

DEPARTMENT OF COMPUTER SYSTEMS TECHNOLOGY

DEGREE CHECKLIST FOR ASSOCIATE IN APPLIED SCIENCE IN COMPUTER INFORMATION SYSTEMS AND BACHELOR OF TECHNOLOGY IN COMPUTER SYSTEMS

For students entering the program Spring 2022 or later.

ASSOCIATE DEGREE	COURSE	COURSE TITLE	PRE/CO REQUISITES	CREDITS
GENERAL EDUCATION REQUIRED AND FLEXIBLE COMMON CORE AND COLLEGE OPTION REQUIREMENTS (22 CREDITS) At least 1 course designated WI is required from the Gen Ed Flexible Common Core.	ENG 1101	English Composition I (EC)	Prereq: CUNY Read and Write Proficiency	3 credits.
	ENG 1121	English Composition II (EC)	Prereq: ENG 1101	3 credits.
	MAT 1375 ²	Precalculus or higher (MQR)	Prereq: MAT 1275 or CUNY Placement	4 credits.
		Life and Physical Sciences (LPS)		3 credits.
		*Additional Flexible Common Core Course: WCGI, USED, CE, SW		3 credits.
	COM 1330 ²	Public Speaking or higher (IS)	Prereq: CUNY Read and Write Proficiency	3 credits.
PROGRAM-SPECIFIC DEGREE REQUIREMENTS (38 CREDITS) At least 1 course designated WI is required from the program-specific required and elective courses. Double Duty Specific courses listed indicate double duty courses, i.e., program degree requirements that also meet general education requirements in that category.	PSY 1101 ²	Introduction to Psychology (IS)	Prereq: CUNY Read and Write Proficiency	3 credits.
	CST 1100	Introduction to Computer Systems (WI)	Prereq: CUNY Proficiency	3 credits.
	CST 1101	Problem Solving with Computer Programming	Prereq: CUNY Proficiency	3 credits.
	CST 1201	Programming Fundamentals	Prereq: CST 1101 and (CST 1100 for CST students)	3 credits.
	CST 1204	Database Systems Fundamentals	Prereq: CST 1101 and (CST 1100 for CST students)	3 credits.
	CST 1215	Operating Systems Fundamentals	Prereq: CST 1100	3 credits.
	CST 2307	Networking Fundamentals	Prereq: CST 1215	3 credits.
	CST 2309	Web Programming I	Prereq: CST 1201	3 credits.
	CST 2410	Introduction to Computer Security	Prereq: CST 2307	3 credits.
	CST 2801	Special Topics in Information Technology	Prereq: Two CST 2000 Level	1 credit.
	CST 2XXX	CST 2301, CST 2400, CST 2405, CST 2406, CST 2409, CST 2415 or CST 2900		3 credits.
	CST 2XXX	CST 2301, CST 2400, CST 2405, CST 2406, CST 2409, CST 2415 or CST 2900		3 credits.
	ACC 1101	Principles of Accounting	Prereq: CUNY Math and Read Proficiency	4 credits.
	BUS 2425	Business Management (WI)	Prereq: ACC 1101 or ACC 1162 or MKT 1210	3 credits.

ASSOCIATE IN APPLIED SCIENCE IN COMPUTER INFORMATION SYSTEMS: 60 CREDITS. MINIMUM REQUIRED LIBERAL ARTS AND SCIENCES CREDITS: 20 CREDITS.

BACHELOR'S DEGREE	COURSE	COURSE TITLE	PRE/CO REQUISITES	CREDITS
GENERAL EDUCATION REQUIRED AND FLEXIBLE COMMON CORE AND COLLEGE OPTION REQUIREMENTS (21 TO 25 CREDITS) At least 1 course designated WI is required from the College Option or Gen Ed Flexible Common Core.		Associate degree or other transfer credits		60 credits.
	COM 1330	Public Speaking or higher, if not already taken		3 credits.
		*Flexible Common Core Course: WCGI, USED, CE, SW		3 credits.
		*Flexible Common Core Course: WCGI, USED, CE, SW		3 credits.
		*Flexible Common Core Course: WCGI, USED, CE, SW		3 credits.
	PSY 2404	Personnel and Organizational Psychology (IS)	Prereq: PSY 1101	3 credits.
PROGRAM-SPECIFIC DEGREE REQUIREMENTS (39 CREDITS) At least 1 course designated WI is required from the program-specific required and elective courses.		Interdisciplinary Course (ID)		3 credits.
	MAT 2440 ²	Discrete Structures and Algorithms I (LibArt, WI)	Prereq: MAT 1375 or higher, (CST 1201 or CST 2403 or MAT 1630)	3 credits.
	MAT 2540 ² or	Discrete Structures and Algorithms II (LibArt)	Prereq: MAT 2440	3 to 4
	MAT 1475 ²	Calculus I (LibArt)	Prereq: MAT 1375	credits.

