



# Atlantic Technical College

## Cloud Computing & Virtualization

### Program Syllabus

### 2022-2023



**Instructor(s):** Cecilia Ramirez  
**Department:** Business and Information Technology  
**Office/Classroom Location:** Building 7, Room 177  
**Phone Number:** 754-321-5100  
**Email Address:** [cecilia.ramirez@browardschools.com](mailto:cecilia.ramirez@browardschools.com)

**Instructor Office Hours:**  
**M-F:** 7:00 am – 3:00 pm (by appointment)

Instructor responses to student requests will be provided within 24 hours of regular school operating hours:  
 Monday – Friday 7:00 am – 3:00 pm.

**Student Hours: Monday – Friday**  
**High School AM:** 7:05 am – 10:10 am  
**High School PM:** 10:50 am – 1:50 pm  
**Postsecondary Part-Time:** 7:05 am – 10:05 am  
**Postsecondary Full-Time:** 7:05 am – 1:50 pm  
**Break:** 10:10 am – 10:20 am  
**Lunch:** 10:20 am – 10:50 am

Program Name: Cloud Computing & Virtualization		
OCPs	Course Names	Hours
A	OTA0040 Information Technology Asst.	150
B	EEV0504 Computer Support Assistant	150
C	CTS0026 Network Support Technician	150
D	CTS0054 Cloud Analyst	150
E	CTS0056 Cloud Virtualization Specialist	300

**Course Description:**  
 The Cloud Computing & Virtualization program prepares students for entry-level employment as a Cloud Support Specialist, Cloud Technician, Network Support Technician or provides supplemental training for people previously or currently employed in networking support occupations seeking to update their skills. The program prepares students to create, monitor, and maintain virtual computer networks and design cloud-based solutions. Core cloud design and infrastructure will be covered to implement solutions to deploy and maintain virtualized clients. Laboratory activities are an integral part of this program. Earn your Industry Certifications and develop hands-on skills to give you a competitive edge in the IT field.

**Technical College Policy/Adult Student Attendance:**

- A student must be withdrawn after being absent for six (6) consecutive days.
- Two (2) additional absences may be allowed under certain circumstance with appropriate documentation.
- Please refer to the Student Handbook for postsecondary students.  
<http://www.atlanticttechnicalcollege.edu/atc-student-handbook/>

**Magnet High School/Attendance Policy:**

A student who has had at least five unexcused absences, or absences for which the reasons are unknown, within a calendar month, or 10 unexcused absences, or absences for which the reasons are unknown, within a 90-calendar day period, may be exhibiting a pattern of non-attendance (F.S.1003.26 (1) (b)) and the School Board of Broward County, Policy 5.5.

**Required Book(s) and/or Online Access:**

- Testout IT Fundamentals Pro
- Cengage – CompTIA Cloud+ Guide to Cloud Computing & Mindtap
- AWS Cloud Academy – Cloud Foundations

*Additional online materials, workbooks and/or written activities will be provided by the instructor.*

**Required Materials/Supplies:**

- USB storage device
- Headphones
- 3-Ring Binder
- Paper, pencils, and pens

***Most importantly, a positive attitude geared toward success!***

*All required books and most materials/supplies can be purchased from the ATC bookstore.  
 Stop by during operational hours for pricing, booklist and other purchasing information.*

