STADIO
HIGHER EDUCATION

HIGHER CERTIFICATE IN SOFTWARE DEVELOPMENT

NQF 5 | MIN. 120 CREDITS | SAQA ID: 119053 | MIN. 1 YEAR
MODE OF DELIVERY: DISTANCE LEARNING

DESCRIPTION

A software developer's role involves more than just knowing how to code! The Higher Certificate in Software Development aims to equip anyone wishing to enter the software development field with sufficient skills to do so. The main objective of this programme is to provide the student with a broad knowledge of the most important aspects of software development, including understanding hardware and software interaction, software analysis and design (focusing on the object-oriented paradigm), database management and use, software implementation, testing and maintenance, as well as the security issues impacting the entire development cycle. The student will be equipped with problem solving and programming skills, ranging from algorithm development to the more advanced skills of programming using the Python scripting language. This programme will equip the student with the basic knowledge and skills needed to develop a reasonable-sized software application to automate the solution of a business problem of medium complexity, by participating in a 20-credit software development project. Moreover, students will be taught to consider legal, social and ethical implications in all aspects of the software engineering process, encompassing both existing and potential future technologies. This programme will equip learners with a sound theoretical foundation in respect of the software development discipline and develop the application skills required for entry into the IT job market.

ADMISSION REQUIREMENTS

- a National Senior Certificate (NSC) with a minimum of 30% in English Home Language or English First Additional Language; and a minimum of at least 40% for either Mathematics or Information Technology, or a minimum of at least 70% for Mathematical Literacy; **OR**
- a National Senior Certificate (Vocational) (NC(V)) at Level 4, with a minimum of 30% in English Home Language or English First Additional Language; and a minimum of at least 40% for either Mathematics or Information Technology, or a minimum of at least 70% for Mathematical Literacy; **OR**
- a Senior Certificate (SC) with a minimum of 30% (F) in English First Language(HG) or English Second Language (HG); and a minimum of at least 40%(E) for either Mathematics (HG) or Computer Studies (HG), or a minimum of at least 70%(B) for Mathematics (SG); **and in addition**
- a minimum of 50% for the compulsory non-credit bearing entry/access module Computational Thinking, which is offered at the start of the programme, and which includes a provision for students to write an early test in order to fulfil this requirement.

Applicants who do not meet the admission requirement for Mathematics, Maths Literacy, IT, or CAT will be conditionally admitted and registered for the online numeracy module in their first semester (at no extra cost). They must pass Numeracy to continue with the Higher Certificate in Software Development.

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OTHER ACCESS PATHWAYS

MINIMUM SYSTEM REQUIREMENTS

- Wi-Fi: Reliable broadband Internet access (Wi-Fi is available on all of our campuses, but you may prefer access from home as well).
- Web browser: Edge/Chrome/Safari/Opera/FireFox.
- Computer/Laptop: A current Windows or Apple Mac computer/laptop capable of running the Office 365 software. Office 365 includes Word, Excel, PowerPoint and Outlook.
- PDF Viewer: The free Adobe Acrobat software.
- Scanning documents: Ability to scan and upload documents (typically from your cellphone or smart phone).
- Email/cellphone for notification and communication.
- Communication: A cellphone or smartphone for receiving notifications and communication.

CURRICULUM OUTLINE

	1st YEAR	
Compulsory (All)	Computational Thinking for Problem Solving	CTPS152 (0 credits)
	Fundamentals of Information Technology	FIT152 (10 credits)
	Fundamentals of Object-Oriented Analysis and Design	FOAD152 (15 credits)
	Information Security for IS Practitioners	ISP152 (10 credits)
	Introduction to Databases	IDB152 (10 credits)
	Introduction to Programming and Program Development	PPD152 (20 credits)
	Introduction to Web Programming	IWP152 (15 credits)
	Software Development Project	SDP152 (20 credits)
	Software Engineering	SEN152 (10 credits)
	Technology and Society	TAS152 (10 credits)
CREDITS PER YEAR	**120**	

ARTICULATION POSSIBILITIES

Students who have completed credits at another higher education institution may apply for the transfer of those credits in line with STADIO's CAT Policy. The recognition of credits for the purpose of transfer from one qualification to another is determined by the nature of the qualifications, the relationship between them, the nature, complexity, and extent of the curricula associated with the specific subjects to be recognised for credit and the nature of the assessment used. A maximum of 50% of credits of a completed qualification may be transferred via CAT, while all credits from an incomplete qualification may be transferred, provided that no more than 50% of the credits on the receiving qualification are awarded via CAT.

CAREER OPPORTUNITIES

- DATABASE ADMINISTRATOR
- ENTRY-LEVEL SOFTWARE DEVELOPER
- ENTRY-LEVEL WEB DEVELOPER