The Further Education and Training Awards Council (FETAC) was set up as a statutory body on 11 June 2001 by the Minister for Education and Science. Under the Qualifications (Education & Training) Act, 1999, FETAC now has responsibility for making awards previously made by NCVA.

Module Descriptor

Wood Fabrication

Level 5    C20137

www.fetac.ie
# Level 5 Module Descriptor

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<td>Describes how the module functions as part of the national vocational certificate framework.</td>
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<tr>
<td><strong>Module Title</strong></td>
<td>Indicates the module content. This title appears on the learner’s certificate. It can be used to download the module from the website <a href="http://www.fetac.ie">www.fetac.ie</a>.</td>
</tr>
<tr>
<td><strong>Module Code</strong></td>
<td>An individual code is assigned to each module; a letter at the beginning denotes a vocational or general studies area under which the module is grouped and the first digit denotes its level within the national vocational certificate framework.</td>
</tr>
<tr>
<td><strong>Level</strong></td>
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<tr>
<td><strong>Purpose</strong></td>
<td>Describes in summary what the learner will achieve on successfully completing the module and in what learning and vocational contexts the module has been developed. Where relevant, it lists what certification will be awarded by other certification agencies.</td>
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<tr>
<td><strong>Preferred Entry Level</strong></td>
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<tr>
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<td>Usually ‘none’ but in some cases detail is provided here of specific learner or course provider requirements. There may also be reference to the minimum safety or skill requirements that learners must achieve prior to assessment.</td>
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**Introduction**

A module is a statement of the standards to be achieved to gain a FETAC award. Candidates are assessed to establish whether they have achieved the required standards. Credit is awarded for each module successfully completed.

The standards in a module are expressed principally in terms of specific learning outcomes, i.e. what the learner will be able to do on successful completion of the module. The other elements of the module - the purpose, general aims, assessment details and assessment criteria - combine with the learning outcomes to state the standards in a holistic way.

While FETAC is responsible for setting the standards for certification in partnership with course providers and industry, it is the course providers who are responsible for the design of the learning programmes. The duration, content and delivery of learning programmes should be appropriate to the learners’ needs and interests, and should enable the learners to reach the standard as described in the modules. Modules may be delivered alone or integrated with other modules.

The development of learners’ **core skills** is a key objective of vocational education and training. The opportunity to develop these skills may arise through a single module or a range of modules. The core skills include:

- taking initiative
- taking responsibility for one’s own learning and progress
- problem solving
- applying theoretical knowledge in practical contexts
- being numerate and literate
- having information and communication technology skills
- sourcing and organising information effectively
- listening effectively
- communicating orally and in writing
- working effectively in group situations
- understanding health and safety issues
- reflecting on and evaluating quality of own learning and achievement.

Course providers are encouraged to design programmes which enable learners to develop core skills.
Module Title: Wood Fabrication

Module Code: C20137

Level: 5

Credit Value: 2 credits

Purpose: This module is designed to provide the learner with the skills and knowledge necessary to use wood in the construction of a modern two-storey domestic dwelling.

This module may be taken as an alternative or in addition to the Building Construction (C20008) module on the Level 5 Certificate in Construction Technology award.

Preferred Entry Level: Level 4 Certificate, Leaving Certificate or equivalent qualifications and/or relevant life and work experiences.

Special Requirements: None.

General Aims

Learners who successfully complete this module will:

8.1 be familiar with the applications of wood in the construction industry

8.2 develop a range of skills in wood fabrication which are applicable to the construction of a modern two-storey domestic dwelling

8.3 develop a greater awareness of the timber industry and a respect for the environment in which it operates

8.4 be aware of the principal building regulations and bye-laws associated with the use of timber in a modern two-storey domestic building

8.5 plan appropriate component drawings, cutting lists and specifications

8.6 recognise and apply quality, reliability and good design in wood fabrication

8.7 be aware of common hazards in the workplace

8.8 develop safe working practices when dealing with materials, equipment and chemicals.
# Units

The specific learning outcomes are grouped into 10 units.

