Introduction:
1.1 The mission of BSMMU is to ensure quality health care to the people by improving the educational process continuously and maintaining high standards for certifying interests and sub-specialists who acquire the knowledge, skill and attitudes essentials for the provision of quality care, thus attaining a level to make the BSMMU as the centre of excellence.

The specialty of Oral and Maxillofacial Surgery developed as a sub-specialization of dentistry where the surgeons are predominantly concerned with the care of patients of oral and maxillofacial disorders. This branch of Dentistry concerned with prevention, investigation, therapy and research into diseases involving the Oral and Maxillofacial region. Care of patients with oral and maxillofacial disorders embraces a wide range of clinical activities and OMS surgeons need a broad understanding of any prevailing healthcare inequalities. This requires knowledge of not only the diagnostic and therapeutic modalities available but also an appreciation of the epidemiology and potential for prevention of Oral and Maxillofacial surgical diseases. Oral and Maxillofacial Surgeons generally work as hospital based specialists and need to integrate their work with not only community based dental surgeons but also other hospital based surgeons eg. General dental surgeons, Orthodontists, Prosthodontists, Paediatric dental surgeons, ENT and head & neck surgeons, Plastic surgeons, Orthopaedic surgeons, General surgeons, Oncologists, Pathologists, Anaesthesiologists and Imaging specialists. Specialization within Oral and Maxillofacial Surgery has become common place with individuals focusing the development of their expertise in areas such as Cleft lip and Palate surgery, Maxillofacial, Trauma, Cyst, Tumors and Cancer surgery, Oral and Maxillofacial Reconstructive surgery, Microvascular reconstructive surgery, Facial deformity corrective surgery, TMJ disorder surgery, Salivary glands disorder surgery, Orthonathic

Oral and Maxillofacial Surgery-3
surgery, Dental Implant surgery, Distraction Osteogenesis, Management of Odontogenic infection and others. Recently BSMMU has introduced its competency-based Residency program. Phase-A training of the program, which lasts for two years, aims at a broad based training in Oral and Maxillofacial surgery.

Curriculum Framework:
Rationale and objectives: describes the background of the development of the curriculum, the structure of training, and the purpose of the curriculum in medical/dental training.
1. **Content of learning:** syllabus section of the curriculum, describing the knowledge, skills and attitudes that trainees need to learn.
2. **The learning process:** discusses the systems for assessment of competence for the curriculum.
3. **Assessment strategy:** outlines the systems for assessment of competence for the curriculum.
4. **Trainee supervision and feedback:** recommends how a trainee should be supervised during the training program and how feedback on learning should be given.
5. **Curriculum implementation and management:** discusses how the management and implementation of the curriculum within training program will be achieved.
6. **Curriculum review:** the plans for curriculum review, evaluation and monitoring is laid out.
7. **Equality and Diversity:** describes how the curriculum complies with anti discriminatory practice.

Rationale and Objectives:
Educational purpose and Goals:
1. To prepare the maxillofacial surgeons who would be able to meet and respond to the changing oral healthcare needs and expectation of the society.
2. To develop maxillofacial surgeons who possess knowledge, skills and attitudes that will ensure that they are competent to practice maxillofacial Surgery, safely and effectively.
3. To ensure that they have appropriate foundation for lifelong learning and further training in their specialty.
4. To help them develop to be critical thinkers and problem solvers when managing health problems in the community they serve.

Objectives:
The educational and training process aims to produce specialists:
1) Can address all aspects of the healthcare need of patients and their families.
2) Have acquired and developed leadership and team working skills, especially with other healthcare professionals, to deliver patient-centered care.
3) Maintain the highest standards appropriate in their professional field and show themselves able to respond constructively to assessment and appraisals of professional competence and performance.
4) Are aware of current thinking about ethical and legal issues.
5) Are able to act as safe independent practitioners whilst recognizing the limitation of their own expertise and are able to recognize their obligation to seek assistance of colleagues where appropriate.
6) Are aware of the procedures, and able to take appropriate action, when things go wrong, both in their own practice and in that of others.
7) Will be honest and objectives when assessing the performance of those they have supervised and trained.
8) Manage time and resources to the benefit of themselves, their patients and colleagues.
9) Can take advantage of information technology to enhance all aspect of patient care.
10) Can develop management plans for the “Whole patient” and maintain knowledge in other areas of medicine which impinge on their specialty of practice.
11) Understand that more effective communication between them and their patients can lead to more effective treatment and care.
12) Apply appropriate knowledge and skill in the diagnosis and management of patients.
13) Establish a differential diagnosis for patients presenting with surgical problems by the appropriate use of the clinical history, examination and investigations.
14) Are competent to perform the core investigations and procedures required in their specialist.
15) Develop clinical practice which is based on an analysis of relevant clinical trials and to have an understanding of their research methodologies.
16) Are able to apply the knowledge of biological and behavioral sciences in clinical practice.
17) Are able to identify and take responsibility for their own educational needs and the attainment of these needs.
18) Have developed the skills of an effective teachers.

Admission Requirements:
Medical graduate with successful completion of internship and with full registration with the BMDC will be selected by competitive admission test.
A. Pre-requisites for admission in Phase-A
B. The applicants should not be above 45 years of age on enrollment.
   a) BDS or equivalent degree as recognized by MBDC
   b) One year of internship/ in-service training.
   c) Completion of one year after internship/ in-service training.
   d) BMDC registration

C. Candidates for residency have to sit for a written MCQ-based admission test on Basic Medical Sciences and Faculty-based topics.
D. Foreign students should apply through proper channel.

Content of Learning: The Educational and Clinical Syllabus
This section lists the specific knowledge, skills, and attitudes to be attained throughout the education and training period in applied basic science, and specialty and subspecialty where appropriate. Each stage/phase of learning in the curriculum will be considered as competencies to be attained by the trainee/residents within the domains of knowledge, skills and attitude/behavior.
1. Applied basic sciences
2. Clinical skill and attitudes

A. General clinical competences
1) History taking
2) Clinical examination
3) Therapeutics and safe prescribing
4) Decision making and clinical reasoning
5) Prioritization of patient safety in clinical practice
6) Infection control
7) Others

B. Problem/Disease based competences
1. Swelling in oral & maxillofacial region
2. Pain in oral & maxillofacial region
3. Ulcer in oral and maxillofacial region
4. Vesico-bulbar lesion in oral & maxillofacial region
5. Trismus
6. Limitation of mouth opening
7. Facial deformity
8. Facial Asymmetry
9. Mal-occlusion
Residency Program

10. Defect in oral & maxillofacial region
11. Pterygium/Xerostomia
12. Mobility of teeth
13. Gum Bleeding
14. Exophytic lesions
15. Pigmented Lesions
16. Patches/Macule/Papillary lesion in oral & maxillofacial region
17. Others......

C. Emergency
1) Cardio-Pulmonary arrest
2) Unconscious patient
3) Dental Chair Emergency
4) Hemorrhage
5) Acute Respiratory Obstruction
6) Dislocation/Displacement of TMJ
7) Others..................

D. Investigation competences routine investigation:
1) Basic investigations: CBC, WBC, RBC, platelet count, blood sugar, serum creatinine, liver function test, kidney function test, lung function test, C/S etc.

Special investigation:
1) X-ray specific for specific patient
2) CT Scan Interpretation
3) MRI Interpretation
4) USG Interpretation
5) Angiogram Interpretation
6) Cephalogram

Residency Program

7) Sialogram Interpretation
8) Sinogram Interpretation
9) Colour Doppler Interpretation
10) Biopsy
11) F.N.A.C
12) PET
13) Scintigraphy
14) Others..................

