

Appendix A

The South African Council for the Architectural Profession (SACAP) Competencies

1. Introduction

The core mandate of SACAP on architectural education is to set standards of architectural education and training in South Africa. Therefore, all architectural qualifications are benchmarked against the SACAP competencies as the main criteria for accreditation. The SACAP competencies set out the required skills that each architectural graduate has upon completion of the qualification. To this end, all accreditation documentation (Architectural Learning Sites Report Appendix B, Architectural Learning Sites Evidence Preparation Appendix C, and Architectural Learning Sites Qualification Submission Appendix E,) prepared by an Architectural Learning Site should identify how the SACAP competencies and standards are being met within the curriculum, pedagogic approach and assessment practices of the Architectural Learning Sites (ALS).

This appendix describes the competencies required for each of the categories of registration as stipulated in section 18 of the Architectural Profession Act 44 of 2000. The Standard Generating Body (SGB) for Architecture is intended to interface between academia and practice. The competencies are informed by four interdependent considerations.

2. Outcome Fields

The essential skills and knowledge required to practice architecture in a sustainable, socially responsible, and financially viable way are clustered into a range of ten specific outcome fields.

1. Office practice, legal aspects, and ethics Outcome
2. Computer applications
3. Urban relationship
4. Architectural history & theory
5. Architectural design
6. Environmental relationship
7. Contract documentation and administration
8. The structure of buildings
9. Construction technology
10. Building services & related technologies

3. Identification of work policy

The competencies are aligned to the Identification of Work (IDoW) policy under Board Notice 27 of 2021. The IDoW policy is based on the complexity of the project, and the sensitivity of the context and site, whether natural or constructed.



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for the Architectural Profession

		SITE SENSITIVITY		
		LOW	MEDIUM	HIGH
PROJECT COMPLEXITY	LOW	PrArchDraught		
		PrArchT		
		PrSArchT		
		PrArch		
	MEDIUM	PrArchT		
		PrSArchT		
		PrArch		
	HIGH	PrSArchT		

4. Alignment to national higher education legislation

The SACAP competencies establish a consistent framework and align and match categories of registration with the relevant qualifications. The qualification frameworks have been updated several times in the past two decades. Currently, the Higher Education Qualification Sub Framework (HEQSF) is the standard framework. The National Qualification Framework (NQF) levels have also changed. The table below aligns current qualifications and related NQF levels to establish a holistic picture of present architectural qualifications in South Africa. All qualifications require two or three years of candidacy and the successful completion of a professional practice exam before registration as a professional.

HEQSF aligned Architectural Qualifications at ALSs for SACAP Registration:

CATEGORY	ACRONYM	QUALIFICATION	NQF LEVEL
Professional Architect	PrArch	Master's Degree (Prof) [1 year, 180 credits]	9
Professional Senior Architectural Technologist	PrSArchT	Bachelor (Hons) Bachelor's Degree [4 years, 480 credits] Postgraduate Diploma	8
		Advanced Diploma [1 year, 120 credits]	7
Professional Architectural Technologist	PrArchT	Bachelor's Degree [3 years, 360 credits]	7
		Diploma [3 years, 360 credits] Advanced certificate [3 years, 240 credits]	6
Professional Architectural Draughtspersons	PrArchD	Higher Certificate [1 year, 120 credits]	5

5. Learning levels

The fourth consideration is the requirement that the SACAP competencies must allow an architectural professional to compete and operate locally and internationally. Considerable benchmarking was done with competencies set out by other international accrediting agencies.

LEVEL	LEARNING LEVEL	DESCRIPTION
A	Awareness	Acquaintance with relevant concepts and methods, without necessarily being skilled in paraphrasing information.
B	Knowledge	Familiarity with relevant information, without necessarily being skilled to see its fullest implication or application.
C	Understanding	Full assimilation and comprehension of information, and the skill to correctly paraphrase it and relate it to other situations, including its practical application.
D	Ability	Skill in analyzing problems, identifying appropriate information for the accomplishment of tasks, and applying it to the solution of specific problems.

