ROCHESTER
COMMUNITY SCHOOLS
PRIDE IN EXCELLENCE

CAREER AND TECHNICAL EDUCATION PROGRAMS AT ROCHESTER COMMUNITY SCHOOLS

Inside you will find the classes and certifications you can take and earn for your future career field while at Rochester Community Schools.

CONTENTS

INTRODUCTION

Welcome to the Rochester Community Schools' Career and Technical Education (CTE) Programs, where we empower students with the knowledge, skills, and experiences they need to succeed in today's dynamic and competitive world. Our CTE programs offer a diverse range of opportunities designed to prepare students for a wide array of career paths and industries.

In this comprehensive guide, we will take you on a journey through the various programs available within our CTE department. Whether you are interested in business management, marketing, information technology, multimedia, computer science, accounting and finance, engineering, drafting and technology, woodworking, mechatronics, education careers, health sciences, or exploring other opportunities, you will find a wealth of information about each program.

Furthermore, our commitment to fostering real-world experiences for our students is reflected in our Work-Based Learning opportunities, which include job shadowing and testimonials from our successful alumni. These experiences provide invaluable insights and networking opportunities that can shape the trajectory of our students' future careers.

We invite you to explore this guide and discover how the Rochester Community Schools' Career and Technical Education Programs can open doors to exciting career prospects and equip students with the skills and knowledge they need to excel in their chosen fields. Your journey towards a bright and fulfilling future begins here.

BUSINESS MANAGEMENT

Click above for more information,

ORGANIZATIONS

Distributive Education Clubs of America(DECA)

This club has a goal to improve educational and career opportunities in marketing, management, and entrepreneurship for students

Business Professionals of America(BPA)

BPA is a way to enable students and prepare them for careers in business management and information technology, finance, accounting, office administration, and other business-related career fields

COURSE OFFERINGS

Computer Operations in Business

Credentials: Microsoft(PowerPoint, Word, Excel, Outlook, and Access)

Merchandising Lab/School Store

Small Business Management and Entrepreneurship

Credentials: Entrepreneurship and Small Business

Virtual Enterprise Capstone

Credentials: Entrepreneurship and Small Business, and Communication Skills for Business

Business Functions and Operations

AVERAGE SALARY
$41,330- $116,380

MARKETING

Click above for more information,

ORGANIZATIONS

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COURSE OFFERINGS

Marketing and Advertising

Credentials: PowerPoint, and Communication Skills for Business

Advanced Marketing

Virtual Enterprise Capstone

Credentials: Entrepreneurship and Small Business, and Communication Skills for Business

Merchandizing Lab/School Store

AVERAGE SALARY
$37,000-$68,000

IT MULTIMEDIA

Click above for more information,

ORGANIZATIONS

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COURSE OFFERINGS

Multimedia Communications

Advanced Multimedia Communications

Computer Operations in Business

Web Design and Social Media

Credentials: Adobe

Virtual Enterprise Capstone

Credentials: Entrepreneurship and Small Business, and Communication Skills for Business

AVERAGE SALARY $35,000- $84,000

COMPUTER SCIENCE

Click above for more information,

ORGANIZATIONS

FIRST Robotics

FIRST combines the excitement of sport with the rigors of science and technology. FIRST is known for their saying "We're not building robots using students, were using robots to build students." Through the business teams(Impact, Finance, Imagery, and Digital Content) and the Engineering teams(Mechanical, Electrical, Programming, and CAD) we are able to create an environment that encourages growth and diversity.

COURSE OFFERINGS

Computer Programming 1

Computer Programming 2

AP Computer Science Principles

AP Computer Science A

AVERAGE SALARY
$42,591- $194,954

ACCOUNTING AND FINANCE

Click above for more information,

ORGANIZATIONS

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COURSE OFFERINGS

Accounting 1

Credentials: Excel

Accounting 2

Accounting 3

Accounting 4

Virtual Enterprise Capstone

Credentials: Communication Skills for Business, and Entrepreneurship and Small Business

AVERAGE SALARY
$54,488-$65,952

ENGINEERING

Click above for more information,

ORGANIZATIONS

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Michigan Industrial and Technology Education Society(MITES)

The mission of MITES is to "empower students, teachers, and stakeholders to grow, lead, collaborate, and advocate for industrial and technological education and workforce initiatives." MITES is a STEM focused organization that allows students to compete statewide using their creations from engineering classes. It also allows students to draw a connection to STEM and spark an interest in future careers.