CST Track: Choose 1 of 4:				27 credits.
	Database or			
	Networking and Security or			
	IT Operations or			
	Software Development			
Courses common to all tracks				
CST 4800	Project Management (WI)	Prereq: Three CST 3500-level or higher		3 credits.
CST 4900 or	Internship or	Prereq: Two CST 3500, One 3600 Level, Dept permission		3 credits.
CST 4905	Information Systems Project			
BUS 3525	Strategic Management	Prereq: BUS 2425		3 credits.
ENG 2575	Technical Writing	Prereq: ENG 1121		3 credits.

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BACHELOR'S DEGREE

PROGRAM-SPECIFIC DEGREE REQUIREMENTS (27 CREDITS)

Choose 1 of 4 Tracks

Database
Networking and Security
IT Operations
Software Development

COURSE	COURSE TITLE	PRE/COREQUISITES	CREDITS
Database Courses			27 credits.
CST 3504	Database Design	Prereq: CST 1204 with grade C or higher	3 credits.
CST 2406** or CST 3606	Introduction to Systems Analysis and Design or Object-Oriented Systems Analysis and Design	Prereq: CST 1201 and CST 1204 Prereq: CST 2406 or CST 3513	3 credits.
CST 3604	Quality Database Implementation	Prereq: CST 3504	3 credits.
CST 3613	Application Development with Database	Prereq: CST 1201 and 1204	3 credits.
CST 4704	Business Intelligence, Data Warehousing, and Data Mining	Prereq: CST 3604	3 credits.
CST 4714	Database Administration	Prereq: CST 2405 or CST 2415 or CST 3604	3 credits.
CST 4724	Data On the Web	Prereq: CST 2309 and CST 3504	3 credits.
CST 3XXX*	Track Elective		3 credits.
CST 3XXX*	Track Elective		3 credits.
Networking and Security Courses			27 credits.
CST 3507	Advanced Single-LAN Concepts	Prereq: CST 2307	3 credits.
CST 3523	Task Automation in System Administration	Prereq: CST 1201 and (CST 2405 or CST 2415)	3 credits.
CST 3607	Interconnectivity	Prereq: CST 3507	3 credits.
CST 3610	Networking Security Fundamentals	Prereq: CST 2410	3 credits.
CST 4707	The LAN-Internet Connections	Prereq: CST 3607	3 credits.
CST 4710	Advanced Security Technologies	Prereq: CST 3507 and CST 3610	3 credits.
CST 4715	Advance Topics in Systems Administration	Prereq: CST 3523, CST 3607 and CST 3610	3 credits.
CST 3XXX	Track Elective		3 credits.
CST 3XXX	Track Elective		3 credits.
IT Operations Courses			27 credits.
CST 2405** or CST 2415**	Systems Administration (Windows) or Systems Administration (UNIX/Linux)	Prereq: CST 2307	3 credits.
CST 3507	Advanced Single-LAN Concepts	Prereq: CST 2307	3 credits.
CST 3605	Virtualization	Prereq: CST 3507 and (CST 2405 or CST 2415)	3 credits.
CST 3610	Networking Security Fundamentals	Prereq: CST 2410	3 credits.
CST 3615	Enterprise Applications	Prereq: CST 3507 and (CST 2400 or CST 2405 or CST 2415)	3 credits.
CST 4700	IT Service Management	Prereq: CST 2405 or CST 2415	3 credits.
CST 4709	Installing and Maintaining Web Servers	Prereq: CST 2307 and CST 2309	3 credits.
CST 4714	Database Administration	Prereq: CST 2405 or CST 2415 or CST 3604	3 credits.
CST 3XXX*	Track Elective		3 credits.
Software Development Courses			27 credits.
CST 2301*	Multimedia and Mobile Device Programming	Prereq: CST 1201 and 1204	3 credits.
CST 3513	Object-Oriented Programming in Java	Prereq: CST 1201	3 credits.
CST 3519	Advanced Web Client Technologies	Prereq: CST 2309	3 credits.
CST 3606	Object-Oriented Systems Analysis and Design	Prereq: CST 2406 or CST 3513	3 credits.
CST 3613	Application Development with Databases	Prereq: CST 1201 and CST 1204	3 credits.
CST 4708	Software Development and .NET Framework	Prereq: CST 3513 or CST 3503	3 credits.
CST 4713	Dynamic Web Development: Servlets and JSP	Prereq: CST 3513, CST 3613 and CST 2309	3 credits.
CST 3XXX*	Track Elective		3 credits.
CST 3XXX*	Track Elective		3 credits.