6. The SACAP summary matrix of competencies

This summary categorizes the competencies and skills in relationship to the body of knowledge and expertise available and rates it from minimal, low, and medium through to advanced.

			OUTCOMES FIELD & NO									
PROFESSIONAL CATEGORY	LEARNING LEVEL REQUIREMENTS PER CATEGORY		Architectural design	Environmental relationships	Construction technology	The structure of the building	Contextual & urban relationships	Architectural history, theory & precedent	Building services & related technologies	Contract documentation & administration	Computer applications	Office practice, legal aspects & ethics
			1	2	3	4	5	6	7	8	9	10
Professional Architect	Advanced	A										
	Medium	B										
	Low	C										
	Minimal	D										
Prof Senior Arch. Technologist	Advanced	A										
	Medium	B										
	Low	C										
	Minimal	D										
Prof Arch. Technologist	Advanced	A										
	Medium	B										
	Low	C										



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	Minimal	D										
Prof Arch. Draughtsperso	Advanced	A										
	Medium	B										
	Low	C										
	Minimal	D										

THE SACAP COMPETENCIES

	C.Arch. Draught	C.Arch. T	CS. Arch.T	C.Arch
	A person registered in one of the categories above must demonstrate ...			
1. Office practice, legal aspects and ethics	<p>EXPERIENTIAL</p> <p><u>Understanding</u> of the required legal and regulatory frameworks within which the architectural profession is ethically practiced.</p>	<p>FORMAL</p> <p><u>Understanding</u> of the terminology, basic concepts, and principles of architectural practice.</p> <p><u>Understanding</u> of the contents of the various building contracts and the practice manual.</p> <p><u>Understanding</u> of all the regulatory, IDoW, and legal aspects of the profession</p> <p>FORMAL</p> <p><u>Understanding</u> of allied professions, industries, organizations, regulations, and procedures involved in translating design concepts into buildings and integrating plans into overall planning.</p> <p><u>Knowledge</u> of the terminology and basic concepts and principles of business practice.</p> <p><u>Knowledge</u> of the administrative and logistical support systems in a practice.</p>	<p>FORMAL</p> <p><u>Understand</u> the terminology, basic concepts, and principles of architectural practice.</p> <p><u>Understand</u> all the regulatory, IDoW, and legal aspects of the profession.</p> <p><u>Understanding</u> of the contents of the various building contracts and practice manuals.</p> <p>FORMAL</p> <p><u>Understanding</u> of allied professions, industries, organizations, regulations, and procedures involved in translating design concepts into buildings and integrating plans into overall planning.</p> <p><u>Understand</u> the terminology, basic concepts, and principles of business practice.</p> <p><u>Understand</u> the administrative and logistical support systems in a practice.</p> <p><u>Understand</u> the basic concepts of business structures and principles, about the architectural profession.</p> <p><u>Ability</u> to design a feasible information access and retrieval system.</p> <p><u>Ability</u> to design a functional and integrated management system.</p> <p><u>Ability</u> to participate meaningfully in the management and administration of a building project.</p> <p><u>Ability</u> to set up and run a building project Successfully.</p>	<p>FORMAL</p> <p><u>Ability</u> to apply all the regulatory, IDoW, and legal aspects of the profession</p> <p><u>Ability</u> to implement the contents of the various building contracts and the practice manual.</p> <p>FORMAL</p> <p><u>Understanding</u> of allied professions, industries, organizations, regulations, and procedures involved in translating design concepts into buildings and integrating plans into overall planning.</p> <p><u>Ability</u> to apply the basic concepts of business structures and principles, about the architectural profession.</p> <p><u>Ability</u> to design a feasible information access and retrieval system.</p> <p><u>Ability</u> to design a functional and integrated management system.</p> <p><u>Ability</u> to implement administrative and logistical support systems in a practice.</p> <p><u>Ability</u> to design marketing strategy.</p> <p><u>Ability</u> to participate meaningfully in the management and administration of a building project.</p> <p><u>Ability</u> to set up and run a building projects successfully.</p>

