Computer and Electronics Technology

Award: Associate of Applied Science Degree

Major: Computer and Electronics Technology

Possible occupations for graduates are: electronics technician, industrial electronics technician, instrumentation technician, consumer product repair technician, communications technician, computer network technician, and technical salesperson.

The A.A.S. degree program in Computer and Electronics Technology is designed for people who seek employment or professional development in the areas of computer and electronics technology and is structured so that students need no previous electrical or electronics knowledge. The program provides students with knowledge and skills needed to prepare for the following certification testing: Certified Electronics Technician (ISCET) and Certified Electronics Associate (EIA).

Generally, the A.A.S. in Computer and Electronics Technology is the minimum requirement for many employment opportunities in the field.

Many BRCC Computer and Electronics Technology program graduates pursue a Bachelor of Science degree in Electrical Engineering through the Old Dominion University Distance Learning program.

Curriculum

Course No.	Title	Credits
First Semester		
ENG 111	College Composition I	3
ETR 106	Programming Methods for Electrical/ Electronic Calculations	2
ETR 113	D.C. and A.C. Fundamentals I	4
ETR 123	Electronics Applications	2
HLT/PED	Health or Physical Education	1
MTH 103	Applied Technical Math I	3
	or	
MTH 163	Precalculus I [a]	(3)
SDV	Student Development	1
		16
Second Semester		
ETR 114	D.C. and A.C. Fundamentals II	3
ETR 143	Devices and Applications I	4
ETR 164	Upgrading and Maintaining PC Hardware [b]	3
ETR 225	Data Communications [c]	4
MTH 104	Applied Technical Math II	3
	or	
MTH 164	Precalculus II [a]	(3)
HLT/PED	Health or Physical Education	1
		18
Third Semester		
ETR 241	Electronic Communications I	4
ETR 273	Computer Electronics I	4
PHY 201	General College Physics I [d]	4
	or	
PHY 100	Elements of Physics [d]	(4)
	Social/Behavioral Science Elective [e]	3
CST 110	Introduction to Speech Communication	3
		18

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Fourth Semester		
ETR 237	Industrial Electronics I	3
ETR 274	Computer Electronics II	4
ETR 296	On-site training in Electronics [f]	2
	or	
ETR 298	Seminar & Project in Computer and Electronics [f]	(2)
	Humanities/Fine Arts Elective [e]	3
	Social/Behavioral Science Elective [e]	3
		15
Total credits required		**67**

[a] MTH 163-164 required for transfer.

[b] Cross-listed as ITN 106.

[c] Cross-listed as ITN 208.

[d] PHY 201 required for transfer.

[e] Please refer to the list of Humanities/Fine Arts electives and Social/Behavioral Science electives that are approved to fulfill these requirements available in Admissions and Records.

[f] Instructor approval required.

Computer and Electronics Technology, Computer Network Technologies Specialization

Award: Associate of Applied Science Degree

Major: Computer and Electronics Technology

Specialization: Computer Network Technologies

Possible occupations for graduates are: networking specialist, network technician, network installation/maintenance specialist, network administrator trainee, PC repair technician, help desk specialist, end-user support specialist.

The A.A.S. degree program in Computer and Electronics Technology, with a Computer Network Technologies specialization, is designed for people who seek employment or professional development in the field of network technology.

The knowledge and skills needed for success as a computer network technician include a combination of basic electronics, digital/microprocessor electronics, data communications, computer systems, LAN (Local Area Network) architecture and administration. These skills are an integral part of the Computer Network Technologies curriculum. The curriculum includes technical courses in both electronics technology and information systems technology. Instruction includes both the theoretical concepts and practical applications (hands-on) needed for success in computer network technologies.

Employers are interested in skilled technicians who are certified in various areas. The Computer Network Technologies specialization provides students with knowledge and skills needed to prepare for the following certification examinations: A+ certification exam for Computer Technicians (CompTia), Network+ for Network Technicians (CompTia), Security+ for Computer Security Technicians (CompTia), Windows 2008 Server (Microsoft), Cisco Certified Network Associate.

Curriculum

Course No.	Title	Credits
First Semester		
ETR 106	Programming Methods for Electrical/ Electronic Calculations	2
ETR 113	D.C. and A.C. Fundamentals I	4
ETR 123	Electronics Applications	2
HLT/PED	Health or Physical Education	1
ITE 119	Information Literacy	3
MTH 103	Applied Technical Math I or	3
	or	
MTH 163	Precalculus I [a]	(3)
SDV	Student Development	1
		16

Second Semester

ENG 111	College Composition I	3
ETR 164	Upgrading and Maintaining PC Hardware [b]	3
ETR 225	Data Communications [c]	4
MTH 104	Applied Technical Math II	3
	or	
MTH 164	Precalculus II [a]	(3)
HLT/PED	Health or Physical Education	1
	Social/Behavioral Science Elective [d]	3
		17

Third Semester

ETR 273	Computer Electronics I	4
ITN 103	Administration of Networked Servers	3
ITN 260	Network Security Basics	3
PHY 201	General College Physics I [e]	4
	or	
PHY 100	Elements of Physics [e]	(4)
	Social/Behavioral Science Elective [d]	3
		17

Fourth Semester

ETR 274	Computer Electronics II	4
ETR 296	On-Site Training in Electronics[f]	2
	or	
ETR 298	Seminar & Project in Electronics [f]	(2)
ITE 182	User Support/Help Desk	3
ITN 151	Introductory Routing and Switching	3
	Humanities/Fine Arts Elective [d]	3
CST 110	Introduction to Speech Communications	3
		18

Total credits required **68**

[a] MTH 163-164 required for transfer.

[b] Cross-listed as ITN 106.

[c] Cross-listed as ITN 208.

[d] Please refer to the list of Humanities/Fine Arts electives and Social/Behavioral Science electives that are approved to fulfill these requirements available in Admissions and Records.

[e] PHY 201 required for transfer.

[f] Instructor approval required.