SREB | High Schools That Work

Advanced Career

Global Logistics & Supply Chain Management Curriculum

College or Career?...Why Not Both?

Advanced Career combines college-ready academics with authentic, hands-on projects.

Schools are challenged to prepare students better for a wide array of postsecondary options. The workforce of today and tomorrow demands a higher level of skill — people who grasp complex problems, understand technology and troubleshoot problems.

Advanced Career (AC) answers both of these needs. By fusing a rigorous academic core with challenging project work and advanced technology in a career pathway program of study, AC courses give students a greater depth of knowledge and skills and prepare them for more options after high school.

Advanced Career provides:

- ready-to-implement AC course work for students
- comprehensive training for teachers
- access to tools and technology for project-based learning
- end-of-course assessments
- opportunity for industry certification and/or dual credit

Global Logistics & Supply Chain Management

Global logistics and supply chain management connect internal functions of an organization with other institutions around the globe. It is vital to understand the roles of logistics and supply chain management in a global economy where individuals and organizations have access to markets across the world. This field requires critical thinking and problem-solving skills to coordinate the movement of goods and services that may be separated by a few feet or thousands of miles. In an industry always striving for optimization, decision-making skills are paramount.

The AC Global Logistics & Supply Chain Management (GLSCM) pathway enables students to practice innovative and critical thinking skills as they develop solutions to authentic logistics problems businesses regularly face both locally and internationally. Students will learn the complexities businesses deal with in securing raw materials from distant locations, moving them across multiple borders, receiving them in various ports, transporting them to warehouses accessible through multiple modes of transportation, storing them efficiently or employing the just-in-time model, and then distributing them to customers through networks that properly balance transit time with cost.

Logistics is indispensable for the U.S. economy, constituting nearly 9 percent of the gross domestic product (GDP). Completers of the GLSCM pathway master extensive field-related technical content that prepares them for a wide array of opportunities after high school.

Global Logistics & Supply Chain Management was developed by SREB and New Jersey as part of a multi-state consortium to improve career and technical education in this country.

For more information about other Advanced Career curricula, visit sreb.org/AC.

Advanced Career Global Logistics & Supply Chain Management Curriculum

Global Logistics & Supply Chain Management is for students who want to solve complex spatial problems on a global scale through careful research and critical thinking about how to move people and products between points.

Course 1: Introduction to Logistics

This course engages students in solving contextual problems related to the concepts of supply chains, warehouse location, contingency planning, insourcing and outsourcing, and expanding existing supply chains. These concepts form the basis of global logistics and supply chain management and help students understand how professionals examine options to maximize the use of resources across distribution networks.

Course 2: Functional Areas in Logistics

This course compels students to explore deeper understandings of the concepts they discovered in the previous course as they navigate projects on warehouse design, inventory management, transportation optimization, information technology, emergency responsiveness and the supply chain for manufacturing. Students use their experiences in this course to discover ways that professionals minimize the outlay of resources while improving efficiency and ability in the global market.

Course 3: Global Logistics Management

This advanced course offers challenging projects that require students to look at the global implications of the industry in more earnest as they experiment with decisions over intermodal transportation, route selection, international shipping regulations, emergency preparedness, cultural awareness, business ethics and international trade restrictions related to a distribution strategy. Students develop their understanding of the industry in this course and truly build their awareness of the challenges of doing business in a world with multiple borders that must be traversed.

Course 4: Logistics and Supply Chain Management

This advanced course allows students to see the implications of all the concepts they learned in the previous three courses as they consider environmental impact, selecting business partners in a global and domestic chain, information technology and decisions regarding e-commerce. Students explore the ongoing need to balance dependability and resource outlay in meeting customer demands around the world. Projects will expand students' decision-making skills as they tackle issues related to transportation, distribution networks and manufacturing.

Key Features of Advanced Career

Fully Developed Pathway Programs

Advanced Career (AC) encompasses a coherent sequence of four ready-to-implement courses; comprehensive training for teachers; access to tools and technology for project-based learning; and end-of-course assessments. To ensure fidelity from site to site, each course has a syllabus that includes instructional philosophy, instructional delivery and support systems, assessment and a recommended grading system.

Advanced Career Programs of Study

Each AC program of study (POS) is a progression of non-duplicative courses joined with a college-ready academic core and aligned from high school to postsecondary studies. The integration of academic and technical content in each POS prepares students for more options after high school graduation, offers opportunity for dual credit and leads to an industry-recognized credential, advanced training, or an associate's or bachelor's degree. The high-skill, high-wage career fields represented among the AC programs of study are important to the economy.

Project-Based Learning

Each course is designed around project-based units — featuring essential questions, project descriptions, authentic roles and tasks that require students to utilize an industry-recognized decision-making process. Assignments in AC courses encompass essential elements of good project-based learning to engage students in an extended process of asking questions, using resources and developing answers. Students collaborate and work in teams and develop important 21st-century skills.

Blended Learning Experiences

AC course work creates rigorous blended learning experiences for all students. Students apply their academic and technical skills to real-world projects in ways that advance their literacy, math, science and technical knowledge and skills, and strengthen their habits of behavior and mind for success.

Technology and Software

Students employ industry-standard data acquisition hardware and software systems to complete authentic tasks simulating the work of professionals in the field.

Assessments

Each project unit includes formative and summative assessments. Each course has an end-of-course assessment that measures both academic and technical achievement with the performance level needed for jobs, advanced training and postsecondary credit-bearing courses. In addition, students and teachers complete surveys about what works or does not work in the AC course. This serves to inform continuous improvement of the AC program.

Counseling for Careers

Student and parent orientation to each AC program of study highlights the career field, including requirements for jobs and postsecondary study in the career field. Each AC course has a career and education exploratory component. Counselors trained to support the AC program will assist students in developing a career and education plan aligned with students' goals and aspirations.

Teacher Selection, Professional Development and Support

Teachers are selected who have strong math skills and experience in the pathway career field. Staff development is essential and includes an intensive two-week summer institute for teachers to prepare them to teach each course and to use a project-based approach. They will perform students' assignments and use the tools developed by national industry partners. A support team including the principal, counselor and academic teachers in literacy, math and science learn how to support AC teachers and students in course implementation.

Dual Credit and Industry Certification

Courses three and four in the AC program offer the potential for dual credit when a state or district has an established process for approving such courses. Each AC program of study also offers opportunities for industry certification for students who complete the program.

Collaboration and Partnerships

Ongoing relationships among education, business and other stakeholders are central to AC pathway programs. Representatives from industry and postsecondary institutions have helped shape the curriculum design and technical content. Serving as an expert panel, they have collaborated with secondary educators and state education agency staff to identify authentic learning experiences for students that can lead to additional opportunities after high school. Organizations represented in the development of the Advanced Career Global Logistics & Supply Chain Management Pathway Program include:

- 3M Company
- Expeditors International of Washington, Inc.
- FedEx Ground
- Kean University
- Merck & Co, Inc.
- Middle Atlantic Products, Inc. (A Division of Legrand Group)
- Middlesex County College
- NAIOP (Commercial Real Estate Development Association) New Jersey Chapter
- New Jersey Department of Education
- New Jersey TLD Talent Network
- New York Shipping Association, Inc.
- North Jersey Transportation Planning Authority (NJTPA)
- Raritan Valley Community College
- Rider University
- Rutgers, The State University of New Jersey
- Southern Regional Education Board
- Stratus Informatix LLC