NCCA
An Chomhairle Náisiúnta Curaclaim agus Measúnachta
National Council for Curriculum and Assessment

# Background paper and brief for the review of Leaving Certificate Construction Studies

March 2024

# Contents

# Introduction

The Senior Cycle Review: Advisory Report (NCCA 2022a) was published in March 2022 following the response from the Minister for Education, Norma Foley, TD. Actions outlined in the Advisory Report include a review of existing curriculum components - subjects, modules, and programmes. In March 2022, the Minister for Education requested that NCCA undertake a series of actions to support the realisation of her vision for a redeveloped senior cycle as set out in Equity and Excellence for All (Department of Education, 2022.) One key action set out in this plan was that a schedule of senior cycle subjects and modules for redevelopment be prepared for approval by the Minister.

NCCA subsequently prepared a schedule of subjects for review, which was organised into a number of tranches. The redevelopment of Tranche 1 subjects will be completed in 2024 for introduction to schools in 2025. The redevelopment of the specification for Leaving Certificate Construction Studies is included in Tranche 2, which will be completed in 2025 for introduction to schools in September 2026.

This paper provides a context for the review of Leaving Certificate Construction Studies and has also been informed by the views of teachers, school leaders and students gathered through a schedule of school visits conducted in a representative sample of schools.

It begins by considering the background of Leaving Certificate Construction Studies with Section 1 presenting an overview of the current context, including consideration of relevant policy developments. Section 2 sets out how Leaving Certificate Construction Studies is currently provided for within the Irish curriculum before focusing in more detail on the current Leaving Certificate Construction Studies syllabus. Section 3 details insights garnered from the school visits into the lived experience for schools, teachers, and students, while Section 4 considers similar education opportunities internationally and presents an overview of built environment education in four different jurisdictions. Section 5 draws on the previous three sections to categorise and briefly discuss some issues identified for consideration in the redevelopment of Leaving Certificate Construction Studies before finally setting out a proposed brief for this work in Section 6, which will guide the work of the development group.

# 1. Background and context

This section sets out some of the significant developments relevant to Construction Studies over the past forty years. It also outlines the policy initiatives and developments over the last decade both within education and in the world of construction which are most relevant to the review of Leaving Certificate Construction Studies.

The current Leaving Certificate Construction Studies syllabus was introduced in 1983. A revised syllabus for Construction Studies was developed in 2006. The implementation of the revised syllabus was suspended, which may have been the result of the economic downturn in the country at the time. The revised syllabus was called Architectural Technology which aimed to:

- explore relationships architecture, the environment, technology, engineering, and craft
- provide a broad technological experience relevant to students' needs
- investigate design considerations relating to the general built environment
- foster creativity, cognitive and practical skills
- encourage innovation and entrepreneurial skills and offer progression opportunities.

The subject intended to offer students opportunities to combine creativity, problem-solving, and practical skills in architectural contexts. The syllabus was constructed on the basis of a core area of study and optional areas of study, reflecting the different topics and sections within the subject area. The subject was to be assessed through two components: a project based on a theme selected from the set of themes (50%) and a written examination paper (50%). In recent years, teaching, learning and assessment in Leaving Certificate Construction Studies has evolved, as the coursework and written assessment components prescribed by the State Examinations Commission reflected ongoing transformations in the built environment.

Since the introduction of the 1983 syllabus, the world of construction and technology education has seen some significant changes. Such developments include significant growth and transformation in the construction industry due to the emergence of the Celtic Tiger, the subsequent economic downturn, Brexit, the impact of the Covid-19 pandemic, and most recently, the instability resulting from the war in Ukraine. These events have dramatically impacted on supply of materials, the availability and affordability of housing, and access to a skilled workforce. The most significant factors that impact the world of construction include climate change, the depletion of fossil fuels, greenhouse gas emissions and a transition to a low carbon energy future.

## Curriculum developments

From a curriculum perspective, there have been many significant developments. In line with the Framework for Junior Cycle (DE, 2015), revised subject specifications for Junior Cycle Applied Technology, Engineering, Graphics and Wood Technology were introduced in schools in September 2019. These subjects replaced the four technology subject syllabuses in Materials Technology (Wood), Metalwork, Technical Graphics and Technology which were introduced in 1989. One of the main changes was the introduction of Classroom-Based Assessments as part of the implementation of the Framework for Junior Cycle.

At senior cycle, the publication of the Senior Cycle Review: Advisory Report (NCCA, 2022) set out an agreed purpose for senior cycle education and outlines a vision for the redevelopment of

senior cycle that is underpinned by a set of guiding principles. Responding to this report, Minister Foley initiated a programme of senior cycle redevelopment. As part of this redevelopment, a set of student key competencies are being embedded across learning outcomes in new and redeveloped subjects and modules.

The STEM Education Implementation Plan to 2026 was published in March 2023. The vision for STEM education is that Ireland will be internationally recognised as providing the highest quality STEM education experience for learners that nurtures curiosity, inquiry, problem-solving, creativity, ethical behaviour, confidence, and persistence, along with the excitement of collaborative innovation (DES, 2023 p.4). A recent report on STEM education highlighted the need to actively promote and develop learners' creative and critical thinking skills, skills that are essential for the next generation. Not only does STEM education promote these skills, it also supports the development of life skills, ingenuity and problem-solving and it promotes empathy for issues including sustainability and the natural environment (Government of Ireland, 2020 p.7).

Within the education policy landscape, the Digital Strategy for Schools to 2027 focuses on the potential of digital technology in the curriculum, placing an increased emphasis on the role of digital technology in supporting and enhancing teaching, learning and assessment and in fostering the development of 21st century skills. Appropriate use of digital technology can enhance teaching and learning in the construction studies classroom, support student skill development and provide opportunities to engage with a wide range of topical construction-related content.

Beyond education policy, there have been many significant developments in government policies and strategies. The United Nations Sustainable Development Goals (SDGs) aim to end poverty, protect the planet, and ensure peace and prosperity for all by 2030. The European Energy Performance of Buildings Directive Recast 2010 (EPBD) is the current EU legislation that aims to improve the energy efficiency and reduce the greenhouse gas emissions of buildings in the EU. It stipulates that all new buildings are to be Nearly Zero Energy Buildings (NZEB) by 31st December 2020 and all buildings acquired by public bodies by 31st December 2018 (IGBC, 2023). NZEB requires a high level of energy performance for the building envelope and the building systems, a low or negligible amount of energy from non-renewable sources and consideration for the life cycle emissions of the materials and technologies used in the design of buildings.

