

ENGINEERING AND DESIGN AT MONARCH HIGH SCHOOL



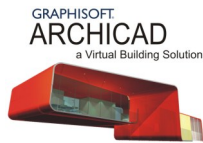
[HTTP://DAVINCILAB.ORG](http://DAVINCILAB.ORG)

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CLASSES OFFERED

- Design Tech I & II
- CAD I & II
- Robotics
- Architecture I & II
- Industrial Design
- Web Design
- Advanced Web Design

PTC®



SUGGESTED SEQUENCE

Freshman Year

Design Tech I/Robotics/
Drafting

Sophomore Year

Drafting/Design Tech II/
Robotics

Junior/Senior Year

Industrial Design/Robotics/
Architecture/Design Tech II

Design Tech I & Design Tech II
can be repeated for Credit.

Web Design can be taken at
any time.

PRE-ENGINEERING & DESIGN CLASSES

Students at Monarch High School have the opportunity to develop skills in a variety of engineering and design disciplines.

Design Technologies I allows student to experience a number of design technologies including CAD, CNC milling, robotics, architectural design, and more. Students may then continue onto **Design Technologies II** to hone their design skills on large semester long projects.

For students serious about developing their design skills, **CAD** is the place to start. In CAD, students work with 3D modeling and

design programs widely used in industry and engineering programs around the country. CAD skills can then be applied in more advanced design classes .

Robotics explores the wonderful mechanical world of robotics including motor control, sensor applications and programming.

Architectural Design allows students to explore the synthesis of art/history and technology that is architecture. Students learn BIM (Building Information Management) techniques widely implemented in industry.

Industrial Design looks deeply into the design process including project man-

agement, quality control and risk management as it relates to product development.

Web Design students start out learning the basics of HTML and CSS design before moving onto creating dynamic websites using Adobe Dreamweaver software. They will create a variety of websites as they build their skills in this fast growing field.



Architectural Design students Carly and Grace collaborate on designing a library

MONARCH HIGH SCHOOL FIRST ROBOTICS

FOR INSPIRATION AND RECOGNITIONS OF SCIENCE AND TECHNOLOGY

All students at Monarch High School have the opportunity to join the Monarch FIRST Robotics team (aka the Shazbots). Students work alongside professional engineers from local and national engineering firms such as Ball, Lockheed Martin and others. Together we build and design complex robots during a six week build period in January/February.

Competition is the last week

in March at the University of Denver. The Shazbots pit themselves against other teams from around the nation in an event which has been referred to as the Super Bowl of Smarts.

FIRST alumni have gone on to some of the top engineering schools in the nation including MIT and Carnegie Mellon as well as earning scholarships and prestigious internships at NASA, NCAR and LASP.



Aida works alongside Lockheed Martin mechanical engineer Dave Hwang at 2011 Colorado FIRST Regional

<http://www.shazbots.org>