* Elective courses shall be chosen from any CST 35XX, CST 36XX and CST 47XX course.

** If the course was taken as part of associate degree coursework, select another BTech-level major elective.

BACHELOR OF TECHNOLOGY IN COMPUTER SYSTEMS: 120 CREDITS.
MINIMUM REQUIRED LIBERAL ARTS AND SCIENCES CREDITS: 42 CREDITS.

DEPARTMENT OF COMPUTER SYSTEMS TECHNOLOGY

SAMPLE COURSE OF STUDY

For Associate in Applied Science in Computer Information Systems and
Bachelor of Technology in Computer Systems.

SEMESTER 1

(Total Credits 16)

CST 1100	Introduction to Computer Systems	3 credits.
CST 1101	Problem Solving with Computer Programming	3 credits.
ENG 1101	English Composition I	3 credits.
COM 1330	Public Speaking or higher	3 credits.
MAT 1375	Precalculus or higher	4 credits.

SEMESTER 2

(Total Credits 16)

CST 1215	Operating Systems Fundamentals	3 credits.
CST 1204	Database Systems Fundamentals	3 credits.
CST 1201	Programming Fundamentals	3 credits.
ENG 1121	English Composition II	3 credits.
ACC 1101	Principles of Accounting	4 credits.

SEMESTER 3

(Total Credits 15)

CST 2309	Web Programming I	3 credits.
CST 2307	Networking Fundamentals	3 credits.
LPS	Life and Physical Sciences Course	3 credits.
PSY 1101	Introduction to Psychology	3 credits.
BUS 2425	Business Management	3 credits.

SEMESTER 4

(Total Credits 13)

CST 2400	Computer Systems Management and Support	3 credits.
CST 2801	Special Topics in Information Technology	1 credits.
CST 2410	Introduction to Computer Security	3 credits.
PRGM Elective		3 credits.
WCGI	World Cultures and Global Issues Course	3 credits.

FOR SEMESTERS 5 TO 8, CHOOSE ONE OF THE TRACKS BELOW

Database Track

SEMESTER 5

(Total Credits 15)

CST 3504	Database Design	3 credits.
CST 3613	Application Development with Database	3 credits.
CST 2406**/3606	Introduction to Systems Analysis and Design or Object-Oriented Systems Analysis and Design	3 credits.
MAT 2440	Discrete Structures and Algorithms I	3 credits.
BUS 3525	Strategic Management	3 credits.

SEMESTER 6

(Total Credits 15)

CST 3604	Quality Database Implementation	3 credits.
CST 4724	Data On the Web	3 credits.
SW	Scientific World Course	3 credits.
MAT 2540/1475	Discrete Structures and Algorithms II or Calculus I	3 to 4 credits.
CE	Creative Expression Course	4 credits.

SEMESTER 7

(Total Credits 15)

CST 4704	Business Intelligence, Data Warehousing, and Data Mining	3 credits.
CST 4714	Database Administration	3 credits.
Track Elective*		3 credits.
PSY 2404	Personnel and Organizational Psychology	3 credits.
ID	Interdisciplinary Course	3 credits.

SEMESTER 8

(Total Credits 15)

CST 4800	Project Management (WI)	3 credits.
CST 4900/4905	Internship or Information Systems Project	3 credits.
Track Elective*		3 credits.
USED	US Experience in its Diversity Course	3 credits.
ENG 2575	Technical Writing	3 credits.

