

Relationship between the program learning outcomes (PLOs) and the Vietnamese Qualifications Framework

Program learning outcomes of the Architecture program	Knowledge					Skills						Level of autonomy and responsibility			
	KT 1	KT 2	KT 3	KT 4	KT 5	KN 1	KN 2	KN 3	KN 4	KN 5	KN 6	TC& TN1	TC& TN2	TC& TN3	TC& TN4
PLO1. Analyse architectural design context Analyse architectural design problems by integrating technical, technological, environmental, and socio-cultural knowledge within specific contexts to identify design requirements and influencing factors.	X	X				X		X				X		X	
PLO2. Evaluate and select design options Evaluate and select appropriate design options from multiple feasible alternatives to make sound, creative decisions that meet design requirements.	X			X	X	X	X	X	X			X	X	X	X
PLO3: Designing architecture to professional standards Design architectural works that meet aesthetic, functional, technical, legal, and socio-cultural requirements within a given context in order to produce design documents that comply with professional standards.	X	X		X	X	X	X		X			X	X	X	X
PLO4. Creative and sustainable design Develop creative and sustainable architectural design solutions that respond to environmental, social, and innovation challenges in order to create value-added	X	X				X	X	X				X	X	X	

designs with practical application potential.															
PLO5: Science-based architectural research Conduct independent architectural research using critical thinking and lifelong learning that is based on clearly defined contexts and data in order to propose solutions grounded in scientific evidence and practical needs.	X					X		X	X			X		X	
PLO6: Application of architectural design technology Apply architectural design software, digital technologies, and artificial intelligence (AI) in modelling, analysis, and presentation in order to enhance technical performance, design quality, and creativity.			X			X				X		X			
PLO7: Communication and design presentation Communicate and present architectural design ideas to clients, communities, and multidisciplinary teams in order to achieve clear, persuasive, and professional communication.										X	X	X	X	X	

Relationship between the program learning outcomes (PLOs) and the University's mission, vision, educational philosophy and core values

Program learning outcomes of the Architecture program	The University's mission and vision		The University's educational philosophy: Distinctive - Holistic - Liberal	The University's core values: Responsibility - Creativity - Quality and
	Vision: To become a leading research university in the region, with engineering and technology as its core	Mission: To educate high-quality human resources; to conduct scientific research, foster technological		

	strengths, making significant contributions to the development of a peaceful and prosperous Viet Nam.	innovation, and facilitate knowledge transfer; and to co-create sustainable development for society and the nation.		Efficiency
PLO1. Analyse architectural design context Analyse architectural design problems by integrating technical, technological, environmental, and socio-cultural knowledge within specific contexts to identify design requirements and influencing factors.	X	X	X	X
PLO2. Evaluate and select design options Evaluate and select appropriate design options from multiple feasible alternatives to make sound, creative decisions that meet design requirements.	X	X	X	X
PLO3: Designing architecture to professional standards Design architectural works that meet aesthetic, functional, technical, legal, and socio-cultural requirements within a given context in order to produce design documents that comply with professional standards.	X	X	X	X
PLO4. Creative and sustainable design Develop creative and sustainable architectural design solutions that respond to environmental, social, and innovation challenges in order to create value-added designs with practical application potential.	X	X	X	X
PLO5: Science-based architectural research Conduct independent architectural research using critical	X	X	X	X

thinking and lifelong learning that is based on clearly defined contexts and data in order to propose solutions grounded in scientific evidence and practical needs.				
PLO6: Application of architectural design technology Apply architectural design software, digital technologies, and artificial intelligence (AI) in modelling, analysis, and presentation in order to enhance technical performance, design quality, and creativity.	X	X	X	X
PLO7: Communication and design presentation Communicate and present architectural design ideas to clients, communities, and multidisciplinary teams in order to achieve clear, persuasive, and professional communication.	X	X	X	X

Relationship between the program learning outcomes (PLO) and the University's learning outcomes (ULO)

PLO of the Architecture program	ULO1	ULO2	ULO3	ULO4	ULO5	ULO6	ULO7	ULO8
PLO1	X		X		X			
PLO2	X		X					X
PLO3	X	X		X	X			
PLO4	X	X	X		X			X
PLO5	X		X			X		
PLO6		X					X	X
PLO7				X	X	X		

Note:

