CODE COAST STEM ACADEMY INC.

TECHNICAL ACADEMY

Proposed Workforce Certificate Programs

2027 academic planning catalog | 8 proposed programs | 2 recommended founding programs

IT SUPPORT • NETWORKING • CYBER DEFENSE • CLOUD • SOFTWARE • DATA & AI • CAD • IOT

PLANNING DRAFT — NOT APPROVED, ACCREDITED OR OPEN FOR ENROLLMENT

Prepared for Code Coast leadership, curriculum review, workforce partners and regulatory pre-application discussions.

17 November 2026

Academic concept & program framework

Proposed operating division: **Code Coast Technical Academy** • Parent organization: **Code Coast STEM Academy Inc.**

Mission

Create accessible, project-based technical education for adult learners and career changers across coastal Georgia and South Carolina. The certificate program concept is designed as a stepping stone into industry credentials, employment exploration and future authorized higher education pathways.

A proposed stackable structure

Stage	Sample pathway	Evidence
Foundation	CCTA-101 → CCTA-102	Device/service-desk lab → network capstone
Cyber specialization	CCTA-102 → CCTA-201	Security operations investigation portfolio
Cloud/software specialization	CCTA-301 → CCTA-202 / 302	Application → cloud deployment or data dashboard
Engineering specialization	CCTA-401 + foundation → CCTA-402	CAD portfolio → sensor-system demonstration

Founding sequence & authorization gate

Priority program applications: CCTA-101 IT Support & Systems Administration and CCTA-102 Networking & Cybersecurity Foundations. The other six programs are concept designs for future review. Georgia’s initial authorization fee includes two new program applications for an unaccredited applicant; this is **not** an assurance of approval or an absolute two-program limit.

Delivery, academic hours, tuition, start dates, faculty, facilities and program title use must be confirmed with GNPEC and South Carolina CHE before regulated advertising or instruction.

Standard credential language

Upon lawful program activation and successful completion, the academy could issue a **non-degree Certificate of Completion** for the named Code Coast program. Third-party professional certification requires passing the separate issuer-administered examination; exam fees and exam access are not assumed included.

No credits or transfer guarantees

These are noncredit, workforce-oriented concepts. No college credit, degree, occupational license, accreditation, federal student aid eligibility, transferability or employment placement is promised.

At-a-glance program catalog

Program durations are proposed instructional clock hours, not credit hours. Week counts assume roughly 10 hours of learning per week.

Code / phase	Program	Hours / weeks	Entry
CCTA-101 Flagship 1	IT Support & Systems Administration	120 h / 12 wk	Entry
CCTA-102 Flagship 2	Networking & Cybersecurity Foundations	160 h / 16 wk	Entry
CCTA-201 Expansion	Defensive Cybersecurity Operations	160 h / 16 wk	Intermediate
CCTA-202 Expansion	Cloud Infrastructure & DevOps Foundations	160 h / 16 wk	Intermediate
CCTA-301 Expansion	Software Development & Python	180 h / 18 wk	Entry
CCTA-302 Expansion	Data Analytics & Responsible AI	140 h / 14 wk	Entry
CCTA-401 Expansion	CAD, Product Design & Digital Fabrication	140 h / 14 wk	Entry
CCTA-402 Expansion	Automation, IoT & Connected Systems	160 h / 16 wk	Intermediate

Proposed short-form readiness workshops

Digital Literacy & Professional Communication (40 hours): safe computing, productivity tools, basic troubleshooting, reading technical instructions and professional communication.

Career Launch Lab (24 hours): portfolio and résumé review, interviews, teamwork, technology ethics and career planning.

Workshops are separately proposed concepts. Their licensing/exemption treatment must also be verified before public delivery.

CCTA-101 / FLAGSHIP 1

IT Support & Systems Administration

Help-desk troubleshooting, device deployment, operating systems and workplace support.

PROGRAM LEVEL	Entry	INSTRUCTION HOURS	120
ESTIMATED LENGTH	12 weeks	CAREER FIELD	Infrastructure

Intended learners / prerequisites

No prior technical experience; basic reading and computer-use readiness assessment.