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## Specific Learning Outcomes

### Unit 1: Wood Technology

**Learners should be able to:**

10.1.1 describe and illustrate the growth cycle of trees
10.1.2 identify the parts of the growing tree and explain their function
10.1.3 differentiate between the structure of hardwoods and softwoods
10.1.4 outline the properties of common hardwoods and softwoods
10.1.5 identify the main natural defects in timber, explain their causes and their effects on usage
10.1.6 list the main diseases in timber, their causes and methods of treatment
10.1.7 outline the main forms of preservative used on timber, and their proper application having due regard to function and safety precautions
10.1.8 explain how timber reacts to fire and how its resistance to ignition may be enhanced
10.1.9 explain and illustrate the distribution of the world’s timber
10.1.10 describe the present state of afforestation in Ireland
10.1.11 illustrate the locations of the main forest regions in Ireland
10.1.12 outline the primary industries both nationally and locally which use timber as a raw material and identify their sources
10.1.13 appreciate the need for conservation/re-planting and the associated environmental benefits.
Unit 2  Timber Processing

Learners should be able to:

10.2.1 describe and illustrate the main methods of converting timber
10.2.2 outline the properties and applications of timber converted by the different methods
10.2.3 define, measure and analyse the effects of moisture content in timber
10.2.4 identify the main methods of seasoning timber
10.2.5 explain how timber is properly seasoned using the methods identified above
10.2.6 specify suitable moisture contents for timber in a wide variety of applications
10.2.7 identify the main seasoning related defects in timber
10.2.8 explain the exact cause of each of the defects identified above
10.2.9 identify and briefly explain how timber may be ‘stress graded’
10.2.10 elaborate on the main principles of ‘visual stress grading’ of structural timber for domestic construction
10.2.11 explain how Irish structural timber is stress graded and marked according to the requirements of ‘Irish Standard Recommendation SR11-1988’
10.2.12 identify the various manufactured boards used in the construction industry
10.2.13 describe the manufacture, properties and uses of the manufactured boards identified above.

Unit 3  Workshop Processes

Learners should be able to:

10.3.1 identify a range of setting out tools, hand tools, powered handtools
10.3.2 maintain a range of setting out tools, hand tools, powered tools
10.3.3 use workshop hand tools for sawing, planing, chiselling, boring and hammering
10.3.4 detail the function, capacity and limitations of a full range of powered hand tools and workshop machines
10.3.5 set up and operate the powered hand tools and workshop machines which have been specified by course internal assessor
10.3.6 demonstrate the use of workshop hand tools, specified power tools and machines
10.3.7 recognise and illustrate joint types and their applications
10.3.8 using appropriate tools and techniques, set out and construct the joints detailed above
10.3.9 identify and use fasteners, hinges and fittings that are commercially available.

Unit 4 Drawings and Calculations

Learners should be able to:

10.4.1 read and interpret house plans
10.4.2 draw a ground floor plan and a cross-section of first floor and roof, using traditional and modern means of communication
10.4.3 determine the sizes, quality, quantity and price of timber required
10.4.4 prepare and compare costings for the above project lists making allowance for waste
10.4.5 calculate quantities in linear, superficial and cubic measurement
10.4.6 compile material specification and cutting lists from working drawings
10.4.7 order and arrange/co-ordinate the delivery of required timber
10.4.8 design and construct appropriate setting out rods for project work
10.4.9 interpret the building regulations which relate to the design and construction of the timber components in a modern two-storey domestic dwelling
10.4.10 set out and construct temporary arch supports for construction work
10.4.11 explain the setting out, construction, erection and striking methods used from form work to Level 3s.