The Climate Action & Low Carbon Development (Amendment) Bill (2021) recently set a legal target of a 51% reduction in national $CO_2$eq emissions by 2030 and an overall target of a climate neutral economy by 2050 (Government of Ireland, 2021). The Irish Green Building Council recently argued that education has a pivotal role to play in this context, by raising awareness and developing the right skills in young people to address environmental issues. It was recommended that curricular development should be infused with environmental education to increase carbon literacy. More specifically, it recommended that WLC (Whole Life Carbon) be covered at secondary school level as part of STEM subjects, construction studies, geography, or home economics (Irish Green Building Council, 2022 p.40). The ESD to 2030: Second National Strategy on Education for Sustainable Development is a government strategy that also has similar actions for curriculum development ( Government of Ireland, 2024).

The Housing for All- a New Housing Plan for Ireland is a government strategy to address the housing crisis in Ireland. Under this plan, the government aims to increase the supply of housing to an average of 33,000 per year over the next decade. The plan focuses on several pathways to a

more sustainable system, including increasing new house supply, addressing vacancy, and making efficient use of existing stock. To meet this demand, the Government is committed to expanding education and training opportunities for people, including commitments regarding programmes and apprenticeships and delivery of new courses (Government of Ireland, 2021).

Ireland's National Skills Strategy 2025 is a government plan to enhance the skills of the Irish workforce and increase the supply of skilled workers to meet the current and future needs of the economy and society (Government of Ireland, 2016). The construction sector is one of the key sectors that can benefit from the implementation of the strategy, as it faces both significant challenges and opportunities in terms of skills development.

Such broad-ranging and dynamic changes mean that the redevelopment of Leaving Certificate Construction Studies is timely, providing an opportunity to ensure that learning in construction studies is relevant for students in terms of their daily lives, their local community, and the environment, and for the world of construction.

## Section Summary

- The current Construction Studies syllabus was introduced in 1983. A revised syllabus was developed in 2006 but a decision was taken at the time not to implement it.
- Since the introduction of the current syllabus, the built environment has experienced significant changes in terms of building design, the evolution of materials and a focus on more sustainable practices. These changes are as a consequence of environmental, societal and economic needs.
- In terms of curriculum redevelopment, new specifications for the four junior cycle technology subjects have been introduced, including the introduction of Classroom-Based Assessments
- The vision for STEM education is that Ireland will be internationally recognised as providing the highest quality STEM education.
- Recent national and international policy places a significant emphasis on protecting the environment and striving for sustainability in the built environment. A significant emphasis is also placed on developing the skills and competencies of learners that are relevant for the current and future needs of the economy and society.
- The redevelopment of Leaving Certificate Construction Studies is timely and aims to ensure that learning is relevant for students' daily lives, local communities, and the environment, as well as the broader world of construction.

# 2. Construction Studies in the curriculum

This section provides an overview of post-primary technology education in Ireland and concludes with the most recent Chief Examiner's report on Leaving Certificate Construction Studies.

## STEM education in post primary

STEM education is offered through subjects and cross-curricular activities. The availability and choice of STEM subjects at post-primary level varies from school to school. Maths is compulsory and some schools also require all students to study Junior Cycle Science. Technology subjects are typically optional at junior cycle and at senior cycle.

## Technology education in junior cycle

### Junior Cycle Wood Technology

A new Junior Cycle Wood Technology specification was introduced to schools in 2019 replacing the Junior Certificate Materials Technology (Wood) syllabus.

The specification aims to:

- enable students to develop the necessary conceptual understanding, disciplinary skills and subject knowledge to design and create artefacts of value
- empower students through designing and making, whilst developing an awareness of sustainability and the use of natural resources
- develop a range of core design skills and relevant manipulation skills through modelling and processing wood and other materials
- develop the confidence and resilience of students through engagement with the uncertainty of design challenges
- encourage students' innovation and creativity through recognition and appreciation of their capacity to design and create.

The specification focuses on developing students' understanding of, and skills in, the applications and impact of using wood as a resource in the world around them. This will be achieved through three interconnected contextual strands: Principles and practices, Design thinking and Wood science and materials. Throughout each of the strands, the use of four elements: Planning and managing, Communicating, Creating, and Environment and sustainability, creates a framework for learning that ensures a coherent learning experience for the students. This framework presented in Figure 1 sets the context for the learning outcomes.

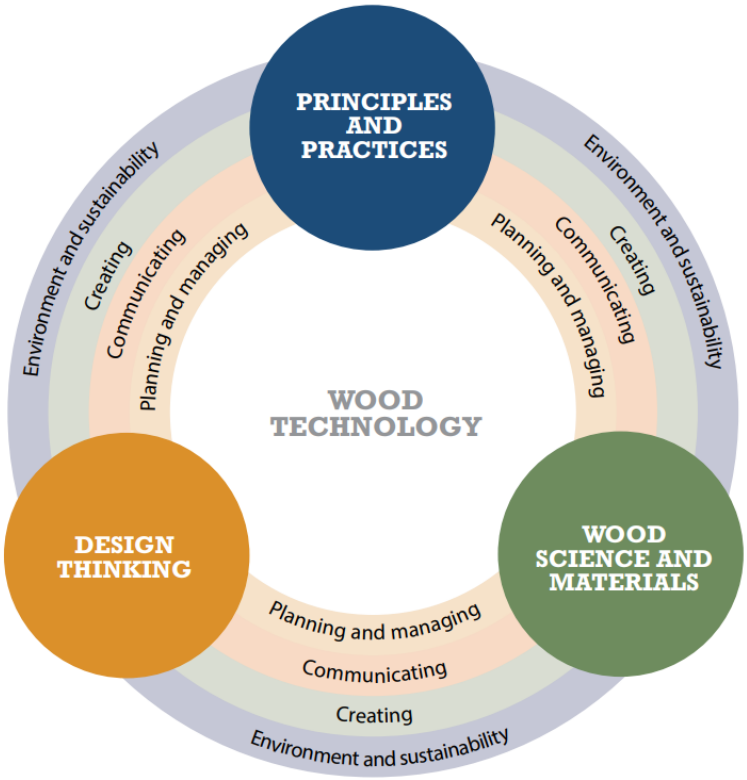


Figure 1: The strands and elements of Junior Cycle Wood Technology

Assessment in Junior Cycle Wood Technology includes two Classroom-Based Assessments: Wood science in our environment, and Self-analysis and evaluation. The final assessments, which are externally assessed by the State Examinations Commission, consist of a project and a written examination (NCCA, 2019).

### Other areas of junior cycle

Students also have opportunities to further develop knowledge, understanding, skills and values related to technology education in other junior cycle subjects and short courses such as Mathematics, Science, Visual Art, Coding, and through other areas of learning such as competitions.

## Technology education in senior cycle

Students in senior cycle have opportunities to study technology-related subjects and modules across the Leaving Certificate Established (LCE) and the Leaving Certificate Applied (LCA) programme. In Transition Year (TY), schools have a high degree of autonomy in designing their own programme therefore technology education is a suggested area of experience for TY students.

