessment

- **360-Degree Evaluation Instrument- Multi-source Feedback (MSF):**
- 360-degree evaluations consist of measurement tools completed by multiple people in a person's sphere of influence.
- Evaluators completing rating forms in a 360-degree evaluation usually are superiors, peers, subordinates, and patients and families.
- Most 360-degree evaluation processes use a survey or questionnaire to gather information about an individual's performance on several topics (e.g., teamwork, communication, management skills & decision-making).
- Most 360-degree evaluations use rating scales to assess how frequently a behavior is performed (e.g., a scale of 1 to 5, with 5 meaning "all the time" and 1 meaning "never").
- The ratings are summarized for all evaluators by topic and overall to provide feedback. Evaluators provide more accurate and less lenient ratings when the evaluation is intended to give formative feedback rather than summative evaluations.
- A 360-degree evaluation can be used to assess ACGME criteria including interpersonal and communication skills, professional behaviors, and some aspects of patient care and systems-based practice.
- **Chart Stimulated Recall Oral Examination (CSR)**

In a chart stimulated recall (CSR) examination patient cases of the examinee (resident) are assessed in a standardized oral examination.

o A trained and experienced physician examiner questions the examinee about the care provided probing for reasons behind the work-up, diagnoses, interpretation of clinical findings, and treatment plans.

The examiners rate the examinee using a well-established protocol and scoring procedure. In efficiently designed CSR oral exams each patient case (test item) takes 5 to 10 minutes.

A typical CSR exam is two hours with one or two physicians as examiners per separate 30 or 60-minute session. These exams assess clinical decision-making and the application or use of medical knowledge with actual patients.

- **Checklist Evaluation**
- Checklists consist of essential or desired specific behaviors, activities, or steps that make up a more complex competency or competency component.
- Typical response options on these forms are a check (√) or “yes” to indicate that the behavior occurred or options to indicate the completeness (complete, partial, or absent) or correctness (total, partial, or incorrect) of the action.
- The forms provide information about behaviors but for the purpose of making a judgment about the adequacy of the overall performance, standards need to be set that indicate, for example, pass/fail or excellent, good, fair, or poor performance.
 - Checklists are useful for evaluating any competency and competency component that can be broken down into specific behaviors or actions. Documented evidence for the usefulness of checklists exists for the evaluation of patient care skills (history and physical examination, procedural skills) and for interpersonal and communication skills.
- Checklists have also been used for self-assessment of practice-based learning skills (evidence-based medicine). Checklists are most useful to provide feedback on performance because checklists can be tailored to assess detailed actions in performing a task.
- **Objective Structured Clinical Examination (OSCE)** in an objective structured clinical examination (OSCE) one or more assessment tools are administered at 12 to 20 separate standardized patient encounter stations, each station lasting 5-10 minutes.
 - Between stations candidates may complete patient notes or a brief written examination about the previous patient encounter. All candidates move from station to station in sequence on the same schedule.
 - Standardized patients are the primary assessment tool used in OSCEs, but OSCEs have included other assessment tools such as data interpretation exercises using clinical cases and clinical scenarios with mannequins, to assess technical skills.
 - OSCEs have been administered in most of the medical schools worldwide, many residency programs, and by the licensure board examinations.
 - The OSCE format provides a standardized means to assess: physical examination and history taking skills; communication skills with patients and family members, breadth and depth of knowledge; ability to summarize and document findings; ability to make a differential diagnosis, or plan treatment; and clinical judgment based upon patient notes.
- **Procedures, Operative or Case Logs**
- Procedure, operative, or case logs document each patient encounter by medical conditions seen, surgical operation or procedures performed.
- The logs may or may not include counts of cases, operations, or procedures. Patient case logs currently in use involve recording of some number of consecutive cases in a designated time frame.
- Operative logs in current use vary; some entail comprehensive recording of operative data by CPT code while others require recording of operations or procedures for a small number of defined categories.

- Logs of types of cases seen or procedures performed are useful for determining the scope of patient care experience. Regular review of logs can be used to help the resident track what cases or procedures must be sought out in order to meet residency requirements or specific learning objectives.
- Patient logs documenting clinical experience for the entire residency can serve as a summative report of that experience; as noted below, the numbers reported do not necessarily indicate competence.
- **Patient Surveys**
- Surveys of patients to assess satisfaction with hospital, clinic, or office visits typically include questions about the physician's care.
- The questions often assess satisfaction with general aspects of the physician's care, (e.g., amount of time spent with the patient, overall quality of care, physician competency (skills and knowledge), courtesy, and interest or empathy).
- A typical patient survey asks patients to rate their satisfaction with care using rating categories (e.g., poor, fair, good, very good, excellent).
- Each rating is given a value and a satisfaction score calculated by averaging across responses to generate a single score overall or separate scores for different clinical care activities or settings.
- Patient feedback accumulated from single encounter questionnaires can assess satisfaction with patient care competencies (aspects of data gathering, treatment, and management; counseling, and education; preventive care); interpersonal and communication skills; professional behavior; and aspects of systems-based practice (patient advocacy; coordination of care).
- If survey items about specific physician behaviors are included, the results can be used for formative evaluation and performance improvement.
- **Portfolios**
- A portfolio is a collection of products prepared by the resident that provides evidence of learning and achievement related to a learning plan. A portfolio typically contains written documents but can include video- or audio-recordings, photographs, and other forms of information.
- Reflecting upon what has been learned is an important part of constructing a portfolio. In addition to products of learning, the portfolio can include statements about what has been learned, its application, remaining learning needs, and how they can be met. o in graduate medical education, a portfolio might include a log of clinical procedures performed; a summary of the research literature reviewed when selecting a treatment option; a quality improvement project plan and report of results; ethical dilemmas faced and how they were handled; a computer program that tracks patient care outcomes; or a recording or transcript of counseling provided to patients.
- Portfolios can be used for both formative and summative evaluation of residents. Portfolios are most useful for evaluating mastery of competencies that are difficult to evaluate in other ways such as