<b>Grading System:</b> A 90 - 100% B 80 - 89% C 70 - 79% D 60 - 69% F 0 - 59% I Incomplete	<b>Online Specific Grading Policy:</b> Online students' grades and attendance are based on: <ul style="list-style-type: none"> <li>• Scheduled assignments (<i>late submission of work will not be accepted</i>)</li> <li>• Weekly lab attendance</li> <li>• Exams (may include oral and/or hands-on skills component)</li> </ul> <i>*Final exams will be in-person during a lab session</i>
<b>Program Grading Policy:</b> <ul style="list-style-type: none"> <li>• Students assume full responsibility to submit assignments on or before they are due. Late submissions will negatively affect grades and/or not be accepted. (<i>see pacing chart and/or assignment matrix on your instructor's website</i>)</li> <li>• Students assume full responsibility for the content and integrity of submitted work. As the guiding principle of academic integrity, a student's submitted work, examinations, reports, projects, etc. must be his/her own.</li> <li>• Unless otherwise stated by the instructor, physical or digital references including books, charts, graphs, diagrams, photos, notes or calculators may not be utilized during assessments or exams. Blank scratch paper will be permitted during certain assessments.</li> </ul>	
<b>View Your Grades:</b> <b>Grades can be viewed online by following the directions below:</b> <ol style="list-style-type: none"> <li>1. Go to Clever SSO Website link: <a href="https://sso.browardschools.com">https://sso.browardschools.com</a> and login: <ol style="list-style-type: none"> <li>a. Username: 10-digit student ID number</li> <li>b. Password: PMM/DD/YYYY (or your personally created password after initial login)</li> </ol> </li> <li>2. Click on the FOCUS app on your Clever opening page. (You may need to scroll-down the page to see the FOCUS app.)</li> <li>3. Enter your FOCUS username and password. <i>NOTE: If the Focus App. is not visible after logging into Clever, please navigate to the Broward Focus website directly: <a href="https://broward.focusschoolsoftware.com/focus/">https://broward.focusschoolsoftware.com/focus/</a>.</i></li> </ol>	
<b>Classroom/Lab Rules:</b> <ul style="list-style-type: none"> <li>• Sign in and out DAILY.</li> <li>• Read and follow DAILY AGENDA upon arrival.</li> <li>• Follow all rules in the student and discipline code books.</li> <li>• Cell phones silent or OFF and PUT AWAY.</li> <li>• Contact instructor by 8:00 am on the same day when absent (email preferred).</li> <li>• Come to class prepared to work and be respectful of ALL class members.</li> <li>• ALL assignments submitted to instructor must reflect the student's own individual work.</li> <li>• <b>NO FOOD OR BEVERAGES IN THE LAB.</b></li> </ul>	
<b>Industry Certification &amp; State Credential Exam Cost:</b> <ul style="list-style-type: none"> <li>• CompTIA IT Fundamentals+, \$126</li> <li>• CompTIA Cloud+ - \$338</li> <li>• AWS Certified Cloud Practitioner \$100</li> <li>• AWS Certified Solutions Architect – Associate \$150</li> </ul> <p><i>You may qualify for certification reimbursement of your exam cost(s) upon passing. Credential fees are subject to change.</i></p>	<b>Outstanding Student Recognition Information:</b>  A gold seal will be applied to a Program Completion Certificate or an Applied Technology Diploma if the student has earned a 3.5 GPA or higher in their Career and Technical Education (CTE) classes.

**Program Name: Cloud Computing & Virtualization**

**Course Number: OTA0040**

**Course Name: Information Technology Assistant (150 Hours)**

**Occupational Completion Point: A**

**Intended Outcomes:** [\(From FL DOE Curriculum Framework\)](#)

Student will be able to:

- Demonstrate knowledge, skill, and application of information systems to accomplish job objectives and enhance workplace performance.
- Develop an awareness of microprocessors and digital computers.
- Demonstrate an understanding of operating systems.
- Use technology to enhance the effectiveness of communication skills utilizing word processing applications.
- Use technology to enhance communication skills utilizing presentation applications.
- Use technology to enhance the effectiveness of communication utilizing spreadsheet and database applications.
- Use technology to enhance communication skills utilizing electronic mail.
- Investigate individual assessment and job/career exploration and individual career planning that reflect the transition from school to work, lifelong learning, and personal and professional goals.
- Incorporate appropriate leadership and supervision techniques, customer service strategies, and standards of personal ethics to accomplish job objectives and enhance workplace performance.
- Demonstrate competence using computer networks, internet and online databases to facilitate collaborative or individual learning and communication.
- Demonstrate competence in page design applicable to the WWW.
- Develop an awareness of emerging technologies.
- Develop awareness of computer languages and software applications.
- Demonstrate comprehension and communication skills.

