LEVEL 5 HIGHER INTERNATIONAL DIPLOMA

IN

FACADE ENGINEERING

CURRICULUM FOR FACADE ENGINEERING BASED ON CREDIT SYSTEM

PROGRAMME LEARNING OUTCOMES (PLO):

I. Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

II. Problem analysis Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

III. Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

IV. Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions Manage Construction Projects for Planning, Analyzing, Costing, Scheduling, Predicting and complete within the stipulated period and fund.

V. Modern tool usage Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations

VI. Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

VII. Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development, Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

VIII. Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

IX. Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

X. Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

PROGRAMME GUIDELINES	
PROGRAMME TITLE	**Level 5 Higher International Diploma in Façade Engineering**
QUALIFICATION CODE	**A/701/8024/6**
LEVEL	**LEVEL – 5**
TOTAL CREDITS	**240**
TOTAL LEARNING HOURS	**2400 HOURS**
GUIDED LEARNING HOURS	**960 HOURS**

Total learning hour 2400 Hours

1 Credit = 10 hours of effort (10 hours of learning time which includes everything a learner has to do to achieve the outcomes in a qualification including the assessment procedures and practical's).

Guided Learning Hour for first year is 480 hours and second year is 480 hours.
Total Guided Learning Hours for Higher International Diploma in Façade Engineering is 960 hours.

HID IN FACADE ENGINEERING

COURSE STRUCTURE

YEAR	SEMESTER	UNIT SPECIFICATION	NO. OF. UNITS	UNIT CREDIT	CREDIT/YEAR
I	SEMESTER 1	Common unit	1	15	120
		Essential unit	2	30	
		Elective (or) Open unit	1	15	
	SEMESTER 2	Common unit	1	15	
		Essential unit	2	30	
		Elective (or) Open unit	1	15	
II	SEMESTER 3	Common unit		-	120
		Essential unit	2	30	
		Elective (or) Open unit	2	30	
	SEMESTER 4	Common unit		-	
		Essential unit	2	30	
		Special Unit (Essential)*	1	30	
				TOTAL	**240**

FIRST YEAR	Common unit carries	15 credit
	Essential unit carries	15 credit
	Elective unit carries	15 credit
SECOND YEAR	Essential unit carries	15 credit
	Elective unit carries	15 credit
	Special unit (Essential)* carries	30 credit

LIST OF UNITS

S. No.	Subject Code	UNIT	UNIT SPECIFICATION	CREDIT
1	CUP001	Technical Drawings with Engineering Graphics	Common unit	15
2	CUP002	Workshop and General Safety	Common unit	15
3	FEP001	Introduction to Façade Engineering	Essential unit	15
4	FEP002	Façade Materials and Components	Essential unit	15
5	FEP003	Glass and Glazing	Essential unit	15
6	FEP004	Applied Mathematics for Facade engineering	Essential unit	15
7	FEP005	Weather Tightness	Essential unit	15
8	FEP006	Thermal Performance of Facades	Essential unit	15
9	FEP007	Structural Analysis for Façade Engineering	Essential unit	15
10	FEP008	Facade Construction	Essential unit	15
11	SU001	Project	Special unit (Essential)*	30
ELECTIVE UNITS				
13	FUP001	Facade Procurement	Elective Unit	15
14	FUP002	Daylight and Shading	Elective Unit	15
15	FUP003	Acoustics and Fire	Elective Unit	15
16	FUP004	Natural Ventilation in Buildings	Elective Unit	15
17	FUP005	Contract Management	Elective Unit	15
18	FUP006	Façade Sustainable Design	Elective Unit	15

Semester : I
Year : 1
Credit : 60

UNIT CODE	UNIT	UNIT SPECIFICATION	CREDIT
CUP001	Technical drawings with Engineering Graphics	Common unit	15
FEP001	Introduction to Façade Engineering	Essential unit	15
FEP002	Façade Materials and Components	Essential unit	15
FUP001	Natural Ventilation in Buildings	Elective Unit	15

Semester : II
Year : 1
Credit : 60

UNIT CODE	UNIT	UNIT SPECIFICATION	CREDIT
CUP002	Workshop and General Safety	Common unit	15
FEP007	Structural Analysis for Façade Engineering	Essential unit	15
FEP003	Glass and Glazing	Essential unit	15
FUP009	Daylight and Shading	Elective Unit	15

Semester : III
Year : 2
Credit : 60

UNIT CODE	UNIT	UNIT SPECIFICATION	CREDIT
FEP004	Applied Mathematics for Facade engineering	Essential unit	15
FEP005	Weathertightness	Essential unit	15
FUP004	Acoustics and Fire	Elective Unit	15
FUP011	Natural Ventilation in Buildings	Elective Unit	15