	C.Arch. Draught	C.Arch. T	CS. Arch.T	C.Arch
	A person registered in one of the categories above must demonstrate ...			
2. Computer applications	<p>FORMAL <u>Understanding</u> of the range of computer technology and digital tools presently in use in architectural practice and ...</p> <p>FORMAL <u>Ability</u> to apply it in the execution of work. Computer software to include web browsers and communication programs, word processing, architectural drawing, graphic and image editing programs.</p>	<p>FORMAL <u>Understanding</u> of computer technology and digital tools presently in use in architectural practice and ...</p> <p>FORMAL <u>Ability</u> to apply it in the execution of work. Computer software to include web browsers and communication programs, word processing, spreadsheets, architectural drawing, graphic and image editing programs.</p>	<p>FORMAL <u>Understanding</u> of the range of computer technology and digital tools presently in use in architectural practice</p> <p>FORMAL <u>Ability</u> to apply it in the execution of work. Computer software to include web browsers and communication programs, word processing, spreadsheets, databases, architectural drawing, 3- 3-dimensional modeling, and graphic and image editing programs. <u>Ability</u> to design, publish, and maintain a website. <u>Knowledge</u> of different computer hardware solutions for networking. <u>Ability</u> to make informed decisions in the acquisition of networking hardware. <u>Ability</u> to troubleshoot network problems on a basic level. <u>Knowledge</u> of operating systems for networked machines, and, in particular, setting up work groups, setting permissions, and data security. <u>Ability</u> to troubleshoot, upgrade, and maintain PCs at a basic level.</p>	<p>FORMAL <u>Understanding</u> of the range of computer technology and digital tools presently in use in architectural practice and ...</p> <p>FORMAL <u>Ability</u> to apply it in the execution of work. Computer software to include web browsers and communication programs, word processing, spreadsheets, databases, architectural drawing, 3- 3-dimensional modeling, and graphic and image editing programs.</p>

3. Urban relationships	<p>FORMAL</p> <p><u>Knowledge</u> of and sensitivity to urban aspects when designing individual buildings.</p>	<p>FORMAL</p> <p><u>Knowledge</u> of and sensitivity to urban aspects when designing individual buildings.</p>	<p>FORMAL</p> <p><u>Understanding</u> of and sensitivity to urban aspects when designing individual buildings.</p> <p><u>Knowledge</u> of urban design, planning, and the skills involved in the planning process.</p>	<p>FORMAL</p> <p><u>Understanding</u> of the basic spatial, functional, and aesthetical aspects appropriate to urban design.</p> <p><u>Ability</u> to evaluate urban environments in very basic terms in an analytical, constructive, and critical manner.</p> <p><u>Understanding</u> of and sensitivity to urban aspects when designing individual buildings.</p> <p><u>Knowledge</u> of urban design, planning, and the skills involved in the planning process.</p>
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	C.Arch. Draught	C.Arch. T	CS. Arch.T	C.Arch
	A person registered in one of the categories above must demonstrate ...			
4. Architectural history & theory	<p>FORMAL</p> <p><u>Awareness</u> of basic terminology about architectural theory and history studies.</p>	<p>FORMAL</p> <p><u>Awareness of responsibilities toward human, social, cultural, urban, architectural, and environmental values, as well as architectural heritage.</u></p> <p><u>Knowledge</u> of the basic spatial and aesthetical aspects appropriate to architecture.</p> <p><u>Knowledge</u> of architectural history inbroad terms.</p> <p><u>Knowledge</u> of the relationship between people and buildings, and between buildings and their environment, and of the need to relate buildings and the spaces between them to human needs and scale.</p> <p><u>Understanding</u> of the profession of architecture and the role of the architectural professional in society, in particular in preparing briefs that take into account social factors.</p>	<p>FORMAL</p> <p><u>Awareness of responsibilities toward human, social, cultural, urban, architectural, and environmental values, as well as architectural heritage.</u></p> <p><u>Understanding</u> of architectural history and theories of architecture and the related arts, technologies, and human sciences.</p> <p><u>Understanding</u> of the relationship between people and buildings, and between buildings and their environment, and of the need to relate buildings and the spaces between them to human needs and scale.</p> <p><u>Understanding</u> of the profession of architecture and the role of the architectural professional in society, in particular in preparing briefs that take into account social factors.</p> <p><u>Understanding</u> of the principles of learningfrom historical precedent.</p> <p><u>Awareness</u> of the built environment and <u>understanding</u> of structures in an analytical constructive, and critical manner.</p> <p><u>Knowledge</u> of the basic spatial and aesthetical aspects appropriate to architecture.</p> <p><u>Understanding</u> of research processes in architectural theories.</p>	<p>FORMAL</p> <p><u>Awareness of responsibilities toward human, social, cultural, urban, architectural, and environmental values, as well as architectural heritage.</u></p> <p><u>Understanding</u> of architectural history and theories of architecture and the related arts, technologies, and human sciences, as part of a wider natural, social, technological, and cultural system.</p> <p><u>Ability</u> to evaluate and analyze the builtform critically in complex terms.</p> <p><u>Understanding</u> of the principles of learningfrom historical precedent.</p> <p><u>Understanding</u> of the relationship between people and buildings, and between buildings and their environment, and of the need to relate buildings and the spaces between them to human needs and scale.</p> <p><u>Understanding</u> of the profession of architecture and the role of the architectural professional in society, in particular in preparing briefs that take into account social factors.</p> <p><u>Understanding</u> of social, ethical, spatial, and aesthetical aspects of the environment.</p> <p><u>Ability</u> to conduct relevant research in architectural theories.</p>