E. Procedure Competences

BLOCK (OMFS) 1

1. Surgical Extraction – 10 cases to be performed
2. Transplantation – 10 cases to be performed
3. Dento-Alveolar Fracture - 01 cases to be performed
4. Arch bar Wiring- 02 cases to be performed
5. Different type of interdental wiring - 05 cases to be performed
6. Acrylic splint - 05 cases to be performed
7. Lateral compression plate and circumferential wiring - 02 cases to be performed

8. Local anaesthesia
   a) Inferior alveolar block- 10 cases to be performed
   b) Gau-Gate block- 01 cases to be performed
   c) Mental/Incisive Block- 05 cases to be performed
   d) Infra-Orbital block – 05 cases to be performed
   e) Palatal Block – 02 cases to be performed
   f) Infiltration- 20 cases to be performed
   g) Extra Oral block:
      i. Auriculo-Temporal block- 01 cases to be performed
      ii. Foramen Oxale block- 01 cases to be performed
Residency Program

BLOCK (Radiology & Imaging) II

1. X-ray report Interpretation - 5 cases to be performed
2. CT Scan report Interpretation - 5 cases to be performed
3. MRI report Interpretation - 5 cases to be performed
4. Sialogram procedure perform - 5 cases to be performed
5. Sinogram report Interpretation - 5 cases to be performed
6. U.S.G report Interpretation - 5 cases to be performed
7. Colour Doppler report Interpretation - 5 cases to be performed
8. Angiogram report Interpretation - 5 cases to be performed

BLOCK (Surgery) - III & IV

1. Wound Dressing - 5 cases to be performed
2. Scrubbing/Draping - 5 cases to be performed
3. I.V/canulation & Mx of complication - 5 cases to be performed
4. N/G Tube - 5 cases to be performed
5. Catheterization - 5 cases to be performed
6. Different surgical Drains - 5 cases to be performed
7. Haemothorax/pneumothorax/ hydrothorax - 5 cases to be performed
8. Haemodynamic Balance correction - 5 cases to be performed
9. Veno-puncher - 5 cases to be performed
10. Blood Transfusion - 20 cases to be performed
11. Different type of suturing - 5 cases to be performed
12. Post operative management -

BLOCK (Medicine) - V

1. Nebulization - 5 cases to be performed
2. Water Seal Drainage - 5 cases to be performed
3. Relevant Auscultation - 5 cases to be performed
4. Relevant Palpation - 5 cases to be performed
5. Neurological Assessment - 5 cases to be performed
6. Psychological Assessment - 5 cases to be performed

BLOCK (Otolaryngology) VI

1. Tracheotomy - 5 cases to be performed
2. Fiber-optic laryngoscope Intubation - 2 cases to be performed
3. Cricothrotyomosis - 5 cases to be performed
4. Neck lump examination - 5 cases to be performed
5. Surgical Excision of Neck lump - 5 cases to be performed
6. Neck Dissection - 5 cases to be performed

BLOCK (General Dentistry) - VII

Conservative dentistry and Endodontics
1. Acquired knowledge of management of fracture tooth - 3 cases to be performed
2. Acquired knowledge of management of traumatic tooth -

Department of Orthodontics
1. Acquired knowledge of management of cephalometric tracing - 3 cases to be performed
2. Acquired knowledge of management of Constriction of orthodontics plate -

Department of Prosthodontics
1. Acquired knowledge of impression technique of delf palate and maxillectomy patient - 3 cases to be performed
2. Acquired knowledge of fabrication procedure of obturation -

Oral and Maxillofacial Surgery-10

Oral and Maxillofacial Surgery-11
Field of Residency Training & Academic Curriculum
Oral and Maxillofacial Surgery Department
Phase-A

<table>
<thead>
<tr>
<th>Block</th>
<th>Subjects</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Department of Maxillofacial Surgery</td>
<td>3 Month</td>
</tr>
<tr>
<td>2</td>
<td>Radiology &amp; Imaging</td>
<td>3 Months</td>
</tr>
<tr>
<td>3</td>
<td>Department of Surgery</td>
<td>3 Months</td>
</tr>
<tr>
<td>4</td>
<td>Department of Surgery</td>
<td>3 Months</td>
</tr>
<tr>
<td>5</td>
<td>Department of Medicine</td>
<td>3 Months</td>
</tr>
<tr>
<td>6</td>
<td>Department of Otolaryngology</td>
<td>3 Months</td>
</tr>
<tr>
<td>7</td>
<td>Department of General Dentistry</td>
<td>3 Months</td>
</tr>
<tr>
<td>8</td>
<td>Preparatory</td>
<td></td>
</tr>
</tbody>
</table>

Syllabus:
MS (Residency) Oral and Maxillofacial Surgery
Duration-03 (three) Months
Phase-A, Block-1

1. Principles of exodontia:--
   Special emphasis on:
   1. Pre-operative assessment of extraction.
   5. Post Extraction Care of Tooth Socket and follow-up.

Objective: able to--
1. Know how to examine and prepare the patient for extraction.
2. Familiar with special investigation, diagnosis and management of various type of extraction.
II. Principles of Management of Impacted Teeth:

- Classification of Impacted Teeth
- Pre-surgical assessment
- Indications for Removal of Impacted Teeth
- Removal of other impacted teeth
- Surgical Procedure
- Management of post-surgical complication

**Objective:** able to
1. Assess the various type of impacted tooth.
2. Familiar with special investigation, diagnosis and surgery of impacted tooth.

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skill</th>
<th>Attitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. List the classification of impaction.</td>
<td>1. Respect the need to follow the steps of surgical procedure.</td>
<td>1. Respect the need for accurate diagnosis and treatment</td>
</tr>
<tr>
<td>2. Choose the special investigation require for surgery.</td>
<td></td>
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</tr>
<tr>
<td>3. Illustrate the surgical procedure for impacted teeth.</td>
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<td></td>
</tr>
</tbody>
</table>

III. Extraction in Medically Compromised Patient:

- Special emphasis on:
  1. Endocrine Disorders
  2. Hypertension
  3. Cardiac Diseases
  4. Neurological Disorder
  5. Kidney diseases
  6. Respiratory Diseases
  7. Hepato-biliary Diseases
  8. Congenital/Genetic disorder
  9. Pregnancy
  10. Haemorrhagic disorder

**Objective:** able to
1. Identify different type of medically compromised patient
2. Manage the medically compromised patient undergoing of teeth extraction.

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skills</th>
<th>Attitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Identify the basic role of examination of the medically compromised patient.</td>
<td></td>
<td>1. Respect the need for accurate diagnosis and treatment</td>
</tr>
<tr>
<td>2. Recognized the management protocol for individual medically compromised patient.</td>
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</tr>
</tbody>
</table>
Residency Program

IV. Basic Concept of Dento-alveolar Surgery:
Special emphasis on:
1) Basic necessities for Oral and Maxillofacial Surgery
2) Surgical diagnosis
3) Treatment plan
4) Aseptic techniques
5) Incision
6) Flap design
7) Tissue handling
8) Haemostasis
9) Decontamination, Debridement and Dressing

Objective: able to---

1. Diagnose the clinical condition related to Dento-alveolar Surgery
2. Manage the cases with dento-alveolar Surgery.

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skills</th>
<th>Attitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Identify the steps needs to follow before surgery.</td>
<td>1. Respect the general principles of surgery</td>
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</tr>
<tr>
<td>2. Application of preoperative steps of surgery.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. EvaluatePost operative complication and management.</td>
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</tbody>
</table>

V. Surgical Endodontics:
Special emphasis on:
Surgical endodontics-

1) Apisectomy
2) Re-implantation
3) Transplantation
4) Hemisection.

Objective: able to
1. Know the Investigations of surgical endodontics
2. Be Familiar with surgical procedure and post surgical management.

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skill</th>
<th>Attitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Recognize the assessment of surgical endodontics.</td>
<td>1. Respect the need to follow the steps of surgical procedure.</td>
<td></td>
</tr>
<tr>
<td>2. Choose the special investigation need surgery</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Illustrate surgical procedure and management.</td>
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</tbody>
</table>

VI. Implant Surgery:

Special emphasis to:
- Dental Implant & its biomechanics
- Clinical Implant Component
- Evaluation of patient
- Patient preparation
- Surgical procedure
- Preparation of Implant site
- Implant placement
- Post-operative care
- Implant Prosthetic Option
Residency Program

- Guided Bone Regeneration
- Block bone Grafting
- Alveolar Distraction
- Transanstral grafting (Sinus lift)

Objective:
- The student will be able to:
  - Know the preparation of patient for implantology
  - Familiar with surgical procedure post surgical management.

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skill</th>
<th>Attitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Know the clinical assessment.</td>
<td>1. Respect the need for accurate diagnosis and treatment modalities</td>
<td>2. Consider the need for pre operative evaluation and post operative follow up.</td>
</tr>
<tr>
<td>2. Know the special investigation to reach clinical diagnosis.</td>
<td></td>
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</tr>
<tr>
<td>3. Know the type, surgery and follow up of the patient.</td>
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</tr>
</tbody>
</table>

Department of Radiology & Imaging
MS (Residency) Oral and Maxillofacial Surgery
Duration-03 (Three)-Months
Phase-A, Block-2

I. Imaging Modalities and Interpretation Related to Maxillofacial Surgery:

Special emphasis on:
1. Basic Principles of Radiology
2. Interpretation of radiological investigation
3. Periapical Views, bitewing Views, occlusal views
4. OPG
5. Lateral/lateral oblique views
6. PA views of skull with mandible
7. AP views of skull with mandible
8. PNS view
9. Submento vertex
10. Jage handle Views
11. Town’s views/reverse towns views
12. Waters view
13. Occipito-mental Views
14. Trans- Cranial views
15. Cephalometric Radiography

Objective: able to
1. Know the various types of imaging techniques related to oral and maxillofacial surgery.
2. Interpret the findings.

