CPP - Computer Programming

Version 79
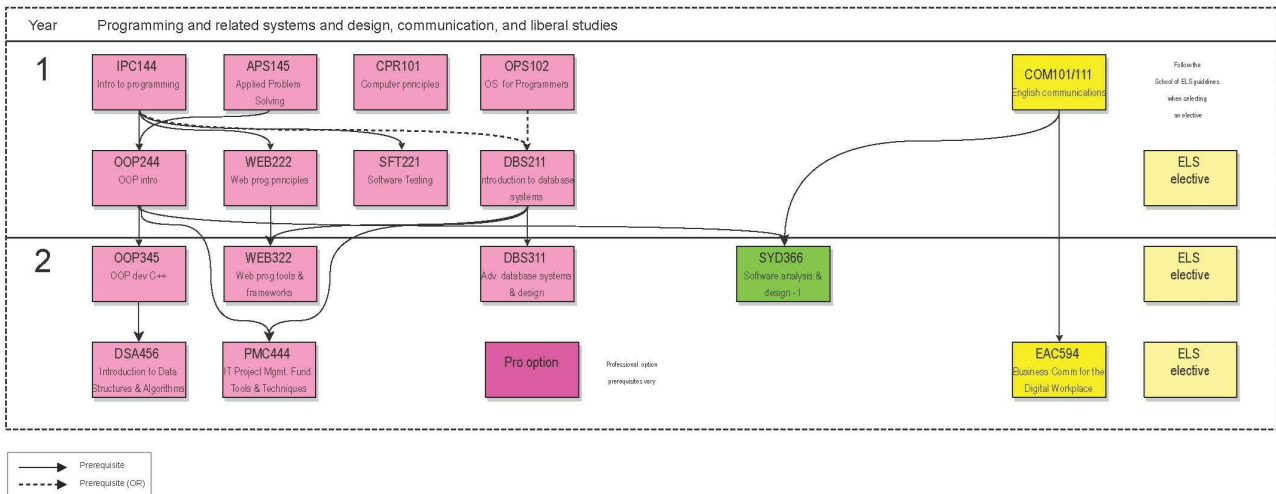
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Program Code:	CPP
Credential Awarded:	Diploma
Campus:	Newnham & Seneca International Academy, Markham
Duration:	2 years (4 academic semesters)
Starts In:	January, and May and September

Program Map

Computer Programming (CPP) Curriculum
Entry Date: September 2023 or later

Program Curriculum

Computer Programming (CPP) - 23-24

Semester 1		
Course Code	Course Name	Pre-requisites
APS145	Writing Strategies	None
COM101 or COM111	Communicating Across Contexts or Communicating Across Contexts (Enriched)	None
CPR101	Computer Principles for Programmers	None
IPC144	Introduction to Programming Using C	None
OPS102	Operating Systems for Programmers	None

Semester 2		
Course Code	Course Name	Pre-requisite

DBS211	Introduction to Database Systems	IPC144 and OPS102
OOP244	Introduction to Object Oriented Programming	IPC144 and APS145
SFT221	Software Testing	IPC144
WEB222	Web Programming Principles	IPC144
	General Education Course	

Semester 3		
Course Code	Course Name	Pre-requisites
DBS311	Advanced Database Services	DBS211
OOP345	Object-Oriented Software Development Using C++	OOP244
SYD366	Software Analysis and Design - I	OOP244 and COM101/COM111
WEB322	Web Programming Tools and Frameworks	WEB222 and DBS211
	General Education Course	

Semester 4		
Course Code	Course Name	Pre-requisites
DSA456	Data Structures and Algorithms	OOP345
EAC594	Business Communication for the Digital Workplace	COM101/COM111
PMC444	IT Project Management Fundamentals Tools and Techniques	OOP244 and DBS211
	General Education Course	
	Professional Options Course	

Professional Options		
Course Code	Course Name	Pre-requisites
BCI433	IBM Business Computing	OOP345 and DBS211
CCP555	Cloud Computing for Programmers	WEB422
CVI620	Computer Vision	DSA456
DBA625	Database Administration	DBS311
DBS501	Stored Procedures Using Oracles PL/SQL	DBS311
ELA521	Ethics, Law and Application Development	DBS211
GAM531	Game Engine Foundations	OOP345
GAM532	Game Engine Techniques	GAM531
GAM536	Game Content Creation	OOP345
GAM537	Game Development Fundamentals	OOP345
GPU621	Parallel Algorithms and Programming Techniques	OOP345
MAP523	Mobile App Development - iOS	OOP345 and WEB322
MAP524	Mobile App Development - Android	OOP345
MAP526	Mobile App Development - Cross Platform	OOP345
MST300	Introduction to Microsoft Cloud Technologies	WEB322
OSD600	Open Source Development	OOP345 and WEB322
OSD700	Open Source Development Project	OSD600
SDR520	Software Design for Robotics Applications	WEB422 and OOP345

SPO600	Software Portability and Optimization	IPC144 and OOP345
DEN502	Digital Entrepreneurship	EAC594
UNX510	UNIX BASH Shell Scripting	OOP345 and OPS102
UNX511	UNIX Systems Programming	OOP345 and OPS102
WEB524	Web Programming Using ASP.NET	WEB422

Program Learning Outcomes

As a graduate, you will be prepared to reliably demonstrate the ability to:

- Identify, analyze, develop, implement, verify and document the requirements for a computing environment.
- Contribute to the diagnostics, troubleshooting, documenting and monitoring of technical problems using appropriate methodologies and tools.
- Implement and maintain secure computing environments.
- Implement robust computing system solutions through validation testing that aligns with industry best practices.
- Communicate and collaborate with team members and stakeholders to ensure effective working relationships.
- Select and apply strategies for personal and professional development to enhance work performance.
- Apply project management principles and tools when working on projects within a computing environment.
- Adhere to ethical, legal, and regulatory requirements and/or principles in the development and management of computing solutions and systems.

Degree Pathway Options:

Transfer Pathway into BSD: Honours Bachelor of Technology - Software Development

Further Information About This Program from Seneca's Website

tags : cpp, diploma, sdds