COURSE OFFERINGS

Engineering 1

Engineering 2

Engineering 3

Engineering 4

AVERAGE SALARY
$52,500-$205,000

DRAFTING/TECHNOLOGY

Click above for more information,

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COURSE OFFERINGS

Architecture 1

Architecture 2

Architecture 3

Architecture 4

AVERAGE SALARY
$65,789-$85,114

MECHANICAL DRAFTING

Click above for more information,

ORGANIZATIONS

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COURSE OFFERINGS

Mechanical Drafting/Design 1

Mechanical Drafting/Design 2

Computer Modeling and Animation

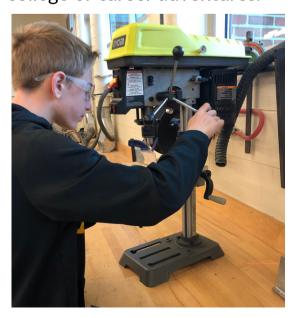## AVERAGE SALARY
$52,500-$205,000

WOODWORKING

Click above for more information,

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COURSE OFFERINGS

Woodworking 1

Woodworking 2

Woodworking 3

Woodworking 4

AVERAGE SALARY
$24,000-$108,000

MECHATRONICS

Click above for more information,

ORGANIZATIONS

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COURSE OFFERINGS

Robotics 1

Robotics 2

Credentials: FANUC Robot Operator and Technician

AVERAGE SALARY
$57,000-$130,000

EDUCATION CAREERS

Click above for more information,

PERKS

You can earn college credit through this class at select Michigan colleges such as CMU, Ferris, WMU, SVSU, and OU.

Some colleges will waive classroom observation hours required in their teacher ed program.

CDA credential holders are qualified for select professional job opportunities.

The YDA Credential Prepares students for many types of work with children age 5 and older, including out-of-school programming, recreation and sports coaching, and community-based youth programs such as Boys and Girls Clubs and 4-H

AVERAGE SALARY
$46,781-$68,317

COURSE OFFERINGS

Educational Careers

This class combines in class learning with work based learning for students who want to pursue a career in the education field. In this class you will have classroom instruction, an internship at an Elementary School 1-3 days a week, guest speakers such as industry experts, and field trips.

REQUIREMENTS

Positive Attendance

This is based on the year prior to taking this class attendance

Students must be able to drive themselves or have a parent drive

Students cannot rideshare with other students to and from work, they must drive themselves or have a parent drive

Must like working with kids

Students need to be able to do as asked(or not asked) by the cooperating teacher

They need to jump in wherever needed

HEALTH SCIENCES (Pilot)

ORGANIZATIONS

Health Occupations Students of America(HOSA)

"HOSA- Future Health Professionals is a global student-led organization, whose mission is to promote career opportunities in the health industry and to enhance the delivery of quality health care to all people."

-HOSA

AVERAGE SALARY
$32,000-$104,000

COURSE OFFERINGS

Medical Careers

This comprehensive year-long program uniquely incorporates the medical sciences, pathology, and real work experiences into the curriculum. Throughout the course, students will engage in immersive work-based learning experiences, and develop essential employability skills. By the end of this program, students will be well-equipped with the knowledge and skills essential for success in the dynamic and rewarding field of medicine.

Credentials offered:

-Emergency Medical Technician (partnership with the Rochester Hills Fire Department)
-Clinical Medical Assistant

REQUIREMENTS

Anatomy and Physiology

This course is a prerequisite for Medical Careers.

Upperclassmen only

Plan of Study for CTE

Business Department Offerings

Classes in each program are sequential and should be taken in order
To obtain maximum funding level 1 & 2 in each program must be completed

Business Admin Management and Operations (BAMO)

BAMO is a business course that provides the framework for pursuing additional business courses and entrepreneurship.

Business Functions and Operations 9-12

Small Business and Entrepreneurship (ESB) 11-12

Virtual Enterprise (PR)

Digital Multimedia

This course is intended for any student desiring exposure to business applications using Microsoft Office Suite and Adobe

Computer Operations in Business (MS Office) 9-12

Web Design and Social Media * (Adobe) 9-12

Virtual Enterprise (PR)

Finance

This course is recommended for students with an interest in business/finance, being a business major in college, or planning to own their own business.

