



SAINT MARTIN'S CATHOLIC ACADEMY

Construction and the Built Environment

Curriculum Intent & Year 9–11 Sequencing

*“Knowing that we are loved by God,
Learning the best that has been thought and said,
and living a virtuous life.”*

Pearson BTEC Tech Award Level 1/2 in Construction and the Built Environment

Construction Curriculum Intent

At the heart of Saint Martin's curriculum lies our mission: knowing that we are loved by God, learning the best that has been thought and said, and living a virtuous life. Construction extends that mission to a different, equally honourable kind of excellence — the skilled, disciplined work of hand and craft that has shaped human shelter and civilisation since its beginning. Delivered as a three-year pathway from Year 9 to Year 11, culminating in the Pearson BTEC Tech Award in Construction and the Built Environment, the subject gives pupils a route to a genuine, respected qualification, built on real technical skill rather than an easier substitute for it.

In Year 9, pupils follow a blended foundation shared with Design Technology, before choosing between the GCSE Design Technology route and the BTEC Construction route for Key Stage 4. This shared year ensures every pupil has secured the common ground both subjects depend on — safe and competent use of tools and materials, the ability to measure, mark out and read a technical drawing, and a first understanding of structures and the design process — through a genuine taste of both a design-and-make project and a practical construction task, so that pupils choose their Year 10 pathway from real experience rather than guesswork.

Construction is taught with the same regard for secure, applied knowledge that runs through Saint Martin's wider curriculum, adapted to a vocational context. Pupils learn to use tools, materials and measuring and marking-out techniques correctly and safely; to read and interpret construction drawings; and to understand why a building performs as it does, not simply how to assemble one. This applied knowledge is the foundation of good practical work: a pupil who understands jointing methods, load-bearing structure and material choice can reason about a real construction problem, where one who has only copied a procedure cannot.

From Year 10, the course is built around the qualification's three components, each teaching a distinct kind of expertise:

- **Practical construction skills** (Year 10, Component 2) — measuring, marking-out and interpreting drawings; the tools, materials and jointing, assembly and finishing techniques used in carpentry, joinery and brickwork; working accurately within specified tolerances; and identifying, assessing and controlling risk in a live practical environment
- **Construction technology** (Year 11, Component 1, assessed by external examination) — the performance requirements of low-rise buildings; structural loads, strength and stability; the construction and detailing of floors, walls, roofs, sub-structures and super-structures; insulation, sound reduction and sustainable construction; and the range of work undertaken across the wider construction industry, including housing, infrastructure and transportation
- **Designing for a client** (Year 11, Component 3) — analysing a client's needs and the constraints on a design; generating design solutions through freehand sketching, floor plans and 3D external views; and communicating design ideas clearly enough for others to build from

Vocational conventions and practice sits at the centre of how accuracy and safety are taught as essential components of achieving practical outcomes, woven through the subject rather than bolted on as a compliance exercise. Working within tolerance, checking dimensions honestly, and carrying out a risk assessment thoroughly all demand the same virtues Saint Martin's asks of every pupil — care, patience and personal responsibility for the safety of others — made concrete in a workshop or on a site rather than in the abstract. Pupils are also taught to communicate as construction professionals do: through accurate technical sketching, annotation and clear written explanation of design decisions, so their ideas can be understood and acted on by others.

The course broadens pupils' understanding of a genuinely varied industry and its progression routes — from carpentry, joinery and bricklaying to design, surveying and civil engineering — supporting apprenticeships,

further study and employment alongside their GCSEs. Ultimately, our Construction curriculum aims to send every pupil forward with real vocational skill, technical understanding and pride in accurate, honest work — a practical expression, in brick, timber and drawing, of the virtuous and purposeful life Saint Martin's mission calls every pupil to live.

Year 9–11 Sequencing

This follows the department's scheme of work for the Pearson BTEC Tech Award in Construction and the Built Environment, mapped against its three assessed components: Component 1 (Construction Technology, external exam), Component 2 (Practical Construction Skills, internally assessed, PSA), and Component 3 (Design a Practical Construction Solution, internally assessed, PSA). Year 9 is a blended foundation shared with Design Technology, ahead of the Year 10 choice between the GCSE and BTEC pathways; its content below is proposed to match this shared aim and should be checked against the department's actual Year 9 scheme of work.

Year 9 — Blended Foundation (Design Technology & Construction)

Focus: A common foundation of tool safety, materials, measuring and technical communication, shared with Design Technology, giving every pupil a genuine taste of both a design-and-make project and a practical construction task before choosing their Year 10 pathway.

Term 1 Workshop and Site Safety

- Health and safety induction for both workshop and construction-site contexts
- Safe and correct use of hand tools common to both subjects
- Understanding of PPE, hazard identification and safe working practice

Term 1 Materials: Timbers, Metals and Manufactured Boards

- Properties, sources and working characteristics of timbers and metals
- Introduction to manufactured boards and their use in both product and building contexts
- Selecting a material appropriately for a given practical task

Term 2 Measuring, Marking Out and Technical Drawing

- Correct use of measuring and marking-out tools and equipment
- Reading and interpreting simple technical drawings and plans
- Freehand sketching, including basic orthographic and 3D views, as a shared communication skill

Term 2 Structures and Mechanisms

- Basic principles of strength, stability and load in structures
- Introduction to simple mechanisms and how forces are transferred
- Relating structural principles to both product design and building construction

Term 3 Tools and Equipment

- Correct names, uses and safe handling of hand tools and small machinery
- Care and maintenance of tools and equipment

Term 3 Design Process and Briefs

- Understanding a design brief and the needs of a user or client
- Introduction to the iterative design process: explore, create, evaluate
- Generating and communicating initial ideas in response to a brief

Practical outcomes: a short Design & Make project in the style of Design Technology, and a short Practical Construction task, so pupils experience the distinct character of each subject before opting into GCSE Design Technology or the BTEC Construction pathway for Year 10.