Proposed course sequence

Course	Module	Hours
CCTA 101.1	Digital support essentials and professional practice Digital literacy, hardware basics, documentation, customer communication	24
CCTA 101.2	PC hardware, endpoints and troubleshooting Installation, diagnostics, peripherals, operating systems	32
CCTA 101.3	User and systems administration Identity, permissions, system configuration, backups, virtualization	32
CCTA 101.4	Support operations and capstone lab Ticketing, remote support, change control, security basics, assessment	32
	TOTAL	120

Learning outcomes

- Diagnose common PC, peripheral and operating-system issues using structured ticketing.
- Install, configure and secure Windows/Linux systems and user accounts.
- Explain basic networking, backups, security, and customer communication.
- Document and resolve service requests using safe escalation procedures.

Required practical capstone

Build, configure, secure and troubleshoot two virtual workstations; close five simulated tickets, document backups and present a support runbook.

Industry credential alignment (separate external exam)

CompTIA A+; Cisco CCST IT Support (external exams)

Possible entry-level direction: Help Desk Technician; IT Support Specialist; Junior Systems Support

CCTA-102 / FLAGSHIP 2

Networking & Cybersecurity Foundations

Build networks, understand TCP/IP, secure devices and troubleshoot connected environments.

PROGRAM LEVEL	Entry	INSTRUCTION HOURS	160
ESTIMATED LENGTH	16 weeks	CAREER FIELD	Infrastructure

Intended learners / prerequisites

CCTA-101 or demonstrated foundational IT knowledge recommended.

Proposed course sequence

Course	Module	Hours
CCTA 102.1	Networking models and IPv4/IPv6 OSI/TCP-IP, addressing, subnetting, standards	32
CCTA 102.2	Switching, routing and wireless labs VLANs, routing principles, Wi-Fi, design and simulations	48
CCTA 102.3	Network troubleshooting and visibility Packet capture, logs, DNS, DHCP, monitoring, documentation	40
CCTA 102.4	Network security and capstone Segmentation, secure configurations, business network project	40
	TOTAL	160

Learning outcomes

- Explain network topologies, OSI/TCP-IP models, IP addressing and subnetting.
- Configure basic switching, routing, wireless and VLAN concepts in a simulator.
- Analyze traffic and troubleshoot connectivity using standard tools.
- Apply access control, network hardening and safe incident escalation.

Required practical capstone

Create an addressing and VLAN plan, deploy a simulated network, document firewall rules and resolve a set of staged faults.

Industry credential alignment (separate external exam)

Cisco CCST Networking; CompTIA Network+ (external exams)

Possible entry-level direction: Network Support Technician; Junior Network Administrator; NOC Analyst

CCTA-201 / EXPANSION

Defensive Cybersecurity Operations

Threat detection, alerts, incident handling and security-monitoring fundamentals.

PROGRAM LEVEL	Intermediate	INSTRUCTION HOURS	160
ESTIMATED LENGTH	16 weeks	CAREER FIELD	Cybersecurity

Intended learners / prerequisites

CCTA-102 or comparable networking/security fundamentals.

Proposed course sequence

Course	Module	Hours
CCTA 201.1	Security principles and governance CIA, access control, risk basics, ethics	32
CCTA 201.2	Logs, endpoint and SIEM fundamentals Event review, queries, alert logic, secure lab workflows	48
CCTA 201.3	Incident triage and response Triage, containment simulations, evidence, reporting	40
CCTA 201.4	SOC investigation capstone Scenario investigation, playbook and briefing	40
	TOTAL	160

Learning outcomes

- Interpret authentication, endpoint and network telemetry.
- Triage simulated alerts and distinguish false positives from suspicious events.
- Apply incident response, evidence handling, least privilege and reporting.
- Communicate ethical, legal and defensive boundaries in security practice.

Required practical capstone

Investigate a contained, synthetic phishing-to-compromise scenario; produce a timeline, indicators and response playbook.