Accounting 1~ 10-12

Accounting 2 ~ (PR) 10-12

Account 3 (PR) 10-12

Account 4 (PR) 10-12

Virtual Enterprise (PR)

Marketing

Marketing and Advertising educates students on the important role that Marketing plays in our economic system, using simulations and hands on, real world projects incorporating the latest technology and practices

Marketing and Advertising 1 * (CSB) 10-12

Advanced Marketing and Advertising 2 *(PR) 10-12

Merchandising Lab (School Store) (PR)

Virtual Enterprise (PR)

Computer Science

Prog 1 and 2 are an introduction to programming course where students will learn to to write and read code in Visual BASIC and Python. Moving on to Java and C++.

Programming 1 9-12

Programming 2 (PR) 9-12

AP Computer Science A 9-12

AP Computer Science Principles 9-12

Work Based Learning

Capstone is an opportunity for business students who have taken a number of business classes to use their skills and knowledge in a paid on-the- job training site.

Business Capstone (CO-OP)- 1 hr or 2 hr Block- Both Semesters (Paid) 11-12 ^

Practicum- 2 hour block- 1 semester (Unpaid) 12 only

Credential offered

(ESB) Entrepreneurship and Small Business   (CSB) Communication Skills for Business
MS Office
Adobe Photoshop

Key

Complete program- level 1 and 2

Upperclassmen only- unless specified

~ Math Credit

* Applied Art Credit

PR Pre-requisite to take class

^ Must take a current CTE class

CTE Plan of Study

Design & Technology Offerings

Classes in each program are sequential and should be taken in order
To obtain maximum funding level 1 & 2 in each program must be completed

Engineering Technology

Program for students going into STEM careers. Students will create computer drawings, solve problems and build prototypes while applying what was learned in math and science classes.

- Engineering Design 1 9-12
- Engineering Design 2 9-12
- Engineering Design 3 10-12
- Engineering Design 4 10-12

Mechatronics

Program for students interested in STEM careers. This is a hands on class learning concepts through the use of robots; including problem solving, collaboration and communication

- Robotics 1 9-12
- Robotics 2 9-12

Woodworking RHS ONLY

This is a hands on STEM shop class students will learn about materials, use hand and power tools, and design & build projects.

- Woodworking 1 9-12
- Woodworking 2 9-12
- Woodworking 3 10-12
- Woodworking 4 10-12

Drafting and Design Technology

Program for students interested in buildings and architecture. Students create floor plans, and other associated drawings, students will solve problems & build models

- Architecture 1 9-12
- Architecture 2 9-12
- Architecture 3 10-12
- Architecture 4 10-12

Mechanical Drafting

This class should be taken after taking Engineering 1-4. Students will design & execute projects using classroom tools & equipment

- Mechanical Drafting / Design 1 10-12
- Mechanical Drafting / Design 10-12

Animation: Class exposes students to a variety of animation types and styles. This class can be taken independently.

- Computer Modeling & Animation 9-12

Key

- Complete program- level 1 and 2
- Upperclassmen only- unless specified

CTE Plan of Study

Ed Careers Offerings

Educational Careers is a one-year course designed for students interested in pursuing a career in an educational field and/or getting an inside glimpse at the world of teaching. Course runs 6th hour only.

Ed Care S1 11-12	Ed Care S2 11-12

Health Sciences Offerings

Medical Careers is a one-year course designed for students interested in pursuing a career in the health science field. The prerequisite for this course is Anatomy and Physiology.

Medical Careers (PR) +

Credentials offered:
EMT (partnership with Rochester Hills Fire Department)
Clinical Medical Assistant

Key

■ Upperclassmen only- unless specified
+ Science Credit
PR Pre-requisite to take class

WORK BASED LEARNING

Click above for more information,

COURSE OFFERINGS

Business Capstone

Business Capstone, formerly known as Co-op, is a class taken 5th & 6th hour with the option to take 6th hour only. This class allows you to have a paid internship at a place of your choosing for school credit, provided that the business agrees with the terms of the class. This class requires 200 hours in 20 weeks, so roughly 10 hours a week. There is also in-class opportunities to create a resume, opening statement, and more requirements for entering the workforce

Practicum

Practicum is similar to Business Capstone except it is an unpaid internship and it requires less hours to pass the class. This class requires 100 hours of work in 20 weeks, roughly 5 hours a week. This class only has a 2 hour block option of 5th & 6th hour. Unlike Business Capstone, this class requires you to apply to be in the class.

