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Tomorrow's Architects:
Competency Outcomes for Architects

Introduction

This document outlines the threshold competencies required for registration as an architect irrespective of the route taken to registration. Competence is defined as a professional's ability to carry out their role successfully, having the relevant knowledge and skills and behaviours necessary to achieve this. This is defined through five competency areas:

1. Contextual and Architectural Knowledge

2. Design

3. Research and Evaluation

4. Management Practice and Leadership

5. Professionalism and Ethics

The competence statements reflect the required competencies at the point of entry into the profession.

Professionalism and Ethics

Design | Research and Evaluation

Contextual and Architectural Knowledge

Management Practice and Leadership

Levels of Competency and their Assessment

Depending upon whether students are being assessed for entry into the profession or for an intermediate qualification, each outcome will be assessed to a different level. The four levels below are a development of "Miller's Triangle" which has previously been used to assess competencies in clinical disciplines[1] but has been adapted to architecture.

4

Performance (Does/Is):
The student performs in a consistent and independent way within complex, professional situations. At this level, the student should be able to demonstrate the skill, knowledge and behaviours of an architect through engagement with architectural practice. At this level, a student should be able to demonstrate a commitment to the aspects being covered, even if they have not personally undertaken a task of that nature.

The outcome tables below show the level by which each outcome is to be demonstrated at the conclusion of a Level 7 qualification or Level 11 in Scotland **(Academic Outcomes)** and at the point of entry into the profession following any requisite period of professional practical experience **(Practice Outcomes)**.

1

Knowledge (Knows):
The student has gained sufficient grounding in an area to know that this aspect is important and relevant to the subject and practice of architecture and when and where it is relevant. This includes both knowledge of the subject and also the behavioural norms expected of an architect. At this level they will not necessarily have put this knowledge into practice.
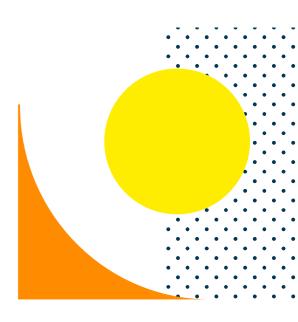
3

Ability (Shows how):
The student is able to demonstrate their capabilities in authentic situations where there is a need to work within multiple constraints and complexities. This might include a comprehensive design project or supervised professional experience. It is recognised that not every student will have the opportunity to demonstrate all competency outcomes within architectural practice, so these competencies may also be assessed through simulated scenarios.

2

Understanding (Knows how):
The student is able to work with their knowledge and apply it to tasks or processes relevant to the practice of architecture, but in a limited, managed situation.

[1] Cruess, R.L., Cruess, S.R. and Steinert, Y., 2016. Amending Miller's pyramid to include professional identity formation. Academic Medicine, 91(2), pp.180-185.

1 Contextual and Architectural Knowledge

A candidate showing competence in this area will demonstrate knowledge of:

Key: Environmental Sustainability = `E`   Fire and Life Safety = `S`
Equality, Diversity and Inclusion = `I`   Building Technology = `B`

Outcome		Academic Outcomes	Practice Outcomes
CK1	How diverse global, cultural, social, technological, economic factors and building technology influence aspects of architecture and urban design. `E` `S` `B` `I`	Knowledge	
CK2	The role of architects in society, the design team and the construction industry.	Knowledge	
CK3	The principles and relevance of social sustainability, social value and inclusive design. `E` `I`	Knowledge	
CK4	The principles of climate change and biodiversity as relevant to design and construction. `E` `B`	Knowledge	
CK5	The principles of building construction, services, structure, materials use, assembly and manufacture. `E` `S` `B`	Knowledge	
CK6	The principles of building physics and environmental design. `E` `B`	Knowledge	
CK7	The principles required to ensure that buildings are safe to construct, inhabit, use and maintain, refurbish, re-use and deconstruct. `S` `B`	Knowledge	

2 Design

A candidate demonstrating competence in this area will:

Key: Environmental Sustainability = `E`   Fire and Life Safety = `S`
Equality, Diversity and Inclusion = `I`   Building Technology = `B`

Outcome		Academic Outcomes	Practice Outcomes
D1	Prepare and present architectural design projects of diverse scale, complexity, and type in a variety of contexts, using a range of media, responding critically to a brief.	Ability	
D2	Prepare, appraise, refine and engage with building briefs of diverse scales and types, accounting for client, user, site, environmental and contextual requirements. `E` `S` `B`	Ability	
D3	Demonstrate a critical and creative approach to architectural design.	Ability	
D4	Produce designs that integrate the artistic, spatial, environmental, social and experiential aspects of a building with the technical requirements of its construction. `E` `S` `B`	Ability	
D5	Propose strategies for structure, construction technology, materials, services, ventilation, thermal environment and lighting and acoustics that are appropriate to a project's brief and context. `E` `S` `B`	Ability	
D6	Produce the designs that consider the relationship between people and built environment, between buildings and their context, and the need to relate buildings and the spaces between them to human needs, inclusivity, user experience and scale. `E` `I`	Ability	
D7	Understand the consequences of design decision making on value to clients and communities over the life-cycle of built projects and the costs to the environment. `E` `I`	Understanding	
D8	Propose design solutions that achieve or exceed relevant performance standards and requirements. `B`	Ability	
D9	Understand the implications and benefits of regenerative design solutions and ethical sourcing and supply chains throughout the life cycle of architectural projects that meet or go beyond minimum standards. `E`	Understanding	
D10	Understand the implications and benefits of working with existing buildings including potential for re-use and retrofit, and the resulting environmental impact. `E`	Understanding	
D11	Prepare and document designs that demonstrate appropriate consideration of fire safety, life safety and wellbeing and inclusivity of users, the public and building constructors. `S`	Ability	
D12	Use appropriate digital systems for creating, modelling, processing, presenting, and sharing design, building and project information. `B`	Understanding	Ability