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skills</th>
<th>Attitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Co-relate the clinical and radiological</td>
<td></td>
<td>1. Respect the need for accurate</td>
</tr>
</tbody>
</table>

Oral and Maxillofacial Surgery-18

Oral and Maxillofacial Surgery-19
II. Special Imaging Related to Maxillofacial Surgery:

**Special emphasis on:**
1. USG
2. CT Scan --- Contrast, Spiral
3. MRI
4. Sinogram
5. Angiogram
6. Color Doppler
7. PET
8. CT guided FNAC
9. USG guided FNAC
10. Scintigraphy

**Objective:** Able to
1. Know the different special imaging technique needs for maxillofacial surgery.
2. Familiar with interpretation of imaging films in the head & neck and maxillofacial region

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skills</th>
<th>Attitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. List of radiological variation related to maxillofacial surgery. 2. Utilize the special investigation tools and findings to assess Maxillofacial Pathology</td>
<td>1. Respect the required investigation.</td>
<td>1. Respect the benefit of patient.</td>
</tr>
</tbody>
</table>

III. Radiological hazard in maxillofacial surgery:

**Special emphasis on:**
1) General Hazard and precaution about contrast media use in imaging
2) Contraindication and limitation of dye use in imaging
3) Contra-indication and limitation of CT scan
4) Contra-indication and limitation of Sialogram
5) Contra-indication and limitation of MRI

**Objective:** Able to
1. Know the bad impact of ray/dye etc on health.
2. Know the precaution to minimized the hazard/complication.
Department of General Surgery
MS (Residency) Oral and Maxillofacial Surgery
Duration-03 (Three) Months
Phase-A, Block-3 & 4

I. Basic Concept of General Surgery Related to Maxillofacial Surgery:
Special emphasis on:
1) Preoperative workup including consent taking
2) Important points on general examination
3) Knowledge about body's response to surgery
4) Points about writing preoperative order, operation note, postoperative order
5) Maintenance of I/O chart, Diabetic chart, dietary chart and medication chart
6) Knowledge about general surgical instrument
7) Swabs and packs, implants materials, ligature, sutures staples and clips
8) Precaution against loss of instrument or swab
9) Postoperative fluid and electrolyte plan
10) Postoperative complication: prevention and management
11) Enteral and parenteral nutrition for surgical patients
12) DIC,ARDS,MOF
13) Important points on Anemia, jaundice, Dehydration, pulse, BP, LN
14) Antibiotic prophylaxis
15) Screening for surgical diseases.
16) Surgical dressing
17) Burn
18) Suture materials
19) Surgical Audits

Objective: able to
1. Evaluate and diagnose the clinical conditions related to Maxillofacial Surgery
2. Know how to manage the various basic problems related to Maxillofacial Surgery.

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skills</th>
<th>Attitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Identify the steps needs to follow before surgery.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Illustrated Per-operative steps of surgery.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Solve Post-operative complications and management.</td>
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</tr>
<tr>
<td>1. Respect the general principle of surgery</td>
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<td></td>
</tr>
</tbody>
</table>

II. Maxillofacial Trauma:
Special emphasis on:
1) Basic knowledge about trauma management
2) Head injury
3) Chest injury
4) Abdomen injury
5) Injury of the extremities
Residency Program

6) Fractures and dislocation
7) Management of bleeding
8) Principle of resuscitation of trauma patient in emergency department
9) Prophylaxis against tetanus

Objective: able to
1. Examine the various types of injuries.
2. Diagnosis, special investigation and management of the various types of injuries.

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skills</th>
<th>Attitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Apply the basic role of examination of Maxillofacial trauma. 2. Utilize special investigation tools and findings to assess injury 3. Plan the management of injury</td>
<td>1. Respect the need for accurate diagnosis and treatment</td>
<td>1. Respect the need for accurate diagnosis and treatment modalities</td>
</tr>
</tbody>
</table>

III. Neoplasm in the head & neck and maxillofacial region
Special emphasis on:
1) Principle of surgery for malignant diseases
2) Pathogenesis of cancer
3) Knowledge about predisposing factors, genetic relation and tumor markers
4) Cancer chemotherapy
5) Cancer radiotherapy
6) Terminal care illness of a patient
7) Nutrition
8) Palliative Care

Objective:
The student will be able to
1. Examine the various types of tumor in maxillofacial region
2. Diagnosis and special investigation of various tumors.
3. Familiar with radiotherapy and chemotherapy treatment modalities.

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skills</th>
<th>Attitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Identify the clinical findings of tumour. 2. Apply special investigation to reach clinical diagnosis of tumour 3. Plan the treatment protocol.</td>
<td></td>
<td>1. Respect the need for accurate diagnosis and treatment modalities</td>
</tr>
</tbody>
</table>

IV. Co-existing Diseases Related to Maxillofacial Surgery
1) Diabetes Mellitus & Surgery
2) Cardiac problem & Surgery
3) Liver Disease & Surgery
4) Kidney Disease & Surgery
5) Anticoagulant and surgery
6) Cytotoxic drugs and surgery
7) Cortisol Dependent Patient & Surgery
8) Jaundice & Surgery
9) Neurological disorder & Surgery
10) Obesity & Surgery
11) Surgery in elderly patients
12) Psychiatric diseases & Surgery
13) Blood disorder & Surgery
14) Respiratory diseases & Surgery
15) Endocrine dysfunction & Surgery
16) AIDS & Surgery
17) Prophylaxis against DVT and PE

**Objective:** The student will be able to
1. Assess the various medically compromised conditions related to maxillofacial surgery.
2. Be familiar with types, special investigation and to diagnose the various medically compromised conditions related to maxillofacial surgery.

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skill</th>
<th>Attitude</th>
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</thead>
<tbody>
<tr>
<td>1. Assess the clinical status of co-existing diseases</td>
<td>1. Respect the need for accurate diagnosis and treatment modalities</td>
<td></td>
</tr>
<tr>
<td>2. Choose the special investigations to reach clinical diagnosis and management of various co-existing diseases</td>
<td>2. Consider the need for multi-disciplinary approach</td>
<td></td>
</tr>
</tbody>
</table>

**V. Operative Theatre and Equipments.**
1) Modern operation theatre
2) Basic principles of MRI/MRCP
3) Basic principle of using Diathermy
4) Basic principle of using laser
5) Basic principle of using USG/CT
6) Knowledge about laparoscopic instrument
7) Tourniquet
8) Principle of laparoscopic/ endoscopic surgery (indication /contraindication /complication)
9) Sinus/fistula/ulcer/swelling/abscess/gangrene/cyst

**Objective:** able to
1. Acquire Knowledge about function of different equipments
2. Be familiar with OT and Equipments etc.

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skill</th>
<th>Attitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. List of special equipments needs for surgery.</td>
<td>1. Respect the steps of each instrumental procedure</td>
<td></td>
</tr>
<tr>
<td>2. Utilize of different equipments.</td>
<td></td>
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</tbody>
</table>

Oral and Maxillofacial Surgery-27
Department of Medicine

MS (Residency) Oral and Maxillofacial Surgery
Duration-03 (Three)-Months
Phase-A, Block-5

I. Oral Manifestation of Systemic Disease:
Special emphasis to
1. Muculopapular rash
2. Viral infection
3. Bacterial infection
4. Fungal infection
5. Auto-immune diseases
6. Connective tissue disorder

Objective: able to
1. Assess a patient presenting with a mucosal lesion.
2. Formulate a differential diagnosis, investigation and management plan.
3. Treat the patient appropriately.

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skills</th>
<th>Attitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Recognize the clinic-pathological correlation of oral mucosal lesion.</td>
<td>1. Respect the need for accurate management</td>
<td>1. Respect the required investigation.</td>
</tr>
<tr>
<td>2. Identify the Specific type of lesion.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

II. Endocrine and Metabolic Disorder:
Special emphasis to:
1. Diabetes mellitus
2. Thyrotoxicosis
3. Hypo/Hyperparathyroidism
4. Hyper/hypo-calcaemia
5. Hyper/hypo-natremia
6. Significance of corticosteroid therapy

Objective: able to
1. Know the patho-physiology of liver disease.
2. Be familiar with management of liver diseases.

III. Liver, Gall bladder and Billiary tract diseases:
Special emphasis on:
1) Jaundice
2) Hepatitis
3) Cirrhosis
4) Veno-occlusive disease
5) Indication of Drugs in liver diseases
6) Pre-operative evaluation and management of a patient with impaired liver function.