practice-based improvement, use of scientific evidence in patient care, professional behaviors, and patient advocacy.
- Teaching experiences, morning report, patient rounds, individualized study or research projects are examples of learning experiences that lend themselves to using portfolios to assess residents.
- **Medical Record Review** of Trained staff in an institution's medical records department or clinical department perform a review of patients' paper or electronic records.

- The staff uses a protocol and coding form based upon predefined criteria to abstract information from the records, such as medications, tests ordered, procedures performed, and patient outcomes.
- Record review can provide evidence about clinical decision-making, follow-through in patient management and preventive health services, and appropriate use of clinical facilities and resources (e.g., appropriate laboratory tests and consultations).
- Often residents will confer with other clinical team members before documenting patient decisions and therefore, the documented care may not be directly attributed to a single resident but to the clinical team.
- **Simulated Teaching** Simulations used for assessment of clinical performance closely resemble reality and attempt to imitate but not duplicate real clinical problems.
- Key attributes of simulations are that: they incorporate a wide array of options resembling reality, allow examinees to reason through a clinical problem with little or no cueing, permit examinees to make life-threatening errors without hurting a real patient, provide instant feedback so examinees can correct a mistaken action, and rate examinees' performance on clinical problems that are difficult or impossible to evaluate effectively in other circumstances.
- Simulation formats have been developed as paper-and-pencil branching problems (patient management problems or PMPs), computerized versions of PMPs called clinical case simulations (CCX[®]), role-playing situations (e.g., standardized patients (SPs), clinical team simulations), anatomical models or mannequins, and combinations of all three formats.
- Mannequins are imitations of body organs or anatomical body regions frequently using pathological findings to simulate patient disease. The models are constructed of vinyl or plastic sculpted to resemble human tissue with imbedded electronic circuitry to allow the mannequin to respond realistically to actions by the examinee.
- Virtual reality simulations or environments (VR) use computers sometimes combined with anatomical models to mimic as much as feasible realistic organ and surface images and the touch sensations (computer generated haptic responses) a physician would expect in a real patient.
- The VR environments allow assessment of procedural skills and other complex clinical tasks that are difficult to assess consistently by other assessment methods. Simulations using VR environments have been developed to train and assess anesthesiologists managing life-threatening critical incidents during surgery and residents responding to cardio-pulmonary incidents on a full-size human mannequin.
- Written and computerized simulations have been used to assess clinical reasoning, diagnostic plans and treatment for a variety of clinical disciplines as part of licensure and certification examinations. Standardized patients as simulations are described elsewhere.
- **Standardized Viva-Voce** o the standardized Viva examination is a type of performance assessment using realistic patient cases with a trained physician examiner questioning the examinee.
- The examiner begins by presenting to the examinee a clinical problem in the form of a patient case scenario and asks the examinee to manage the case. Questions probe the reasoning for requesting clinical findings, interpretation of findings, and treatment plans.
- An examinee can be tested on 18 to 60 different clinical cases. These exams assess clinical decision-making and the application or use of medical knowledge with realistic patients. Multiple-choice questions are better at assessing recall or understanding of medical knowledge.

- **Written Assessment (MCQ)**
- A written or computer-based MCQ examination is composed of multiple-choice questions (MCQ) selected to sample medical knowledge and understanding of a defined body of knowledge, not just factual or easily recalled information.
- Each question or test item contains an introductory statement followed by four or five options in outline format. The examinee selects one of the options as the presumed correct answer by marking the option on a coded answer sheet.
- Only one option is keyed as the correct response. The introductory statement often presents a patient case, clinical findings, or displays data graphically. Medical knowledge and understanding can be measured by MCQ examinations.
- Comparing the test scores on in-training examinations with national statistics can serve to identify strengths and limitations of individual residents to help them improve.
 - Comparing test results aggregated for residents in each year of a program can be helpful to identify residency training experiences that might be improved.
- **Mini-Clinical Evaluation Exercise (mini-CEX)**
 - This tool evaluates a clinical encounter with a patient to provide an indication of competence in skills essential for good clinical care such as history taking, examination and clinical reasoning. The trainee receives immediate feedback to aid learning. They can be used at any time and in any setting when there is a trainee and patient interaction and an assessor is available.
 - **Direct Observation of Procedural Skills (DOPS)**
- A DOPS is an assessment tool designed to evaluate the performance of a trainee in undertaking a practical procedure, against a structured checklist. The trainee receives immediate feedback to identify strengths and areas for development.
- **Case-Based Discussion (CBD)**
 - The CBD assesses the performance of a trainee in their management of a patient to provide an indication of competence in areas such as clinical reasoning, decision-making and application of medical knowledge in relation to patient care. It also serves as a method to document conversations about, and presentations of, cases by trainees.
- The CBD should focus on a written record (such as pre-op assessment, intra-op management, post-op/recovery room discharge notes).
- **Acute Care Assessment Tool (ACAT)**
- The ACAT is designed to assess and facilitate feedback on a doctor's performance during their practice on the Acute Medical Take.
- Any doctor who has been responsible for the supervision of the Acute Medical Take can be the assessor for an ACAT.
- **Audit Assessment (AA)**
- The Audit Assessment tool is designed to assess a trainee's competence in completing an audit.
- The Audit Assessment can be based on review of audit documentation OR on a presentation of the audit at a meeting. If possible, the trainee should be assessed on the same audit by more than one assessor.

