

**-SQA-SCOTTISH QUALIFICATIONS AUTHORITY**

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**NATIONAL CERTIFICATE MODULE DESCRIPTOR**

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**-Module Number-** 0069143 **-Session-1986-87**  
**-Superclass-** PF

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**-Title-** DENTAL SPECIAL TRAYS

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**-DESCRIPTION-**

Type and Purpose A Specialist Module for Dental Technology students who require a knowledge of the construction and principles of special trays. It is also suitable for students requiring basic skills in working with acrylic.

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Preferred Entry Level 09142 Dental Casts

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Learning Outcomes The student should:

1. know the uses of special trays and the principles underlying the construction of special trays;
2. know the properties and types of materials used in special tray construction;
3. prepare casts for partial and complete special trays, and make partial and complete special trays for both edentulous and dentate casts to prescription using various materials;
4. demonstrate safe working practice in the laboratory.

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Content/Context Corresponding to Learning Outcomes 1 - 4:

1. Uses of special trays.  
Retention of impression material:
  - 1.1 material retained by preparations in tray;
  - 1.2 material retained by roughening the tray;

1.3 material retained by use of adhesives.

Aids to dimensional accuracy of impression:

- 1.4 permits correct thickness of impression material to be used;
- 1.5 prevents distortion of material during setting and removal from mouth;
- 1.6 allows the impression material to cover the whole area required.

Principles in constructing special trays:

coverage (In relation to anatomical landmarks):

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|--------|--|
| upper; | 1.7 labial sulcus,<br>1.8 buccal sulcus,<br>1.9 hamular notch,<br>1.10 fovea palatina,<br>1.11 muscle attachments.     |
| lower; | 1.12 labial sulcus,<br>1.13 buccal sulcus,<br>1.14 retromolar pad,<br>1.15 lingual sulcus,<br>1.16 muscle attachments. |

Handle position.

Dentate Trays: handle straight out from anterior incisal edge between the lips.

Edentulous Trays: handle comes up vertically from the crest of the anterior ridge to the height of the mid lip line then straight out between the lips.

2. Properties of materials:

- 2.1 ease of manipulation;
- 2.2 strength and rigidity;
- 2.3 retention of shape at mouth temperature;
- 2.4 non-irritant to mouth tissues
- 2.5 must retain the impression materials in correct position.

Types of materials:

- 2.6 shellac;
- 2.7 self cured acrylic resin;
- 2.8 heat cured acrylic resin;
- 2.9 vacuum formed plastic.

3. For both edentulous and dentate casts:
  - 3.1 outlining periphery of tray on cast;
  - 3.2 laying spacers to prescription given;
  - 3.3 use of at least two types of materials to make accurately fitting bases with securely attached handles for partial and complete special trays.
4. Safe working practices with wax, flamer, bunsen burner and instruments.

Safe handling of methyl methacrylate, handpiece, and acrylic dust with particular reference to safety precautions needed to protect eyes.

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Suggested  
Learning and  
Teaching  
Approaches

Relating to Learning Outcomes 1 - 4:

This is a practical-based module in which the majority of the time will be spent in practising skills to achieve a satisfactory standard of work.

- 1-2 A collection of demonstration models, visual aids, films and existing special trays could be shown to the student during short lectures and discussions, backed up where possible by a visit to a clinic.
  3. The whole procedure for a special tray could be demonstrated by the use of a series of prepared special trays at differing stages in their construction, so that the time factor is eliminated and the student can gain an overview of the task he/she will be required to carry out. The student will subsequently, under constant guidance, make several different special trays using various materials. The student should be kept informed of his/her progress and formative assessment by oral questioning and observation of the student's practical work should accompany each practical activity so that remedial action can be undertaken. There should be a discussion on the restraint imposed by industry with regard to the time allocated to this task.
  4. The safety procedures should be demonstrated and subsequently discussed frequently throughout the module.
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Assessment  
Procedures

Relating to Learning Outcomes 1 - 4:

1. Short oral or written test or tests (objective or short answer) when appropriate during the module but allowing time for remediation and retesting if necessary.
2. Short oral or written test or tests (objective or short answer) when appropriate during the module but allowing time for remediation and retesting if necessary.
3. Observation of performance during practical work and inspection of finished work using a checklist to indicate that satisfactory special trays for both edentulous and dentate casts have been made on two occasions.

Checklist

- 3.1 Preparation of casts.
  - 3.2 Fit and coverage of bases.
  - 3.3 Thickness of material.
  - 3.4 Handle.
  - 3.5 Quality of finish.
  - 3.6 Correct interpretation of prescription.
4. Observation during practical activities and the use of a checklist to indicate safe procedure observed for:
- electrical equipment;
  - methyl methacrylate;
  - hot wax;
  - bunsen burner;
  - flamer;
  - hand piece;
  - eye protection;
  - face protection.

Performance Criteria.

Learning Outcomes 1 and 2:

The performance in the respective tests should indicate that the student has mastered the content required for the Learning Outcomes. The exact score required will depend on the difficulty and extent of the tests and cannot be fully judged in advance; it is however unlikely to be less than 70% correct response.

Learning Outcome 3:

The student can carry out all the requirements of the Learning Outcome to a consistently satisfactory standard. This will be indicated by the completion of all the items on the checklist on all four occasions. The dental trays to be used for summative assessment should be retained.

Learning Outcome 4:

The student observes the safe procedure for each item on the checklist before he/she is credited with achievement of the Learning Outcome.

For Learning Outcomes 1,2,3 and 4 the standard to be achieved will be a matter for the professional judgement of the tutor aided by the Council's assessor.

Award of the module depends on satisfactory achievement of all the Learning Outcomes.