Objective: able to
1. Know the identification and investigation of metabolic disorder.
2. Be familiar with management of metabolic disorder.
IV. Haematological Disorder:
Special emphasis on:
1) Blood cell disorder
2) Haemorrhagic disorder
3) Oral manifestation of hematological disorder
4) DIC
5) Haemostasis and Thrombosis
6) Oral manifestation of hematological disorder
7) Blood grouping and its importance
8) Blood transfusion
9) Complication of Blood Transfusion and management

Objective: able to
1. Know the presentation of disorder.
2. Be familiar with management of disorder.

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skills</th>
<th>Attitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Identify the clinical feature of various disorder.</td>
<td>1. Respect the benefit of patient.</td>
<td></td>
</tr>
<tr>
<td>2. Choose special investigation for the diagnosis of various disorder.</td>
<td></td>
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</tr>
</tbody>
</table>

V. Renal Diseases:
Special emphasis to:
1. Acute and chronic renal failure
2. Glomerulopathies, Nephrotic Syndrome
3. Dialysis and surgery
4. Indication of Drugs in renal diseases
5. Preparation of Kidney impaired patient for surgery

VI. Cardio-vascular diseases
Special emphasis on:
1) Infective endocarditis
2) Ischaemic heart disease
3) Atheroslerotic heart diseases
4) CCF, LVF
5) Valvular Heart diseases
6) Pulmonary heart diseases
7) Veno-occlusive disease
8) Indication of Drugs in Cardiac Diseases
9) Heart Block

Objective: able to
1. Know the pathophysiology of marked Heart disease.
2. Familiar with surgical management of marked Heart diseases.

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skills</th>
<th>Attitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Identify the clinical features of various Heart diseases.</td>
<td></td>
<td>1. Respect the benefit of patient.</td>
</tr>
<tr>
<td>2. Choose special investigation for the diagnosis of various Heart diseases.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
VII. Pulmonary Diseases:
Specially emphasis to:
1) Common cold
2) Tuberculosis
3) Asthma
4) Pneumonia, Pneumothorax, Haemothorax, Hydrothorax.
5) Fibrosis, Lung abscess,
6) Bronchial Carcinoma. And Metastatic Lung diseases

Objective: able to-
1. Know the pathophysiology of Lung disease.
2. Be familiar with the management of Lung diseases.

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skills</th>
<th>Attitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Identify clinical feature of various lung diseases.</td>
<td>1. Respect the benefit of patient.</td>
<td></td>
</tr>
<tr>
<td>2. Choose special investigation for the diagnosis of various lung diseases.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Department of Otolaryngology
MS (Residency) Oral and Maxillofacial Surgery
Duration-03 (Three) Months
Phase-A. Block-6

I. Developmental /Congenital Cystic Lesions of the Head and Neck Region:
Special emphasis on:
1. Dermoid and Epidermoid cysts
2. Brachial cysts
3. Thyroglossal cysts
4. Lymphoepithelial cysts (cervical)
5. Cystichygroma

Objective: able to-
1. Know how to examine the various types of cystic lesions in the head and neck region.
2. Able to diagnose cystic lesions of the head neck region

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skills</th>
<th>Attitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Identify the clinical findings of cystic lesion of head and neck</td>
<td></td>
<td>1. Respect the need for accurate diagnosis and treatment</td>
</tr>
<tr>
<td>2) Categorized types of developmental/congenital cysts</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3) Identify etiopathology</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

II. Lymphatic and Vascular Malformation/ Tumor in the Head Neck Region
Special emphasis on:
1. Haemangiomas,
2. Lymphangiomas,
Residency Program

3. Arterio-venous haemangiomas,
4. Nasopharyngeal angiobromas,
5. Haemangio-pericytomas
6. Carotid Body tumor,
7. Juvenile Capillary haemangiomas etc

Objective: able to
1. Know how to examine the various type of vascular and lymphatic malformations in the maxillofacial region.
2. Be familiar with special investigation tools and to diagnose the various type of vascular and lymphatic malformations in the maxillofacial region.

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skills</th>
<th>Attitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Identify the clinical findings</td>
<td>2. Respect the need for accurate diagnosis and treatment</td>
<td></td>
</tr>
<tr>
<td>2. Choose special investigation tools to assess vascular and lymphatic lesions of maxillofacial region.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Categorize types of vascular and lymphatic lesions of maxillofacial region.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Identify etiology</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

III. Salivary gland diseases
Special emphasis on:
1. Parotid gland - neoplastic and non-neoplastic diseases
2. Submandibular gland - neoplastic and non-neoplastic diseases
3. Sublingual gland - neoplastic and non-neoplastic diseases
4. Minor salivary gland - neoplastic and non-neoplastic diseases

Objective: able to -
1. Know how to examine the various type of salivary gland diseases.
2. Be familiar with special investigation and to diagnose the various type of salivary gland diseases.

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skill</th>
<th>Attitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Categorize types of salivary glands</td>
<td>1. Respect the need for accurate diagnosis and treatment modalities</td>
<td></td>
</tr>
<tr>
<td>2. Identify the clinical findings of salivary gland diseases</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Choose the special investigation to reach clinical diagnosis of salivary gland diseases</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Identify etiology</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

IV. Head & Neck Malignancies, Metastasis Neck Diseases
Specially:
1) Tumors of the Hypopharynx
2) Tumors of the Nasopharynx
3) Tumors of the Nose and Sinuses

Objective: The student will be able to:
1. Know how to assess the various type of head & neck malignancies and Metastatic neck diseases.
2. Be familiar with types, special investigation tools and to diagnose the various type of head neck malignancies and metastatic neck diseases as well as occult primary

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skill</th>
<th>Attitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Categorise types of head &amp; neck malignancies and metastatic neck diseases</td>
<td>1. Respect the need for accurate diagnosis and treatment modalities</td>
<td></td>
</tr>
<tr>
<td>2. Identify the clinical findings of head &amp; neck malignancies and metastatic neck diseases</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Choose the special tools for investigation and its findings.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Identify etiology</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Oral and Maxillofacial Surgery-34

Oral and Maxillofacial Surgery-35
Residency Program

V. Thyroid and Parathyroid Gland Diseases including Malignancies

Special emphasis on:
1. Neoplasm of Thyroid gland.

Objective: The student will be able to
1. Know how to assess and examine the thyroid and parathyroid gland diseases.
2. Be familiar with types, special investigation tools and to diagnose the various type of thyroid and parathyroid gland diseases.

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skill</th>
<th>Attitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Categorize types of thyroid and parathyroid gland diseases</td>
<td>1.</td>
<td>Respect the need for accurate diagnosis and management</td>
</tr>
<tr>
<td>2. Identify the clinical findings of thyroid and parathyroid gland diseases</td>
<td>2.</td>
<td>Control of nasal bleeding</td>
</tr>
<tr>
<td>3. Choose the special tools for investigation and its findings</td>
<td>3.</td>
<td>Neoplasm of Paranasal Sinuses</td>
</tr>
<tr>
<td>4. Identify etiology</td>
<td>4.</td>
<td>Rhinoplasty</td>
</tr>
</tbody>
</table>

VI. Medical Emergencies in Relation to Maxillofacial Surgery

Special emphasis:
1) Tracheotomy.
2) Airway clearance
3) Cricothyrotomy

Objective: The student will be able to:
1. Know how to examine the various type of maxillofacial trauma.
2. Be familiar with special techniques for airway clearance, bleeding and determination of consciousness level in maxillofacial emergencies.

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skill</th>
<th>Attitude</th>
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</thead>
<tbody>
<tr>
<td>1. Categorize types of nasal and paranasal sinus diseases</td>
<td>1.</td>
<td>Respect the need for accurate diagnosis and treatment modalities</td>
</tr>
<tr>
<td>2. Identify the clinical findings of nasal and paranasal sinus diseases</td>
<td>2.</td>
<td></td>
</tr>
<tr>
<td>3. Choose the special tools for investigation and its findings</td>
<td>3.</td>
<td></td>
</tr>
<tr>
<td>4. Identify etiology</td>
<td>4.</td>
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</tbody>
</table>

VII. Nose and Paranasal Sinus diseases including reconstructive surgery of nose

Special emphasis on:
1. Nasal bone fracture
2. Control of nasal bleeding.
3. Neoplasm of Paranasal Sinuses.
4. Rhinoplasty

Objective: The student will be able to
1. Know how to examine the various type of nasal and paranasal sinus diseases including laryngoscopy and fiberoptic examination
2. Able to familiar with special tools and investigation techniques for the assessment of nasal and paranasal sinus diseases

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skill</th>
<th>Attitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Categorize types of nasal and paranasal sinus diseases</td>
<td>1.</td>
<td>Respect the need for accurate diagnosis and treatment modalities</td>
</tr>
<tr>
<td>2. Identify the clinical findings of nasal and paranasal sinus diseases</td>
<td>2.</td>
<td></td>
</tr>
<tr>
<td>3. Choose the special tools for investigation and its findings</td>
<td>3.</td>
<td></td>
</tr>
<tr>
<td>4. Identify etiology</td>
<td>4.</td>
<td></td>
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</tbody>
</table>

VIII. Surgical Pathology of External and Internal Oditory Meatus

Special emphasis on:
1. Middle Meatus infection.
2. Congenital and developmental anomalies of ear

Oral and Maxillofacial Surgery-36
Objective: The student will be able to:
1. Know how to examine the various types of ear diseases.
2. Be familiar with special tools and investigation techniques for the assessment of ear diseases.