- **Teaching Observation (TO)**
- The Teaching Observation form is designed to provide structured, formative feedback to trainees on their competence at teaching.
 - o The Teaching Observation can be based on any instance of formalized teaching by the trainee who has been observed by the assessor.
- The process should be trainee-led (identifying appropriate teaching sessions and assessors).
 - The Annual Review of Competence Progression (ARCP) is the formal method by which a trainee's progression through her/his training program is monitored and recorded.

Final Assessment

Eligibility for Final Examination:

- The candidate must have certificate of completion of 2 years training from supervisor, along with rotations
- At least 60 percent marks in the examination conducted at the end of first year of training.
- At least 60 percent marks in continuous internal assessment.
- The Vice-Chancellor shall appoint a panel of 3 examiners (2 external and 1 internal) approved by Dean.
- The degree shall be awarded on the result of an examination consisting of:
 - i. One written paper (MCQs and SEQs)
 - ii. A Viva-Voce covering the entire field of the examination including the academic writing.
 - iii. A high degree of performance will be expected from the candidate in the whole examination in order to get through. The whole examination has to be taken together and cannot be taken in parts.
 - iv. The viva voce, clinical examination shall be conducted by the three examiners (2 external and 1 internal) appointed by the Vice-Chancellor from the panel approved by Dean.

The Diploma of child health under the seal of Rawalpindi Medical University shall be awarded to the successful candidate after the result of the theory & clinical and/or practical examinations

- 1 Passing marks in theory (MCQ'S & SAQ'S) aggregates 60%.
- 2 Passing marks in Oral & Practical aggregates 60%.
- 3 Passing marks in internal assessment 60%.

Candidates has to pass all the four components in final examination

Section-2

Curriculum

1. First Year Curriculum

Module 1: Introduction/ Community Pediatrics (Duration 4 Weeks)

| Learning Objective | | | Mode of Information Transfer | Assessment Tools |
|---|---|--|--------------------------------|---|
| Knowledge | Skill | Attitude | | |
| <ul style="list-style-type: none"> Be able to take complete history of patients presenting with common pediatric illnesses Know the constituents of a healthy diet at all ages including breast and formula feeding in infancy Understand the principles of infant feeding Know the causes of malnutrition and understand the epidemiology and public health consequences of obesity Know the clinical presentation, and management of vitamin deficiencies Understand the principles and the rationale of immunization programme including EPI contraindications, complications and controversies of routine childhood immunizations and be able to advise parents about immunizations | <ul style="list-style-type: none"> Be able to recognize signs associated with pediatric illnesses on general physical examination of a child Be able to assess nutritional status | <ul style="list-style-type: none"> Know and understand the indications of vaccination | Seminar, SGD, bedside teaching | MCQs, SEQs, OSCE, short case, long case |

Module 2: Infectious Diseases (Duration 4 Weeks)

| Learning Objective | | | Mode of Information Transfer | Assessment Tools |
|---|---|----------|--------------------------------|---|
| Knowledge | Skill | Attitude | | |
| <ul style="list-style-type: none"> Know about common infections of children in Pakistan e.g., Malaria, Enteric fever, dengue fever, polio, Tuberculosis, Pertussis, Diphtheria, Tetanus, Hepatitis, chicken pox, mumps, cholera, worm infestations Know the national guide lines on notification of communicable diseases (VPD Surveillance) Know and understand the basic principles of infection control, how outbreaks of infection including nosocomial infection occur, and how they should be investigated Be able to assess and manage afebrile child and have knowledge of current evidence-based guidelines Know the common allergies and advise on management Know when antimicrobials are indicated Understand the normal patterns and frequency of infections in childhood | <ul style="list-style-type: none"> Be able to recognize features that suggest congenital infections Be able to pick and identify common skin rash presenting in childhood | | Seminar, SGD, bedside teaching | MCQs, SEQs, OSCE, short case, long case |

Module 3: Emergency Pediatrics/ Toxicology (Duration 8 Weeks)

| Learning Objective | | | Mode of Information Transfer | Assessment Tools |
|---|-------|----------|--------------------------------|---|
| Knowledge | Skill | Attitude | | |
| <ul style="list-style-type: none"> • Know the common causes of cardiac arrest, the prognostic factors that influence the outcome and how to provide basic life support and advise others • Know how to control acute blood loss until help arrives • Be able to recognize and provide initial management for life-threatening airway, breathing or circulatory compromise • Know about immediate care for children with burns and scalds, recognizing that they may be a presentation of non-accidental injury • Know the causes and features of anaphylaxis and its management • Know how to recognize acute seizures and initiate emergency treatment • Know how to recognize and initiate treatment for children presenting with neurological emergencies • Be aware of common causes of accidents in children and adolescents including safeguarding implications and understand prevention strategies • Know how to differentiate between life or limb threatening injuries and injuries that can be managed less urgently • Know the principles of managing limb threatening injuries • Know of appropriate use of radiological investigations in trauma • Know when to suspect and how to safely initiate management in head and spinal injury • Know the common causes of poisoning in children and adolescents including safeguarding implications • Know about fluid, acid-base and electrolyte disturbances and their management | | | Seminar, SGD, bedside teaching | MCQs, SEQs, OSCE, short case, long case |