### Leaving Certificate Established

As part of their Leaving Certificate Established curriculum, schools can offer Construction Studies, Design and Communication Graphics (DCG), Engineering, and Technology to students. New syllabuses for Leaving Certificate DCG and Leaving Certificate Technology were published in 2006 and examined for the first time in 2009.

The current syllabus for Leaving Certificate Construction Studies was introduced in 1983 and examined for the first time in 1985. This syllabus provides students with an introduction to the knowledge and skills involved in construction technology and construction materials and processes. Students develop their ability to communicate ideas and information and to apply accurate observation and scientific investigation through exploring materials and processes (NCCA, 2023).

The syllabus in Construction Studies is written in a generic manner, with the intention that it be interpreted in the context of ongoing developments in the field, thereby accommodating the significant developments that have taken place since it was first examined in 1985. Most recently, such developments include themes relevant to the environment and sustainability, and to the design and construction of buildings for the 21st century (SEC, 2013 p.3).

The syllabus aims to:

- introduce pupils to the knowledge and skills involved in construction technology and construction materials and practices, through theoretical study and integrated practical projects
- develop the pupils' ability to communicate ideas and information by appropriate methods, and to encourage them to apply accurate observation and scientific investigation through the exploration of materials and processes
- contribute towards their general education, and
- provide a basis for those who may wish to study construction technology at third level (DES, 1983, p.2).

The study of the subject should be primarily related to domestic buildings whilst considering broader aspects, relevant to the subject area. The syllabus contains three parts:

- Part 1- Construction theory and drawings

  Pupils learn about general construction considerations and domestic building detailing. This covers areas like substructure, superstructure, internal construction, services, and external works. Additionally, students explore heat and thermal effects, illumination, and sound within buildings.

- Part 2- practical skills

  Emphasising practical skills, pupils develop a strong grasp of woodworking techniques. The practical test assesses their knowledge and experience with equipment and processes, primarily based on workshop practice.

- Part 3- coursework and projects.

  Coursework aims to bridge theory and practice. Pupils apply their knowledge to construction forms and syllabus concepts. They engage in workshop/laboratory work, including experiments and projects. These projects may involve building details, craft practices, building science, or craft heritage related to architecture and the built environment.

### Assessment

Achievement in Construction Studies is assessed through three components:

1. Coursework (150 marks)
2. The practical skills test (150 marks)
3. The written examination (Ordinary level: 200 marks, Higher level: 300 marks).

The Leaving Certificate Construction Studies syllabus was designed to provide continuity from the Junior Certificate but can also be studied ab initio. The areas of learning identified above are, in general, common to ordinary and higher levels with some designated for assessment at higher level only.

### Transition Year

During Transition Year (TY) students have opportunities to explore different career options and develop some of the skills needed to access more diverse pathways. TY can raise awareness of further, adult and higher education pathways enabling students to make more informed choices of possible career options (NCCA, 2023). In this context, the suite of technology subjects can offer students a balanced and broad set of learning experiences through subject sampling and engagement with TY specific modules.

## Leaving Certificate Construction Studies in focus

This section explores participation rates in Leaving Certificate Construction Studies drawing on statistics from the State Examinations Commission (SEC) and provides an overview of assessment for certification and some insights into student engagement with different areas of the current Leaving Certificate Construction Studies syllabus based on the most recent report of the SEC Chief Examiner for Construction Studies.

### Student participation

Construction Studies is the most popular of the suite of four technology subjects at senior cycle. Participation rates have grown in line with the increasing number of Leaving Certificate students annually.

| Year | Higher Level | Ordinary Level | Total Candidates | Total LC candidates | Construction Studies as a % of total candidates |
|---|---|---|---|---|---|
| 2019 | 7896 | 1114 | 9010 | 56,071 | 16.1% |
| 2020 | 8565 | 1144 | 9709 | 57,668 | 16.8% |
| 2021 | 9124 | 1003 | 10127 | 57,952 | 17.5% |
| 2022 | 8792 | 1167 | 9959 | 58,056 | 17.2% |
| 2023 | 9165 | 1095 | 10260 | 58,006 | 17.6% |

Table 1: Number of students sitting Leaving Certificate Construction Studies at higher and ordinary Level 2019-2023

## Insights from the Chief Examiner's Report 2013

The most recent Chief Examiner's Report for Construction Studies (SEC, 2013) was published after the 2013 examination and provides data on the popularity of each question in the written examination for that year. This data gives an insight into the choices made by students in the examination and provides observations from the Chief Examiner. The report also provides data relating to the coursework and day practical test.

While most students taking Construction Studies are male, the report notes that at Higher and Ordinary levels there were no significant differences between the distribution of grades achieved by male and female candidates.

The examination paper at Higher Level explored a range of themes, including stairs design, health and safety, design of an extension, heating/solar design, U-value calculations, design for sustainability, chimney/stove design, foundation design, ingress of dampness, Passive House design, and sustainable housing. While some students demonstrated exemplary preparation and answered well, others lacked a deep understanding of the concepts and consequently could not achieve high marks. Notably, there was an increased focus on questions related to energy use and sustainability, with students generally showing awareness of environmental issues and understanding of ecological and Passive House design. However, the quality of sketches provided by students was often poor, highlighting the importance of developing sketching skills for effective communication of design ideas and technical details (SEC, 2013).

The written paper at Ordinary Level explored themes, including flat roof design, external insulation, plumbing layout, foundation design, scale drawing – partition, safety/safety-on-site, cold bridge design, technical definitions, and the design of double doors. Students attempted a wide range of questions. Questions on environmental themes, design for disability, insulation methods and plumbing were popular with students. Freehand sketching was generally not sufficiently used by students.

Students were generally well prepared for the practical skills test which is assessed at a common level. Many students showed considerable competence in the marking out, processing and assembly of the artefact. A small number of students were unable to assemble the artefact, due mainly to inaccurate marking out (SEC, 2013).

Examiners reported that many students demonstrated a very high standard of practical skills in the coursework presented for assessment. The quality of the portfolios submitted was also very high in many instances, and many students devoted much time and energy to the development of the portfolio. However, some students who presented very good practical work paid little attention to the portfolio and thus lost significant marks. Some students managed their time poorly and thus clearly either spent an excessive amount of time on coursework or did not succeed in completing the coursework. On occasion, coursework presented for assessment was derivative and did not provide sufficient opportunities for the development of the higher-order skills expected, especially of students at Higher Level.