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skill</th>
<th>Attitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Categorize types of diseases of ear</td>
<td>1. Respect the need for accurate diagnosis and treatment modalities</td>
<td></td>
</tr>
<tr>
<td>2. Identify the clinical findings of external and internal ear diseases</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Choose the special tools for investigation and its findings</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Identify etiopathology</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

IX. Inflammatory and Infectious diseases of the pharynx, tonsil and larynx

Special Emphasis on:
1. Tonsillitis
2. Paratonsillar Abscess/Cellulitis
3. Parapharyngeal Abscess/Cellulitis
4. Retro-pharyngeal Abscess/Cellulitis
5. Mediastinitis

Objective: The student will be able to:
1. Know how to examine the various types of pharyngeal, tonsilar, and laryngeal infections.
2. Be familiar with special tools and investigation techniques for the assessment of pharyngeal, tonsilar, and laryngeal infections.

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skill</th>
<th>Attitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Identify the clinical findings of space infections in the head and neck region</td>
<td>1. Respect the need for accurate diagnosis and treatment modalities</td>
<td></td>
</tr>
<tr>
<td>2. Choose the special tools for investigation and its findings</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Identify etiopathology</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Department of General Dentistry
MS (Residency) Oral and Maxillofacial Surgery
Duration-03 (Three) Months
Phase-A, Block-7

I. Conservative Dentistry & Endodontics
Special Emphasis on:
1. Recent development in conservative dentistry
2. Rotary system for R.C.T
3. Endodontic management of apical and periapical pathology
4. Management of traumatic tooth
5. Evaluation and conservative management of syndromic patient

Objectives
1. To be able to carryout special assessment in relevant Conservative Dentistry & Endodontics.
2. To be able to obtain special ability in recognizing and management of condition related to the subject.

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skills</th>
<th>Attitudes/behavior</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Pulpal and periapical pathology; bacterial, mechanical and chemical irritants,</td>
<td>1. Show attention and respect</td>
<td></td>
</tr>
<tr>
<td>2. Pulp disease</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Classification of pulp and periapical disease</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Laser physics and its implication in dentistry</td>
<td></td>
<td></td>
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</tbody>
</table>

II. Department of Orthodontics
Special Emphasis on:
1. Basic concept of facial growth and malocclusion.
2. Orthodontic evaluation of oro-facial cleft patient.
3. Evaluation of impacted, buried or, unerupted teeth.
4. Pre-operative orthodontic protocol for Orthognathic surgery.
5. Basic principle and interpretation of cephalometric analysis.
6. Interceptive orthodontics.
Residency Program

Objective
1. To be able to carry out special assessment in principles of orthodontics.
2. To be able to obtain different orthodontic related problems in relation to orthognathic surgery.

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skill</th>
<th>Attitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Basic concept of occlusion; classification, completeness of the dentition and the need for other restoration, occlusal support, local occlusal factors such as rotation, overeruption and tipping.</td>
<td>Show attention and respect.</td>
<td></td>
</tr>
<tr>
<td>2. Fundamental principles of management of orthodontic cases</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Diagnostic aspects: History taking, examination, relevant investigations and treatment planning</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Essential diagnostic aids of Orthodontics such as radiograph, photographs and study models.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Treatment possibilities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Periodontal health and maintenance the stability of the potential abutment teeth to support the proposed orthodontic works.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Aesthetic and functional requirements such as patient expectation from the orthodontic works cosmetically and in speech and eating.</td>
<td></td>
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</tr>
<tr>
<td>8. Ortho - Endo relationship</td>
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</tbody>
</table>

Oral and Maxillofacial Surgery-40

III. Department of Prosthetics Emphasis on:
1. Pre-prosthetic evaluation of patient having/undergoing maxillofacial surgery.
2. Prosthesis sequence for cleft patient.
3. Prosthetic consideration and technique of dental implant surgery.
4. Prosthetic reconstruction of maxillofacial surgical defect.

Objectives
1. To be able to carry out special assessment in principles of prosthetics.
2. To be able to carry out special assessment of different prosthesis related problems.
3. To be able to identify different problem based prosthesis.

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skill</th>
<th>Attitudes/ behavior</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Aesthetic and functional requirements such as patient expectation from the prosthesis works cosmetically and functionally.</td>
<td>Show attention and respect.</td>
<td></td>
</tr>
<tr>
<td>2. Periodontal health and maintenance the stability of the potential abutment teeth to support the proposed prosthesis works.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Different scopes of oral rehabilitation such as copy denture, immediate replacement denture, over denture and removal partial dentures.</td>
<td></td>
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</tr>
<tr>
<td>4. Complication and procedural errors during and/or after insertion of prosthesis works and their management.</td>
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</tr>
</tbody>
</table>

Oral and Maxillofacial Surgery-41
Residency Program

IV. Department of Preventive and Children Dentistry

Emphasis on:

Objective
1. To be able to carry out special assessment in principles of Children and Preventive dentistry.
2. To be able to evaluate different problems of children in maxillofacial field.

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skill</th>
<th>Attitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Evaluate strategy of pediatric patients in aspect of child psychology and behavior with parent counseling.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Treatment possibilities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Ortho - Endo relationship</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Medical emergency in pediatric dentistry.</td>
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</tr>
</tbody>
</table>

A. General Clinical Competence:

1. History taking:

   Specially:
   1. Art of History Taking
   2. Clinical Examination in Maxillofacial Region.

Objectives
1. To progressively develop the ability to obtain a relevant focused history from increasingly complex patients and challenging circumstances.
Residency Program

2. Clinical Examination:

   Specially:

1. **Art of Clinical Examination Objectives:**
2. To progressively develop the ability to obtain a relevant focused history from increasingly complex patients and challenging circumstances.
3. To relate physical findings to history in order to establish diagnosis and formulate a management plan.

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skills</th>
<th>Attitude/behaviours</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Understand the need for a valid clinical examination.</td>
<td>1. Perform and examination relevant to the presentation and risk factors that is valid, targeted and time efficient.</td>
<td>1. Show respect and behave in accordance with good dental practice.</td>
</tr>
<tr>
<td>2. Understand the basis for clinical signs and the relevance of positive and negative physical signs.</td>
<td>2. Recognize the possibility of deliberate harm in vulnerable patients and report to appreciate agencies.</td>
<td></td>
</tr>
<tr>
<td>3. Recognize contains to performing physical examination and strategies that may be used to overcome them.</td>
<td>3. Interpret findings from the history, physical examination and mental state examination, appreciating the importance of clinical, psychological, religious, social and cultural factors actively elicit important clinical findings.</td>
<td></td>
</tr>
<tr>
<td>4. Recognize the limitations of physical examination and the need for adjunctive forms of assessment to confirm diagnosis.</td>
<td>4. Perform relevant adjunctive examinations.</td>
<td></td>
</tr>
</tbody>
</table>

Objective: The student will be able to:

1. Examine the various type of Swelling in maxillofacial region
2. Familiar with special investigation and to diagnose the various type of Swelling in maxillofacial region.

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skills</th>
<th>Attitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Recall the clinical findings of Swelling</td>
<td>1. Differentiate the findings.</td>
<td>1. Respect the need for accurate diagnosis and treatment modalities</td>
</tr>
<tr>
<td>2. Choose the special investigation to reach clinical diagnosis.</td>
<td>2. Grasp the special investigations.</td>
<td></td>
</tr>
<tr>
<td>3. Detect treatment plan</td>
<td>3. Handle the various modalities of surgical procedure</td>
<td></td>
</tr>
</tbody>
</table>

2. Pain in maxillofacial region

Objective: Able to

1. Differentiate different type of pain
2. Familiar with special investigation and diagnose the various type of pain in maxillofacial region.