Unit 5 Ground Floor (Suspended Timber)

Learners should be able to:

10.5.1 cut ground floor joists
10.5.2 explain the need to apply preservative to joists
10.5.3 apply appropriate preservative to joists
10.5.4 explain the need to allow for ventilation around joists
10.5.5 fit joists in place, allowing for adequate ventilation and overlap
10.5.6 fit ground floor joists around hearth
10.5.7 list and compare the different types of flooring commonly used
10.5.8 list the different techniques used to lay a floor
10.5.9 fit a floor on the joists.

Unit 6 First Floor

Learners should be able to:

10.6.1 cut first floor joists
10.6.2 apply appropriate preservative to ends of joists
10.6.3 fit joists in place, allowing for adequate ventilation and overlap
10.6.4 brace the first floor joists
10.6.5 fit first floor joists around opening for stairwell
10.6.6 explain the importance of insulation
10.6.7 fit insulation to first floor joists.

Unit 7 Roof

Learners should be able to:

10.7.1 explain the terms associated with the traditional cut roof
10.7.2 cut roofing timbers
10.7.3 apply appropriate preservative to ends of joists and rafters
10.7.4 fit joists and rafters in place, allowing for adequate ventilation and overlap
10.7.5 cut roofing timbers to allow for roof opes
10.7.6 compare and contrast the traditional cut roof and a roof truss
10.7.7 construct the following: a frame roof, hip roof, a valley
10.7.8 cut, construct and fit the eaves, verges, abutments and facias
10.7.9 fit felt and battens to roof.
Unit 8  Partitions, Doors and Windows

*Learners should be able to:*

10.8.1  draw a typical timber stud partition, indicating the positions of its members, allowing for opes and services
10.8.2  construct and fit a timber stud partition
10.8.3  apply preservative to a supplied softwood window frame
10.8.4  install damp proof course around window ope
10.8.5  plumb and fit a window
10.8.6  fit a window board
10.8.7  construct and fit a door frame.

Unit 9  Second Fixings

*Learners should be able to:*

10.9.1  identify the different types of doors, windows and stairs commonly used in the construction of a modern two-storey domestic dwelling
10.9.2  identify associated ironmongery
10.9.3  cut and fit skirting
10.9.4  cut and fit architrave
10.9.5  cut and fit a dado rail and a picture rail
10.9.6  hang an internal and external door to include the fitting of hinges, handles, locks
10.9.7  install a door saddle
10.9.8  construct, install built-in furniture such as a hot press, a wardrobe, under stairs
10.9.9  define the following terms associated with a stairs: tread, rising, going, newel post, pitch, landing, stringers etc.
10.9.10 order a stairs
10.9.11 fit a supplied stairs
10.9.12 cut and fit handrail, banisters, newel post.
Unit 10 Safety and Health

Learners should be able to:

10.10.1 identify the adverse physical, chemical, biological effects of common hazards associated with the construction industry
10.10.2 recognise common hazard symbols and labels
10.10.3 know the rights and responsibilities of employers and employees as specified in the Safety, Health and Welfare at Work Act
10.10.4 erect scaffolding and fit toe boards
10.10.5 select and wear appropriate personal protective equipment
10.10.6 follow correct safety procedures when dealing with electrical appliances.

11 Portfolio of Assessment

Please refer to the glossary of assessment techniques and the note on assessment principles at the end of this module descriptor.

All assessment is carried out in accordance with FETAC regulations.

Assessment is devised by the internal assessor, with external moderation by FETAC.

Summary

<table>
<thead>
<tr>
<th>Project</th>
<th>50%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skills Demonstration</td>
<td>50%</td>
</tr>
</tbody>
</table>

11.1 Project

The internal assessor will devise a project brief that requires candidates to demonstrate understanding and application of concepts in wood fabrication and mastery of tools and techniques.

The project brief will focus on a broad range of specific learning outcomes, and require candidates to

- plan and prepare, make working drawings
- use a range of skills in wood fabrication which are applicable to the construction of a modern domestic dwelling
- evaluate the finished product.