Semester : IV
Year : 2
Credit : 60

UNIT CODE	UNIT	UNIT SPECIFICATION	CREDIT
FUP008	Facade Procurement		
FEP006	Thermal Performance of Facades	Essential unit	15
FEP008	Facade Construction	Essential unit	15
SU001	Project	Special unit (Essential)*	30

UNIT CODE : CUP001

UNIT TITLE : Technical drawings with Engineering Graphics

CREDIT : 15

SPECIFICATION : Common Unit

UNIT DESCRIPTION

This unit enables students to understand about the technical drawing and its importance. This unit teaches the students about the vital role of technical drawings in engineering documents and communication. This unit covers angle of projection, Multiview, section, detail drawing and symbol.

UNIT LEARNING OUTCOMES

ULO1 - Use appropriate tool to develop technical drawings

ULO2 - Ability to understand and interpret technical drawings.

ULO3 - Ability to provide required information in technical drawing according to process and operation.

MAPPING

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10
ULO1	M	M		M	M		M	M		M
ULO2	M			M		M		M		
ULO3		M			M		M		M	M

UNIT CODE : CUP002

UNIT TITLE : Workshop and General Safety

CREDIT : 15

SPECIFICATION : Common Unit

UNIT DESCRIPTION

This unit help to know about tools used for diverse application in engineering workshop. This unit helps to learn skill-oriented experience in manufacturing process and production technology. This unit teaches safety procedure and workshop safety in various workshop practice.

UNIT LEARNING OUTCOME

ULO1 – Ability to select appropriate tool and process for required application

ULO2 – Ability to understand basic operation in manufacturing and production

ULO3 - Ability to maintain safety procedure and use safety tools and equipment in engineering practice.

MAPPING

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10
ULO1	M	M			M	M		M	M	M
ULO2			M	M			M	M		
ULO3	M		M		M	M	M	M		M

UNIT CODE : FEP001

UNIT TITLE : Introduction to Façade Engineering

CREDIT : 15

SPECIFICATION : Essential Unit

UNIT DESCRIPTION

This unit enables the students to explore the historical roots and modern relevance of facade engineering and to uncover the pivotal functions and prerequisites of building facades, dissecting their role in structural integrity, energy efficiency, and occupant well-being. The students also analyze how facade design interweaves with building performance and environmental stewardship, shaping sustainable architectural futures.

UNIT LEARNING OUTCOME

ULO1 - Understand the historical context and evolution of facade engineering and recognize the significance of facade engineering in modern architecture.

ULO2 - Identify the primary functions and requirements of building facades.

ULO3 - Analyze the relationship between facade design, building performance, and environmental sustainability.

MAPPING

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10
ULO1	M	M		M	M		M	M	M	M
ULO2	M						M		M	
ULO3	M	M	M	M	M	M			M	

UNIT CODE : FEP002

UNIT TITLE : Façade Materials and Components

CREDIT : 15

SPECIFICATION : Essential Unit

UNIT DESCRIPTION

This unit offers the students a comprehensive exploration of facade materials and technologies, focusing on their properties, performance characteristics, manufacturing processes, and sustainability implications in building design.

UNIT LEARNING OUTCOMES

ULO1 - Identify and evaluate the properties and performance characteristics of facade materials.
ULO2 - Understand the manufacturing processes and fabrication techniques for facade components.
ULO3 - Analyze emerging facade technologies and innovations for sustainable building design.

MAPPING

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10
ULO1	M	M		M	M		M	M		M
ULO2	M			M		M		M		
ULO3		M			M		M		M	M

UNIT CODE : FEP003

UNIT TITLE : Glass and Glazing

CREDIT : 15

SPECIFICATION : Essential Unit

UNIT DESCRIPTION

This unit enables the students to explore the glass applications in building facades and investigate properties, types, and innovative uses of glass. This unit also helps the students to evaluate glazing systems for structural integrity, thermal performance, and aesthetic appeal, integrating them seamlessly into facade design solutions.

UNIT LEARNING OUTCOMES

ULO1 - Understand the properties and characteristics of different types of glass used in building facades.
ULO2 - Evaluate various glazing systems in terms of structural integrity, thermal performance, and aesthetic considerations.
ULO3 - Apply knowledge of glass and glazing to effectively integrate these elements into facade design solutions.