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skills</th>
<th>Attitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. List of type of pain in maxillofacial region.</td>
<td>1. Differentiate the type of pain.</td>
<td>1. Respect the benefit of patient.</td>
</tr>
<tr>
<td>2. Formulate the steps of management.</td>
<td>2. Handle the patient to control pain.</td>
<td></td>
</tr>
</tbody>
</table>

Oral and Maxillofacial Surgery-44
3. Ulcer in Maxillofacial Region

Objective: Able to
1. Differentiate different type of Ulcer
2. Familiar with special investigation and diagnose the various type of ulcer in maxillofacial region.

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skills</th>
<th>Attitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. List of type of Ulcer in</td>
<td>1. Differentiate the type of ulcer.</td>
<td>1. Respect the benefit of</td>
</tr>
<tr>
<td>maxillofacial region.</td>
<td>2. Handle the patient for treatment.</td>
<td>patient.</td>
</tr>
<tr>
<td>2. Formulate the steps of</td>
<td></td>
<td></td>
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<tr>
<td>management.</td>
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</tbody>
</table>

4. Vesico-bullar lesion in maxillofacial region

Objective: able to
1. Assess a patient presenting with a Vesico-bullar lesion.
2. Formulate a differential diagnosis, investigation and management plan.
3. Treat the patient appropriately.

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skills</th>
<th>Attitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Define the clinico -</td>
<td>1. Differentiate the clinical features.</td>
<td>1. Respect the need for</td>
</tr>
<tr>
<td>pathological co-relation of oral</td>
<td>2. Grasp diagnosis and handle management.</td>
<td>accurate management.</td>
</tr>
<tr>
<td>Vesico-bullar lesion.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Identify Specific type of</td>
<td></td>
<td></td>
</tr>
<tr>
<td>lesion.</td>
<td></td>
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</tr>
</tbody>
</table>

5. Trismus

Objective: Able to
1. Know the identification and investigation of trismus.
2. Familiar with management of trismus.

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skills</th>
<th>Attitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Define the pathophysiology of trismus.</td>
<td>1. Reach the diagnosis.</td>
<td>Respect the required investigation.</td>
</tr>
<tr>
<td>2. Identify the causes, effects and complication of trismus.</td>
<td>2. Handle the management.</td>
<td></td>
</tr>
</tbody>
</table>

6. Limitation of mouth opening:

Objective: Able to
1. Know the identification and investigation of Limitation of mouth opening.
2. Familiar with management of Limitation of mouth opening.

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skills</th>
<th>Attitude</th>
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</thead>
<tbody>
<tr>
<td>1. Define the pathophysiology of this condition.</td>
<td>1. Reach the diagnosis.</td>
<td>Respect the required investigation.</td>
</tr>
<tr>
<td>2. Identify the causes, effects and complication of this condition.</td>
<td>2. Handle the management.</td>
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</tbody>
</table>

7. Facial deformity:

Objective: able to
1. Know the identification and investigation of facial deformity.
2. Familiar with management of facial deformity.

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skills</th>
<th>Attitude</th>
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</thead>
<tbody>
<tr>
<td>1. Define the pathophysiology of this condition.</td>
<td>1. Reach the diagnosis.</td>
<td>Respect the required investigation.</td>
</tr>
<tr>
<td>2. Identify the causes, effects and complication of this condition.</td>
<td>2. Handle the management.</td>
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</tbody>
</table>
8. Facial Asymmetry:

**Objective:** able to
1. Know the identification and investigation of facial asymmetry.
2. Familiar with management of facial asymmetry.

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skills</th>
<th>Attitude</th>
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</thead>
<tbody>
<tr>
<td>1. Define the pathophysiology of this condition.</td>
<td>1. Reach the diagnosis.</td>
<td>Respect the required investigation.</td>
</tr>
<tr>
<td>2. Identify the causes, effects and complication of this condition.</td>
<td>2. Handle the management.</td>
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</tbody>
</table>

9. Malocclusion:

**Objective:** able to
1. Know the identification and investigation of malocclusion.
2. Familiar with management of malocclusion.

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skills</th>
<th>Attitude</th>
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</thead>
<tbody>
<tr>
<td>1. Define the pathophysiology of this condition.</td>
<td>1. Reach the diagnosis.</td>
<td>Respect the required investigation.</td>
</tr>
<tr>
<td>2. Identify the causes, effects and complication of this condition.</td>
<td>2. Handle the management.</td>
<td></td>
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</tbody>
</table>

10. Defect in Maxillofacial Region:

**Objective:** able to
1. Know the identification and investigation of defect in maxillofacial region.
2. Familiar with management of defect in maxillofacial region.

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skills</th>
<th>Attitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Define the pathophysiology of this condition.</td>
<td>1. Reach the diagnosis.</td>
<td>Respect the required investigation.</td>
</tr>
<tr>
<td>2. Identify the causes, effects and complication of this condition.</td>
<td>2. Handle the management.</td>
<td></td>
</tr>
</tbody>
</table>

11. Ptyalism/xerostomia:

**Objective:** able to
1. Know the identification and investigation of ptyalism/xerostomia.
2. Familiar with management of ptyalism/xerostomia.

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skills</th>
<th>Attitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Define the pathophysiology of this condition.</td>
<td>1. Reach the diagnosis.</td>
<td>Respect the required investigation.</td>
</tr>
<tr>
<td>2. Identify the causes, effects and complication of this condition.</td>
<td>2. Handle the management.</td>
<td></td>
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</tbody>
</table>

12. Mobility of teeth:

**Objective:** Able to
1. Know the identification and investigation of Mobility of teeth
2. Familiar with management of this condition.

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<thead>
<tr>
<th>Knowledge</th>
<th>Skills</th>
<th>Attitude</th>
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</thead>
<tbody>
<tr>
<td>1. Define the pathophysiology of this condition.</td>
<td>1. Reach the diagnosis.</td>
<td>Respect the required investigation.</td>
</tr>
<tr>
<td>2. Identify the causes, effects and complication of this condition.</td>
<td>2. Handle the management.</td>
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</tbody>
</table>
13. Gum bleeding:
Objective: Able to
1. Know the identification and investigation of gum bleeding.
2. Familiar with management of this condition.

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skills</th>
<th>Attitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Define the pathophysiology of this condition.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Identify the causes, effects and complication of this condition.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Reach the diagnosis.</td>
<td></td>
<td></td>
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<tr>
<td>2. Handle the management.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Respect the required investigation.</td>
<td></td>
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</tbody>
</table>

14. Exophytic lesions:
Objective: The student will be able to:
1. Know how to examine the various type of exophytic growth.
2. Able to familiar with special investigation and diagnose the various type of exophytic growth.

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skills</th>
<th>Attitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Define the clinical findings of exophytic growth.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Choose the special investigation to reach clinical diagnosis.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Define the treatment plan.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Reach the diagnosis.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Handle the management.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Respect the need for accurate diagnosis and treatment modalities</td>
<td></td>
<td></td>
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</tbody>
</table>

15. Pigmented Lesions:
Objective: The student will be able to:
1. Know how to examine the various type of pigmented lesion.
2. Familiar with special investigation and diagnose the various type of pigmented lesions.

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skills</th>
<th>Attitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Define the clinical findings of pigmented lesion.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Choose the special investigation to reach clinical diagnosis.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Define the treatment plan.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

16. Patches/macule/papillary lesion in maxillofacial region:

Objective: The student will be able to:
1. Know how to examine the various type of Patches/macule/papillary lesion in maxillofacial region.
2. Familiar with special investigation and diagnose the various type of Patches/macule/papillary lesion in maxillofacial region.

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skills</th>
<th>Attitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Define the clinical findings of Patches/macule/papillary lesion in maxillofacial region</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Choose the special investigation to reach clinical diagnosis.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Define the treatment plan</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Reach the diagnosis.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Handle the management.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Respect the need for accurate diagnosis and treatment modalities</td>
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</tbody>
</table>

C. Emergency
1. Cardio-Pulmonary arrest:

Objective:
1. Carries out special assessment and treatment of patients with Cardio-Pulmonary arrest.
2. Residency Program

2. Record accurately and synthesize history with clinical examination and formulation of management plan according to likely clinical evolution.

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skill</th>
<th>Attitude/behaviors</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Identify the causes. 2. Utilize relevant history and perform a reliable and appropriate examination. 3. Select and use investigations appropriately.</td>
<td>1. Formulate a management plan for acute period of care, including in the event of normal or inconclusive investigation. 2. Prescribe non-invasive ventilation where appropriate. 3. Be able to select and use investigation appropriately. 4. Be able to present the risks and benefits of an intervention to a patient in a way that they understand.</td>
<td>1. Show respect and behave in accordance with the benefit of patient.</td>
</tr>
</tbody>
</table>

2. Unconscious patient:

**Objective:**

1. Able to promptly assess the unconscious patient to a different diagnosis, establish safe monitoring, and investigate appropriately.
2. Formulate an initial management plan, including recognizing situation in which emergency specialist investigation or referral is required.