## Section Summary

- Students have multiple opportunities to engage in construction-related learning across senior cycle.
- The Junior Cycle Wood Technology specification focuses on developing students' understanding of, and skills in, the applications and impact of using wood as a resource in the world around them.
- Wood Technology places a significant focus on the development of practical skills as well the development of skills in problem-solving, innovation, communication, collaboration, and exploration. The development of these skills is also supported through the Classroom-Based Assessments.
- The study of Wood Technology at junior cycle develops the foundations for a student to continue their studies in the suite of technology subjects in senior cycle.
- Construction Studies is the most popular of the four Leaving Certificate technology subjects in terms of student uptake.
- Assessment in the current Construction Studies syllabus is based on three components: coursework, a practical skills test and a written examination. Students following both Higher and Ordinary level are expected to demonstrate a knowledge and understanding of the syllabus content with some areas of content designated for assessment at higher level only.
- The most recent Chief Examiner's Report (SEC, 2013) highlights the areas of the syllabus that are favoured by students in examinations. Many students demonstrated a very high standard of practical skills in the coursework and the practical test. Time management, design thinking, sketching skills and the completion of portfolios were highlighted as areas for concern. The report also underlines the need for students to further enhance higher-order skills and to develop a deeper understanding of construction-related concepts.

# 3. Insights from school visits

A schedule of school visits was conducted as part of the scoping work for this Background Paper. The representative sample was selected from the 20 schools that expressed an interest in becoming involved in Leaving Certificate Construction Studies curriculum developments. The six schools were selected using criteria relating to DEIS status, gender, school size and type. Visits to these schools took place in January 2024 and involved focus group meetings with 39 senior cycle students, 13 Leaving Certificate Construction Studies teachers and eight school leaders. The following section provides an overview of the insights gathered through these visits.

## The broad context of Construction Studies

The practical nature of Construction Studies is highly valued by school leadership, teachers, and students. While the syllabus has remained unchanged since 1983, participants in the consultation noted that the focus of teaching, learning and assessment has evolved over time in response to the need for sustainable home design and advancements in building practices. There were mixed views on the breadth and depth of the subject. Some participants felt that the current syllabus is broad in nature. Other participants felt that the current syllabus lacks breadth, having too few opportunities to learn about a sufficient range of building structures or construction-related career paths, or to engage in site visits or work experience as part of the course.

The subject provides students with opportunities to develop their cognitive and manipulative skills and engage in project work, which fosters creativity, design-thinking, and problem-solving skills. Some teachers highlighted the challenge of developing students' proficiency in manipulative skills if they did not study a junior cycle technology subject.

## Teaching and learning in Construction Studies

Teaching and learning in Construction Studies was an area of significant discussion during the school visits. The course content is highly valued by teachers and students, but time, workload and keeping up to date with evolving building practices were highlighted as the main challenges to enacting the subject in the classroom. Participants recommended that the review should consider those areas of learning that are no longer relevant or that will not require the same level of detailed treatment in a new specification. One area of concern related to the scaled drawings students learn during their study of Construction studies. Teachers highlighted that some students transitioning from junior cycle lacked proficiency in technical drawing skills. Many teachers and students also felt that there was a broad range of scaled drawings to learn and that perhaps a prescribed list of scaled drawings could make learning more manageable in the future.

The school visits highlighted the importance of developing skills to equip students for further study, work, training, and life in general. such as manipulative skills, design thinking, problem-solving, creativity, project management, communication, and evaluation skills. Many teachers felt that design thinking was an area of difficulty for students and central to this was an inability or lack of confidence to sketch ideas effectively. Participants also highlighted the importance of using CAD/CAM when appropriate in the subject.

## Assessment of Leaving Certificate Construction Studies

The current assessment arrangements include coursework, a day practical skills test and a final examination paper. The coursework element was highly valued by students, teachers and by school leaders. Participants highlighted the importance of student choice, and the opportunity to demonstrate a broad range of practical skills, as well as problem-solving and creativity skills developed in Leaving Certificate Construction Studies. Some teachers and students felt that using thematic briefs in coursework could enhance students' design thinking skills, while maintaining choice for students.

Participants questioned the relevance of the Experiments element of the SEC coursework portfolio. Many students were of the view that it would be more beneficial to learn practical skills relating to different trades and to document this learning in place of the experiments. For example, a student could demonstrate how to put a hinge on a door, wire an electrical socket, or fix a hole in a timber-studded plasterboard wall and record this learning in their portfolio.

There were varied views of the day practical test which was an area of significant discussion. Most participants valued this assessment component and preferred to see it retained in a redeveloped specification, believing that the four-hour practical examination was a fair way to demonstrate their learning. However, some students and teachers felt that this assessment component was outdated in its focus and commented that a mistake made by a student on the day of their day practical test could have a significant impact on their overall grade in construction studies.

Participants viewed the final examination papers for Leaving Certificate Construction Studies at Higher Level and at Ordinary Level to be relevant and reflective of ongoing changes in the built environment. Scaled drawing questions were highlighted as a concern, as previously noted. Some students suggested adding multiple short questions for greater choice. In addition, some students occasionally found the exam language to be too wordy.

A review of the weighting of the assessment components was recommended by most. The main strength and the most appealing aspect of the subject is that it is practical in nature. Therefore, and in line with the approach in junior cycle, many teachers and students expressed a preference for the practical assessment components to have a greater weighting than the written component. This would better reflect both the practical, hands-on nature of the subject and the needs of society to prepare young people for apprenticeships, traineeships, higher education, the world of work and life in general.

## Resourcing and implementation

Teachers emphasised the need for ongoing CPD with a focus on strategies and resources to enhance teaching and learning in the redeveloped subject. Participants acknowledged the importance of creating STEM learning experiences. However, they expressed concerns regarding the logistical challenges of integrating these experiences into timetabling, especially alongside the demands of a leaving certificate course.

School leaders and teachers welcomed recent capital funding for practical rooms but expressed concerns about the ongoing cost of resourcing Construction Studies, especially considering how

recent global uncertainty has increased the cost of materials. School leaders and teachers also felt that there is an absence of equality in funding between different types of post-primary schools when it comes to the provision of practical subjects such as Construction Studies.

As part of an overall implementation strategy for a revised specification for Construction Studies, participants suggested improving communication to parents and students through an information campaign in primary schools, followed by taster modules in first year and transition year in post-primary schools to strengthen the appeal of Construction Studies to all students. Some students indicated that they had been unaware of the content and learning experiences in Construction Studies before they commenced their study of the subject. Other students thought that Construction Studies was a continuation of junior cycle Wood Technology, not realising the broader focus on the built environment. Transition Year was seen as a year where STEM modules could be developed that would benefit students across all the technology subjects and broaden the appeal of technology subjects to other students.

## Section Summary

- Construction Studies is very popular due to its real-world relevancy and its practical nature.
- Scaled drawings, design thinking, and sketching were highlighted as key areas for concern. Some participants felt that using thematic briefs in coursework could enhance students' design thinking skills.
- The coursework and day practical skills test were highly valued by school leaders, teachers, and students. The written examination is perceived to be relevant in terms of content.
- Additional ongoing funding is required to support schools in providing Construction Studies as a subject. School leaders and teachers highlighted the cost of materials and the absence of equality in funding between different types of post-primary schools as areas of concern.

