Bachelor of Science in Computer Programming (BSc.CP)

• A clear, high-level description of the program

- The Bachelor of Science in Computer Programming (BSc. CP.) is a dynamic three-year Bachelor of Science program at Western Pacific University (WPU). It prepares and puts students on the right track to work in global cities worldwide or to work for a local company that deals in designing and developing computer and mobile software's securely. Likewise, the program is designed to prepare students to manage secure database systems and work in global companies. It provides graduates with the ability to bring people, processes, and technology together to achieve improved performance in domestic or international enterprises. Students who successfully attain the degree in BSCCP can embark on a career in any of the following professions: Development Specialist, Computer Programmer, Mobile App Developer, Software Production Engineer, Mobile Systems Specialist, Database Administrator, Computer Network Architect, Information Security Analysts, Web Developer.

• Objectives and learning outcomes

- The Bachelor of Science (BSc) in Computer Programming is a degree program which provides students with the skills needed to analyze a problem and design and implement a solution to meet the ever-changing demands of industry. Students, who study computer program design will be practicing a variety of high-level programming languages, as well as technology in troubleshooting. Computer Science is a science of problem solving. The Computer Science program helps students to master the basic skills needed to analyze a problem and design, implement, and verify a correct solution to meet the ever-changing demands of industry. Students will also receive extensive practice in computer program design using a variety of high-level programming languages such as Java, Python, .Net and C++, as well as technology troubleshooting experience. This BSc in Computing Programming offers a suggested curriculum to build a strong foundation in computer program design. Courses or units to be delivered include fundamentals of mathematics, and other specific relevant courses/units in discrete mathematics, and statistics that form part of the core study. Instruction emphasizes the development of computational thinking, problem solving, and communication skills. Such skills are attuned to the 21st century skills that graduates of our current times need to be integrated into the World of Work pertaining to the 4th Industrial age.

Table 2
Learning Outcomes for BSc. in Computer Programming

BSc. in Computer Programming Learning Outcomes	PNGNQF Descriptors
• Apply discipline-based knowledge, problem solving and creative thinking skills in anticipating challenges and providing solutions to contemporary IT issues	Knowledge
• Communicate IT knowledge and ideas clearly and coherently to technical and non-technical audiences	Knowledge

BSc. in Computer Programming Learning Outcomes	PNGNQF Descriptors
• Demonstrate technological literacy by finding, evaluating and using relevant tools and information from a range of sources	Knowledge
• Demonstrate initiative on complex and innovative IT projects with consideration of new environments, technologies and professional ethics	Knowledge
• Develop network solutions for contemporary business environments by employing appropriate problem-solving strategies	Knowledge and Skills
• Configure and administer different server services to support business environments	Knowledge and Skills
• Support the middle and higher-level ICT management of the organization with effective team collaboration	Knowledge and Skills
• Making sound decisions using appropriate technology, with the higher-level understanding of business environments	Knowledge and Skills

• Teaching approach (ex: theoretical + practical, industry-focused, research-based)

• Face-to-face, online, blended

• Faculty / Department offering the program

• Faculty of Digital Technologies and Global Industries

• Department of Computing & Emerging Technologies

• Duration (ex: 2 years, 4 years)

• 3 Years – Full Time

• Total Credit Value

• 480 Credit Points

• Mode of study (Full-time / Part-time / Online)

• Full Time/Online

• Language of instruction

• English

• Award granted (ex: BSc, MSc,

Diploma) Experiential Learning &

Facilities BSc.CP

• Internship opportunities : Yes

• Industrial training / placements : Industrial training: Yes, Placements: No

• Laboratory facilities : Computer Programming Laboratory

Research opportunities: Digital Library, ProQuest Premium one etc.

BSc. CP. Program Structure

Year 1			Year 2			Year 3		
Code	**Course Description**	**CP**	**Code**	**Course Description**	**CP**	**Code**	**Course Description**	**CP**
Semester 1								
CMP 111	Fundamental of Mathematics	15	CMP 211	Web Development II	15	CMP 311	Computer Graphics with HCI Elements	15
CMP 112	Fundamental of statistics	15	CMP 212	Fundamentals of Economics	15	CMP 312	Artificial Intelligence	15
CMP 113	Computer Organization	15	CMP 213	Introduction to Ethics and Law	15	CMP 313	Software Requirements Engineering	15
CMP 114	Fundamentals of Information Technology	15	CMP 214	Operating Systems I	15	CMP 314	Elements of Automation and Robotics	15
CMP 115	Introduction to Programing	15	CMP 215	Programming in C#	15	CMP 315	Computing Project I: Analysis and Design	15
			CMP 216	Programming Mobile Systems	15			
Total CP		**75**			**90**			**75**
Semester 2								
CMP 121	Advanced Mathematics	15	CMP 221	Computer Systems Architecture	15	CMP 321	Techniques of Software Development	15
CMP 122	Discrete mathematics	15	CMP 222	Professional and Social Issues of IT	15	CMP 322	CASE Tools Methodology	15
CMP 123	Algorithms and Data Structures	15	CMP 223	Database Systems	15	CMP 323	Cloud Systems Development	15
CMP 124	Programing in C++	15	CMP 224	Software Engineering	15	CMP 324	Computing Project II: Development and Implementation	15
CMP 125	Fundamentals of Network Technologies	15	CMP 225	Concepts of Programming Languages	15			
CMP 126	Web Development I	15	CMP 226	Professional Apprenticeship	15			
Total Credit points per year		**90**			**90**			**60**
Yearly CPs required		**165**			**180**			**135**
Total credit points requirement for awarding the degree BSc. in Computer Programming								**480**