Module 4: Neonatology (Duration 10 Weeks)

| Learning Objective | | | Mode of Information Transfer | Assessment Tools |
|--|---|----------|--------------------------------|---|
| Knowledge | Skill | Attitude | | |
| <ul style="list-style-type: none"> • Know and understand the effects of antenatal and perinatal events • Know about antenatal diagnosis of neural tube defects • Know the problems associated with prematurity and the long-term sequelae including the impact on the family and community • Be able to recognize and initiate the management of common disorders in the newborn including sepsis • Understand the principles of new born feeding and growth recognizing the importance of breast feeding and being able to advise on lactation difficulties and contraindications • Be aware of the occurrence and clinical features of maternal to fetal transmission of infection • Know about the support networks for families and babies including those from socially disadvantaged families • Know the range of newborn screening tests available including hematological and metabolic conditions, cystic fibrosis and the universal newborn hearing screening programme • Know about common minor congenital abnormalities and their initial management • Understand the causes and features of neonatal jaundice knowing when to refer for further investigation and be able to recognize early presentation of neonatal hepatitis and biliary atresia • Know the presentations of neonatal seizures and recognize abnormal neurological features e.g. the floppy baby • Know the principles and methods of neonatal resuscitation • Know how to recognize, assess and initially manage respiratory disorders in the neonatal period • Be able to recognize and assess birth injury with appropriate referral • Know about the identification, initial management and appropriate referral pathways for neonatal surgical problems including NEC | <ul style="list-style-type: none"> • Be able to examine the newborn baby appropriately and with sensitivity and communicate with parents (unlikely to be tested in an examination) • Be able to examine hips for congenital dysplasia (unlikely to be tested in an examination) | | Seminar, SGD, bedside teaching | MCQs, SEQs, OSCE, short case, long case |

Module 5: Child Psychiatry/Developmental Paediatrics (Duration 4 Weeks)

| Learning Objective | | | Mode of Information Transfer | Assessment Tools |
|---|---|----------|--------------------------------|---|
| Knowledge | Skill | Attitude | | |
| <ul style="list-style-type: none"> • Understand normal development including common variants • Know the causes of disability, disordered development and learning difficulties • Know the causes of speech and language delay or disorder and principles of management including autism spectrum disorder • Understand the definition and effects of neutralizability on children and families • Know approach to common behavior disorders like autism, attention deficit disorder • Know how to recognize, assess and initially manage enuresis/encopresis. | <ul style="list-style-type: none"> • Be able to perform a reliable assessment of neuro-developmental status at key stages, including the newborn period, the first year of life, nursery age and school entry • Know how to detect squint at an early age | | Seminar, SGD, bedside teaching | MCQs, SEQs, OSCE, short case, long case |

Module 6: Pediatric Dermatology (Duration 4 Weeks)

| Learning Objective | | | Mode of Information Transfer | Assessment Tools |
|---|--|----------|--------------------------------|---|
| Knowledge | Skill | Attitude | | |
| <ul style="list-style-type: none"> • Know the causes and management of skin infections and cellulitis • Know the common causes of fever and rash – e.g., exanthemata, Kawasaki • Know the side effects and different potencies of topical steroids • Be able to assess simple birth marks such as strawberry naevi and Mongolian blue spots and refer when appropriate • Know the causes features and management of rashes- HSP, erythema nodosum and multiforme and the association between skin rashes and common systemic diseases and when to refer • Be able to diagnose, investigate and manage common skin rashes e.g. eczema, acne, impetigo, staphylococcal scalded skin syndrome, dermatitis, cradle cap, and nappy rash • Understand the emotional impact of severe dermatological problems | <ul style="list-style-type: none"> • Be able to recognize different birthmarks and naevi • Be able to diagnose common skin rashes – eczema, seborrheic dermatitis, acne, impetigo, allergic dermatitis | | Seminar, SGD, bedside teaching | MCQs, SEQs, OSCE, short case, long case |

Module 7: Respiratory (Duration 8 Weeks)

| Learning Objective | | | Mode of Information Transfer | Assessment Tools |
|--|--|----------|--------------------------------|---|
| Knowledge | Skill | Attitude | | |
| <ul style="list-style-type: none"> • Know the causes and management of conditions affecting nose including epistaxis and allergic rhinitis • Know the causes and management of respiratory infections, bronchiolitis, pneumonia, earache, ear discharge, otitis media and glue ear • Know how to assess and manage children with acute asthma and wheeze and plan long term management • Know how to assess and manage a child with Pulmonary Tuberculosis • Know causes of stridor and principles of management • Know the presentation of cystic fibrosis and principles of treatment • Understand the causes of chronic cough and appropriate investigations | <ul style="list-style-type: none"> • Be able to examine the respiratory system, interpret and discuss physical findings • Be able to recognize an abnormal audiogram and tympanogram and discuss likely causes of abnormality • Be able to teach children and young people how to use peak flow meter • Be able to teach and assess inhaler technique and teach care of spacer | | Seminar, SGD, bedside teaching | MCQs, SEQs, OSCE, short case, long case |

