

INFORMATION AND COMMUNICATION TECHNOLOGY (CYBER DEFENSE) - BACHELOR OF INFORMATION AND COMMUNICATION TECHNOLOGY

A Suggested Plan of Study for Students

These roadmaps assume student placement in MATH 1220G College Algebra or higher. The contents and order of this roadmap may vary depending on initial student placement in mathematics and previous coursework. It is only a suggested plan of study for students and is not intended as a contract. Course availability may vary from fall to spring and summer semester and may be subject to modification or change.

All Information and Communication Technology requirements must be completed with a C- or higher grade.

Pathway: 4-year Bachelor's Degree

First Year

Fall		Credits
ICT 141	IT Essentials I: A+ Certification Training Focused on the Hardware Exam	3
Elective Course ⁴		3
General Education Area I ¹		4
General Education Area II (MATH 1220G or Higher) ¹		3-4
General Education IV ¹		3
Credits		16-17

Spring		Credits
ICT 145	Network Essentials: N+ Certification Training	3
ICT 161	IT Essentials II: A+ Certification Training focused on the Software exam	3
General Education Area I ¹		3
General Education Area III ¹		4
General Education Area V ¹		3
Credits		16

Second Year

Fall		Credits
ICT 152	Java Programming	3
ICT 220	Discrete Math and Its Relationship to Information Technology	3
General Education Area I ¹		3
General Education Area VI ¹		3
Elective Course ⁴		3
Credits		15

Spring		Credits
ICT 267	Information Security+ Certification Preparation	3
ICT 280	Introduction to Web Development	3
General Education Area III or IV ¹		3-4
General Education Elective ¹		3

Elective Course ⁴		Credits
		3
Credits		15-16

Third Year		Credits
Fall		
ICT 360	Operating Systems for ICT	3
ICT 377	Computer Networking I	3
Elective Course ⁴		3
Elective Course ⁴		3
Elective Course ⁴		3
Credits		15
Spring		
ICT 320	Introduction to Internet Protocols	3
ICT 339	Introduction to Digital Forensics and Incident Response ³	3
ICT 350V	Introduction to Personal Computer Security and Privacy ²	3
ICT 355	Linux System Administration	3
ICT 364	Windows Enterprise Administration	3
Credits		15

Fourth Year		Credits
Fall		
ICT 362	Software Technology II	3
ICT 435	Senior Project	3
ICT 439	Advanced Digital Forensics and Incident Response ³	3
ICT 450	Ethical Hacking	3
ICT 487	Data Security ³	3
Credits		15
Spring		
ICT 457	Information Security Principles	3
ICT 467	Communication Network Security ³	3
Electives to bring total to 120 credits (if necessary) ⁴		1-0
Viewing a Wider World ²		6
Credits		13-12
Total Credits		120-121

¹ See the **General Education** (<https://catalogs.nmsu.edu/nmsu/general-education-viewing-wider-world/#viewingawiderworldtext>) section of the catalog for a complete list of courses. The number of credits provided assumes MATH 1220G College Algebra placement or higher.

² The ICT 350V Introduction to Personal Computer Security and Privacy course is part of the required curriculum for the ICT degree. It does not count towards the Viewing a Wider World (<https://catalogs.nmsu.edu/nmsu/general-education-viewing-wider-world/#viewingawiderworldtext>) Requirements (6 credits). Visit the c (<https://catalogs.nmsu.edu/nmsu/general-education-viewing-wider-world/#viewingawiderworldtext>)atalog's Viewing a Wider World (<https://catalogs.nmsu.edu/nmsu/general-education-viewing-wider-world/#viewingawiderworldtext>) section for a complete list of Viewing a Wider World (<https://catalogs.nmsu.edu/nmsu/general-education-viewing-wider-world/#viewingawiderworldtext>) Requirements. These courses will form part of the required 48 upper-level credit hours taken as part of the ICT program at NMSU.

³ The **provided selection of Technical Electives** will lead to an ICT concentration on **Cyber Defense**, one of the three concentration options. See the NMSU Catalog for information on other concentration options. Concentrations are *optional* educational sequences that students may choose to focus on in IT-related areas. A Technical

Electives pre-approved list for each concentration is provided in this catalog.

⁴ **Elective** credit may vary based on prerequisites, dual credit, AP credit, double majors, or minor coursework. The amount indicated in the requirements list is needed to bring the total to 120 credits and may appear in variable form based on the degree. However, students may need to complete more or less on a case-by-case basis, and students should discuss elective requirements with their academic advisor.

Pathway: 2+2 Bachelor's Degree

First Year		Credits
Elective Credits (include General Education credits) ^{1,4}		30
Credits		30
Second Year		Credits
Elective Credits (include General Education credits) ^{1,4}		33
Credits		33
Third Year		Credits
Fall		
ICT 141	IT Essentials I: A+ Certification Training Focused on the Hardware Exam	3
ICT 152	Java Programming	3
ICT 220	Discrete Math and Its Relationship to Information Technology	3
ICT 360	Operating Systems for ICT	3
ICT 377	Computer Networking I	3
Credits		15
Spring		
ICT 320	Introduction to Internet Protocols	3
ICT 339	Introduction to Digital Forensics and Incident Response ³	3
ICT 350V	Introduction to Personal Computer Security and Privacy ²	3
ICT 355	Linux System Administration	3
ICT 364	Windows Enterprise Administration	3
Credits		15
Fourth Year		Credits
Fall		
ICT 362	Software Technology II	3
ICT 435	Senior Project	3
ICT 439	Advanced Digital Forensics and Incident Response ³	3
ICT 450	Ethical Hacking	3
ICT 487	Data Security ³	3
Credits		15
Spring		
ICT 457	Information Security Principles	3
ICT 467	Communication Network Security ³	3
Viewing a Wider World ²		6
Credits		12
Total Credits		120

World (<https://catalogs.nmsu.edu/nmsu/general-education-viewing-wider-world/#viewingawiderworldtext>) Requirements (6 credits). Visit the catalog's Viewing a Wider World (<https://catalogs.nmsu.edu/nmsu/general-education-viewing-wider-world/#viewingawiderworldtext>) section for a complete list of Viewing a Wider World (<https://catalogs.nmsu.edu/nmsu/general-education-viewing-wider-world/#viewingawiderworldtext>) Requirements. These courses will form part of the required 48 upper-level credit hours taken as part of the ICT program at NMSU.

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