



# College or { Why not both? } career?

SREB

High Schools  
That Work

ADVANCED CAREER

*The college track ... or the career pathway?*

**Your school or system  
doesn't have to limit  
students to such a choice.**

## OTHER KEY FACTS ABOUT SREB ADVANCED CAREER

- Advanced Career is currently offered or being developed in partnership with SREB in nine states: Alabama, Arkansas, Kansas, Kentucky, New Jersey, North Carolina, Ohio, South Carolina and West Virginia.
- Each AC pathway consists of four courses that emphasize state standards for college preparation.
- Five AC pathways and curricula are ready for your school or system to adopt right now:
  1. Aerospace Engineering
  2. Clean Energy Technology
  3. Energy and Power
  4. Health Informatics
  5. Innovations in Science and Technology
- One other high-demand AC pathway/curriculum – Advanced Manufacturing – will be ready for field-testing in Kentucky and other states in fall 2014.



# Advanced Career: How it works

Advanced Career combines college-ready core academic content with hands-on, project-based assignments – centered around a defined career focus, such as aerospace engineering, informatics, advanced manufacturing and clean energy technology. Students who enroll in the AC program graduate high school better prepared to start a high-value job and/or go to college, community college or a technical school.

Advanced Career provides participating high schools with:

- ready-to-implement AC course work for students
- comprehensive training for teachers
- access to tools and technology for project-based learning, and
- end-of-course assessments.

The program is offered through yearlong or semester classes, each of which explores a different facet of a high-skill industry. So students become immersed in career areas such as health informatics and global logistics, depending on the AC career pathway your school or system chooses to offer.

Because Advanced Career draws from the academic core . . . employs a range of technologies and software . . . focuses on high-skill careers . . . and uses work-related projects to develop problem-solving skills, it challenges students more than traditional career-technical programs. Best of all, the program is available to any and all students.



## Why it's needed

High schools are under pressure like never before to prepare students better for a wide array of postsecondary options. And the workforce of today and tomorrow demands a higher level of skill – people who grasp complexity, understand technology and troubleshoot problems.

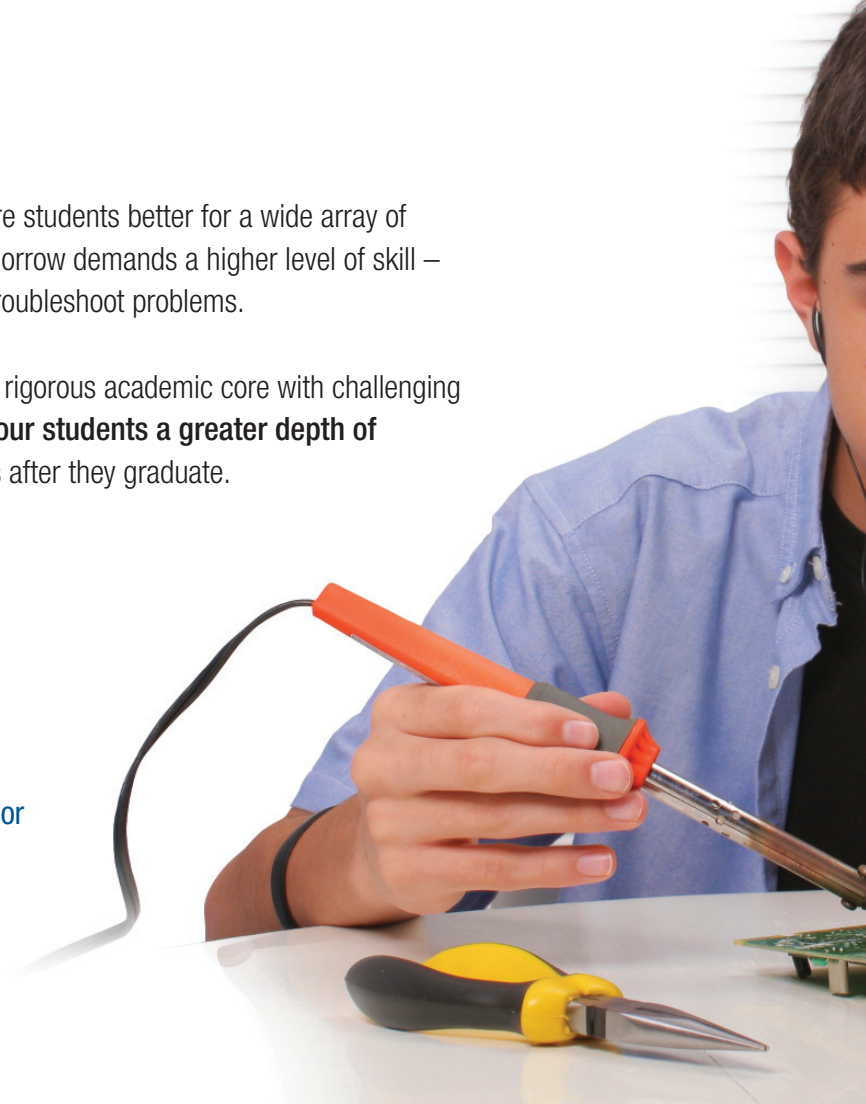
Advanced Career answers both of these needs. By fusing a rigorous academic core with challenging project work and advanced technology, **AC courses give your students a greater depth of knowledge and skill** – and prepare them for more options after they graduate.

