Meeting Workforce Needs through High School Dual Enrollment and Industry Incumbent Worker Training

by
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Transportation, Logistics & Cargo Security (TLCS) Program

AACC is located minutes from the U.S. Naval Academy and in close proximity to Baltimore Washington Thurgood Marshall International Airport, the Port of Baltimore, the Maritime Institute of Technology and Graduate Studies (MITAGS), Fort George G. Meade, the National Security Agency, U.S. Cyber Command, and many other government agencies and private industries.

This location makes AACC ideally situated to provide programming that gives students the broad knowledge, skills, and training required to work in jobs related to cargo handling, warehouse and distribution, supply chain logistics, airport and seaport operations, related technologies, and security operations.

We strive to close the skills gap that exists at ports, marinas, and airports in the Central Maryland region and to identify the next generation of such workers.
TLCS Curriculum

Credentials

- Transportation, Logistics and Cargo Security
  18-credit Certificate
- Supply Chain Management
  18-credit Certificate that stacks into the AAS in Business Management degree

Courses

- Introduction to Transportation and Logistics
- Airport and Seaport Operations – separating these into tracks
- Supply Chain Management
- Domestic and International Freight Operations
- Transportation and Border Security
- Internship
- Procurement and Materials Management
- Logistics Technologies
- Safety & Risk Management in TLCS

Courses are taught face-to-face, online, hybrid, and can be customized for workforce contract clients.
TLCS Program Target Areas

- **Dual enrollment** – high school dual enrolled students
- **Job-ready training** – those needing a job-ready credential, including recent high school graduates and adults
- **Incumbent worker training** – workforce contracts with federal agencies and industry that need employee training
- **Skilled Trades training** – training in plumbing, welding, electric, HVAC, forklift and eventually specific marine skilled trades
- **Drone/Robotic training** – training in marine drone technology
Partnership History: AACC & Anne Arundel County Public Schools (AACPS)

- AACPS has 12 high schools and two Centers for Applied Technology
- Each of the 12 high schools has a signature theme or academic focus
- North County High School’s (NCHS) signature is IT3, which signifies International Trade, Transportation & Tourism
- After the IT3 Signature was developed, discussions took to deliver our six-course, 18-credit Transportation, Logistics and Cargo Security certificate program on-site at NCHS
- Career Pathway developed and approved by NCHS’s advisory board, AACPS’s Board of Education and AACC Board of Trustees
## GUIDELINE for Course Selection

**COLLEGE:** Anne Arundel Community College  
**HIGH SCHOOL:** North County High School  
**AACPS CLUSTER:** Transportation Technologies  
**AACPS PATHWAY:** Transportation, Logistics and Cargo Security  
**AACCC PROGRAM:** Business Management, Supply Chain Management Option, A.A.S. Degree

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<tr>
<th>GRADE</th>
<th>ENGLISH</th>
<th>MATH</th>
<th>SCIENCE</th>
<th>SOCIAL STUDIES</th>
<th>REQUIRED COURSES/RECOMMENDED ELECTIVE COURSES/OTHER ELECTIVE COURSES/CAREER &amp; TECHNICAL EDUCATION COURSES</th>
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| 9     | English 9 (1)    | Algebra I or Geometry  | Matter & Energy or Biology (1)  | US History (1) | Fitness for Life (.5)  
|       |                  | (1)                    | (1)                             |                | Fine Arts (.5)  
|       |                  |                        |                                 |                | Basic Technology Credit (1)  
|       |                  |                        |                                 |                | World Language I (1)  
|       |                  |                        |                                 |                | IT3 Explorations 1 (.5)  |
| 10    | English 10 (1)   | Geometry or Algebra    | Biology or Chemistry (1)        | US Government (1) | Health (.5)  
|       |                  | II (1)                 | (1)                             |                | Fine Arts (.5)  
|       |                  |                        |                                 |                | World Language II (1)  
|       |                  |                        |                                 |                | IT3 Explorations 2 (.5)  |
| 11    | English 11 or   | Algebra II or Pre-     | Chemistry or Earth, Space      | World History (1) | Physical Education (.5)  
| AP English Language | Calculus (1)            | Science or Physics (1)         | (1)             |                                  |  
|       |                  |                        |                                 |                | BFA 235 Introduction to Transportation & Logistics  
|       |                  |                        |                                 |                | BFA 237 Supply Chain Management  
| 12    | English 12 or   | Math Elective or Pre-  | World History (1)              | World History (1) | Physical Education (.5)  
| AP English Literature | Calculus or AP Calculus | Calculus (1)                     | (1)             |                                  |  
|       |                  |                        |                                 |                | BFA 236 Intro. to Airport & Seaport Operations  
|       |                  |                        |                                 |                | HLS 213 Transportation & Border Security (AACC Approved Elective)  
|       |                  |                        |                                 |                | BFA 238 Domestic & Internatl. Freight Operations  
|       |                  |                        |                                 |                | BPA 275 Internship in Business 1  

Administer college placement exams (reading, math and writing) and other assessments to determine academic readiness and career skill preparedness.  
**THIS GUIDELINE SHOULD NOT BE REGARDED AS AN IRREVOCABLE CONTRACT - ACADEMIC/CAREER ADVISING IS RECOMMENDED TO ASSURE ACCURACY OF PROGRAM REQUIREMENTS**

