

**-SQA-SCOTTISH QUALIFICATIONS AUTHORITY**

**Hanover House  
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**NATIONAL CERTIFICATE MODULE DESCRIPTOR**

**-Module Number-**      0065610                              **-Session-1986-87**  
**-Superclass-**            WK  
**-Title-**                    **CARCASE AND FRAME CONSTRUCTION BY  
MACHINE (x 2)**

**-DESCRIPTION-**

Type and Purpose                    A specialist module (2) which enables the student to construct an article of furniture or furniture components using machines.

Preferred Entry Level                05611: Tooling and Equipment: Woodworking, Machines.  
05312: Machine Wood Working: Breaking Out Machines.

Learning Outcomes                    The student should:

1.    know the constructional details of carcasses and frames.
2.    select suitable joints and methods of construction to make furniture.
3.    use woodworking machinery to form selected joints.
4.    construct a carcass or frame;
5.    comply with regulations and procedures and use safe working practices specified for equipment and work areas.

Content/ Context                        Corresponding to the Learning Outcomes:

1.    (a)    knowledge of the mechanical and structural properties of carcasses, frames and shells;
- (b)    relationship between different components to establish rigidity in the manufacture of cabinets, tables and chairs;
- (c)    use of sketches to explain the principles of rigidity;

- (d) identification of which of the following joints rely on the above properties: dowel, mortice and tenon, dovetail, housing, tongue and groove, mitre, loose tongue biscuit, vee groove and fold, corner locking (comb), knock down.
2. common joints used in construction of furniture from the above range; the methods of construction used to suit solid timber and sheet materials.
  3. correct use of woodworking machinery to form joints including single head dowel borer, mortise machine, single ended tenoner, lever operated dovetailer, high speed router, biscuit jointer to form selected joints.
  4.
    - (a) preparation of working drawings from written or graphic specifications;
    - (b) marking out of job;
    - (c) correct sequence of assembly, application of adhesives, check to ensure squareness and prevention of twist;
    - (d) knowledge of hydraulic cramping equipment to assemble components.
  5. safety precautions and regulations relevant to tools, equipment, behaviour and work; there should be strict compliance with Machine Woodworking Regulations 1974.

#### Suggested Learning and Teaching Approaches

It is envisaged that the general teaching approach will be activity/workshop based and student centred.

The learning programme should interest the student and relate to a theme or vocational bias.

Critical skills and techniques should be demonstrated prior to student involvement.

Posters, information sheets, worksheets, workfiles, slides, films and video may be used to enhance the learning environment and process.

A set of completed exercises should be available for student to work to and compare standards.

Safety, safe working practices, care and use of equipment should be an integral part of all module activities.



Assessment  
Procedures

All Learning Outcomes must be validly assessed.

The student must be informed of the tasks which contribute to summative assessment. Any unsatisfactory aspects of performance should, if possible, be discussed with the student as and when they arise.

Acceptable performance in the module will be satisfactory achievement of performance criteria for each Learning Outcome.

The following abbreviations are used below:

LO Learning Outcome

IA Instrument of Assessment

PC Performance Criteria

LO1 IA Short answer written test/graphics exercise.

PC The student should correctly:

- (a) state the basic constructional details of cabinets, tables and chairs;
- (b) state the difference between mechanical and adhesive strength;
- (c) explain the principles involved to establish rigidity of a frame or carcass.
- (d) state which joints rely on the above properties.

LO2, IA Project/observation checklist.

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PC The student should correctly:

- (a) prepare working drawings and cutting list for a given article of furniture;
- (b) select three joints;
- (c) select appropriate methods of construction;
- (d) use machinery to form joints;
- (e) construct a carcass or frame using correct procedures, material and equipment in an agreed time in which:
  - (i) functional dimensions are within specified tolerances; (ii) quality is comparable with an agreed exemplar;
- (f) follow sequence of assembly;

- (g) use cramping equipment and correctly apply adhesive;
- (h) achieve standard of cleanliness and ensures frame is square and out of twist;
- (i) wear all necessary safety clothing and equipment;
- (j) behave in a manner appropriate to the working environment;
- (k) use tools and equipment safely.