5. Architectural design	<p>FORMAL</p> <p><u>Knowledge</u> of the fundamentals of the design process and how it impacts the documentation process.</p> <p><u>Knowledge</u> to create architectural designs that satisfy both aesthetic and technical requirements.</p>	<p>FORMAL</p> <p><u>Knowledge</u> of the principles and terminology applicable to architectural design.</p> <p><u>Understanding</u> of the fundamentals of the design process.</p> <p><u>Ability</u> to do thorough, appropriate planning.</p> <p><u>Understanding</u> of problem analysis on a basic level.</p> <p><u>Knowledge</u> of social and environmental issues.</p> <p><u>Knowledge</u> to create architectural designs that satisfy both aesthetic and technical requirements.</p>	<p>FORMAL</p> <p><u>Ability</u> to do a competent design of a multi-story building as well as long-span structures, based on parameters and constraints developed through independent scientific research, which are sensitive to issues of environment and sustainability, as well as cultural issues in a responsible, appropriate, and economical manner in an urban, a suburban or rural context.</p> <p><u>Ability</u> to appraise and define the above-mentioned architectural problem.</p> <p><u>Ability</u> to prepare an appropriate concept. <u>Ability</u> to develop the design to an ultimate and rational conclusion.</p> <p><u>Ability</u> to present the design synthesis manner.</p> <p><u>Ability</u> to create architectural designs that satisfy both aesthetic and technical requirements.</p> <p><u>Knowledge</u> of the fine arts as an influence on the quality of architectural design. Understanding of the methods of investigation and preparation of the brief for a design project.</p>	<p>FORMAL</p> <p><u>Ability</u> to do a competent building design of a complex nature, based on parameters and constraints developed through independent scientific research, which is sensitive to issues of environment and sustainability, as well as cultural issues in a responsible, appropriate, and economical manner in an urban, a suburban or rural context.</p> <p><u>Ability</u> to appraise and define a complex architectural problem.</p> <p><u>Ability</u> to prepare an appropriate concept. <u>Ability</u> to develop the design to an ultimate and rational conclusion.</p> <p><u>Ability</u> to present the design synthesis logically.</p> <p><u>Ability</u> to create architectural designs that satisfy both aesthetic and technical requirements.</p> <p><u>Knowledge</u> of the fine arts as an influence on the quality of architectural design. Understanding of the methods of investigation and preparation of the brief for a design project.</p> <p><u>Ability</u> and training in research techniques as an inherent part of architectural learning, for both students and teachers.</p>
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	C.Arch. Draught	C.Arch. T	CS. Arch.T	C.Arch
	A person registered in one of the categories above must demonstrate ...			
6. Environmental relationships	FORMAL <u>Awareness</u> of the issues	FORMAL <u>Awareness</u> of the issues	FORMAL <u>Understanding</u> of the relationship between the natural and the built environment. <u>Understanding</u> of physical problems and technologies and of the function of buildings to provide them with internal conditions of comfort and protection against the climate. <u>Understanding</u> of landscapes and environmental structures in basic terms in an analytical, constructive, and critical manner. <u>Knowledge</u> of the basic spatial, functional and aesthetical aspects appropriate to landscape architecture	FORMAL <u>Understanding</u> of the relationship between the natural and the built environment. <u>Ability</u> to evaluate landscapes and environmental structures in basic terms in an analytical, constructive, and critical manner. <u>Understanding</u> of the basic spatial, functional and aesthetical aspects appropriate to landscape architecture <u>Knowledge</u> of the means of achieving ecologically sustainable design and environmental conservation and rehabilitation. <u>Knowledge</u> of physical problems and technologies and of the function of buildings to provide them with internal conditions of comfort and protection against the climate.