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skill</th>
<th>Attitude/behaviors</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Identify the principle causes of unconsciousness</td>
<td>1. Make a rapid and immediate</td>
<td>1. Recognized immediate</td>
</tr>
</tbody>
</table>

3. Dental Chair Emergency

**Objective**

1. Identify shocked patients, assess their clinical state, produce a list of appropriate differential diagnosis.
2. Initiate immediate management.

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skill</th>
<th>Attitude/behaviors</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Identify and recognized the principle causes of emergency. 2. Define the indications, limitations, risks and predictive value of non-invasive and invasive investigations.</td>
<td>1. Be able to diagnosis the situation accurately and immediately. 2. Be able</td>
<td>1. Arrange immediate resuscitation and involve appropriate specialist to facilitate immediate management.</td>
</tr>
</tbody>
</table>
4. Hemorrhage

**Objective**
1. To be able to carry out specialist assessment and treatment of patients with hemorrhage.
2. To record accurately and synthesize history with clinical examination and formulation of management plan according to likely clinical evolution.

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skill</th>
<th>Attitude/behaviours</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Be able to take relevant history and perform a reliable and appropriate examination.</td>
<td>1. Appreciate the importance of the history in evaluating the clinical status.</td>
<td>1. Show respect and behave in accordance with the benefit of patient.</td>
</tr>
<tr>
<td>2. Be able to select and use investigations appropriately.</td>
<td>2. Be able to select and use investigation appropriately.</td>
<td></td>
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</tbody>
</table>

5. Acute Respiratory Obstruction

**Objective**
1. To be able to assess a patient presenting with breathlessness to produce a valid differential diagnosis, investigate appropriately, formulate and implement a management plan.

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skill</th>
<th>Attitude/behaviours</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Define the causes of pain and disfunction of TMJ.</td>
<td>1. Able to take the history in evaluate the causes of pain and disfunction of TMJ and its complication.</td>
<td>1. Show respect and behave in accordance with the benefit of patient.</td>
</tr>
<tr>
<td>2. Be able to take relevant history and perform a reliable and appropriate examination.</td>
<td>3. Be able to select and use investigations appropriately.</td>
<td></td>
</tr>
</tbody>
</table>

6. Dislocation/Displacement of TMJ

**Objective**
1. To be able to carry out special assessment and treatment of patients with Dislocation/Displacement of TMJ.
2. To record accurately and synthesize history with clinical examination and management.
Residency Program

D. Investigation competences

1. Routine investigation:

Objective:
1. Able to perform competently and/or select appropriately and interpret correctly the advised investigations for the diagnosis and assessment of patients' condition.

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skill</th>
<th>Attitude/behaviors</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Define the indications for, and be able to report and interpret the result.</td>
<td>1. Prescribe the investigations relevant to the condition of patient. 2. Able to interpret the result of investigations.</td>
<td>1. Show respect and behave in accordance with the benefit of patient.</td>
</tr>
</tbody>
</table>

2. Special investigation:

Objective:
1. Able to perform competently and/or select appropriately and interpret correctly the advised investigations for the diagnosis and assessment of patient's condition.

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skill</th>
<th>Attitude/behaviors</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Define the indications for, and be able to report and interpret the result.</td>
<td>1. Prescribe the investigations relevant to the condition of patient. 2. Able to interpret the result of investigations.</td>
<td>1. Show respect and behave in accordance with the benefit of patient.</td>
</tr>
</tbody>
</table>

Communicator competence

<table>
<thead>
<tr>
<th>Objective</th>
<th>Knowledge</th>
<th>Skill</th>
<th>Attitude/behaviors</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Able to facilitate the doctor-patient relationship. 2. Able to exchange information before, during and after the medical encounter.</td>
<td>1. Define rapport, trust and ethics and describe their role for establishing the doctor-patient relationship. 2. Describe physician role to effectively facilitate doctor-patient relationship. 3. Describe how poor communication affects the clinical outcome.</td>
<td>1. Competent to establish rapport and trust, formulation a diagnosis, delivering information, striving for mutual understanding, and facilitating a shared plan of care. 2. Capable to elicit and synthesize relevant information and perspectives of patients and families, colleagues, and other professionals. 3. Talent to accurately convey relevant information and explanation to patients and families, colleagues, and other professionals. 4. Capable to convey effective oral and written information about a medical encounter.</td>
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</tbody>
</table>
### Collaborator Competence

<table>
<thead>
<tr>
<th>Objective</th>
<th>Knowledge</th>
<th>Skill</th>
<th>Attitude/behaviours</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Able to work within a multi-professional environment.</td>
<td>1. Describe the importance of multi-professional environment.</td>
<td>1. Competent to collaborate effectively with patients, families, and an inter-profession team of expert health professionals.</td>
<td>1. Participate effectively in inter-profession team meeting.</td>
</tr>
<tr>
<td></td>
<td>2. Describe the roles and responsibilities of collaborator to other professionals.</td>
<td>2. Capable to participate effectively and appropriately in an multi-professional health care team.</td>
<td>1. Respect team ethics, including confidentiality, resource allocation and professionalism.</td>
</tr>
<tr>
<td></td>
<td>3. Describe collaborator role for work within a multi-professional healthcare team.</td>
<td>3. …Talent to work with other health professionals to prevent, negotiate, and resolve inter-professional conflict.</td>
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</table>

### Health Advocate Competence

<table>
<thead>
<tr>
<th>Objective</th>
<th>Knowledge</th>
<th>Skill</th>
<th>Attitude/behaviours</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Able to accept physician responsibilities.</td>
<td>1. Describe principles of health policy and its implication.</td>
<td>1. Competent to identify the health need of an individual patient.</td>
<td>1. Competent to identify the health need of an individual patient.</td>
</tr>
<tr>
<td>2. Able to use their expertise and influence to advance the health and well-being of individual patients, communities, and populations.</td>
<td>2. Express encouragement for individual patients, populations and communities.</td>
<td>2. Capable to identify opportunities for advocacy, health promotion and disease prevention with individuals to whom they provide care.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3. Describe how public policy impacts on the health of the populations served.</td>
<td>3. Describe the ethical and professional issues inherent in</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4. Describe the ethical and professional issues inherent in</td>
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### Manager Competence

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<tr>
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<th>Skill</th>
<th>Attitude/behaviors</th>
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</thead>
<tbody>
<tr>
<td>1. Able to participate integrally in healthcare organizations.</td>
<td>1. Describe the structure and function of the healthcare system as it relates to their specialty, including the roles of physicians.</td>
<td>1. Capable to active engagement of all physicians in decision making in the orientation of the healthcare system.</td>
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<tr>
<td>2. Able to organizing sustainable practices.</td>
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<tr>
<td>3. Able to making decisions about allocating resources and contributing the effectiveness of the</td>
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</table>
### Scholar competence

<table>
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<tr>
<th>Objective</th>
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<th>Skill</th>
<th>Attitude/behaviours</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Able to demonstrate a lifelong commitment to reflective learning.</td>
<td>1. Describe the principles of maintenance of scholar competence.</td>
<td>1. Capable to enhance professional competence.</td>
<td>1. Capable to identify gaps in knowledge.</td>
</tr>
<tr>
<td>2. Able to create, disseminate, apply and translate medical knowledge.</td>
<td>2. Describe the principles and strategies for implanting a personal knowledge management system.</td>
<td>2. Capable to facilitate the learning of patients, families, students, residents, other health professionals.</td>
<td>2. Capable to recognize and reflect learning issues in practice.</td>
</tr>
<tr>
<td></td>
<td>3. Describe the principles of critical assessment.</td>
<td>3. Competence to recognize learning issues in practice.</td>
<td></td>
</tr>
<tr>
<td></td>
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<td>4. Capable to identify gaps in knowledge.</td>
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</table>

### Professional competence

<table>
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<th>Knowledge</th>
<th>Skill</th>
<th>Attitude/behaviours</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Able to commit to the health.</td>
<td>1. Describe responsibilities to the profession including obligations of peer review.</td>
<td>1. Capable to demonstrate a commitment to their patients, profession, and society through ethical practice.</td>
<td>1. Capable to demonstrate a commitment to their patients, profession, and society through ethical practice.</td>
</tr>
<tr>
<td>2. Able to commit well-being of</td>
<td></td>
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</tbody>
</table>

### The Learning Process: Principal Teaching/Learning Methods

1. Supervised direct patient care activities:
   - Clinical training rotations:
     - Phase-A: Core block, Elective block
     - Phase-B: Specialty rotation: Core, Advanced sub-specialty rotation
   - Educational activities:
     - Learning in non-clinical aspects of the curriculum

### Rotation Specific Competency Objectives:

The seven role of physicians, as defined by the CanMEDS framework (Annexure 1), may form the structure for the organization of competencies. The roles are: 1) Medical Expert, 2) Communicator, 3) Collaborator, 4) Manager, 5) Health Advocate, 6) Scholar, 7) Professional. They are of course, not discrete and free-standing, but overlap and inter-relate to produce on overall picture of the physician as a medical expert. This framework encompasses the complex and ever-evolving roles the physician is expected to play in present day medicine. It underlines the need to bring crucial but previously ignored competencies, such as communication and professionalism, to

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the forefront of medical training objectives. Such competencies need to be fully recognized as central role to the medical profession.