- *ULO1: Foundational and specialized knowledge: Apply foundational and specialised knowledge to analyse problems and develop effective, innovative, and sustainable technical, technological, and managerial solutions.*
- *ULO2: Practical skills and technology application: Demonstrate advanced practical skills and effectively apply emerging technologies in the design, implementation, and management of professional projects.*
- *ULO3: Capacity for research and knowledge development: Conduct fundamental scientific research and innovation activities in accordance with national and international academic standards.*
- *ULO4: Professional skills and conduct: Demonstrate professional conduct, teamwork skills, effective communication, and intercultural competence in national, regional, and international professional environments.*
- *ULO5: Sustainability and Social Responsibility: Integrate environmental sustainability, public health, social equity, and ethical considerations into the design, implementation, operation, and evaluation of professional projects and research activities.*
- *ULO6: Autonomy and professional development: Demonstrate self-directed learning, autonomy, accountability, and continuous professional development throughout lifelong learning and professional practice.*
- *ULO7: Digital transformation and data competence: Apply digital technologies, data analytics, artificial intelligence, and digital platforms effectively in learning, research, and professional practice.*
- *ULO8: Entrepreneurship and innovation: Demonstrate entrepreneurial thinking and the ability to design, develop, and lead innovative initiatives that contribute to socio-economic development; be ready to participate in and lead entrepreneurial activities.*
- *PLO1. Analyse architectural design context: Analyse architectural design problems by integrating technical, technological, environmental, and socio-cultural knowledge within specific contexts to identify design requirements and influencing factors.*
- *PLO2. Evaluate and select design options: Evaluate and select appropriate design options from multiple feasible alternatives to make sound, creative decisions that meet design requirements.*
- *PLO3: Designing architecture to professional standards: Design architectural works that meet aesthetic, functional, technical, legal, and socio-cultural requirements within a given context in order to produce design documents that comply with professional standards.*

- *PLO4. Creative and sustainable design: Develop creative and sustainable architectural design solutions that respond to environmental, social, and innovation challenges in order to create value-added designs with practical application potential.*
- *PLO5: Science-based architectural research: Conduct independent architectural research using critical thinking and lifelong learning that is based on clearly defined contexts and data in order to propose solutions grounded in scientific evidence and practical needs.*
- *PLO6: Application of architectural design technology: Apply architectural design software, digital technologies, and artificial intelligence (AI) in modelling, analysis, and presentation in order to enhance technical performance, design quality, and creativity.*
- *PLO7: Communication and design presentation: Communicate and present architectural design ideas to clients, communities, and multidisciplinary teams in order to achieve clear, persuasive, and professional communication.*

Relationship between the program learning outcomes (PLO) and the Faculty's mission and vision

Program learning outcomes of the Architecture program	The Faculty's mission and vision	
	Mission: To educate high-quality architects with creativity, professional competence, and social responsibility; to advance scientific research and knowledge transfer; and to co-create sustainable national development while fostering international integration.	Vision: To become a leading high-quality higher education institution in the architecture disciplines in Viet Nam, making significant contributions to building a peaceful and prosperous nation while advancing regional and global engagement.
PLO1. Analyse architectural design context Analyse architectural design problems by integrating technical, technological, environmental, and socio-cultural knowledge within specific contexts to identify design requirements and influencing factors.	X	X
PLO2. Evaluate and select design options Evaluate and select appropriate design options from multiple feasible alternatives to make sound, creative decisions that meet design requirements.	X	X
PLO3: Designing architecture to professional standards Design architectural works that meet aesthetic, functional, technical, legal, and socio-cultural requirements within a given context in order to produce design documents that comply with professional standards.	X	X
PLO4. Creative and sustainable design Develop creative and sustainable architectural design solutions that respond to environmental, social, and innovation challenges in order to	X	X

create value-added designs with practical application potential.		
PLO5: Science-based architectural research Conduct independent architectural research using critical thinking and lifelong learning that is based on clearly defined contexts and data in order to propose solutions grounded in scientific evidence and practical needs.	X	X
PLO6: Application of architectural design technology Apply architectural design software, digital technologies, and artificial intelligence (AI) in modelling, analysis, and presentation in order to enhance technical performance, design quality, and creativity.	X	X
PLO7: Communication and design presentation Communicate and present architectural design ideas to clients, communities, and multidisciplinary teams in order to achieve clear, persuasive, and professional communication.	X	X