7. Contract documentation & administration	<p>FORMAL</p> <p><u>Ability</u> to apply drawing and specifying aspects of a simple double-story building employing either a drawingboard or personal computer</p> <p><u>Ability</u> to apply basic drawing and lettering techniques, basic annotation, and specification.</p> <p><u>Ability</u> to do drawings and sheet layouts.</p> <p><u>Understanding</u> of relationships between general layout drawings.</p> <p><u>Ability</u> to apply appropriate National Building Regulations (NBR) and the South African National Standards 10400 (SANS).</p> <p><u>Understanding</u> of local authority approval requirements and procedures.</p> <p><u>Understanding</u> of graphic projections, scale, dimensioning, and annotation.</p> <p><u>Knowledge</u> of project financing, project management, cost control, and methods of project delivery.</p>	<p>FORMAL</p> <p><u>Ability</u> to produce a set of working drawings as part of a set of contract documents of a complex building to acceptable practice standards.</p> <p><u>Ability</u> to develop durable, cost-effective, climate-responsive construction systems and details sensitive to the contextual language of the design concept.</p> <p><u>Understanding</u> of project financing, project management, cost control, and methods of project delivery.</p> <p><u>Knowledge</u> of the relevance of appropriate National Building Regulations (NBR) as well as the requirements of the SANS 10400. <u>Knowledge</u> of local authority approval requirements and procedures.</p>	<p>FORMAL</p> <p><u>Ability</u> to produce a set of working drawings as part of a set of contract documents of a complex building to acceptable practice standards.</p> <p><u>Ability</u> to develop durable, cost-effective, climate-responsive construction systems and details sensitive to the contextual language of the design concept.</p> <p><u>Understanding</u> of the relevance of applicable appropriate National Building Regulations (NBR) as well as the requirements of the SANS 10400.</p> <p><u>Ability</u> to respond to local authority approval requirements and procedures.</p> <p><u>Knowledge</u> of project financing, project management, cost control, and methods of project delivery.</p>	<p>FORMAL</p> <p><u>Ability</u> to produce a comprehensive set of contract documents of a complex building to acceptable practice standards.</p> <p><u>Ability</u> to develop durable, cost-effective, climate-responsive construction systems and details.</p> <p><u>Ability</u> to recognize the demands of context and local resources and appropriate technologies that harmonize with the environment.</p> <p><u>Understanding</u> of issues of sustainability of the built environment and <u>ability</u> to be able to evaluate materials in an ethical and socially responsible manner.</p> <p><u>Understanding</u> of appropriate National Building Regulations (NBR) as well as the requirements of the SANS 10400.</p> <p><u>Ability</u> to respond to local authority approval requirements and procedures.</p> <p><u>Knowledge</u> of project financing, project management, cost control, and methods of project delivery.</p>
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	C.Arch. Draught	C.Arch. T	CS. Arch.T	C.Arch
	A person registered in one of the categories above must demonstrate ...			
8. Building structures	<p>FORMAL <u>Understanding</u> of the terminology and principles associated with structures. <u>Ability</u> to do pocket calculator functions.</p> <p><u>Understanding</u> of the basic units used in the building industry, SI units. <u>Ability</u> to do calculations of the area and perimeter of basic geometric figures. <u>Ability</u> to do calculations of the volume of basic geometric figures. <u>Ability</u> to do calculations of angles employing sine, cosine, tangent as well as inverse</p>	<p>FORMAL <u>Knowledge</u> of the basic structural concepts of buildings.</p>	<p>FORMAL <u>Understanding</u> of the basic structural design, construction, and engineering problems associated with building design. <u>Ability</u> to integrate structure and building design.</p>	<p>FORMAL <u>Understanding</u> of structural design, construction, and engineering problems associated with building design. <u>Ability</u> to integrate structure and building design. <u>Understanding</u> of calculations on the structural aspects of buildings.</p>
9. Construction technology	<p>FORMAL <u>Ability</u> to research materials, products, and components using commercially available referencing material for contract documentation purposes. <u>Knowledge</u> of the generic names of materials as well as common sizes and thicknesses. <u>Ability</u> to specify basic building materials on technical drawings. <u>Ability</u> to solve construction and design problems in producing working drawings of basic double-story buildings.</p>	<p>FORMAL <u>Knowledge</u> of construction methods and uses for materials related to simple low-rise building types. <u>Ability</u> to develop durable, cost-effective, climate-responsive construction details. <u>Ability</u> to conduct limited relevant research into construction methods and materials and the appropriate applications.</p>	<p>FORMAL <u>Understanding</u> of construction methods and uses for materials related to simple multi-story building <u>Understanding</u> of the demands of context, local resources, and appropriate technologies that harmonize with the environment, which influence the construction of a building. <u>Ability</u> to implement a creative competence in building techniques, founded on a comprehensive understanding of the disciplines and construction methods related to architecture. <u>Ability</u> to develop durable, cost-effective, climate-responsive construction details. <u>Ability</u> to conduct limited relevant research into construction methods and materials and the appropriate</p>	<p>FORMAL <u>Ability</u> to implement a creative competence in building techniques, founded on a comprehensive understanding of the disciplines and construction methods related to architecture, and uses for materials related to multi-story, multi-functional, complex building types. <u>Ability</u> to recognize the demands of context, local resources, and appropriate technologies that harmonize with the environment, which influence the construction of a building. <u>Ability</u> to develop durable, cost-effective, climate-responsive construction details. <u>Ability</u> to conduct advanced research into construction methods and materials and the</p>

