

Student ID	
Last Name	
First Name	
Email	Phone
Address	
City	Zip
Father	
Email	Phone
Mother	
Email	Phone
District	High School
Counselor	
Class of	Special Services <input type="checkbox"/> IEP <input type="checkbox"/> 504
Gender	Birthdate
Describe why you would like to be a student at CART.	

**Number your choices 1-3
in AM or PM box.**

AM	PM	Biomedical Engineering
AM	PM	Biomedicine
AM	PM	Graphics Arts and Web Design
AM	PM	Economics and Finance
AM	PM	Database Design/Computer Programming
AM	PM	Environmental Science
AM	PM	Digital Video Production and Broadcasting
AM	PM	Forensic Research
AM	PM	Interactive Game Design
AM	PM	Law and Order and Public Policy
AM	PM	Marketing and Advertising
AM	PM	Network Management
AM	PM	Web Application Development
AM	PM	Psychology and Human Behavior
AM		Product Development
	PM	Robotics and Electronics



Application for First Year Students **2010-2011**

Morning Session 7:30-10:30
Afternoon Session 12:30-3:30

You are invited to experience the excitement of the **CART** program!

CART SHOWCASE

Student presentations - see all labs in action!

January 14, 2010

Information nights for parents of prospective students:

January 21 - 6:30-7:30 PM and **January 27 - 6:30-7:30 PM**

Lottery Deadline: **February 5, 2010**

Pre-Requisites for Application

- Permission of high school counselor and parent
- Successful completion of Biology, Algebra I, and two years of English
- Regular attendance
- On track for graduation
- Additional prerequisites for some programs

Student - I would like to attend CART the 2010/2011 school year	Signature	Date
Parent - I give permission for my son/daughter to attend CART the 2010/2011 school year. I also give permission to release student information to CART.	Signature	Date
Counselor - I have reviewed transcripts and attendance records and recommend enrollment at CART. Please attach updated student transcript	Signature	Date

Biomedical Engineering

sponsored by Kaiser Permanente

Get the inside track on one of the fastest growing industries. Using state-of-the-art technology, students will develop potential pharmaceutical drugs and test them, genetically engineer bacteria, perform DNA fingerprinting, manufacture DNA, explore questions related to genetic, infectious and other types of disease, look closely at environmental health issues, and wrestle with difficult ethical considerations related to cloning, stem cells, gene therapy, and genetically modified foods. Recommended prerequisites: "C" or better in English, Algebra 1 and Biology.

Students take:

- English 11 (P) or 12 (P)
- Chemistry (P) or Adv Science Topics (HP)
- Bioengineering (P)
- CART Technology Applications

Robotics and Electronics ROP

sponsored by Grundfos (PM only)

Students explore the fascinating and fun world of robotics, covering simple toys to the complex logic and articulation of environmental sensing, recording and actuating devices, and automated design. They will learn to design, build, and program a device that responds to external information. They will learn to understand electronics, pneumatics, and computer systems.

Students take:

- English 11 (P) or 12 (P)
- Physics and Technology (P)
- Robotics/Electronics (P)(A)
- CART Technology Applications

Interactive Game Design ROP

sponsored by DeVry University

Game Design requires skills in a number of areas including graphic design, programming, audio, animation, and modeling. All students have the opportunity to learn about each of these areas while working in teams to create original games and characters rendered in both two and three dimensions. Students are introduced to industry standard software such as Macromedia Flash, GameMaker, 3D Game Studio, and Autodesk 3D Studio Max. Recommended prerequisite(s): database, programming, graphics, or web design.

Students take:

- English 11 (P) or 12 (P)
- Interactive Game Design (2 periods)
- CART Technology Applications

Psychology and Human Behavior

Students investigate the inner workings of the human mind on both physiological and chemical levels. Students explore the workings of their own minds while learning why people behave the way they do. Students consider what influences behavior, and how behavior is controlled, changed, and modified.

Students take:

- English 11 (P) or 12 (P)
- Chemistry (P) or Neuroscience (P)
- Psychology of Human Behavior (P)
- CART Technology Applications

Course Offerings 2010-2011

Web Application Development ROP

YouTube, eBay, MySpace, Amazon, Google—these are some of the 21st century spaces we have created to connect friends, community, business, and information around the world. Go beyond being a user of technology and learn how to design, develop, and deploy rich internet applications using Web 2.0 developer tools such as Java, SQL, PHP, CGI, Flash, and more. Learn the foundational skills of object oriented programming, scripting, and database design, and the design principles of building a graphical user interface that end users will enjoy. Students may elect to take the AP Computer Science A exam. Recommended prerequisite: Geometry.

Students take:

- English 11 (P) or 12 (P)
- Database Design
- AP Computer Science A (P)
- CART Technology Applications

Biomedicine

sponsored by Community Medical Centers

Students explore issues in medical science and human anatomy/physiology through their involvement in dissections, medical case studies, and research projects. Students investigate how a healthy body functions and how it reacts to disease. Students will collaborate with medical professionals at various hospitals and clinics in the Fresno/Clovis area as they research a variety of medical topics. Recommended prerequisites: "C" or better in Biology, Algebra 1 and English.