# 4. International trends in upper secondary built environment education

In reading this section, technology education refers to the subjects and modules provided in post primary education in Ireland. Technical education holds a historical importance, emphasising skills development. Technological education adopts a broader perspective with a focus on developing students' knowledge, skills, values, and dispositions.

Ireland is almost unique in presenting its technology education at senior cycle as four, stand-alone subjects. Other jurisdictions take different approaches due to varying contexts and situations. To explore similarities and differences, it is useful to consider international trends relating to built environment education. The review considers upper secondary built environment education in four jurisdictions: Sweden, USA, Germany, and New Zealand.

Technical education has evolved both nationally and internationally to the more commonly used term technology education. Initially, it focused on vocational training to develop specific technical skills needed for the workforce. This emphasis on mastering practical skills often led to apprenticeships or direct employment. Over time, there has been a shift towards recognising the broader value of technical education emphasising the importance of technical literacy and capability for future careers. Viewing technical education solely as vocational or general education can limit its perceived value. Instead, technical education should be seen as adaptive, creative, and practical, emphasising the importance of design and make activities. In this context, this section examines international approaches relevant to technological education, although their direct applicability to Irish education may vary due to different contexts and situations.

## Sweden

Swedish upper secondary education, which lasts three years, resembles Ireland's senior cycle and serves students who seek further education after completing compulsory schooling. It offers two types of programmes: university preparatory, and vocational. There are eighteen programmes available: twelve vocational programmes and six higher education preparatory programmes. Table 2 outlines vocational programmes related to Construction Studies or the built environment. Each vocational programme must include the study of courses in general upper secondary subjects: English, History, Mathematics, Sports and Health, Science, Civics, and Swedish language.

Technology is offered as a programme in the suite of six higher education preparatory routes. Table 2 displays some examples of specialisations within the Technology area, offering students opportunities for in-depth study alongside core content.

| Higher Education Preparatory Programmes | Vocational Programmes |
|---|---|
| The Technology Programme | The Building and Construction Programme |
| Note: *There are various treatments of Construction and the Built Environment* | The Vehicle and Transport Programme |
| | The Craft Programme |

| | |
|---|---|
| *within the Technology subject area where students can specialise in a range of areas such as: Architecture & Construction, Sustainable Society, CAD, and Energy Technology* | The Electrical and Energy Programme<br>The Plumbing and Property Programme |

Table 2: Technology Areas- Sweden

Teaching should integrate theoretical and practical knowledge effectively, supported by pedagogical strategies and assessments. It should foster creativity, problem-solving, and the development of initiative skills through individual and collaborative tasks.

The Swedish education system highly values crafts education, viewing crafting and material processing as avenues for thought and self-expression. Their approach blends manual and intellectual work, generally through designerly activity. It fosters creativity, problem-solving and manipulative skills through a process of integrating thinking, sensory experiences, and action. This emphasis on material manipulation can enrich curriculum development in the area of the built environment.

## USA

The USA is a relevant context to explore because of its diverse learning pathways and the connections observed across a wide range of technology and built environment curricula. STEM education is strongly emphasised, focusing on mastering conceptual knowledge and critical thinking. Similar to Ireland, high school (equivalent to senior cycle) serves students aged 14 to 18. Each state regulates its school curricula, resulting in variability of provision. Common elements include addressing industry knowledge and skills needs. Beyond second-level education, trade schools and university degree programmes offer career entry pathways to the industry.

Many curricula focus on specific vocational areas related to traditional construction systems such as carpentry, joinery, civil engineering, and other construction-related roles. These areas of learning offer pathways to apprenticeships and trade schools catering for construction careers. Additionally, some curricular options allow dual pathways to vocational apprenticeships or tertiary education. High school credits in math, science, languages, and technology, along with construction-related subjects, form the basis for matriculation to majors in construction and the built environment. Efforts to enhance STEM subjects have led to frameworks like the Engineering Content Taxonomy and the Standards for Technological and Engineering Literacy (STEL), which inform curricular design. Table 3 illustrates the components of the STEL model, emphasising standards, practices, and contexts for literacy development.

| Standards | Practices | Contexts |
|---|---|---|
| Nature and characteristics of technology and engineering | Systems Thinking | Computation, Automation, Artificial Intelligence, and Robotics |

| | | |
|---|---|---|
| Core concepts of technology and engineering | Creativity | Material Conversion and Processing |
| Integration of knowledge, technologies, and practices | Making and Doing | Transportation and Logistics |
| Impacts of technology | Critical Thinking | Energy and Power |
| Influence of society on technological development | Optimism | Information and Communication |
| History of technology | Collaboration | The Built Environment |
| Design in technology and engineering education | Communication | Medical and Health-Related Technologies |
| Applying, maintaining, and assessing technological products and systems | Attention to Ethics | Agricultural Technologies |

Table 3: Standards for Technological and Engineering Literacy

When examining curricula related to the built environment, practical skill development is emphasised. This helps students to understand the complexities of construction-related projects and foster problem-solving abilities. These curricula expose students to diverse career pathways, including apprenticeships and university degrees. Courses address the significance of technology and the built environment, emphasising sustainability, economic impact, and resource considerations. Assessment methods vary, but often include practical problem-solving and formal examinations. Additionally, framing the learning through the use of thematic briefs enhances technology and engineering literacy, focusing on competencies like design, modelling, systems, resources, and human values.

## Germany

In Germany, upper secondary school is equivalent to the Irish senior cycle. It offers diverse subjects and pathways to cater to students' interests and aspirations. The cycle usually consists of a two- or three-year programme that follows on from the completion of lower secondary school. Students attending the Gymnasium (with an academic focus) often proceed to third-level education and university degrees. Those in vocationally oriented schools can choose vocational pathways or tertiary education based on subject offerings.

In the general upper secondary education system, subjects are grouped into main areas. Technology falls under the category of 'mathematics, natural sciences, and technology'. However, the treatment of technology at this level primarily focuses on information technology, with little reference to content similar to Leaving Certificate Construction Studies. The subject offerings most aligned with construction and the built environment can be found in vocationally oriented schools. In these schools, subjects related to trade, technical occupations, and crafts industry have content similarities with aspects of the Construction Studies syllabus. However, the emphasis on knowledge and skills is strongly geared toward career readiness and industry preparation. The dual system requires learners to make early decisions about their educational paths, leading to either vocational or general pathways. This decision-making process may impact learner participation and potential career choices. Similar to the USA, curriculum design and content vary

across the sixteen federal states, with no national curriculum specifically for engineering-based disciplines.