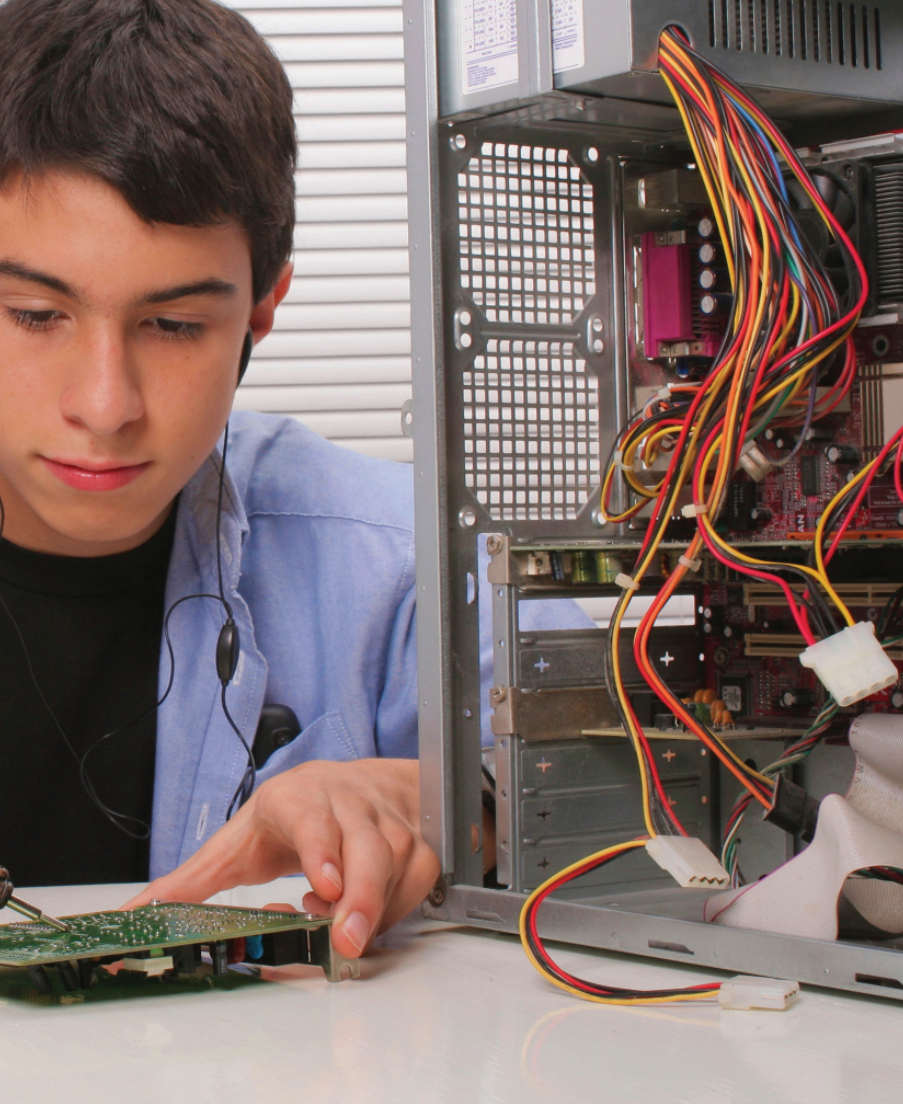
### **Bring Advanced Career to your school or system.**

SREB's High Schools That Work professionals are happy to talk with you about Advanced Career.