Module 8: Introduction to Biostatistics and Research (Duration 4 Weeks)

| Learning Objective | | | Mode of Information Transfer | Assessment Tools |
|--|-------|----------|--------------------------------|------------------|
| Knowledge | Skill | Attitude | | |
| <ul style="list-style-type: none"> • Know the basics of biostatistics • Know the importance of bio medical research • Know the ethics in health research • Know how to search the literature • Know how to write a scientific paper • Know how to make a scientific presentation | | | Seminar, SGD, bedside teaching | MCQs |

2. Second Year Curriculum

| Module 1: Hematology and Oncology (Duration 4 Weeks) | | | | |
|--|---|----------|--------------------------------|---|
| Learning Objective | | | Mode of Information Transfer | Assessment Tools |
| Knowledge | Skill | Attitude | | |
| <ul style="list-style-type: none"> • Know the causes and presentations of anemia and their initial investigation and management • Know and understand safe transfusion practice • Know the causes of bleeding, purpura and bruising and recognize features in the presentation which suggest serious underlying pathology • Know how to interpret hematological investigations including full blood count, blood film and coagulation studies • Know the clinical manifestations of acute leukemia, lymphoma, and solid tumors • Know how to assess a child with lymphadenopathy or other masses and when to refer • Know about the risks and benefits of ionizing radiation • Understand the role of different health care professionals in shared care for oncological conditions. | <ul style="list-style-type: none"> • Be able to perform a general examination of children, interpret and discuss physical findings | | Seminar, SGD, bedside teaching | MCQs, SEQs, OSCE, short case, long case |

| Module 2: Gastroenterology (Duration 8 Weeks) | | | | |
|--|---|----------|--------------------------------|---|
| Learning Objective | | | Mode of Information Transfer | Assessment Tools |
| Knowledge | Skill | Attitude | | |
| <ul style="list-style-type: none"> • Know the causes of acute abdominal pain, and recognize when to refer, including urgency of referral • Know the presentations, causes and management of chronic and recurrent abdominal pain including when to refer • Know the causes of vomiting/regurgitation at different ages and be able to assess, manage and refer appropriately • Know the causes of acute diarrheal illness, how to assess and manage and when to refer • Know the common causes of chronic diarrhea and its initial investigation and management • Know the common causes of food allergies and intolerances, their initial management and when to appropriately refer • Know how to diagnose and manage constipation • Know the causes of jaundice and when to refer • Know the common causes of upper and lower gastrointestinal bleeding, initial management and appropriate referral • Be able to recognize and understand the management of common surgical conditions including hernias, and pyloric stenosis • Know the varied presentations of coeliac disease and its investigation and management • Know the presentation of disorders of the exocrine pancreas | <ul style="list-style-type: none"> • Be able to examine the gastrointestinal system, interpret and discuss physical findings | | Seminar, SGD, bedside teaching | MCQs, SEQs, OSCE, short case, long case |

Module 3: Pediatric Surgery (Duration 6 Weeks)

| Learning Objective | | | Mode of Information Transfer | Assessment Tools |
|---|---|----------|--------------------------------|---|
| Knowledge | Skill | Attitude | | |
| <ul style="list-style-type: none"> Understand initial management and referral of common surgical cases like cleft palate/Lip, acuter abdomen, esophageal atresia, diaphragmatic hernia, Club Foot, Pyloric stenosis, undescended testis. | <ul style="list-style-type: none"> Diagnose common surgical emergencies like imperforate anus, diaphragmatic hernia, tracheoesophageal atresia, congenital dislocation of Hip joint. | | Seminar, SGD, bedside teaching | MCQs, SEQs, OSCE, short case, long case |

Module 4: Cardiology (Duration 8 Weeks)

| Learning Objective | | | Mode of Information Transfer | Assessment Tools |
|---|---|----------|--------------------------------|---|
| Knowledge | Skill | Attitude | | |
| <ul style="list-style-type: none"> Know the clinical features of common congenital heart conditions and understand the principles of management Know the common causes of cyanosis and how to assess these Know the causes of murmurs palpitations, syncope and chest pain, understand the principles of management and know when to refer Know the causes and clinical features of heart failure, understand the principles of management and know when to refer Know the value of oxygen saturation measurement in the assessment of possible congenital heart disease Know the causes and clinical features of hypertension and how to measure and interpret blood pressure in different age groups Know the recommendations regarding endocarditis prophylaxis in children with heart diseases | <ul style="list-style-type: none"> Be able to examine the cardiovascular system in children of different ages, interpret and discuss physical findings Be able to identify common congenital heart diseases (ASD, VSD) and know when to refer Be able to identify an innocent cardiac murmur | | Seminar, SGD, bedside teaching | MCQs, SEQs, OSCE, short case, long case |

Module 5: Nephrology (Duration 4 Weeks)

| Learning Objective | | | Mode of Information Transfer | Assessment Tools |
|---|---|----------|--------------------------------|---|
| Knowledge | Skill | Attitude | | |
| <ul style="list-style-type: none"> Understand the principles of management of disorders of the urogenital tract and know when to seek surgical referral Know the manifestations of acute and chronic renal diseases Know the manifestations and management of urinary tract infections in different age groups Know the causes of hematuria and proteinuria (including nephrotic syndrome and acute nephritis) and recognize features in the presentation which suggest serious or significant pathology Know the principles of managing enuresis Know the causes and assessment of polyuria and polydipsia and when to refer | <ul style="list-style-type: none"> Be able to perform an abdominal examination for palpable kidneys Be able to examine the genitalia appropriately and with sensitivity, assess and manage vulvovaginitis (unlikely to be tested in an examination) | | Seminar, SGD, bedside teaching | MCQs, SEQs, OSCE, short case, long case |