## New Zealand

In New Zealand, technological subjects have a similar historical evolution to Ireland. The current subject, called Technology, has evolved from vocational education focused on woodwork and metalwork. During the 1980s and 1990s, the subject shifted from purely skills-focused programmes to a more design-oriented approach, incorporating a wider range of materials. This transition from technical to technological education broadened access for learners and helped address gender imbalances in subject choices. Over the years, there have been several iterations of the subject, with the most recent reforms implemented in 2020. New Zealand's national curriculum at the secondary level is guided by principles, values, and key competencies similar to those in Ireland's senior cycle redevelopment. Technology education encompasses strands such as Technological Practice, Technological Knowledge, and the Nature of Technology. While these strands are presented separately, they are meant to be integrated in teaching and learning programmes. Table 4 outlines the technological areas of study in New Zealand.

| Technological Areas New Zealand |
| --- |
| Designing and developing materials outcomes |
| Designing and developing processed outcomes |
| Design and visual communication |
| Computational thinking for digital technologies |
| Designing and developing digital outcomes |

Table 4: Technological Areas New Zealand

The structural similarity between New Zealand's curriculum and the new Leaving Certificate specifications is valuable for planning the Construction Studies equivalent. The structure is guided by a clear understanding of knowledge and capability, which drives the desired learning outcomes. The technological areas or contexts for learning can align with the needs outlined by educational, societal, and industrial agendas.

In New Zealand, the subject is assessed both internally by the school and externally by the New Zealand Qualifications Authority for credit awards. Assessments focus on specific subject outcomes, where students demonstrate their capabilities against a set of achievement standards. These assessment activities involve contextual student-directed projects, allowing flexibility in collecting and presenting evidence. Comprehensive standards and guidelines are provided to guide learners and teachers through the assessment process.

## Section Summary

- Technical education has evolved, both nationally and internationally, from a focus solely on vocational training to a broader recognition of its educational value, emphasising technological literacy and capability for future careers. This evolution highlights the importance of viewing technological education as adaptive, creative, and practical, emphasising design and make activities.
- Similar to Ireland, Sweden's compulsory schools emphasise core values promoting holistic education. Swedish upper secondary education offers university preparatory and vocational programmes, some of which relate to Construction Studies or the built environment. The Swedish education system highly values crafts education, integrating manual and intellectual work to foster creativity and skills through designerly activity.
- The USA is significant for its variable learning pathways, STEM emphasis, and curricular alignment with industry needs. Trade schools and university programmes offer pathways to industry beyond secondary education. High school credits in relevant subjects are essential for majors in construction and the built environment. Frameworks like the Engineering Content Taxonomy and STEL inform STEM curricular design.
- In German upper secondary schools, students attend either the Gymnasium, which has an academic focus, or vocational-oriented schools. The latter offer vocational pathways or tertiary education options based on subject offerings. Vocational schools, particularly, offer subjects related to construction and the built environment, emphasising career readiness and industry preparation. The dual system necessitates learners to make early educational path decisions, leading to vocational or general pathways.
- In New Zealand, technological subjects evolved from purely skills-focused programmes to a design-oriented approach incorporating a wider range of materials. This evolution has broadened access for learners and addressed gender imbalances in subject choices. Technology education is organised into separate strands, which are integrated in teaching and learning through contextual technological areas. Assessment activities involve contextual student-directed projects, allowing flexibility in collecting and presenting evidence.

# 5. Issues for consideration

This section sets out a number of issues for consideration in the development of a new specification for Leaving Certificate Construction Studies. These arise from the nature of the subject itself, and the influence of a wide range of environmental, technological, and socio-economic factors both nationally and internationally, in addition to drawing on themes emerging in the previous sections of this background paper.

## Emerging environmental needs and socio-economic needs

In the redevelopment of Leaving Certificate Construction Studies, it is important to address emerging environmental needs and socio-economic needs to ensure that the curriculum remains relevant and impactful in today's world.

National and international policies emphasise the need for sustainability in the built environment, which has led to significant changes in building design, materials, and practices. To ensure a more sustainable future, current and future generations must develop knowledge, understanding, skills, values, and dispositions that facilitate the design, construction, and operation of buildings in a more sustainable manner. This includes developing a greater awareness of carbon literacy and understanding the impact of whole life carbon on the design of the built environment (World Green Building Council, 2019).

Socio-economic factors are pivotal in preparing students for construction-related careers amid a changing global economy. Emphasising relevant knowledge, skills, values, and dispositions in a redeveloped Construction Studies specification not only equips learners for opportunities in apprenticeships, traineeships, further education, and employment, but also for active citizenship. A redeveloped Construction Studies can also contribute in achieving several Sustainable Development Goals (SDGs) and goals in the Government's Housing for *All- a New Housing Plan for Ireland Strategy*.

## Breadth and depth of the subject

As the subject continues to evolve, careful consideration must be given to the breadth and depth of learning set out in the specification. Facilitating student interest in a wide range of topics relating to the built environment that are relevant to their lives is essential. While many teachers and students value the current syllabus for the knowledge, skills, values, and dispositions it fosters, a heavy workload can limit the realisation of potential learning opportunities. One challenge in redeveloping the specification for Leaving Certificate Construction Studies lies in framing its boundaries. This concept of framing a subject's boundaries poses a significant curricular challenge: balancing breadth and depth.

The idea of breadth and depth manifests in two distinct ways. Firstly, in the representation of the discipline area—for instance, the built environment encompasses diverse fields like architecture, civil engineering, structural engineering, the trades and many more. Secondly, in the treatment of built environment related concepts and principles, in which striking an appropriate depth is critical.

## The importance of technological literacy and capability

Acknowledged nationally and internationally, the shift from technical to technological education offers broader applications and enhanced educational value. Defining technological capability as the ability to create "meaningful practical solutions to real problems framed within an appropriate set of values and underpinned by appropriate knowledge", calls for designerly activity as a foundational feature (Gibson, 2008). Essential to this transition is raising awareness of the importance of technological literacy and capability in subject disciplines such as Construction Studies.

The NCCA paper on Senior Cycle Key Competencies (NCCA, 2023) notes that the development of students' literacies contributes to the development of competencies and vice-versa. Expanding on this, the paper notes that key competencies are supported when:

- students' literacies are well developed, i.e., when they can meaningfully and effectively read, watch, write, speak, listen, interpret and mediate meaning in a range of contexts.
- students make good use of various tools, including technologies, to support their learning.

## Participation

It's essential that the subject experience appeals to both male and female students. In March 2022, the Department of Education published recommendations on gender balance in STEM education. To make STEM careers more appealing, particularly for females, students should be exposed to exciting opportunities and see individuals like themselves actively engaged in these fields.

The progression from junior to senior cycle must consider various factors affecting girls' participation in STEM, and any curriculum changes should address these factors positively. For example, incorporating exposure to diverse STEM professionals and career paths can be integrated into subjects such as the redeveloped specification for Construction Studies.

## Section Summary

- In the redevelopment of Leaving Certificate Construction Studies, it is imperative to respond to emerging environmental and socio-economic needs to ensure that the curriculum remains relevant and impactful in today's world. By prioritising relevant competencies, future generations can be better equipped to tackle environmental and socio-economic challenges and actively engage as citizens in their communities.
- As the subject continues to evolve, careful consideration must be given to the breadth and depth of the specification. Facilitating student interest in a wide range of topics relating to the built environment that are relevant to their lives is essential. Balancing both breadth and depth is a challenge in the redevelopment process, as it involves incorporating various disciplines and treating concepts appropriately. The new specification should provide students with choices and flexibility while also ensuring that teaching, learning, and assessment methods are manageable.