MAPPING

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10
ULO1	M	M		M	M		M	M		M
ULO2	M			M		M		M		
ULO3		M			M		M		M	M

UNIT CODE : FEP004

UNIT TITLE : Applied Mathematics for Facade Engineering

CREDIT : 15

SPECIFICATION : Essential Unit

UNIT DESCRIPTION

This unit enables the students to understand the mathematical principles essential for facade engineering and apply mathematical concepts to analyze structural loads, thermal behavior, and energy performance in facade systems.

UNIT LEARNING OUTCOMES

ULO1- Apply mathematical principles and concepts to analyze structural loads, thermal conductivity, and energy performance in facade systems.

ULO2- Utilize mathematical modeling and simulation techniques to predict and optimize the behavior of facade components.

ULO3- Interpret mathematical data and calculations to inform design decisions and ensure compliance with engineering standards.

MAPPING

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10
ULO1	M	M		M	M		M	M		M
ULO2	M			M		M		M		
ULO3		M			M		M		M	M

UNIT CODE : FEP005

UNIT TITLE : Weathertightness

CREDIT : 15

SPECIFICATION : Essential Unit

UNIT DESCRIPTION

This unit enables the students to understand the critical aspect of maintaining building envelope integrity and identify the sources of water infiltration and air leakage in facades. The students will also learn the strategies, materials, and construction techniques to ensure weathertightness, preventing moisture ingress and preserving building durability.

UNIT LEARNING OUTCOMES

ULO1- Identify common sources of water infiltration and air leakage in building facades.

ULO2- Evaluate various strategies and materials for achieving weathertightness in facade systems.

ULO3- Implement effective detailing and construction techniques to mitigate the risk of moisture ingress and maintain building envelope integrity.

MAPPING

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10
ULO1	M	M		M	M		M	M		M
ULO2	M			M		M		M		
ULO3		M			M		M		M	M

UNIT CODE : FEP006

UNIT TITLE : Thermal Performance of Facades:

CREDIT : 15

SPECIFICATION : Essential Unit

UNIT DESCRIPTION

In this unit the students will explore the thermal behavior of facade materials and systems. And analyze the heat transfer mechanisms and insulation strategies to optimize energy efficiency. The students will also utilize computational tools to simulate and enhance thermal performance, mitigating heat gain or loss in building facades.

UNIT LEARNING OUTCOMES

ULO1- Identify common sources of water infiltration and air leakage in building facades.

ULO2- Evaluate various strategies and materials for achieving weathertightness in facade systems.

ULO3- Implement effective detailing and construction techniques to mitigate the risk of moisture ingress and maintain building envelope integrity.

MAPPING

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10
ULO1	M	M		M	M		M	M		M
ULO2	M			M		M		M		
ULO3		M			M		M		M	M

UNIT CODE : FEP007

UNIT TITLE : Structural Analysis for Façade Engineering

CREDIT : 15

SPECIFICATION : Essential Unit

UNIT DESCRIPTION

This unit offers the students a comprehensive study of structural analysis specifically focusing on principles, design, and performance evaluation. The students will explore the intricate relationship between structural mechanics, material properties, and aesthetic considerations to develop efficient and safe facade support systems.

UNIT LEARNING OUTCOMES

ULO1- Understand the principles of structural mechanics as applied to building facades and analyze the behavior of facade materials and systems under different loading conditions.

ULO2- Design structurally efficient and aesthetically pleasing facade support systems.

ULO3- Evaluate the performance and safety of facade structures through structural analysis and testing.

MAPPING

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10
ULO1	M	M		M	M		M	M		M
ULO2	M			M		M		M		
ULO3		M			M		M		M	M

UNIT CODE : FEP008

UNIT TITLE : Façade Construction

CREDIT : 15

SPECIFICATION : Essential Unit

UNIT DESCRIPTION

This unit enables the students to understand the practical aspects of facade installation and construction. The student will also learn construction methods, sequencing, and detailing specific to facade systems and apply quality control measures to ensure compliance with design specifications and industry standards, achieving seamless integration of design intent into built form.

UNIT LEARNING OUTCOMES

ULO1- Understand the principles of structural mechanics as applied to building facades and analyze the behavior of facade materials and systems under different loading conditions.

ULO2- Design structurally efficient and aesthetically pleasing facade support systems.

ULO3- Evaluate the performance and safety of facade structures through structural analysis and testing.

MAPPING

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10
ULO1	M	M		M	M		M	M		M
ULO2	M			M		M		M		
ULO3		M			M		M		M	M

UNIT CODE : SU001

UNIT TITLE : Project

CREDIT : 30

SPECIFICATION : Special unit (Essential)*

UNIT DESCRIPTION

The module aims to enable you to complete a substantial piece of individual work and build on your expertise in a selected area of study. It aims to develop your research, time management, presentation and written communication skills.