Module 6: Endocrinology (Duration 4 Weeks)

| Learning Objective | | | Mode of Information Transfer | Assessment Tools |
|---|--|----------|--------------------------------|---|
| Knowledge | Skill | Attitude | | |
| <ul style="list-style-type: none"> Be able to recognize the features of a child or young person presenting with diabetes including diabetic ketoacidosis and know the principles of management Understand the management of diabetes in primary care including blood sugar monitoring and insulin regimens Know the causes, complications and treatment of hypoglycemia in the diabetic child Know the presentation of disorders of the adrenal, thyroid and parathyroid glands and understand the principles of management Know the presentation of disorders of the pituitary gland and understand the principles of management Understand the patterns of normal growth and development including puberty and its normal variations Understand the principles and practice of growth measurement, including plotting and interpretation of growth charts Know the causes of abnormal growth including short stature and slow or accelerated growth. Know about appropriate assessment, investigation and treatment Be able to recognize disorders of sexual differentiation in children and know about common causes including congenital adrenal hyperplasia Be able to recognize obesity, understand the consequences of obesity on health and well-being in the short and long term and advise young people and their families on effective strategies to manage this and use BMI measurements and charts | <ul style="list-style-type: none"> Be able to examine the thyroid and assess thyroid status Be able to plot and interpret growth charts Be able to identify common clinical syndromes associated with short or tall stature Be able to identify clinical syndromes associated with obesity Be able to identify XX and XY DSD on basis of clinical examination | | Seminar, SGD, bedside teaching | MCQs, SEQs, OSCE, short case, long case |

Module 7: Rheumatic and Orthopedic (Duration 4 Weeks)

| Learning Objective | | | Mode of Information Transfer | Assessment Tools |
|--|---|----------|--------------------------------|---|
| Knowledge | Skill | Attitude | | |
| <ul style="list-style-type: none"> • Know the normal variations of limb development e.g., bow legs and knock knees, in- toeing, flat feet • Know about the assessment, causes and initial management of joint and limb pain, joint laxity and swelling • Be aware of the presentation of muscular disease including the dystrophies • Know the differential diagnosis of pain on walking and limp and initial management • Know the causes of back pain and initial management • Know the causes of acute and chronic arthritis including those with systemic manifestations (e.g., Henoch-Schoenlein purpura) and understand the principles of management • Know how to recognize the various causes of scoliosis and how they present • Know how to recognize developmental dysplasia of the hip, appropriate referral pathways and usual management | <ul style="list-style-type: none"> • Know how to perform a simple musculoskeletal examination, interpret and discuss physical findings • Be able to identify joint swelling | | Seminar, SGD, bedside teaching | MCQs, SEQs, OSCE, short case, long case |

Module 8: Neurology (Duration 6 Weeks)

| Learning Objective | | | Mode of Information Transfer | Assessment Tools |
|--|---|----------|--------------------------------|---|
| Knowledge | Skill | Attitude | | |
| <ul style="list-style-type: none"> • Know the causes of headache and be able to treat or refer as necessary • Know the likely causes and management of meningitis/encephalitis and altered consciousness • Know the causes of hydrocephalus, macrocephaly and microcephaly and when to refer • Know the causes and presentation of seizure disorders, their differential diagnosis, the principles of management and when to refer | <ul style="list-style-type: none"> • Be able to examine the nervous system, including examination of cranial nerves, interpret and discuss physical findings | | Seminar, SGD, bedside teaching | MCQs, SEQs, OSCE, short case, long case |

Module 9: Metabolic Disorders/ Genetic disorder (Duration 4 Weeks)

| Learning Objective | | | Mode of Information Transfer | Assessment Tools |
|--|---|----------|--------------------------------|---|
| Knowledge | Skill | Attitude | | |
| <ul style="list-style-type: none"> • Understand patterns of disease inheritance and be able to construct a family tree and interpret patterns of inheritance • Know about the features of common chromosome disorders e.g., Down, Turner and Fragile X syndromes • Know the basis of genetic screening and diagnosis, the common conditions for which they are used and the ethical dilemmas they pose • Know about environmental factors which may affect pre-natal development, e.g. maternal health, alcohol and drugs • Know the common clinical presentations of metabolic disease • Know about metabolic bone disease and its management | <ul style="list-style-type: none"> • Be able to identify common chromosomal syndromes e.g., Down's syndrome, Turner's syndrome • Be able to collate key clinical features that raise suspicion of metabolic disease | | Seminar, SGD, bedside teaching | MCQs, SEQs, OSCE, short case, long case |

- | | | | | |
|--|--|--|--|--|
| <ul style="list-style-type: none">• Know about the screening procedures for inherited metabolic conditions | | | | |
|--|--|--|--|--|

Section-3

Evaluation & Assessment Strategies

The purpose of the Assessment System:

The purpose of the assessment system is to:

- enhance learning by providing formative assessment, enabling trainees to receive immediate feedback, measure their own performance and identify areas for development;
- drive learning and enhance the training process by making it clear what is required of trainees and motivating them to ensure they receive suitable training and experience;
- provide robust, summative evidence that trainees are meeting the curriculum standards during the training program;
- ensure trainees are acquiring competencies within the domains of Good Medical Practice;
- assess trainees' actual performance in the workplace;
- ensure that trainees possess the essential underlying knowledge required for their specialty;
- inform the Annual Review of Competence Progression (ARCP), identifying any requirements for targeted or additional training where necessary and facilitating decisions regarding progression through the training program;
- Identify trainees who should be advised to consider changes of career direction.