<table>
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<th>COMMUNITY COLLEGE</th>
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| **TERM I**  
| Composition Intro. to Literature 1 OR Composition & Literature  
| Mathematics Requirement  
| Biological/Physical Sci. OR Mathematics OR Computer Tech. Req.  
| Business & Its Environment  
| Principles of Management |
| **TERM II**  
| Composition Intro. to Literature 2  
| Fundamentals of Oral Communication  
| Introduction to Psychology OR Introduction to Sociology  
| Introduction to Economics OR Principles of Economics 1  
| Business Communications |
| **TERM III**  
| Biological/Physical Sciences Requirement  
| Health/Fitness/Wellness Requirement  
| Financial Accounting  
| Legal Issues for Business OR Business Law 1 |

**Required Courses**

**Required Career and Technical Education Courses**

**Recommended Elective Courses (optional courses available)**

**Concurrent/Dual Enrollment Courses**

**College credit earned in high school**

**Mandatory Assessments, Advising, and Additional Preparation**

**Optional Degrees:** Business Mgmt.-Logistics and Supply Chain Management, Option AAS or Certificate; Homeland Security-Transportation and Border Security Track, AAS-Transportation, Logistics and Cargo Security Certificate

**Bachelor Degree Transfer Information**
Signature Program at North County High School

AACC teaches its Transportation, Logistics, and Cargo Security program onsite at North County High School (NCHS), which is in northern part of the county closest to Baltimore and the Port of Baltimore, BWI Thurgood Marshall International Airport, numerous logistics companies including warehouse and distribution centers. (Additional high schools to be added.)

AACC and NCHS partner with the Port of Baltimore, BWI Airport and logistics industries to provide internships, guest speakers, field trips, and input through advisory boards.

Students graduate with a college Certificate at the same time they receive their High School Diploma, and prior to HS graduation they can sit for the APICS Certified Logistics, Transportation and Distribution exam.
Making it Work – Overcoming Challenges

• Must work within the High School’s daily schedule
  – Odd start times (7:07am)
  – A Day/B Day
  – Testing Requirements
• Must manage student expectations
  – Address high school culture – second chances and do-overs
  – Maintain academic rigor
• Need strong high school support - Signature Coordinator & Lead Teacher
  – Mentoring and on-going academic support
  – Recruitment
• Textbooks
Recruiting New Students

• Employment and Career Opportunities
  – Good $
  – Stable future
  – From HS Diploma to PhD
  – Physical labor, some outside
  – Dangerous

• BUT, difficult to get all to appreciate those opportunities
  – Focus on the negatives
  – Only consider the lower level positions
  – Parents: “…aspire for more for my son/daughter”

• Signature Coordinator and Lead Teacher are CRITICAL
Internships

• Valuable to the learning process - connects the in-class academics with real world opportunities, but there are….

• Challenges
  – Age restrictions
  – Maturity issues
  – Timing issues
  – Transportation issues
  – Expectations of internship providers
  – Expectations of students
Innovative Engagement Activities

• School of Business & Law Days
  – Started about three years ago – going to individual schools
  – Transitioned to bringing students to AACC campus - High School Signature Coordinators and 20 students are invited to AACC’s campus during the fall and spring semesters
  – Spend half day learning about programs in the School

• Summer Institute for AACPS Teachers and Staff
  – Three-day training initiative
  – Tours of transportation and logistics companies in the mornings
  – Afternoons spent writing curriculum/lesson plans

• Bus Tour- September 2018 –
  – For students and parents
  – Tours: Port of Baltimore, BWI Airport, industry sites
Bus Tours – Port of Baltimore
Bus Tours - Airport
Innovative Activity:

TLCS Students Streamline Warehouse Operations on Campus

TLCS students in the Logistics Technologies course developed and implemented a logistics technology solution for inventory tracking for AACC’s Dance Studio in partnership with Barcoding, Inc.

Students completed this work as a service learning project. They plan to work with other AACC departments, including Photography and Theatre, that need inventory tracking capabilities.
Innovative Resource: AACC’s Intermodal Transportation Center at Glen Burnie Town Center

Work is underway to transform one floor of the off-site location, the Glen Burnie Town Center, into an Intermodal Transportation Center, complete with a Logistics Learning Lab, which will include:

- Intermodal Resource Library
- Classrooms
- Simulated Warehouse Lab with racks, shelving, barcoding equipment
- Demonstration space for pick/pack operations, ship lashings, airport airside operations
- Computer Simulation Lab for port, airport, warehousing/distribution, and intermodal simulation programs
- Lobby, conference room, offices, kitchen, lounge

To be completed July 2019.
Important Partners for Dual Enrollment Initiatives

- City and County
- County Public Schools
- County Economic Development Corporation
- County Workforce Development Corporation
- A Port or other maritime entity, if available
- A commercial airport, if available
- U.S. Coast Guard affiliate, if available
- State department of Transportation
- Logistics businesses and industries
  - for internships
  - for advisory boards
  - for field trips, guest speakers
  - for adjunct professors
Incumbent Worker Training

• Work with non-credit arm of College – School of Continuing Education and Workforce Development
  – Work together to develop list of potential industries
  – Workforce Development solicits industry contracts
  – Workforce Development works with academic departments to:
    • Modify certificate, if necessary to meet industry needs
      (internship course generally not needed for incumbent workers)
    • Coordinate schedule desired by industry
    • Select appropriate professors
    • Determine where classes offered – on industry site or at-college
  – Example: NSA/CIA/DISA Contract
    • TLCS Certificate with modification
    • Third cohort just started
    • 20 students/cohort
Thank you!

Questions / Comments

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