3 Research and Evaluation

A candidate demonstrating competence in this area will:

Key: Environmental Sustainability = `E`   Fire and Life Safety = `S`
Equality, Diversity and Inclusion = `I`   Building Technology = `B`

Outcome		Academic Outcomes	Practice Outcomes
RE1	Use techniques of research, enquiry and experimentation to develop effective solutions to architectural problems and to broaden their knowledge base.	Ability	
RE2	Work with clients and other stakeholders to gain a mutual understanding of constraints and opportunities, identify immediate and long-term interests, set project agendas, define desirable and feasible project outcomes, and develop appropriate briefs for projects.	Understanding	Ability
RE3	Critically evaluate a diverse range of architectural precedents in order to inform design thinking.	Ability	
RE4	Locate, evaluate and apply relevant legislation, regulations, standards, codes of practice and policies related to the development of the built environment. `E` `S`	Understanding	Ability
RE5	Locate and evaluate evidence that may be incomplete or contradictory, critically evaluating the quality of knowledge sources, making judgements and drawing appropriate conclusions that can inform architectural practice.	Ability	
RE6	Understand how modelling and post occupancy evaluation inform design. `E` `S` `B`	Understanding	

4 Management, Practice and Leadership

A candidate demonstrating competence in this area will:

Key: Environmental Sustainability = `E`   Fire and Life Safety = `S`
Equality, Diversity and Inclusion = `I`   Building Technology = `B`

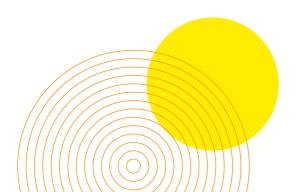| Outcome		Academic Outcomes	Practice Outcomes
M1	Make use of the principles of sustainable, responsible and ethical practice, and recognise how they relate to running an architect's practice. `E`	Knowledge	Ability
M2	Understand the financial and resource management aspects of running an architectural practice including the means of professional remuneration and fee setting.		Understanding
M3	Recognise the ethical and legal impact of practice structures, recruitment and employment terms and their impact on work/life balance, health and the wellbeing of colleagues. `I`		Understanding
M4	Manage and structure projects, administer construction contracts and resolve common construction-related challenges.	Understanding	Ability
M5	Manage the inter-relationships of individuals, organisations, statutory bodies, and professions involved in procuring and delivering architectural projects, recognising how these are defined through contractual and organisational structures.	Understanding	Ability
M6	Select appropriate procurement routes and means of delivery, recognising their relative risks to contractual parties, their implications for sustainable design outcomes and how these influence the selection and management of construction contracts.	Understanding	Ability
M7	Apply the principles of risk management, liabilities, and insurance to architectural projects. `S`	Understanding	Ability
M8	Apply the principles of cost management, control, and budgeting to architectural projects.	Understanding	Ability
M9	Plan, manage, monitor and communicate health and safety arrangements for construction projects as required by current legislation. `S`	Understanding	Ability
M10	Resource, plan, implement and record project tasks to achieve stated goals, either individually or within a team.	Understanding	Ability
M11	Communicate effectively with both specialists and non-specialist audiences through a range of media.	Understanding	Ability

5 Professionalism and Ethics

A candidate demonstrating competence in this area will:

Key: Environmental Sustainability = E   Fire and Life Safety = S
Equality, Diversity and Inclusion = I   Building Technology = B

Outcome		Academic Outcomes	Practice Outcomes
PE1	Recognise the significance of the Architects Code of Conduct, and the need for architects to act always in an ethical and professional manner. E S I	Knowledge	Performance
PE2	Display a committed approach to equity, diversity and inclusion, including in their approach to designing environments and in their relationships with colleagues, employees, clients and communities. I	Ability	Performance
PE3	Work constructively with and within a broader team, exercising leadership, effective communication and personal responsibility. S	Ability	Performance
PE4	Uphold the architect's obligations to the health and safety of the public and building users and building constructors. S	Understanding	Performance
PE5	Uphold the architect's obligation to the environment, society, and the wellbeing and quality of lives of current and future generations. E	Understanding	Performance
PE6	Recognise the responsibilities and duties of care that architects have towards their clients, users, the public and those with whom they work. E S I	Knowledge	Performance
PE7	Adopt a reflective approach to their work by identifying individual learning needs required for further development within the profession, ensuring they are up to date with current standards and best practice.	Ability	Performance
PE8	Acknowledge and work within the limits of their competence, expertise, and experience.	Knowledge	Performance