Evidence presented for the project will include:

- plans, working drawings or other evidence of preparatory work
- the finished product
- an evaluation of the completed work.

Supporting evidence for the project may be presented using a variety of media, including written, oral, graphic, audio, visual...
or any combination of these. Any audio or video evidence must be provided on tape.

Adherence to safe working practices will be an integral part of the project.

The project may be undertaken as a group or collaborative project. The individual contribution of each candidate will be clearly identified.

11.2 Skills Demonstration

In one or more skills demonstrations, candidates will be assessed in a broad range of practical skills and knowledge while carrying out at least 5 practical tasks. The practical tasks will be based on a range of specific learning outcomes.

Candidates will demonstrate adherence to safe working practices throughout the skills demonstration(s).

Candidates will maintain a record of measurements/observations or other relevant information as part of the skills demonstration(s).

The skills may be assessed at any time throughout the learning process.

12 Grading

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pass</td>
<td>50 - 64%</td>
</tr>
<tr>
<td>Merit</td>
<td>65 - 79%</td>
</tr>
<tr>
<td>Distinction</td>
<td>80 - 100%</td>
</tr>
</tbody>
</table>
**Individual Candidate Marking Sheet**

**Wood Fabrication**  
C20137  
Project 50%  
Skills Demonstration 50%

Candidate Name: ______________________________  PPSN: __________________________  
Centre: _________________________________________________  Centre No.: ___________

<table>
<thead>
<tr>
<th>Assessment Criteria</th>
<th>Maximum Mark</th>
<th>Candidate Mark</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Project</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• accurate plans/working drawings/preparatory work used</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>• appropriate materials and tools selected</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>• complete mastery of tools and techniques</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>• excellent technical, visual and aesthetic quality to finished product</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>• critical evaluation of final product</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td>50</td>
<td></td>
</tr>
<tr>
<td><strong>Skills Demonstration</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• appropriate preparation and planning of each task</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>• effective execution of each task demonstrating mastery of tools and techniques</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>• safe use and careful maintenance of tools and equipment</td>
<td>10</td>
<td></td>
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<tr>
<td>• relevant supporting documentation</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td>50</td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL MARKS</strong></td>
<td>100</td>
<td></td>
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</tbody>
</table>

*This mark should be transferred to the Module Results Summary Sheet*

**Internal Assessor’s Signature:** ______________________________  **Date:** __________  

**External Authenticator’s Signature:** ____________________________  **Date:** __________
# FETAC Module Results Summary Sheet

**Module Title:** Wood Fabrication  
**Module Code:** C20137  

<table>
<thead>
<tr>
<th>Candidate Surname</th>
<th>Candidate Forename</th>
<th>Total 100%</th>
<th>Grade*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</table>

*Signed: __________________________  Date: ________________

**Internal Assessor:** ________________________________

This sheet is for internal assessors to record the overall marks of individual candidates. It should be retained in the centre. The marks awarded should be transferred to the official FETAC Module Results Sheet issued to centres before the visit of the external Authenticator.

Grade*  
D: 80 - 100%  
M: 65 - 79%  
P: 50 - 64%  
U: 0 - 49%  
W: candidates entered who did not present for assessment
Glossary of Assessment Techniques

**Assignment**  
An exercise carried out in response to a brief with specific guidelines and usually of short duration.

Each assignment is based on a brief provided by the internal assessor. The brief includes specific guidelines for candidates. The assignment is carried out over a period of time specified by the internal assessor.

Assignments may be specified as an oral presentation, case study, observations, or have a detailed title such as audition piece, health fitness plan or vocational area profile.

**Collection of Work**  
A collection and/or selection of pieces of work produced by candidates over a period of time that demonstrates the mastery of skills.