Year 10 — Component 2: Practical Construction Skills

Measuring, Marking and Setting Out (C2 LOA A2)

- Understand the use of measuring, marking and setting-out tools used for carpentry and joinery
- Understand the reading and interpretation of construction drawings, generic across brickwork and carpentry and joinery
- Know how to mark out effectively

Tools and Materials (C2 LOA A3)

- Understand the tools used in carpentry and joinery
- Understand the main materials used in a practical outcome
- Consider different materials for brickwork and carpentry and joinery

Joining and Incorporating Materials (C2 LOB B1)

- Understand different jointing, joining, assembly and finishing techniques

10.1 Checkpoint Tasks — Practice PSA Tasks

Accuracy in Construction (C2 LOB B2)

- Know how to use a range of techniques to produce an accurate practical outcome
- Know the correct techniques to measure the dimensions of a constructed outcome accurately, within specified tolerance

Dimension Checks on Final Outcome (C2 LOB B3)

- Know how to work accurately to a range of tolerances

10.2 Checkpoint Tasks — Practice PSA Tasks

Risk Assessments (C2 LOB B1)

- Understand hazards and risk for the safe production of a practical construction outcome
- Understand the use of risk assessments in a practical learning environment
- Analyse the environment to identify hazards and risks and produce an initial risk rating
- Make recommendations to minimise risk and produce a revised, acceptable risk rating

10.3 Checkpoint — Practice PSA Tasks

PSA Component 2

- Internal Assessment: Exam Board Set Assignment (30% of the qualification, 8 supervised hours)

Low-rise Construction Requirements (C1 A1)

- Understand the performance requirements for low-rise construction
- Know the range of performance requirements necessary in the design of buildings, and the types of structural load a building must withstand
- Understand how strength and stability, heat retention, and sound reduction are achieved in buildings
- Understand the functions, construction and detailing of floors and roofs used in low-rise buildings, and how buildings are protected from water damage

10.4 Checkpoint

Types of Work Undertaken by the Construction Industry (C1 LOD D1 & D2)

- Know the types of work the construction industry undertakes and examples of each, including transportation systems such as roads, railways and flood defences

10.5 Checkpoint

Year 11 — Components 1 & 3: Construction Technology and Design

Client's Needs — Brief for a Low-rise Building (C3 LOA A1 & A3)

- Understand the client's needs for a building's use
- Understand the differences and key distinguishing external features across different building styles
- Analyse a client's needs and constraints on design to create appropriate design solutions

Influences and Constraints on Design (C3 LOA A2)

- Understand influences and constraints on design

Structural Forms and Sustainability (C1 A2 & A3)

- Understand common structural forms used in low-rise construction, their features, benefits and drawbacks
- Know the ways sustainable construction is achieved, and its benefits and drawbacks

Sub-structure Groundworks and Construction (C1 LOB B1 & B2)

- Know the hazards and risks associated with groundworks and how to control them safely
- Understand the construction and detailing of foundations and sub-structures, and their benefits and drawbacks for different scenarios
- Sketch, detail and annotate the types and features of sub-structures
- Identify site-based and desk-based preconstruction work required before work begins

Walls, Floors & Roofs (Super-structures) (C1 LOC C1, C2 & C3)

- Understand the functions, construction and detailing of floors, walls and roofs in low-rise buildings
- Sketch, detail and annotate the types and features of floors and walls
- Understand the benefits and drawbacks for architects, builders and building users

Review: Component 1 (C1 LOA/B/C/D)

PSA Component 3

Sketching Techniques and Generation of Designs (C3 LOB B1 & B2)

- Create freehand sketch floor plans to approximate scale
- Create freehand 3D external-view sketches
- Create concept ideas for external appearance and internal layout

Internal Assessment: Exam Board Set Assignment (30%)

Revision

Component 1 Exam (provisional — May)

Year 9

Blended Foundation: Design Technology & Construction



Assessment points

Theory Pathway

New &
Emerging Tech

Energy Generation
& Storage

Iterative Design
Process

Specification
Writing

Practical Pathway

Research &
User Need Task

Explore-Create-
Evaluate Project

3D
Frame

By the end of Year 9:
Emerging Tech • Energy • Design Process
• Specifications

Year 10

Components 2 & 3: Construction Skills & Design



Assessment points

Theory Pathway

Measuring, Marking
& Setting Out

Tools &
Materials

Joining &
Incorporating Materials

Accuracy &
Dimension Checks

Risk
Assessment

Performance
Requirements

The Construction
Industry

Construction & Design

Practical Pathway

PSA
Component 2

Setting Out Rods
to Scale

PSA
Component 3

Concept
Drawing

In this year:

Practical Skills • Accuracy • Risk •
Performance • Industry • Construction &
Design

Year 11

Component 1: Construction Technology



Assessment points

Theory Pathway

Practical Pathway

Specification &
Knowledge in
Construction
Technology

Component 1
Exam

In this year:
Construction Technology knowledge •
Component 1 Exam