The Integrated Assessment System

The integrated assessment system comprises a mixture of workplace-based assessments and knowledge-based assessments. Individual assessment methods are described in more detail below. The assessments will be supported by structured feedback for trainees within the training program of General Internal Medicine. Assessment tools will be both formative and summative and will be selected on the basis of their fitness for purpose. Workplace-based assessments will take place throughout the training program to allow trainees to continually gather evidence of learning and to provide formative feedback. They are not individually summative but overall outcomes from a number of such assessments provide evidence for summative decision making. The number and range of these will ensure a reliable assessment of the training relevant to their stage of training and achieve coverage of the curriculum.

Scheme of Assessment

YEAR

1

Rotations/placements (as given in schedule)

Multiple workplace-based assessments /360 evaluation (formative assessment)

End of year - continuous internal assessment.

(Aggregates of rotations assessments)

YEAR

2

Rotations/placements (as given in schedule)

Final examination (summative assessment)

Multiple workplaces-based assessments /360 evaluation
(Formative assessment)

Continuous internal assessment (aggregates of rotations)

Assessment Methodology

| Year | Total Marks | Written | | Clinical | | |
|-----------------|-------------|-------------------------------|--|-------------------------------------|---------------------------------------|----------------------|
| | | MCQs | SEQs | OSCE | Short Cases | Long Case |
| 1 st | 100 | 100 (1 paper, 1 mark each) | - | - | - | - |
| 2 nd | 700 | 100 (1 paper, 1 mark each) | 100 (1 paper, 10 SEQs, 10 marks each) | 200 (20 stations, 10 marks each) | 200 (4 short cases, 50 marks each) | 100 (1 long case) |

1st Year Examination

All candidates admitted in Child Health Diploma Programme course shall appear in **1st year** examination at the end of 1st calendar year.

Eligibility Criteria

To appear in 1st year Examination, a candidate shall be required

- a) To have submitted certificate of completion of one year of training from the supervisor/ supervisors of rotations.
- b) To have submitted assessment proforma from the supervisor on 03 monthly basis achieving a cumulative score of **75%**.
- c) To have submitted evidence of payment of examination fee.

1st Year Examination Schedule and Fee

- I. 1st Year Examination at completion of one year of training, will be held twice a year.
- II. There will be a minimum period of 30 days between submission of applications for the examination and the conduction of examination.
- III. The university will determine examination fee periodically.
- IV. The examination fee once deposited cannot be refunded / carried over to the next examination under any circumstances.
- V. The Controller of Examination will issue Roll Number Slips on receipt of prescribed application form, documents satisfying eligibility criteria and evidence of payment of examination fee.

Components of 1st Year Examination

Child Health Diploma Programme at the end of calendar of 1st calendar year of the programme

- **Formative Assessment**
 - **Log Book** (25% cases)
 - **Work Place Based Assessment**
 - Multisource feedback
 - 360° Performa

- **DOPS**

| |
|--|
| IV Cannulation |
| Direct Laryngoscopy & Endotracheal Intubation |
| Lumbar Puncture |
| Intraosseous line insertion |
| Exchange Transfusion |
| Cardio Pulmonary Resuscitation |
| Emergency Pneumothorax drainage (needle insertion) |
| Foley's Catheterization |

- **Mini-CEX**

| | |
|--------------|-------------------------|
| Pneumonia | Down Syndrome |
| Diarrhea | Nephrotic Syndrome |
| Anemia | Acute Flaccid Paralysis |
| Measles | Rickets |
| Tuberculosis | Malnutrition |
| Meningitis | |

Assessment 1st Year (TOS)
(Pass marks= 50%)

| Content | Assessment Tools | |
|--|------------------|----|
| | MCQs | % |
| Introduction/ community Pediatrics | 8 | 8 |
| Infections | 17 | 17 |
| Emergency Pediatrics and Toxicology | 17 | 17 |
| Neonatology | 22 | 22 |
| Child Psychiatry/ Behavior sciences/ Development Pediatrics | 9 | 9 |
| Dermatology | 7 | 7 |
| Respiratory | 16 | 16 |
| Introduction to biostatistics and research | 4 | 4 |

Written Exam

There will be 100 single best answer type MCQs with a total of 100 marks as follows: -

Each correct answer to MCQ will carry 1 mark. Duration of this exam will be 150 minutes.

The candidates scoring 50% marks will pass the written examination

Declaration of Result

The Candidate will have to score 50% marks in written paper.

2nd Year Examination

All candidates admitted in Child Health Diploma Programme course shall appear in Final examination at the end of structured training programme (end of 2nd calendar year).