- The shift from technical to technological education is recognised globally, offering expanded applications and improved educational value. Raising awareness of technological literacy, particularly in disciplines like Construction Studies, is crucial.
- Progression opportunities from junior cycle to senior cycle should prioritise problem-solving, innovation, and collaboration, aligning with STEM education principles. Recent reports emphasise the necessity of addressing these competencies. A redeveloped subject concerning the built environment should carefully consider knowledge treatment, the importance of making, and the integration of design actions.
- To make STEM careers more appealing, particularly for females, learners should be exposed to exciting opportunities and see individuals like themselves actively engaged in these fields.

# 6. Brief for the review and redevelopment of Leaving Certificate Construction Studies

NCCA has established a development group to undertake the task of redeveloping the curriculum specification for Leaving Certificate Construction Studies. The work of the Development Group is, in general terms, agreed by the NCCA Board for Senior Cycle and approved by the Council in the form of the brief set out below.

This brief is designed to provide the basis for redeveloping the Leaving Certificate Construction Studies curriculum specification. While the brief is derived from the key insights and issues for consideration identified in the previous sections of this paper, it is also guided by the parameters for the design of assessment arrangements in the development of specifications for all Tranche 2 subjects (Appendix 1).

The redevelopment of the new specification for Leaving Certificate Construction Studies will take account of current research and developments in the field of built environment education. It will remain student-centred and outcomes-based and in general terms, the specification should be aligned with levels 4 and 5 of the National Framework of Qualifications.

The specification will align to the template, agreed by Council, for curriculum specifications as set out in the Technical form of curriculum specifications for subjects and modules in a redeveloped senior cycle (NCCA, 2023).

The Senior Cycle Key Competencies will be embedded in the learning outcomes. Leaving Certificate Construction Studies will be available at both Higher and Ordinary level. It will be designed to be taught and assessed in a minimum of 180 hours. The development will be completed in Q2, 2025.

More specifically, the updating of the specification will consider and address the following:

- How the specification aligns with the guiding principles of senior cycle and the vision for senior cycle education.
- How the specification can support continuity and progression, including how to connect with and build on related learning at junior cycle, transition year, and in other senior cycle subjects and modules as well as future learning in life, study, entrepreneurship, further education and training, higher education, apprenticeships, traineeships, and the world of work.
- The rationale for LC Construction Studies making it transparent and evident to students, teachers, and parents and how to further widen the appeal of the subject and continue to promote broader uptake of the subject.
- How the specification can support the development of a range of student key competencies and the development of a range of digital skills relevant to future life, work, and study.

- How the specification, in its presentation and language register, can be strongly student centred and have a clear focus on how students develop and demonstrate their knowledge, skills, values and dispositions.
- The assessment of Leaving Certificate Construction Studies that is aligned to the parameters for the design of assessment arrangements in the development of specifications for all Tranche 2 subjects and modules (Appendix 1). Typically, as noted in appendix 1, there should be two assessment components: one written examination and one other assessment component. However, there may be exceptions to this that are justified even after extensive consideration of the overall assessment load on students.
- How the specification, in its presentation, can support teachers in planning for teaching, learning and assessment.
- How to embrace and embed technology in teaching, learning and assessment.
- How the specification can support students in developing a greater awareness of carbon literacy and understanding the impact of whole life carbon in the built environment
- The breadth and depth of the subject ensuring that teaching, learning, and assessment methods are sustainable.
- How the specification can support the development of students' technological literacy and capability, as applied through the subject discipline
- How the specification can support the development of students' project work skills as they engage with all stages of a design journey, from initial concept to final realisation
- How the specification can foster greater awareness and appreciation among students for the diverse fields within the built environment and STEM- related professions.

The work of the LC Construction Studies Development Group will be based, in the first instance, on this Brief. In the course of the work and deliberations of the Development Group, elaborations of some of these points and additional points may be added to the brief.

# Appendix 1: Overarching parameters for the design of assessment arrangements in the development of specifications for all Tranche 2 subjects.

**Executive summary**

- The Minister for Education announced an update on September 20, 2023, on the approach to be taken to the introduction of new and revised subject specifications including how assessment would be addressed in those specifications. Specifically, each subject shall have an assessment component in addition to the terminal written examination.
- This assessment component will be worth at least 40% of the total available marks.
- Each subject is to have one written examination; typically marks for the written examination will be 60%,
- Typically, there should be two assessment components: One written examination and one other assessment component. However, there may be exceptions to this that are justified even after extensive consideration of the overall assessment load on students.

**Introduction**

This document outlines the overarching assessment arrangements and parameters to guide the design of specifications for all Tranche 2 subjects/ modules. These subjects/modules are:

- Accounting
- Construction Studies
- Engineering
- English
- Geography
- LCVP Link Modules
- Physical Education.

This advice is informed by ongoing work with Tranche 1 subjects and will be amended, as appropriate, for future tranches which may take account of their subject areas and existing assessment arrangements.

The arrangements as detailed here reflect the policy direction issued by the Minister of Education that all subjects will have an assessment component, to be in a form that is not a traditional written examination, for those components to be set and assessed by the SEC and thereby lead to a reduced emphasis on final examinations in June of 6th year.

Specifically, the arrangements for all assessment components as outlined in this document are framed by the Minister's announcement(s) on March 29, 2022, and subsequently on September 20th, 2023. Underpinned by the following understandings, the assessment components:

- will not take the form of traditional written examinations.
- will be set and marked by the SEC.
- will be subject to SEC arrangements for their completion, authentication, and submission.

In developing the arrangements outlined below, the following rationale for moving towards all subjects having another assessment component is central. This rationale is informed by

deliberations on research commissioned by the NCCA and the SEC, and on the assessment literature more generally. From this work, it is evident that these components have the potential to:

- **Reduce dependence** on written summative examinations and therefore provide for a **broader assessment system**; written examinations have an important role but can be seen as a 'snapshot' of learning and can lead to teaching and learning having an excessive focus on examination preparation; other forms of assessment can mitigate the potential for this narrowing of learning by assessing aspects of student learning better and/or more comprehensively than written examinations alone can do; or assess learning that is not readily assessable through written examinations.
- Support and enhance teachers' understanding and assessment of **key competencies** by contributing to a greater understanding of how students' knowledge, skills, values, and dispositions are assessed.
- Provide opportunities for students and teachers to **reflect on student learning,** boost students' motivation to learn and enhance opportunities for formative feedback practices.
- Extend the range and diversity of assessment opportunities; **spread the assessment load** and thus contribute to a reduction in or spreading of pressure on students.
- Build and develop **teachers' assessment skills and assessment literacy** as teachers support students in working through the assessment activities as detailed within assessment briefs or guidelines.
- Generate student assessment data which can help reduce the vulnerability of the system to future unprecedented or unexpected system shocks such as COVID.
- Allow for assessment opportunities that are more **authentic** than a system relying on terminal written examinations solely.