Industry credential alignment (separate external exam)

ISC2 Certified in Cybersecurity (CC); CompTIA Security+ (external exams)

Possible entry-level direction: Junior SOC Analyst; Cybersecurity Technician; Security Operations Assistant

CCTA-202 / EXPANSION

Cloud Infrastructure & DevOps Foundations

Cloud platforms, identity, automation, CI/CD and secure deployments.

PROGRAM LEVEL	Intermediate	INSTRUCTION HOURS	160
ESTIMATED LENGTH	16 weeks	CAREER FIELD	Cloud & Software

Intended learners / prerequisites

Basic networking and command-line knowledge; CCTA-101/102 recommended.

Proposed course sequence

Course	Module	Hours
CCTA 202.1	Cloud architecture and economics IaaS/PaaS/SaaS, networking, service choice, budgets	32
CCTA 202.2	Identity, infrastructure and monitoring IAM, networking, storage, resilience, logging	48
CCTA 202.3	Automation, Git and DevOps workflows Git, scripts, pipelines, infrastructure-as-code concepts	40
CCTA 202.4	Secure deployment capstone Application deployment, cost guardrails and recovery	40
	TOTAL	160

Learning outcomes

- Explain cloud service models, pricing, shared responsibility and core services.
- Implement role-based identity, access controls, backups and monitoring.
- Use version control, scripting and a CI/CD demonstration pipeline.
- Document deployment steps, risks, costs and rollback procedures.

Required practical capstone

Deploy a static application in a controlled sandbox, document roles, backups, change pipeline, cost estimate and restoration steps.

Industry credential alignment (separate external exam)

AWS Certified Cloud Practitioner; Microsoft Azure Fundamentals (AZ-900) (external exams)

Possible entry-level direction: Cloud Support Associate; Junior DevOps Technician; Platform Support Analyst

CCTA-301 / EXPANSION

Software Development & Python

Programming foundations, application design, APIs, testing and collaborative development.

PROGRAM LEVEL	Entry	INSTRUCTION HOURS	180
ESTIMATED LENGTH	18 weeks	CAREER FIELD	Cloud & Software

Intended learners / prerequisites

Basic digital literacy; no previous coding required.

Proposed course sequence

Course	Module	Hours
CCTA 301.1	Python and computational thinking Variables, types, flow control, functions and practice	36
CCTA 301.2	Data structures, APIs and files Collections, data parsing, exceptions, files, API fundamentals	48
CCTA 301.3	Web app design and testing Frontend basics, accessibility, automated tests, version control	48
CCTA 301.4	Team software capstone Planning, implementation, documentation and demo	48
	TOTAL	180

Learning outcomes

- Write and test Python programs using control flow, collections and functions.
- Design a basic data-driven application and consume simple APIs.
- Apply Git collaboration, debugging, testing and secure input handling.
- Explain deployment, documentation and software accessibility basics.

Required practical capstone

Build a community-help application with Python, version control, tests, issue tracking, accessible interface and a live demo.

Industry credential alignment (separate external exam)

Python Institute PCEP; later PCAP (external exams)

Possible entry-level direction: Junior Software Developer Trainee; QA Automation Assistant; Application Support Technician

CCTA-302 / EXPANSION

Data Analytics & Responsible AI

Data cleaning, dashboards, reporting, basic models and responsible AI use.

PROGRAM LEVEL	Entry	INSTRUCTION HOURS	140
ESTIMATED LENGTH	14 weeks	CAREER FIELD	Cloud & Software

Intended learners / prerequisites

Basic spreadsheet skills; foundational numeracy support available in proposed bridge labs.