UNIT LEARNING OUTCOME

ULO1 - Identify a research question, problem or hypothesis and establish aims and objectives to support the investigation.

ULO2 - Communicate the planned project work using standard methods and tools.

ULO3 - Develop a research and data collection strategy appropriate to the research question / problem posed.

ULO4 – Critically evaluate the research findings using reasoned and logical arguments within a structured written framework.

MAPPING

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10
ULO1	M	M	M	M			M	M	M	M
ULO2		M				M			M	
ULO3	M		M	M	M		M	M		M
ULO4	M		M			M		M	M	M

UNIT CODE : FUP001

UNIT TITLE : Façade Procurement

CREDIT : 15

SPECIFICATION : Elective Unit

UNIT DESCRIPTION

This unit enables the students to understand the intricacies of procuring materials and systems for building facades and also learn to evaluate suppliers, negotiate contracts, and manage procurement processes effectively. The students also explore the strategies for ensuring quality, cost-effectiveness, and timely delivery of facade components to meet project requirements.

UNIT LEARNING OUTCOMES

ULO1- Understand the principles of structural mechanics as applied to building facades and analyze the behavior of facade materials and systems under different loading conditions.

ULO2- Design structurally efficient and aesthetically pleasing facade support systems.

ULO3- Evaluate the performance and safety of facade structures through structural analysis and testing.

MAPPING

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10

ULO1	M	M		M	M		M	M		M
ULO2	M			M		M		M		
ULO3		M			M		M		M	M

UNIT CODE : FUP002

UNIT TITLE : Daylight and Shading

CREDIT : 15

SPECIFICATION : Elective Unit

UNIT DESCRIPTION

In this unit the student will the concepts involved in the daylighting and shading in facade design and the students also explore techniques to optimize natural light penetration while controlling glare and heat gain. The students also understand the aesthetic and environmental implications of daylighting strategies, and learn to integrate shading devices seamlessly into facade solutions.

UNIT LEARNING OUTCOMES

ULO1- Analyze daylighting strategies and shading devices for optimizing natural light in buildings.

ULO2- Evaluate the impact of daylighting on occupant comfort, energy consumption, and building aesthetics.

ULO3- Integrate daylighting and shading solutions into facade design to achieve sustainable and visually pleasing environments

MAPPING

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10
ULO1	M	M		M	M		M	M		M
ULO2	M			M		M		M		
ULO3		M			M		M		M	M

UNIT CODE : FUP003

UNIT TITLE : Acoustics and Fire

CREDIT : 15

SPECIFICATION : Elective Unit

UNIT DESCRIPTION

This unit enables the students to understand the critical aspects of acoustics and fire safety in facade engineering and also learn about how facade materials and systems influence sound transmission and fire resistance. This unit will also enable the student to explore regulatory requirements and best practices for designing facades that enhance occupant comfort and safety.

UNIT LEARNING OUTCOMES

ULO1- Understand the principles of acoustics and fire safety as they relate to facade design.

ULO2- Evaluate facade materials and systems for sound insulation and fire resistance.

ULO3- Implement acoustic and fire safety measures in facade design to ensure occupant comfort and building code compliance.

MAPPING

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10
ULO1	M	M		M	M		M	M		M
ULO2	M			M		M		M		
ULO3		M			M		M		M	M

UNIT CODE : FUP004

UNIT TITLE : Natural Ventilation in Building

CREDIT : 15

SPECIFICATION : Elective Unit

UNIT DESCRIPTION

This unit enables the students to understand the principles and benefits of natural ventilation in building design and also to study how facade configurations and openings can facilitate airflow and indoor air quality. The student will also learn to design facades that promote passive ventilation, reducing energy consumption and improving occupant well-being.

UNIT LEARNING OUTCOMES

ULO1- Explore the principles and benefits of natural ventilation in building design.

ULO2- Evaluate facade configurations and ventilation strategies to optimize indoor air quality and thermal comfort.

ULO3- Integrate natural ventilation solutions into facade design to reduce energy consumption and enhance occupant well-being.

MAPPING

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10
ULO1	M	M		M	M		M	M		M
ULO2	M			M		M		M		

ULO3		M			M		M		M	M

UNIT CODE : FUP005

UNIT TITLE : Contract Management

CREDIT : 15

SPECIFICATION : Elective Unit

UNIT DESCRIPTION

This unit enables the students to excel the art of contract management in facade projects and gain insights into contract negotiation, documentation, and administration processes. The students will also learn to mitigate risks, resolve disputes, and ensure project compliance through effective contract management strategies.