It is also important to note that a review of the assessment literature more generally also indicates that when introducing other assessment components, it is necessary to consider how to mitigate risks, for example, of:

- over-assessment of students
- over-rehearsal of assessments
- the assessments becoming overly structured, compartmentalised, repetitive, and routine.
-

As is already the case where other forms of assessment apply, the new assessment arrangements will be guided by the overarching principles of equity, fairness, and integrity.

Table 1 below sets out the general parameters and processes to guide the work of the subject development groups (SDG) as they consider the most appropriate assessment for every subject. The specific parameters for each of the Tranche 2 subjects are set out in Table 2.

**Table 1: Assessment parameters and processes – general application to tranche 2 subjects**

| Considerations | Parameters to guide the work of the development group. |
|---|---|
| **Nature** | The purpose and nature of the assessment component will be clearly outlined in the subject specification and accompanying guidelines to |

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|---|---|
| | support the completion of the assessment. Details will be provided on the nature of the component. Existing examples include:<br>• research project/extended essay<br>• oral assessment<br>• performance assessment<br>• portfolio assessment<br>• creation of an artefact<br>• field study<br>• experiment/ proof of concept/ practical investigation.<br><br>The subject specification and the accompanying guidelines will articulate clearly what the students are required to do, the form(s) in which it can be carried out and submitted, and the workload expectations associated with the assessment. The alignment of the assessment component to a particular set of learning outcomes from the subject specification will be provided, as well as details on which key competencies and associated learning outcomes will be assessed. This does not preclude the same LOs from being assessed in the final examination. |
| **Weighting** | The assessment component in each subject will be worth at least 40% of the total available marks. There will be the option for this weighting to be worth 50% in the cases of Construction Studies, Engineering and PE, and up to 60% for the LCVP Link Modules. |
| **Timing** | The SDG will advise on the time required for the carrying out of the assessment component.<br><br>While the SDG may suggest when this may occur, the final decision will need to be made following consideration of the overall schedule of completion dates for all assessments across all subjects and this will be finalized by the SEC further to collaboration with NCCA and DE.<br><br>The date for completion of the assessment component by the student will be published by the SEC and this detail will not be included in the subject specification. |
| **Design** | The majority of assessment components will result in an artefact/document being transmitted to the SEC and assessed by the SEC.<br><br>In some instances, the design of the assessment may require examiners to visit schools to conduct the assessment but manageability at school and system level will need to be considered. |
| **Guidance** | Guidelines to support the assessment components will be specific to each subject. These guidelines will be developed collaboratively by the NCCA |

| | |
|---|---|
| | and SEC. They will be informed by the deliberations of the SDG during the development of the specification and will detail:<br>• the purpose of the component concerned i.e., what it is intended to assess.<br>• the nature of the assessment component/activity.<br>• descriptors of quality in the form of a graduated rubric and details on assessment standards at higher and ordinary levels if deemed necessary by the assessment method.<br>• details on the timing of the assessment (its duration and when it could happen).<br>• guidance on the processes that may be used for the administration of the assessment. |

**Table 2: Parameters for assessment arrangements for each Tranche 2 subject**

| Subject | Current arrangements | Parameters for new assessment arrangements |
|---|---|---|
| **Accounting** | One written examination. (3 hrs) | Written examination: 60% weighting.<br><br>Assessment component: 40% weighting.<br><br>Written examination will be set at higher and ordinary levels.<br><br>Assessment component would be based on one submission to SEC based on a common brief. |
| **Construction Studies** | Written examination (OL: 40%; HL: 50%) 1 paper (OL: 2.5 hours; HL: 3 hours)<br><br>Coursework (artefact and portfolio) (OL: 30%; HL: 25%)<br>Practical skills test (OL: 30%; HL: 25%)<br><br>Coursework and practical are examined at a common level. Written examination is examined at higher and ordinary levels. | Written examination: 50% weighting.<br><br>Assessment component: 50% weighting.<br><br>Written examination will be set at higher and ordinary levels.<br><br>Assessment component would be based on one submission to SEC based on a common brief. |

| | | |
|---|---|---|
| **Engineering** | Written examination (OL: 40%; HL: 50%) 1 paper (OL: 2.5 hours; HL 3 hours)<br>Coursework (artefact and portfolio) (OL: 30%; HL: 25%)<br>Practical skills test (OL: 30%; HL: 25%)<br><br>Coursework is assessed at Higher and Ordinary levels.<br><br>Practical skills test is examined at a common level. Written examination is examined at higher and ordinary levels. | Written examination: 50% weighting.<br><br>Assessment component: 50% weighting.<br><br>Written examination will be set at higher and ordinary levels.<br><br>Assessment component would be based on one submission to SEC based on a common brief. |
| **English** | Two papers with a 50/50 % split.<br>Paper 1: Broadly essay and comprehension focused (2 hours 30 + 20 minutes reading time).<br><br>Paper 2: Poetry, Literature focused (3 hours + 20 minutes reading time). | Written exam: 60% weighting.<br><br>Assessment component: 40% weighting.<br><br>Written examination will be set at higher and ordinary levels.<br><br>Assessment component would be based on one submission to SEC based on a common brief. |
| **Geography** | Written examination: 80% weighting (2 hours 30 + 20 minutes reading time).<br><br>Geographical Investigation: 20% weighting. | Written exam: 60% weighting.<br><br>Assessment component: 40% weighting.<br><br>Written examination will be set at higher and ordinary levels.<br><br>Assessment component would be based on one submission to SEC based on a common brief. |

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|---|---|---|
| **LCVP Link Modules** | Portfolio: 60% weighting.<br><br>Written examination: 40% weighting<br><br>Portfolio submitted with written exam in March of 6th year.<br><br>Written examination has 3 aspects: Case study, audio visual and extended answer questions.<br><br>Portfolio has combination of core and choice aspects and completed under supervision of class teacher. | Portfolio: 60% weighting.<br><br>Written exam: 40% weighting. |
| **Physical Education** | Physical Activity Project: 20% (to a common brief)<br>Performance assessment: 30% (to a common brief)<br>Written examination: 50% (at Higher and Ordinary Level)<br><br>PAP: over an 8- to 10-week period and submitted as digital format.<br><br>PA: choose one of 3 physical activities; submit as digital artefact. | Written examination: 50% weighting.<br><br>Assessment component: 50% weighting.<br><br>Written examination will be set at higher and ordinary levels.<br><br>Assessment component would be based on one submission to SEC based on a common brief. |

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