Networking and Security Track

SEMESTER 5

(Total Credits 15)

CST 3507	Advanced Single-LAN Concepts	3 credits.
CST 3523	Task Automation in System Administration	3 credits.
CST 3610	Networking Security	3 credits.
MAT 2440	Discrete Structures and Algorithms I	3 credits.
BUS 3525	Strategic Management	3 credits.

SEMESTER 6

(Total Credits 15)

CST 3607	Interconnectivity	3 credits.
CST 4710	Advanced Security Technologies	3 credits.
SW	Scientific World Course	3 credits.
MAT 2540/1475	Discrete Structures and Algorithms II or	3 to 4 credits.
CE	Calculus I Creative Expression Course	4 credits.

SEMESTER 7

(Total Credits 15)

CST 4707	The LAN-Internet Connections	3 credits.
Track Elective*		3 credits.
CST 4715	Advance Topics in Systems Administration	3 credits.
PSY 2404	Personnel and Organizational Psychology	3 credits.
ID	Interdisciplinary Course	3 credits.

SEMESTER 8

(Total Credits 15)

CST 4800	Project Management (WI)	3 credits.
CST 4900/4905	Internship or Information Systems Project	3 credits.
Track Elective*		3 credits.
USED	US Experience in its Diversity Course	3 credits.
ENG 2575	Technical Writing	3 credits.

Footnotes

* Elective courses shall be chosen from any CST 35XX, CST 36XX and CST 47XX course.

** If the course was taken as part of associate degree coursework, select another BTech-level major elective.

IT Operations Track

SEMESTER 5

(Total Credits 15)

CST 3507	Advanced Single-LAN Concepts	3 credits.
CST 4709	Installing and Maintaining Web Servers	3 credits.
CST 2405**/2415	Systems Administration (Windows) or Systems Administration (UNIX/Linux)	3 credits.
MAT 2440	Discrete Structures and Algorithms I	3 credits.
BUS 3525	Strategic Management	3 credits.

SEMESTER 7

(Total Credits 15)

CST 4700	IT Service Management	3 credits.
CST 4714	Database Administration	3 credits.
CST 3615	Enterprise Applications	3 credits.
PSY 2404	Personnel and Organizational Psychology	3 credits.
ID	Interdisciplinary Course	3 credits.

SEMESTER 6

(Total Credits 15)

CST 3605	Virtualization	3 credits.
CST 3610	Networking Security Fundamentals	3 credits.
SW	Scientific World Course	3 credits.
MAT 2540/1475	Discrete Structures and Algorithms II or Calculus I	3 to 4 credits.
CE	Creative Expression Course	4 credits.

SEMESTER 8

(Total Credits 15)

CST 4800	Project Management (WI)	3 credits.
CST 4900/4905	Internship or Information Systems Project	3 credits.
Track Elective*		3 credits.
USED	US Experience in its Diversity Course	3 credits.
ENG 2575	Technical Writing	3 credits.

Software Development Track

SEMESTER 5

(Total Credits 15)

CST 3513	Object-Oriented Programming in Java	3 credits.
CST 3519	Advanced Web Client Technologies	3 credits.
CST 2301**	Multimedia and Mobile Device Programming	3 credits.
MAT 2440	Discrete Structures and Algorithms I	3 credits.
BUS 3525	Strategic Management	3 credits.

SEMESTER 7

(Total Credits 15)

CST 4708	Software Development and .NET Framework	3 credits.
CST 4713	Dynamic Web Development: Servlets and JSP	3 credits.
Track Elective*		3 credits.
PSY 2404	Personnel and Organizational Psychology	3 credits.
ID	Interdisciplinary Course	3 credits.

SEMESTER 6

(Total Credits 15)

CST 3613	Application Development with Databases	3 credits.
CST 3606	Object-Oriented Systems Analysis and Design	3 credits.
SW	Scientific World Course	3 credits.
MAT 2540/1475	Discrete Structures and Algorithms II or Calculus I	3 to 4 credits.
CE	Creative Expression Course	4 credits.

SEMESTER 8

(Total Credits 15)

CST 4800	Project Management (WI)	3 credits.
CST 4900/4905	Internship or Information Systems Project	3 credits.
Track Elective*		3 credits.
USED	US Experience in its Diversity Course	3 credits.
ENG 2575	Technical Writing	3 credits.

Footnotes

* Elective courses shall be chosen from any CST 35XX, CST 36XX and CST 47XX course.

**If the course was taken as part of associate degree coursework, select another BTech-level major elective.