

Process Technology and Collegiate High School for Petrochemical Careers

<http://www.com.edu/newsdesk/news.cfm?newsid=503>

Collegiate High School (CHS) is an early college high school for Galveston County students, who remain enrolled in their local high school, complete their school day on the college campus. CHS offers rigorous academic instruction, career guidance, academic counseling, and work-based learning opportunities. By optimizing dual credit opportunities, students are able to complete high school graduation and associate degree requirements simultaneously.

Careers are available at the technical and engineering levels.

Careers in the petrochemical industry are more attractive than ever with challenging, well-paying jobs. Now, high school students get the education they need for these careers on the College of the Mainland campus in Texas City. More than 80% of the petrochemicals manufactured in the United States come from the Gulf Coast. Local industry is predicting up to 60% of their longtime employees retiring between 2005 and 2011. This anticipated turnover will create vigorous growth in the petrochemical job market. There will be a high demand for people with the education and training to work as process technicians, machinists, pipe fitters, and as instrumentation and electrical technicians. There will also be many opportunities for environmental, chemical, electrical, and mechanical engineers as well as people with expertise in environmental technology.

The current starting pay rate for technical employees with an associate's degree is about \$18-23 per hour. Students who continue their education and earn a four-year engineering degree can expect beginning annual salaries as high as \$60,000. College of the Mainland partners closely with local industry to ensure the right competencies are being taught in the classroom so that CHS students are extremely successful in their new jobs.

All Galveston County juniors and seniors may apply to CHS. Students and parents should strongly consider that students entering this program will be considered college students. High school procedures will not be followed in the college classes that students enroll in, and college instructors follow their own grading and attendance procedures. Progress reports and other parent notifications will not be sent home from college classes. Students must be mature enough to motivate themselves to be successful. Students develop a six to eight year education plan. Participating high schools include Dickinson, Hitchcock, Friendswood, La Marque, Santa Fe, & Texas City ISDs.

Collegiate High School offers dual credits (high school and college credit) in courses leading to degrees in engineering, process technology, chemistry, physics, lab technician, welding, and more. As a Collegiate High School student, students attend their high school functions as well as college activities. They can graduate with their high school class, but gain a valuable head start toward an associate's degree. By optimizing dual credit opportunities, students are able to complete high school graduation and associate degree requirements simultaneously.

College Curriculum

College technical courses in the two-year Process Technology degree program include Process Technology: Equipment, Process Technology II: Systems, Process Technology III: Operations Objectives, Safety Health and Environment, Process Instrumentation, Quality, and Process Troubleshooting.

Funding for this program is provided, in part, by a five-year, \$800,000 grant from the U.S. Department of Education. This covers approximately one-third of the operating costs of the school. Industry partners include BP, Dow Union Carbide Corporation, ISP International Specialty Products, Marathon Petroleum Company, Sterling Chemicals and Valero Energy Corporation.

Benefits

Students benefit from a reduced amount of time in achieving their college degree; school districts benefit from higher ratings on their "report cards" and from reduced costs by sharing facilities; the community college benefits from increased enrollments; industry benefits from an improved workforce; and the

community as a whole benefits as these students become well-rounded, tax-paying citizens much faster than the average high school graduate.

Transfer of Credits

All academic core classes taught at College of the Mainland are transferable to upper-level universities. Some upper level universities may also chose to accept some Workforce Education courses, also. Students who plan to transfer are advised to obtain a copy of the degree plan from the institution they plan to attend to ensure that courses are a part of the degree requirements of the senior institution. Students may refer to the College of the Mainland Catalog to determine the transferability of each course. College courses in which a grade less than a "C" is earned will not transfer to a senior institution and must be retaken.

In Texas transfer of credit from another institution to Texas State University involves consideration of accreditation, comparability of course work and applicability of that course work to a Texas State degree program. The Texas Common Course Numbering System was developed to facilitate transfer of general academic courses between Texas public junior and senior institutions. Common courses are included in the Community College General Academic Course Guide Manual, published by the Texas Higher Education Coordinating Board. Common course numbers may be used to determine how freshman and sophomore level courses from Texas public junior institutions transfer to senior institutions.

Industry Certification

Technician

The Chemical/Refining Process Technician skill standards were developed by the Gulf Coast Process Technology Alliance (GCPTA) with cooperation from the College of the Mainland and funding from the National Science Foundation. The skill standards were recognized March 1, 2005, by the Texas Skill Standards Board (TSSB). The American Chemical Society also has skill standards for the Process Technician.

Engineer

The Texas Board of Professional Engineers administers the state exam for Chemical Engineers. All applicants for licensure must take and pass three examinations - the National Council of Examiners for Engineering & Surveying (NCEES), Fundamentals of Engineering (FE) examination, the NCEES Principles and Practice of Engineering (PE) examination and the Texas Ethics of Engineering examination. http://www.tbpe.state.tx.us/lic_exams.htm In Texas, a person may not engage in the practice of engineering unless the person holds a license issued from the Board.

Program Award

The Caterpillar Inc.-sponsored Exemplary Worksite Learning Award (EWSLA) was established in 1994 by CORD and the National Tech Prep Network (NTPN) to encourage Tech Prep/School-to-Career initiatives to integrate meaningful worksite opportunities into their curricula and to showcase the best of these programs. As one of only three of the 2006 EWSLA Winners, the "**Process Technology and Collegiate High School for Petrochemical Careers**" at Gulf Coast Tech Prep Consortium was recognized as a top program in the United States.