Using guidelines provided by the internal assessor, candidates compile a collection of their own work. The collection of work demonstrates evidence of a range of specific learning outcomes or skills. The evidence may be produced in a range of conditions, such as in the learning environment, in a role play exercise, or in real-life/work situations.

This body of work may be self-generated rather than carried out in response to a specific assignment eg art work, engineering work etc

**Examination**  
A means of assessing a candidate’s ability to recall and apply skills, knowledge and understanding within a set period of time (time constrained) and under clearly specified conditions.

Examinations may be:

- practical, assessing the mastery of specified practical skills demonstrated in a set period of time under restricted conditions
- oral, testing ability to speak effectively in the vernacular or other languages
- interview-style, assessing learning through verbal questioning, on one-to-one/group basis
- aural, testing listening and interpretation skills
- theory-based, assessing the candidate’s ability to recall and apply theory, requiring responses to a range of question types, such as objective, short answer, structured, essay. These questions may be answered in different media such as in writing, orally etc.

**Learner Record**  
A self-reported record by an individual, in which he/she describes specific learning experiences, activities, responses, skills acquired.

Candidates compile a personal logbook/journal/diary/daily diary/record/laboratory notebook/sketch book. The logbook/journal/diary/daily diary/record/laboratory notebook/sketch book should cover specified aspects of the learner’s experience.
**Project**  
*A substantial individual or group response to a brief with guidelines, usually carried out over a period of time.*

Projects may involve:
- research – requiring individual/group investigation of a topic
- process – eg design, performance, production of an artefact/event

Projects will be based on a brief provided by the internal assessor or negotiated by the candidate with the internal assessor. The brief will include broad guidelines for the candidate. The work will be carried out over a specified period of time.

Projects may be undertaken as a group or collaborative project, however the individual contribution of each candidate must be clearly identified.

The project will enable the candidate to demonstrate: *(some of these – about 2-4)*
- understanding and application of concepts in (specify area)
- use/selection of relevant research/survey techniques, sources of information, referencing, bibliography
- ability to analyse, evaluate, draw conclusions, make recommendations
- understanding of process/planning implementation and review skills/planning and time management skills
- ability to implement/produce/make/construct/perform
- mastery of tools and techniques
- design/creativity/problem-solving/evaluation skills
- presentation/display skills
- team working/co-operation/participation skills.

**Skills Demonstration**  
*Assessment of mastery of specified practical, organisational and/or interpersonal skills.*

These skills are assessed at any time throughout the learning process by the internal assessor/another qualified person in the centre for whom the candidate undertakes relevant tasks.

The skills may be demonstrated in a range of conditions, such as in the learning environment, in a role-play exercise, or in a real-life/work situations.

The candidate may submit a written report/supporting documentation as part of the assessment.

Examples of skills: laboratory skills, computer skills, coaching skills, interpersonal skills.
FETAC Assessment Principles

1 Assessment is regarded as an integral part of the learning process.

2 All FETAC assessment is criterion referenced. Each assessment technique has assessment criteria which detail the range of marks to be awarded for specific standards of knowledge, skills and competence demonstrated by candidates.

3 The mode of assessment is generally local i.e. the assessment techniques are devised and implemented by internal assessors in centres.

4 Assessment techniques in FETAC modules are valid in that they test a range of appropriate learning outcomes.

5 The reliability of assessment techniques is facilitated by providing support for assessors.

6 Arising from an extensive consultation process, each FETAC module describes what is considered to be an optimum approach to assessment. When the necessary procedures are in place, it will be possible for assessors to use other forms of assessment, provided they are demonstrated to be valid and reliable.

7 To enable all learners to demonstrate that they have reached the required standard, candidate evidence may be submitted in written, oral, visual, multimedia or other format as appropriate to the learning outcomes.

8 Assessment of a number of modules may be integrated, provided the separate criteria for each module are met.

9 Group or team work may form part of the assessment of a module, provided each candidate’s achievement is separately assessed.
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