Eligibility Criteria:

To appear in the Final Examination the candidate shall be required:

- i) To have submitted the result of passing first year Examination.
- ii) To have submitted the certificate of completion of training, issued by the Supervisor will be mandatory.
- iii) To have achieved a cumulative score of 75% in Continuous Internal assessments of all training years.
- iv) To have submitted no dues certificate from all relevant departments Including library, hostel, cashier etc.
- v) To have submitted evidence of submission of examination fee.

Final Examination Schedule and Fee

- a) Final examination will be held twice a year.
- b) The candidates have to satisfy eligibility criteria before permission is granted to take the examination.
- c) Examination fee will be determined and varied at periodic intervals by the University.
- d) The examination fee once deposited cannot be refunded / carried over to the next examination under any circumstances.
- e) The Controller of Examinations will issue an Admittance Card with a photograph of the candidate on receipt of prescribed application form, documents satisfying eligibility criteria and evidence of payment of examination fee. This card will also show the Roll Number, date / time and venue of examination.

Components of Final Examination

- **Formative Assessment**

- **Log Book** (25% cases)
- **Work Place Based Assessment**
 - Multisource feedback
 - 360° Performa
 - **DOPS**

| |
|-------------------------------|
| Central Venous line insertion |
| Peritoneal Dialysis |
| Pleural Tap |
| Peritoneal Tap |
| Sub Dural Tap |
| Defibrillation |
| Mechanical Ventilation |
| Umbilical Artery Cannulation |

- **Mini-CEX**

| | |
|-------------------------------------|-------------------------------------|
| Wilson Disease | Floppy Baby |
| Disorders of sexual differentiation | Diabetes Insipidus |
| Diabetes Mellitus | Pleural Effusion |
| Hemophilia | Hypothyroidism |
| Cerebral Palsy | CKD |
| Portal Hypertension | CLD |
| Rheumatic Fever | Short Stature |
| Celiac Disease | Ventricular septal defect |
| Chronic Diarrhea | Patent Ductus Arteriosus |
| Asthma | Tetralogy of Fallot's |
| Thalassemia | Idiopathic thrombocytopenic purpura |

Written Part of Final Examination

| Content | Paper 1: MCQs | Paper 2: SEQs |
|--|---------------|---------------------------------------|
| Cardiology | 10 | 1 |
| Pulmonology | 5 | 1 |
| Gastroenterology | 10 | 1 |
| Neurology | 10 | 1 |
| Neonatology | 10 | 1 |
| Nephrology | 10 | 5 SEQs will be made from these units. |
| Hematology/Oncology | 5 | |
| Developmental/Genetics/Metabolic | 5 | |
| Infectious Diseases | 10 | |
| Preventive Pediatrics/Nutrition | 5 | |
| Pediatric Emergency/Critical Care | 5 | |
| Immunology, Rheumatology/Bone Diseases | 5 | |
| Endocrinology | 5 | |
| Dermatology/Psychiatry | 5 | |

- a) There will be two written papers, which will cover the whole syllabus of the specialty of training with total marks of 200 (each paper of 100 marks).
- b) The written examination will consist of two papers. Paper 1 will comprise 100 single best answer type Multiple Choice Questions (MCQs) and Paper 2 will comprise 10 Short Essay Questions (SEQs). Each correct answer in the Multiple-Choice Question paper will carry 01 marks. Each Short Essay Question will carry 10 marks.
- c) The Total Marks of the Written Examination will be 200 and to be divided as follows:
- | | |
|--------------------------------|-------------------|
| Multiple Choice Question Paper | Total Marks = 100 |
| Short Answer Question Paper | Total Marks = 100 |
- d) The candidates scoring a score of 60% marks in multiple choice question paper and short essay question paper will pass the written part of the final examination and will become eligible to appear in the clinical and oral examination.

e) The written part result will be valid for three consecutive attempts for appearing in the Clinical and Oral Part of the Final Examination. After that the candidate have to re-appear the written part of the Final Examination.

Clinical, TOACS/OSCE & ORAL:

- a) Clinical, TOACS/OSCE & ORAL will consist of
1. 20 OSCE stations 10 marks each = 200
 2. 04 short cases 50 marks each = 200
 3. 01 long case 100 marks = 100
- b) A panel of four examiners will be appointed by the Vice Chancellor and of these two will be from RMU whilst the other two will be the external examiners. Internal examiner will act as a coordinator. In case of difficulty in finding an internal examiner in a given subject, the Vice Chancellor would, in consultation with the concerned Deans, appoint any relevant person with appropriate qualification and experience, outside the University as an examiner.
- c) The internal examiners will not examine the candidates for whom they have acted as Supervisor and will be substituted by another internal examiner.
- d) The candidates scoring 60% marks in each component of the Clinical & Oral Examination will pass this part of the Final Examination.
- e) The candidates will have two attempts to pass the final examination with normal fee.

Declaration of Result

For the declaration of result

- I. The candidate must have passed the final written examination with 60% marks and the clinical and OSCE & Oral securing 60% marks. The cumulative passing score from the written and clinical & oral examination shall be 60%.
- II. Cumulative score of 60% marks to be calculated by adding up secured marks of each component of the Examination i.e., written, clinical, OSCE & Oral and then calculating its percentage.
- III. The Child Health Diploma Programme degree shall be awarded after success in the final examination.
- IV. On completion of stipulated training period, irrespective of the result (pass or fail) the training slot of the candidate shall be declared vacant.

Section-4

Logbook /Portfolio

Section-5

Appendices (proformas/forms)

Multi-Source Feedback: 360° Internal Assessment