Competencies are understood as the ability to use knowledge, skills and appropriate attitude to solve clinical problems in a professional, ethical and proficient way for optimal patient and societal outcomes. In the curriculum each of the seven roles is briefly defined, the nature of the role is described, competencies deemed to be key for the role are listed, specific training requirements are described, and teaching, learning and assessment methods are suggested.

Learning Experiences:

A. Experiential learning opportunities:

1. Every patient seen, on the ward or in out-patients, provides a learning opportunity, which will be enhanced by following the patient through the course of their illness. Patients seen should provide the basis for critical reading around clinical problems.

2. Every time a trainee observes another doctor, consultant or fellow trainee, seeing a patient or their relatives there is an opportunity for learning.

3. Ward-based learning including ward rounds. Ward rounds, including those post-take, should be led by a consultant and include feedback on clinical and decision making skills.

4. Supervised consultations in outpatient clinics. Trainee should have the opportunity to assess both new and follow-up patients and discuss each case with the supervisor so as to allow feedback in diagnostic skills and gain the ability to plan investigations.

5. Trainees need to learn to make increasingly independent decisions on diagnosis, investigations and treatment consistent with their level of experience and competence and with maintaining patient safety. These decisions should be reviewed with their supervising consultant.

6. There are many situations where clinical problems are discussed with clinicians in other disciplines such as cardiac surgical multidisciplinary meeting. These provide excellent opportunities for observation of clinical reasoning.

B. Training in practical procedures:

Undertaking supervised practical procedures with a consultant or more senior trainee, including the care and counseling of the patient/ carers before and after the procedure, is the key method of gaining competence in these aspects of the curriculum (apprenticeship learning). Also with advances in technology the use of simulators will play an increasing part in the training of practical procedures. As trainees gain experience they will progress from observing to performing and from simple to more complex cases. Trainees should maintain a logbook of experience. Where appropriate the curriculum indicates the likely minimum number of procedures thought necessary to encompass a sufficiently broad spectrum of clinical experience to define performance of “does” in Miller’s triangle.

C. Small group learning opportunities:

1. Case presentations and small group discussion, particularly of difficult cases, including presentations at clinical and academic meetings. This should include critical incident analysis.

2. Small group bedside teaching, particularly covering problem areas identified by trainee.

3. Small group sessions of data interpretation, particularly covering problem areas identified by trainees. Participation in audit meetings, journal club and research presentations etc.

D. One-to-one teaching:

1. Review of out-patients, ward referrals or in-patients with supervising consultant.

2. Review / case presentations with educational supervisor including selected notes.

3. Letters and summaries.

4. Critical incident analysis.

5. Discussion between trainee and trainer of knowledge of local protocols.

6. Feedback following assessments provide excellent teaching opportunities.
E. Regular teaching and External Course etc:
1. Lecture and small group teaching organized within deaneries
2. Educational courses organized by professional societies
3. Formal training in communication skills and teaching skills

F. Personal study:
1. Personal study including computer-based learning.
2. Practice examination question and subsequent reading.
3. Reading journals.
4. Writing reviews and other teaching material.

G. Teaching others:
   a) Teaching undergraduate medical student and student in allied health professions and postgraduate doctors provides excellent learning opportunities.
   b) Presenting cases at grand rounds or similar clinical meetings provides an opportunity for in depth study of one clinical problem as well as learning important critical thinking skills.
   c) Journal club presentations allow development of critical thinking and in depth study of particular areas.

H. Research:
1. Research provides the opportunity to develop critical thinking and the ability to review medical literature. This is an essential skill for effective clinical practice as well as for the pursuit of more academic research.
2. Clinical research allows development of particular expertise in one area of medicine allowing more in depth knowledge and skills and helping to focus long term career aim and interests.

Record of Training:
The evidence requires confirming progress through training includes:
- Details of the training rotations, weekly timetables and duty rosters; case-mixes and numbers of practical procedures and outcomes.

Logbook:
Residents are required to maintain a logbook in which entries of academic/professional work done during the period of training should be made on a daily basis, and signed by the supervisor. Completed and duly certified logbook will form a part of the application for appearing in Phase Final Examinations.

Portfolio:
This is a collection of evidence documenting trainee's learning and achievements during their training. The trainee takes responsibilities for the portfolio's creation and maintenance. It will form the basis of assessment of progression.

Assessment:
The assessment method is comprehensive, integrated and phase-centered attempting to identify attributes expected of specialists for independent practice and lifelong learning and covers cognitive, psychomotor and affective domains. It keeps strict reference to the components, the contents, the competencies and the criteria laid down in the curriculum. Assessment includes both Formative Assessment and Summative (Phase final) Examinations.

Formative Assessment:
Residency Program

Formative assessment will be conducted throughout the training phases. It will be carried out for tracking the progress of residents, providing feedback, and preparing them for final assessment (Phase completion exams). There will be continuous (day-to-day) and periodic type of formative assessment.

- **Continuous (day-to-day) formative assessment** in classroom and workplace settings provides guidance and feedback to the student's learning and a faculty's teaching/learning strategies to ensure formative lesson/training outcomes.
- **Periodic formative assessment** is quasi-formal and is directed to assessing the outcome of a **block placement** or **academic module completion**. It is held at the end of Block Placement and Academic Module completion. The contents of such examinations include **Block Units** of the Training Curriculum and **Academic Module Units** of the Academic Curriculum.
- **End of Block Assessment (EBA)**: End of Block Assessment (EBA) is a Periodic Formative Assessment and is undertaken after completion of each training block, assessing knowledge, skills, and attitude of the residents. Components of EBA are written examination, Structured Clinical Assessment (SCA), medical record review, logbook review, and portfolio assessment. Incomplete block training must be satisfactorily completed by undergoing further training for the block to be eligible for appearing in the next phase completion examination.

**Summative (Phase A Final) Examination:**

**Phase A Final examination** will be common for Medicine and allied and will have following components:

- Written examination (SAQ/SEQ)
- Clinical examination:
  - Long case (1)
  - Short cases (4)
  - Structured Clinical Assessment (SCA-10)

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**Supervision and Training Monitoring**

The training will incorporate the principle of gradually increasing responsibility, and will guide and trainee with a sufficient scope, volume and variety of experience in a range of settings that include inpatients, outpatients, emergency, and intensive care. All elements of work in training rotation will be supervised with the level of supervision varying depending on the experience of the Resident and the clinical exposure. Outpatient and referral service must be conducted to ensure the opportunity to personally discuss all cases. As training progresses the Resident should have the opportunity for increasing autonomy, consistent with safe and effective care for the patient. Residents will at all times have a Supervisor, responsible for overseeing their education and training.

**Supervisors** are responsible for supervision of training throughout the program to ensure patient safety, service delivery as well as the progress of the resident with learning and performance. They set the lesson plans based on the curriculum, engage in appraisal, review progress against the curriculum, give feedback on both formative and summative assessments, and ensure proper recording of the and signing the logbook. The residents are made aware of their limitations and are encouraged to seek advice and receive help at all times.

**The Course Coordinator** of each department coordinates all training and academic activities of the program in collaboration with the **Course Manager(s)**. The **Course Director** of each faculty directs, guides, and manages curricular activities under his/her jurisdiction and is the person to be reported to for all events and performances of the residents and the supervisors.

**Curriculum Implementation, Review and Updating:**

Both Supervisors and Residents are expected to have a good knowledge of the curriculum and should use it as a guide for their training program. Since Medicine has historically been a rapidly changing specialty, the need for review and updating of
curricula is evident. The Curriculum is specifically designed to guide an educational process and will continue to be the subject of active redrafting, to reflect changes in both Medicine and educational theory and practice. Residents and Supervisors are encouraged to discuss the curriculum and to feedback on content and issues regarding implementation with the Course Director. Review will be time tabled to occur annually for any minor changes to the curriculum.