Relationship between the program learning outcomes (PLO) and the performance indicators (PI)

Program learning outcomes (PLOs)	PI1	PI2	PI3
PLO1. Analyse architectural design context Analyse architectural design problems by integrating technical, technological, environmental, and socio-cultural knowledge within specific contexts to identify design requirements and influencing factors.	PI1.1: Identify the technical, functional, environmental, socio-cultural, and site conditions based on site survey data to develop a comprehensive understanding of the design context.	PI1.2: Analyse the relationships and impacts among contextual factors based on the collected survey data to determine the design requirements.	PI1.3: Analyse the completeness and feasibility of the design requirements against sustainable development principles and applicable codes and standards to determine the necessary revisions or additions before design.
PLO2. Evaluate and select design options	PI2.1. Compare design options based on clearly defined criteria (including aesthetics, functionality,	PI2.2. Analyse how well each design option satisfies the design requirements using professional	PI2.3. Select the optimal design option through comprehensive consideration of the evaluation

Evaluate and select appropriate design options from multiple feasible alternatives to make sound, creative decisions that meet design requirements.	technical performance, cost, sustainability, and feasibility) to identify the strengths and weaknesses of each option.	evaluation tools (e.g., scoring rubrics, evaluation matrices, simulations, and life-cycle analysis) to identify the options most appropriate to the design context.	criteria and the extent to which each option satisfies the design requirements to make sound and creative design decisions.
PLO3: Designing architecture to professional standards Design architectural works that meet aesthetic, functional, technical, legal, and socio-cultural requirements within a given context in order to produce design documents that comply with professional standards.	PI3.1. Develop architectural design documentation (including plans, elevations, sections, perspectives, physical models, and simulations) based on clearly defined design requirements to produce functional, aesthetic, and feasible design solutions.	PI3.2. Coordinate with engineering professionals based on applicable codes and technical standards to develop appropriate technical solutions for architectural projects.	PI3.3. Complete conceptual design documentation and basic design documentation in accordance with applicable legal and professional regulations to ensure accuracy, completeness, and professionalism.
PLO4: Creative and sustainable design Develop creative and sustainable architectural design solutions that respond to environmental, social, and innovation challenges in order to create value-added designs with practical application potential.	PI4.1. Analyse environmental and social trends and needs within the design context to identify opportunities for innovation, value creation, and the development of entrepreneurial thinking.	PI4.2. Propose design solutions that meet innovation requirements and technical constraints to develop creative, distinctive, and feasible design options.	PI4.3. Evaluate the usability, social impact, and application potential of design options based on sustainable evaluation criteria to identify necessary improvements and propose appropriate modifications.
PLO5: Science-based architectural research Conduct independent architectural research using critical thinking and lifelong learning that is based on clearly defined contexts and data in order to propose solutions grounded in scientific evidence and practical needs.	PI5.1. Collect and organise existing-condition data using appropriate and up-to-date methods and tools to ensure the accuracy and completeness of the information.	PI5.2. Analyse the collected data using disciplinary methods and innovative approaches to identify key issues relevant to the research context.	PI5.3. Develop architectural solutions based on the analysis results and clearly defined, up-to-date evaluation criteria to ensure scientific validity and responsiveness to practical needs.
PLO6: Application of architectural design technology	PI6.1. Model architectural projects using specialised design software (CAD, BIM, and 3D modelling	PI6.2. Apply digital technologies and artificial intelligence (AI) to support architectural design to	PI6.3. Present design documentation in accordance with technical requirements to ensure

Apply architectural design software, digital technologies, and artificial intelligence (AI) in modelling, analysis, and presentation in order to enhance technical performance, design quality, and creativity.	tools) with the required level of accuracy to produce deliverables that meet technical standards.	enhance the speed, analytical capability, efficiency, and creativity of design solutions.	visual clarity, accuracy, and professionalism.
PLO7: Communication and design presentation Communicate and present architectural design ideas to clients, communities, and multidisciplinary teams in order to achieve clear, persuasive, and professional communication.	PI7.1. Communicate architectural design ideas using visual representation methods to convey information clearly and appropriately to the intended audience.	PI7.2. Present and explain design proposals in interactive settings with clients and communities to promote understanding and persuasion.	PI7.3. Critique and justify design proposals within design teams and in response to stakeholder feedback to defend design decisions clearly, logically, and professionally.