			applications.	appropriate applications.
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	C.Arch. Draught	C.Arch. T	CS. Arch.T	C.Arch
	A person registered in one of the categories above must demonstrate ...			
10. Building services & related technologies	FORMAL <u>Understanding</u> of the elementary building services, e.g. drainage, hot and cold water supply, and electrical services.	FORMAL <u>Knowledge</u> of the various technological aspects relating to services. <u>Knowledge</u> of the building regulations about all building services. <u>Knowledge</u> of the following technological aspects and building services – Drainage and water reticulation. Electrical and electronic services and lighting. Communications. Air and gas supply. Heating and cooling. Elevators and escalators. Fire protection and control. Acoustics and sound systems	FORMAL <u>Understanding</u> of the integration of the various technological aspects relating to services in one cohesive design. <u>Understanding</u> of the building regulations for all building services. <u>Understanding</u> of the following technological aspects and building services: – Drainage and water reticulation. Electrical and electronic services and lighting. Communications. Air and gas supply. Heating and cooling. Elevators and escalators. Fire protection and control. Acoustics and sound systems.	FORMAL <u>Ability</u> to integrate the various technological aspects relating to services in one cohesive design and find technological solutions. <u>Understanding</u> of the building regulations for all building services. <u>Understanding</u> of the following technological aspects and building services: – Drainage and water reticulation. Electrical and electronic services and lighting. Communications. Air and gas supply. Heating and cooling. Elevators and escalators. Fire protection and control. Acoustics and sound systems.