For more information, email [AdvancedCareer@SREB.org](mailto:AdvancedCareer@SREB.org) or call Gene Bottoms or Marna Young at (404) 875-9211.

Visit: [SREB.org/AC](http://SREB.org/AC).





## SO... WHAT DOES AC COST, ANYWAY?

The annual cost to implement Advanced Career in a high school is *significantly less than* six figures. The exact amount depends on the career focus and the technology required to teach it.

After consulting with a school or system, SREB provides a clear and reliable estimate of the cost to cover training for teachers, technology and tools for student projects, and student assessment instruments and applications. As for the AC curriculum itself, it's provided at no cost to partner states.

**Email Marna Young at [AdvancedCareer@SREB.org](mailto:AdvancedCareer@SREB.org) to discuss AC costs for your school or system.**

**A new approach to career and technical education (CTE) can prepare students better for more options after high school.**

It's SREB Advanced Career (AC), an intensely challenging and highly relevant approach to CTE. Advanced Career is:

- developed by High Schools That Work, part of the Southern Regional Education Board, in partnership with states and industry
- a new way to strengthen the caliber of education in your school or system, and
- open to *all* high school students, not just one segment of students.



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# Advanced Career better prepares students for more options

*{ The New Approach }*

## Advanced Career

A rigorous and relevant blend of technical and academic skills in authentic projects

- **Advanced Training**
- **Community/Technical College**
- **Jobs** *(more options)*
- **College**

*{ The Old Approach }*

**COLLEGE TRACK** → College

OR

**CAREER TRACK** → Jobs  
 → Training





## 3 Case Studies

A look at how educators are partnering with industry and SREB to implement Advanced Career

## **1 Partners shape courses and projects in Advanced**

**Manufacturing:** Like so many 21st-century careers, advanced manufacturing changes constantly. Thus, a strong connection between education and industry is crucial. Kentucky is a model for such collaboration.

Here's how it worked: The Kentucky Association of Manufacturers teamed up with educators and SREB to convene manufacturing leaders throughout the state. Working together, the educators and industry experts identified the academic knowledge, technical skills and current technologies that students need after high school. A writing team – led by a person with both education and manufacturing experience and advised by a current expert in the field – shaped each course.

The team also structured a dozen real-world projects for the first two courses, allowing students to learn and apply academic and technical knowledge.

## **2 Students tackle clean energy challenges:** Diesel or solar? Which

source is better to power a pump that will irrigate the crops of small-plot farmers in equatorial Africa?

That's a question South Carolina high school students face in their first AC project in Clean Energy Technology. As they pursue an answer, the students learn that the supply of diesel fuel in rural Africa is spotty; that middlemen inflate fuel prices to the point where farmers can't afford diesel; and that the latest energy modeling software can help find a solution. Through repeated calculations, students determine a point where adding energy storage and other technologies makes financial sense for the farmers.

As in other states, South Carolina's AC projects are open-ended and team-based. They embed rigorous state academic standards for literacy, math and science. And they focus on real-world situations and challenge students to think critically.

## **3 Energy and Power projects provide real-world experience:**

Students in West Virginia's AC program explore energy in courses and projects that bring their core knowledge to life.

In one project, students build and test a working model of a hydroelectric power plant to determine how such an operation can produce the most power per flow rate of water. The project requires them to apply algebraic thinking and Bernoulli's equation – and use special software to compare real-world data with theoretical calculations.

Another project focuses on smaller-scale energy: After studying principles of electromagnetism and Ohm's Law, students design and build an electric motor; then test its power and efficiency by applying their understanding of horsepower and torque. To document and illustrate their method, they also write a formal engineering design brief, just as they would in the real world.

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**Visit: [SREB.org/AC](https://www.sreb.org/AC)**