

## Bachelor of Computer and Information Sciences BCIS 2023

	Digital Services	Networks and Cybersecurity	Software Development	Data Science	Computer Science	
Year 1	CORE	<b>COMP500</b> Programming Concepts and Techniques (S1, S2, SS) <b>COMP501</b> Computing Technology in Society (S1, S2) <b>DIGD507</b> Mahi Tah: Collaborative Practices (S1, S2) Choose one: <b>MATH502</b> Algebra and Discrete Mathematics (S2), or <b>MATH503</b> Mathematics for Computing (S1, S2, SS) <b>COMP507</b> IT Project Management (S2) <b>COMP508</b> Database System Design (S1, S2)				
		MAJOR	<b>INF5502</b> Digital Services in IT (S2)	<b>COMP504</b> Networks and Internet (S1)		
					<b>COMP503</b> Programming 2 (S1, S2) <i>Pre-req: COMP500/ENSE501</i>	<b>COMP503</b> Programming 2 (S1, S2) <i>Pre-req: COMP500/ENSE501</i>
						<b>COMP517</b> Data Analysis (S2)
Year 2	MAJOR	<b>INF5603</b> Needs Analysis, Acquisition and Training (S1)	<b>COMP604</b> Operating Systems (S2) <i>Pre-req: [COMP503/ENSE502/ENSE504] or COMP504</i>	<b>COMP603</b> Program Design and Construction (S1, S2) <i>Pre-req: COMP503/COMP610/ENSE502</i>	<b>COMP615</b> Foundations of Data Science (S1) <i>Pre-req: COMP517</i>	<b>COMP610</b> Data Structures and Algorithms (S1, S2) <i>Pre-req: COMP503/ENSE502/ENSE602</i>
		<b>INF5604</b> Service Modelling (S1)	<b>COMP607</b> Information Security Technologies (S2) <i>Pre-req: COMP501</i>	<b>COMP610</b> Data Structures and Algorithms (S1, S2) <i>Pre-req: COMP503/ENSE502/ENSE602</i>	<b>COMP616</b> Statistics for Data Science (S1) <i>Pre-req: MATH502 or MATH503</i>	<b>COMP611</b> Algorithm Design and Analysis (S2) <i>Pre-req: COMP610</i>
		<b>INF5605</b> Microservices (S2)	<b>COMP609</b> Network and System Administration (S1) <i>Pre-req: COMP500 and COMP504</i>	<b>COMP602</b> Software Development Practice (S1, S2) <i>Pre-req: COMP603 or COMP610</i> (or) <b>COMP612</b> Computer Graphics (S1) <i>[MATH503 or MATH502] and [COMP603 or COMP610]</i>	<b>STAT603</b> Forecasting (S2) <i>Pre-req: MATH502 or MATH503</i>	<b>COMP613</b> Logic and Discrete Structures (S1) <i>Pre-req: COMP500 and [MATH502 or MATH503]</i>
		<b>COMP603</b> Program Design and Construction (S1, S2) <i>Pre-req: COMP503/COMP610/ENSE502</i> (or) <b>COMP607</b> Information Security Technologies (S2) <i>Pre-req: COMP501</i>	<b>ENEL611</b> Computer Network Applications (S1) <i>Pre-req: COMP504 or ENEL504</i>	<b>COMP604</b> Operating Systems (S2) <i>[COMP503/ENSE502/ENSE504] or COMP504</i> (or) <b>COMP611</b> Algorithm Design and Analysis (S2) <i>Pre-req: COMP610</i>	<b>COMP610</b> Data Structures and Algorithms (S1, S2) <i>Pre-req: COMP503/ENSE502/ENSE602</i> (or) <b>COMP613</b> Logic and Discrete Structures (S1) <i>Pre-req: COMP500 and [MATH502 or MATH503]</i>	<b>COMP604</b> Operating Systems (S2) <i>Pre-req: [COMP503/ENSE502/ENSE504] or COMP504</i> (or) <b>COMP612</b> Computer Graphics (S1) <i>Pre-req: [MATH503 or MATH502] and [COMP603 or COMP610]</i>
Year 3	CORE	<b>COMP702</b> Research and Development Project (Part 1) (S1, S2)				
		<b>COMP703</b> Research and Development Project (Part 2) (S1, S2)				
	MAJOR	<b>INF5704</b> Service Innovation and Design (S1)	<b>COMP715</b> Network Security (S2) <i>Pre-req: ENEL611</i>	<b>COMP719</b> Applied Human Computer Interaction (S2)	<b>COMP717</b> Artificial Intelligence (S1) <i>Pre-req: COMP500 or equivalent; 60 points at level 6 major</i>	<b>COMP711</b> Theory of Computation (S2) <i>Pre-req: COMP610 or COMP613</i>
		<b>COMP718</b> Information Security Management (S1)	<b>COMP714</b> Advanced Network Technologies (S2) <i>Pre-req: COMP609</i> (or) <b>COMP729</b> Enterprise Networks (S2) <i>Pre-req: COMP504/ENEL504</i>	<b>ENSE701</b> Contemporary Issues in Software Engineering (S2) <i>Pre-req: COMP603 or [COMP610/ENSE600]</i>	<b>COMP723</b> Data Mining and Knowledge Engineering (S2)	<b>COMP712</b> Programming Languages (S2) <i>Pre-req: COMP603/ENSE502</i>
		<b>COMP728</b> IoT and Applications (S1) (or) <b>COMP726</b> Blockchains and Cryptocurrencies (S2)	<b>COMP716</b> Highly Secure Systems (S1) <i>Pre-req: COMP611 or [ENG501 and COMP610]</i> (or) <b>COMP718</b> Information Security Management (S1)	<b>COMP713</b> Distributed and Mobile Systems (not running) <i>Pre-req: COMP611</i> (or) <b>COMP721</b> Web Development (S1) <i>Pre-req: COMP603/ENSE600</i> (or) <b>COMP710</b> Game Programming (not running) <i>Pre-req: COMP612</i>	<b>COMP700</b> Text and Vision Intelligence (S2) (or) <b>COMP701</b> Nature Inspired Computing <i>Pre-req: COMP500 (S1)</i>	<b>COMP713</b> Distributed and Mobile Systems (not running) <i>Pre-req: COMP611</i> (or) <b>COMP717</b> Artificial Intelligence (S1) <i>Pre-req: COMP500 or equivalent; 60 points at level 6 major</i> (or) <b>COMP710</b> Game Programming (not running) <i>Pre-req: COMP612</i>

S1: Offered in Semester 1  
 S2: Offered in Semester 2  
 SS: Offered in Summer Semester  
*Pre-req: Prerequisite paper(s)*

**Note:**  
 COMP612 can only replace COMP602 if COMP710 is also taken.  
 All courses are 15 points  
 MATH502 is highly recommended for Computer Science major as a replacement for MATH503 (core)