**Course Number: EEV0504**

**Course Name Computer Support Assistant (150 Hours)**

**Occupational Completion Point: B**

**Intended Outcomes:** [\(From FL DOE Curriculum Framework\)](#)

Student will be able to:

- Incorporate appropriate leadership and supervision techniques, customer service strategies, and standards of personal ethics to accomplish job objectives and enhance workplace performance.
- Identify, install, configure, and upgrade desktop and server computer modules and peripherals, following established basic procedures for system assembly and disassembly of field replaceable modules.
- Diagnose and troubleshoot common module problems and system malfunctions of computer software, hardware, peripherals, and other office equipment.
- Identify issues, procedures and devices for protection within the computing environment, including people, hardware and the surrounding workspace.
- Identify specific terminology, facts, ways and means of dealing with classifications, categories and principles of motherboards, processors and memory in desktop and server computer systems.
- Demonstrate knowledge of basic types of printers, basic concepts, printer components, how they work, how they print onto a page, paper path, care and service techniques, and common problems.
- Identify and describe basic network concepts and terminology, ability to determine whether a computer is networked, knowledge of procedures for swapping and configuring network interface cards, and knowledge of the ramifications of repairs when a computer is networked.
- Perform end user support and assistance by troubleshooting and diagnosing through telephone, e-mail, remote access, or direct contact.
- Demonstrate proficiency using graphical user interface (GUI) operating systems.

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**Course Number: CTS0026**

**Course Name: Network Support Technician (150 Hours)**

**Occupational Completion Point: C**

**Intended Outcomes:** [\(From FL DOE Curriculum Framework\)](#)

Student will be able to:

- Incorporate appropriate leadership and supervision techniques, customer service strategies, and standards of personal ethics to accomplish job objectives and enhance workplace performance.
- Participate in work-based learning experiences.
- Perform end user support and assistance by troubleshooting and diagnosing through telephone, e-mail, remote access, or direct contact.
- Perform installation and configuration activities.
- Demonstrate proficiency using computer networks.
- Demonstrate proficiency in configuring and troubleshooting hardware devices and drivers.
- Demonstrate proficiency in managing, monitoring, and optimizing system performance, reliability and availability.
- Demonstrate proficiency in managing, configuring and troubleshooting storage use.
- Demonstrate proficiency in configuring and troubleshooting network connections.
- Demonstrate proficiency in implementing, monitoring, and troubleshooting security.

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**Course Number CTS0054**

**Course Name: Cloud Analyst (150 Hours)**

**Occupational Completion Point: D**

**Intended Outcomes:** [\(From FL DOE Curriculum Framework\)](#)

Student will be able to:

- Evaluate and analyze cloud principles used in cloud computing.
- Identify the components of cloud based services.
- Evaluate cloud based services.
- Use cloud-based services.
- Evaluate and analyze techniques and methods of cloud deployment.
- Evaluate the risks of cloud-based systems.
- Demonstrate an awareness of cloud implementation.

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**Course Number CTS0056**

**Course Name: Cloud Virtualization Specialist (150 Hours)**

**Occupational Completion Point: E**

**Intended Outcomes:** [\(From FL DOE Curriculum Framework\)](#)

Student will be able to:

- Demonstrate an understanding of virtualization concepts.
- Install and configure the virtualization server platform.
- Install, configure and manage virtualized clients.
- Demonstrate proficiency in managing a virtualization infrastructure.
- Demonstrate an understanding of storage technologies and storage configuration.
- Demonstrate proficiency in network optimization using network protocols, ports, and topologies.
- Understand security in a virtualized environment.