UNIT LEARNING OUTCOMES

ULO1- Understand the principles of contract management and administration in facade projects.

ULO2- Develop contract documents, negotiate terms, and manage contractual relationships with stakeholders.

ULO3- Implement effective contract management practices to mitigate risks, ensure project compliance, and achieve successful project outcomes.

MAPPING

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10
ULO1	M	M		M	M		M	M		M
ULO2	M			M		M		M		

ULO3		M			M		M		M	M

UNIT CODE : FUP006

UNIT TITLE : Façade Sustainable Design

CREDIT : 15

SPECIFICATION : Elective Unit

UNIT DESCRIPTION

This unit enables the students to explore sustainable design principles and practices in facade engineering and the students learn to assess environmental impacts, energy efficiency, and lifecycle considerations of facade materials and systems. The students also discover innovative sustainable design strategies to create facades that minimize environmental footprint and enhance building performance.

UNIT LEARNING OUTCOMES

ULO1- Analyze sustainable design principles and green building standards relevant to facade engineering.

ULO2- Evaluate facade materials, systems, and technologies for their environmental impact and energy efficiency.

ULO3- Implement sustainable design strategies in facade engineering to minimize resource consumption, reduce carbon footprint, and enhance building performance.

MAPPING

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10
ULO1	M	M		M	M		M	M		M

ULO2	M			M		M		M		
ULO3		M			M		M		M	M

ASSESSMENT METHODS AND TECHNIQUES FOR HID IN FAÇADE ENGINEERING

Assessment technique	Type of Assessment	Description	Formative or Summative
Case studies	Oral/ Problem based/ Practical	Students are required to work through a case study to identify the problem(s) and to offer potential solutions; useful for assessing students' understanding and for encouraging students to see links between theory and practice. Case studies could be provided in advance of a time-constrained assessment.	**Formative**
Concept maps	Written/ Oral	Students map out their understanding of a particular concept. This is a useful (and potentially quick) exercise to provide feedback to staff on students' understanding.	**Formative**
'Doing it' exam	Written	An exam which requires students to do something, like read an article, analyze and interpret data etc.	**Formative / Summative**
Field report	Written/ Oral	Students are required to produce a written/ oral report relating to a field/ site visit.	**Formative**
Laboratory books / Reports	Practical/ Written	Students are required to write a report for all (or a designated sample) of practical's in a single lab book. A sample of lab books will be collected each week to mark any reports of labs done in previous weeks; this encourages students to keep their lab books up to date. Each student should be sampled the same number of times throughout the module with a designated number contributing to the assessment mark.	**Summative**
Multiple choice questions (MCQs)	Written	Can be useful for diagnostic, formative assessment, in addition to summative assessment. Well-designed questions can assess more than factual recall of information, but do take time to design.	**Formative / Summative**
Online discussion boards	Written	Students are assessed on the basis of their contributions to an online discussion for example, with their peers; this could be hosted on a virtual learning environment (VLE).	**Formative**

Open book exams	Written	Students have the opportunity to use any or specified resources to help them answer set questions under time constraints. This method removes the over-reliance on memory and recall and models the way that professionals manage information.	**Summative**
Oral presentations	Oral / Written	Students are asked to give an oral presentation on a particular topic for a specified length of time and could also be asked to prepare associated	**Summative**

		handout(s). Can usefully be combined with self- and peer-assessment.	
Problem sheets	Written	Students complete problem sheets, e.g. on a weekly basis. This can be a useful way of providing students with regular formative feedback on their work and/or involving elements of self- and peer assessment.	**Formative**
Research projects / Group projects	Written/ Practical/ Oral/ Performance/ Problem based/ Work placement	Potential for sampling wide range of practical, analytical and interpretative skills. Can assess wide application of knowledge, understanding and skills.	**Formative / Summative**
Short answer questions	Written	Useful to assess a wide range of knowledge/skills across a module.	**Summative**
Simulations	Practical/ Written/ Oral/ Problem-based	Text or virtual computer-based simulations are provided for students, who are then required to answer questions, resolve problems, perform tasks and take actions etc. according to changing circumstances within the simulation. Useful for assessing a wide range of skills, knowledge and competencies.	**Formative**
Viva voce	Oral	Often used for assessing 'borderline' degree classifications but also useful to explore students' understanding of a wide range of topics. Depending on class size however, they can be time consuming for staff.	**Summative**