Students take:

- English 11 (P) or 12 (P)
- Anatomy/Physiology (P)
- Adv Topics in Medicine (P)
- CART Technology Applications

Environmental Research and Technology ROP

sponsored by P G & E

Students take part in exciting field trips and engaging field experiences as they learn about the San Joaquin Valley and its rivers, the Monterey Bay and Pacific Coast and the Sierra Nevada Mountains. Students will carry out hands on projects relating to careers in marine biology, wildlife rehabilitation, air and water quality monitoring, alternative energy, and river restoration. Students will have the opportunity to work with professionals while they work on a variety of projects experimenting with and growing native plants, restoring native wildlife habitat in and along the San Joaquin River, rehabilitating injured and orphaned wildlife species, and conducting long term studies of rocky inter-tidal and sandy beach ecosystems.

Students take:

- English 11 (P) or 12 (P)
- Chemistry (P) or Zoology (P)
- Environmental Research and Technology (P)(U)
- CART Technology Applications

Economics and Finance ROP

Students study human behaviors of producing, distributing, and consuming materials, goods, and services in a world of limited resources. They learn how the financial services industry works as they strengthen the analytical, technical and communication skills needed to succeed in any economy.

Students take:

- English 11 (P) or 12 (P)
- Government and Economics (P) or US History (P)
- Global Economics and Finance (P)(U)
- CART Technology Applications

Network Management and Computer Maintenance ROP

Students gain solid foundational skills to be successful in the fast-paced world of Information Technology. Focus is placed on hardware (motherboards, memory, hard drives, etc.), OS (Vista and Windows XP), and networking (topology, router and LAN switching theory). Students are exposed to current trends (Web 2.0 technologies) and IT business contacts. Students may take the industry recognized Cisco Certified Network Associate (CCNA) exam.

Students take:

- English 11 (P) or 12 (P)
- Adv Network Management and Certification (B) (2 periods)
- CART Technology Applications

Law and Order and Public Policy

Students study the major aspects of constitutional, criminal, and civil law. Projects teach students about their individual rights and criminal procedure, how laws are made and how to make a legal argument. Students learn how to research and discuss current and historical controversial issues relating to the law. All students have the opportunity to participate in mock trials and field trips to local and federal courthouses and law firms.

Students take:

- English 11 (P) or 12 (P)
- Government and Economics (P)
- Law and Order and Public Policy (P)
- CART Technology Applications

Engineering and Product Development ROP

sponsored by Grundfos (AM only)

Knowledge, imagination, and creativity are used to develop solutions to engineering design problems. Working in small teams, students create working prototypes of their design solutions using a variety of tools and materials. Laptop computers are used to make engineering drawings and create team presentations.

Students take:

- English 11 (P) or 12 (P)
- Physics and Technology (P)
- Engineering I (P)
- CART Technology Applications

Multimedia—Digital Video Production and Broadcast ROP

Students explore and develop skills in television, broadcasting and film production. Using industry-standard software packages (i.e. Adobe Production Premium Suite), students will engage in hands-on, activity-based curriculum. They will work on all stages of production while creating products such as short films, music videos, journalism broadcasts, and documentaries. All multimedia students develop skills in the content and presentation of message design, the psychological and sociological impacts of media, and the stages of the production cycle.

Students take:

- English 11 (P) or 12 (P)
- Digital Video Production and Broadcasting (P) (2 periods)
- CART Technology Applications

Multimedia—Graphic Arts and Web Design ROP

Students explore and develop skills in communication and message design including color, typography, and design principles. They will investigate graphic and web techniques in cooperative teams similar to corporate settings. Design students will work on all stages of production using industry-standard software (i.e. Adobe Design Premium Suite) to create original products such as posters, websites, newspapers, brochures, and two-dimensional animation. All multimedia students develop skills in the content and presentation of message design, the psychological and sociological impacts of media, and the stages of the production cycle.

Students take:

- English 11 (P) or 12 (P)
- Digital Media and Graphic Design (P)(A) (2 periods)
- CART Technology Applications

Marketing and Advertising ROP

Students explore the dynamics of how and why people spend their money and time as well as ways to influence those decisions. They work with business professionals to produce effective marketing plans and develop strategies for local businesses.

Students take:

- English 11 (P) or 12 (P)
- Government and Economics (P) or US History (P)
- Economics of Marketing and Advertising (P)
- CART Technology Applications

Forensic Research and Biotechnology

Students use investigative science techniques to solve intriguing problems involving the law. Scientific evidence, DNA, fingerprinting, physical evidence, scene reconstruction, and biotechnology are used to create a picture of what happened in the past. Recommended prerequisites: "C" or better in Biology, Algebra I and English.

Students take:

- English 11 (P) or 12 (P)
- Chemistry (P) or Physics (P)
- Forensic Research and Biotechnology (P)
- CART Technology Applications

(P) Approved by UC and CSU systems as meeting entrance requirements
(A) Articulated with Fresno City College/Reedley
(U) Course receives Unitrack college credit through CSU Fresno
(B) Course prepares students to take industry certification exam
(ROP) Regional Occupational Program