Proposed course sequence

Course	Module	Hours
CCTA 302.1	Data literacy and responsible AI Privacy, descriptive statistics, model limits, evaluation	28
CCTA 302.2	Spreadsheets, SQL and data cleaning Data types, tables, transformations, queries	36
CCTA 302.3	Dashboards and Python analysis Visualization, reproducibility, Python fundamentals	36
CCTA 302.4	Community data capstone Dataset analysis, ethical review and evidence-based presentation	40
	TOTAL	140

Learning outcomes

- Collect and clean data using documented, repeatable processes.
- Create useful charts and interpret basic descriptive statistics.
- Use SQL/spreadsheet/Python basics for simple queries and reporting.
- Evaluate privacy, bias, accuracy and appropriate AI-assistant use.

Required practical capstone

Produce a documented dashboard from synthetic public-service data, check data quality and state ethical limitations.

Industry credential alignment (separate external exam)

Python Institute PCED (optional); Microsoft Power BI Data Analyst (later-stage preparation)

Possible entry-level direction: Junior Data Analyst Trainee; Reporting Assistant; Business Intelligence Support

CCTA-401 / EXPANSION

CAD, Product Design & Digital Fabrication

Technical drawings, 3D models, design iteration and prototyping safety.

PROGRAM LEVEL	Entry	INSTRUCTION HOURS	140
ESTIMATED LENGTH	14 weeks	CAREER FIELD	Engineering

Intended learners / prerequisites

Basic computer skills; introductory math and measurement workshop recommended.

Proposed course sequence

Course	Module	Hours
CCTA 401.1	Design communication and measurements Sketching, drafting, scale, tolerances	28
CCTA 401.2	Parametric CAD and assemblies Sketch constraints, parts, assemblies, revisions	42
CCTA 401.3	Materials, manufacturing and safety Fabrication concepts, tool safety, prototyping	35
CCTA 401.4	Engineering portfolio capstone Product brief, prototype, testing and design review	35
	TOTAL	140

Learning outcomes

- Read technical drawings and create dimensioned 2D sketches.
- Model and revise 3D parts and assemblies in CAD tools.
- Apply basic design-for-manufacture, materials and safe prototyping rules.
- Present an iterative design portfolio with specifications and tradeoffs.

Required practical capstone

Model a modular accessibility tool or lab accessory; produce assembly drawings, a bill of materials and a safety review.

Industry credential alignment (separate external exam)

Autodesk Certified User in Autodesk Fusion (external exam)

Possible entry-level direction: CAD Assistant Trainee; Design Technician Trainee; Prototype Lab Assistant

CCTA-402 / EXPANSION

Automation, IoT & Connected Systems

Sensors, microcontrollers, simple automation, networking and device security.

PROGRAM LEVEL	Intermediate	INSTRUCTION HOURS	160
ESTIMATED LENGTH	16 weeks	CAREER FIELD	Engineering

Intended learners / prerequisites

Foundational programming or networking; CCTA-102 or CCTA-301 recommended.

Proposed course sequence

Course	Module	Hours
CCTA 402.1	Circuits, sensors and safety Low-voltage electronics, multimeters, sensor reading	32
CCTA 402.2	Embedded programming and data Microcontrollers, APIs, scripts, logging	40
CCTA 402.3	Networks and device security Wi-Fi, MQTT basics, segmentation, safe configuration	40
CCTA 402.4	Connected systems capstone Prototype integration, testing, risk assessment, demonstration	48
	TOTAL	160

Learning outcomes

- Connect, test and calibrate common sensors and microcontrollers.
- Write basic scripts to collect and visualize device data.
- Explain connectivity, segmentation, device identity and secure defaults.
- Evaluate prototype reliability, electrical safety and environmental impact.

Required practical capstone

Build a simulated coastal environmental sensor station with dashboard, secure communications plan and maintenance guide.

Industry credential alignment (separate external exam)

Applied skills portfolio; optional progression toward Cisco networking credentials

Possible entry-level direction: IoT Lab Technician Trainee; Automation Support Technician; Connected Systems Technician

Academy-wide draft standards

Completion and credential integrity

Proposed minimums: 80% attendance, 75% cumulative academic mastery, successful safety/ethics checks and a capstone scored at least 80% on the rubric. One capstone revision may be offered.

Baseline skills check, weekly lab checkpoints, documented project artifacts, capstone and student reflection. Offer accessible assessment options that measure the same competency.