Ed Careers

Ed Careers is also a working class that allows you to work specifically with kids in an elementary school. For more information go to page 12.

WORK BASED LEARNING

REQUIREMENTS FOR BUSINESS CAPSTONE AND PRACTICUM

Must have a Valid Drivers License

These classes require you to drive yourself to work after 4th or 5th hour so you MUST have a valid Drivers License.

Must be in 11th or 12th Grade

Must have an up-to-date Educational Development Profile on Xello

Must Take a Concurrent Business Class if taking Business Capstone

There is a requirement to take a business class the same school year that you take Business Capstone or Practicum. The classes can be any of the below:

Accounting 1
Accounting 2
Programming 1
Programming 2
Business Functions and Operations
Small Business and Entrepreneurship
Computer Operations in Business
Web Development and Social Media
Marketing
School Store
Virtual Enterprise Capstone(full year class)

JOB SHADOWING

OFFERINGS

Job shadowing is an opportunity that does not require any in-class time but can still give you an experience that will benefit you severely in the workforce.

RCS has partnered with many local businesses which allows for students to shadow a job for their future career.

Job shadowing does not count towards graduation credits as it does not coincide with any classes at RCS. However this allows the student to learn the duties of a person in the career they hope to pursue while keeping a full class schedule.

Additionally, the business you wish to shadow does not have to be one that we have previously partnered with, but it is highly recommended.

A form must be filled out and turned in to your main office in order to be considered for this opportunity. This can be found on the school website at: www.rochester.k12.mi.us/academics/curriculum/career-technical-education/work-based-learning

TESTIMONIALS

Elaina Gemellaro, SCHS Graduate

CTE Classes Taken :
Small Business and Entrepreneurship
Business Capstone 5th & 6th hour

In my Small Business Classes I learned the basics of being an entrepreneur and starting a business. Through the hands-on projects and assignments created and taught by Ms. Oliver, it was easy to comprehend all the complex ideas. I ended the semester by passing my Entrepreneurship and Small Business test with flying colors and earned my certificate in which I was able to put it on my resume. In this class I also created a LinkedIn Profile which helped me to become known and gain new job opportunities. In addition to Small Biz, I took Business Capstone both semesters 5th and 6th hour, also taught by the amazing Ms. Oliver. Through this class I was able to gain experiences in business management, marketing, advertising, customer service, and learning the ways of a workplace. My first semester I worked at Chicken Shack and learned marketing and advertising while also customer service and cashier work. My second semester I worked at the RCS Admin building under the guidance of the lovely, Karen Malsbury, the Director of Career Readiness, CTE and CFE. Through this job I learned the importance of branding and the ways of a professional workplace. I also spent o lot of time creating the CTE portion of the school website and expanding the availability of information about these classes, such as this booklet. I highly recommend taking CTE courses as they help you with your future in many way and you make many new connections and meet a surplus of new people.

TESTIMONIALS

Landon Rooney, RHS Graduate
CTE Classes Taken : Business Co-op

I signed up for the co-op program in my senior year at Rochester High (2022). This was a life-changing decision. I started working for a company called Spalding DeDecker as an admin intern, and I am now a student at Michigan State University, still working for them remotely doing computer-aided design. This job has given me amazing, professional experience and I would recommend the co-op program to anyone.

Tobias Zen, RHS Graduate
CTE Classes Taken : Woodworking 1 & 2

Really fun class and I learned a lot! Once you get past woodworking 1 (the basics) there is a lot more freedom to pursue projects you're interested in, and explore every area. Personally I loved working with the lathe, it's very soothing and there's a kind of rhythm to it, you can really zone in and it's a great time. Plus this class gave me and my dad something to talk about, that he was excited about too, and that was nice.

CTE STAFF

Karen Malsbury

Director of CTE and Career Readiness K-12

With a B.A. in Business and ICT from Cardiff, a Masters in Teaching from Warwick, and a Masters in CTE from Western, Karen Malsbury heads career readiness K through 12. She is the CTE budget controller, a Professional Development facilitator, and CTE ambassador for RCS.

Jennifer Diemert

With her B.A. in elementary education specializing in science and a masters in educational technology from Michigan State University, Jennifer Diemert supports the innovation spaces at each high school and helps provide career readiness to students of all ages while imbedding their interests and passions into their 9-12 education.

Jason Gendreau

Rochester High School CTE Teacher

With his B.S. from Central Michigan University, and a Masters from Saginaw Valley, Jason Gendreau teaches Programming I and II, Business Functions, Web Design and Social Media, and is a Co-Op Supervisor.

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CTE STAFF

Lindsay Land

Rochester High School Business Teacher

With a B.A. in Supply Chain Management from Michigan State University, and a Masters of Art in Teaching: Career and Technical Business Education from Wayne State University, Lindsay Land teaches Marketing and Advertising, Advanced Marketing, Accounting 1 and 2, and Merchandising Lab (School Store).

Timothy Lewis

Rochester High School

With a B.S. in Industrial Education from Central Michigan University, a Master of Education in Quality Schools and his MI Contractors License from Graceland University, Timothy Lewis teaches Woodworking 1-4, Engineering 1-4, Architecture 1-4, Robotics 1 and 2, and Mechanical Design/Drafting 1 and 2.

Lorie Hand

Rochester High School Business Teacher

With a B.S. from Central Michigan University, and an Elementary Certification from Saginaw Valley State University, Lorie Hand teaches Small Business and Entrepreneurship, Marketing, Virtual Enterprise, and Computer Operations in Business

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CTE STAFF

Michelle Reckling

Rochester High School

With a B.S. in Industrial Engineering from Michigan State University, Secondary Eduction in Mathematics & Science from the Univeristy of Michigan, and a Master of Arts of Educational Technology from Michigan State University, Michelle Reckling teaches AP Computer Science Principles and AP Computer Science A

Katelyn Cryderman

Stoney Creek High School Business Teacher

With a Bachelor's in Marketing from Oakland University, and a Master's in Career and Technical Educational Leadership from Utah State University, Katelyn Cryderman teaches Marketing, Advanced Marketing, Small Business Management and Entrepreneurship, and Virtual Enterprise Capstone.

Lois Davis

Stoney Creek High School

With a B.S. in Engineering and a Masters of Arts in Teaching, Lois Davis teaches Engineering 1-4, Mechanical Design 1 and 2, Architecture 1-4, and Robotics 1 and 2.

CTE STAFF

Meghan Ivory

Stoney Creek High School

With a BA in Hospitality Business from Michigan State University, a Business and Health Education Certification from Northern Michigan University, and a Marketing Vocational Endorsement from Central Michigan University, Meghan Ivory teaches Business Functions and Operations, Computer Operations in Business, Computer Programming 1, Web Development and Social Media, and Merchandising Lab (School Store).

Sarah Millard

Stoney Creek High School Ed Careers Teacher

With her B.S. in Education and Masters in Reading and Language Arts, Sarah Millard teaches Education Careers, Yearbook, and Language Arts.

Charlotte Oliver

SCHS Business Teacher and Curriculum Lead

With her Masters in Instructional Technology from Wayne State, Charlotte Oliver teaches Accounting, Business Functions, Marketing, and Small Business and Entrepreneurship.

CTE STAFF

Erin Rodger

Stoney Creek High School

With a B.A. in Mathematics and a Master of Arts in Teaching, Erin Rodger teaches AP Computer Science A, AP Computer Science Principles, and Computer Programming I and II.

Dan Carruthers

Adams High School Computer Science

With his B.S. from Western Michigan University and Masters from Marygrove College, Dan Carruthers teaches Computer Programming 1 and 2, AP Computer Science Principles, and AP Computer Science A.

Vince LoPiccolo

Rochester Adams Marketing and Business Education

With a B.B.A. in Marketing, International Business Emphasis, and a Masters of Arts in Teaching, Vince LoPiccolo teaches Marketing and Advertising, Advanced Marketing, Merchandising Lab - (School Store), and Business Functions and Operations.

ROCHESTER COMMUNITY SCHOOLS

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CTE STAFF

Tom Mavis

Rochester Adams

With a B.A. in Supply Chain Management from Michigan State University and a Masters in Education from Wayne State University, Tom Mavis teaches Accounting 1 and 2, Small Business Management , Web Design, Personal Finance, Virtual Enterprise Capstone, and Programming 1.

Charlotte Morey

Adams Design & Technology

With her B.S. from Eastern Michigan University, a Masters from Oakland University, and a Masters from Ball State University, Charlotte Morey teaches Architecture 1-4, Engineering 1-4, and Robotics 1 and 2.