A draft passing designation would require completing the published curriculum and documented evaluation. A completion certificate is evidence of learning within the academy’s program, not a professional certification, degree or occupational license.

Learner support and accessibility

At entry, identify technical readiness, access to devices/internet and needed accommodations. Provide accessible instruction, flexible assessment formats, clear instructions, reasonable accommodations and non-punitive remediation while preserving skill standards.

Suggested program oversight

Each program should have an approved course outline, lesson plans, instructional hours accounting, curriculum version, faculty qualification requirements, equipment inventory, safety procedures, outcomes rubric, student records retention procedures, formal complaint and refund policies, and an annual advisory review.

Public disclosures before launch

Publish exact tuition/fees, refund terms, admission requirements, calendar, contact details, program outcomes, modality, facilities, accessibility contact, transfer-credit statement, third-party exam terms and any legally required disclosures only after official review.

Ethics, security and child protection

Adult defensive cybersecurity activities must occur only in explicitly authorized isolated labs. Do not simulate real attacks against third-party networks or devices. For mixed-age environments, separate adult and youth access, facilities, communications and safeguarding controls.

Implementation roadmap and state review

Milestone 0 — Regulatory determination

Request written classification and authorization/exemption guidance from Georgia GNPEC and South Carolina CHE for the precise program titles, delivery modalities, instructional locations, fees and certificate language. Do not treat nonprofit status as a blanket exemption.

Milestone 1 — Founding two-program package

Develop regulator-ready curriculum for CCTA-101 and CCTA-102: course outline, syllabus, lesson plans, admissions standards, student contract, sample certificate, equipment, instructor qualifications, pricing and completion/rubric documents.

Milestone 2 — Learning infrastructure

Provision a compliant learning-management platform, lab images, identity controls, accessibility support, student records system, attendance tracking, device inventory, instructor onboarding and academic oversight.

Milestone 3 — Employer-informed pilot

Once authorization/exemption is resolved, start a controlled, appropriately authorized cohort. Collect learner skill-baseline and mastery data, capstone ratings, satisfaction, certification exam attempts (voluntary) and employment follow-up with consent.

Milestone 4 — Expand after evidence

Prioritize cybersecurity operations, cloud and Python after documented early outcomes. Add engineering and AI programs when staff, equipment and regulatory approvals are ready.

Ten-year ambition

2027–2028: lawful adult-education launch and measurable outcomes. **2029–2032:** expanded workforce programming and transfer partnerships. **2033–2036:** pursue eligibility for further institutional authorization, accreditation and college-level programs if feasible. “College” or “University” remains a future goal, not a present designation.

Reference links and compliance notes

Official state education regulators

Georgia Nonpublic Postsecondary Education Commission — initial authorization process, including program documentation and unaccredited initial application provisions.

https://gnpec.georgia.gov/authorization/authorization-application/how-do-i-apply-certificate-authorization

South Carolina Commission on Higher Education — nonpublic postsecondary licensing.

https://www.che.sc.gov/institutions-and-educators/licensing-non-public-postsecondary-institutions

Official third-party credential issuers

CompTIA certification pathways
https://www.comptia.org/

Cisco CCST Networking
https://www.cisco.com/site/us/en/learn/training-certifications/training/courses/ccst-networking.html

ISC2 Certified in Cybersecurity
https://www.isc2.org/certifications/cc

AWS Cloud Practitioner
https://aws.amazon.com/certification/certified-cloud-practitioner/

Microsoft Azure Fundamentals
https://learn.microsoft.com/en-us/credentials/certifications/azure-fundamentals/

Python Institute PCEP
https://pythoninstitute.org/pcep

Autodesk design and manufacturing certification
https://www.autodesk.com/certification/design-manufacturing-certification

Review notes

Program titles, curriculum lengths, certificate requirements and career roles are Code Coast planning proposals. Certification providers may change exam versions, requirements and fees. No endorsements, authorized training-provider partnerships, certification passes or accreditation are claimed.

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