Chelmsford High School

Innovation Career Pathways

Student & Staff Information Guide

Chelmsford High School

200 Richardson Road
North Chelmsford, MA 01863
Phone: 978.251.5111 Fax: 978.926.2402
http://www.chelmsford.k12.ma.us/chs

Mr. Stephen Murray, Principal

Mr. Joshua Blagg, Dean
Ms. Erin MacNeil, Dean
Mr. John MacIsaac, Dean

Dear Innovation Pathways Student and Families,

The Innovation Pathways Program was developed to help expand career field exploration through technical education within Chelmsford High School. Students participating in the program will experience an in depth look at a career field of their interest, gain industry recognized credentials in that area, engage in college and career planning activities, take college-level classes in preparation for career advancement, and enhance their experience through an internship or a capstone project.

Chelmsford High School is working with many organizations to develop a program that meets the needs and interests of students as well as future labor market demands. We are proud partners with:

MassHire Lowell Region Workforce Board
Workers Credit Union
FLIR Technologies
Town of Chelmsford Sewer Division
Chelmsford Water District
WNA, A Novolex Brand
New England Interstate Water Pollution Control Commission
Axis Communications

We are extremely excited to provide this opportunity and work with you throughout your high school career with this endeavor. You have a wide variety of support for this work, including your guidance counselor, teachers, building administration, and district administration. Our goal is to guide and support you through each of your four years of high school as you prepare for your post-secondary experience.

By enrolling in the program, you have started on a promising path towards your future!

Sincerely,

The CHS Innovation Pathways Team

Table of Contents

MISSION STATEMENT

Our mission is to cultivate inspired, creative, and well-rounded lifelong learners who possess the integrity and self-direction necessary to be contributing community members.

The Chelmsford Public Schools provide all students with multiple pathways to optimize their own potential for academic excellence, leadership, and social and emotional wellness.

Chelmsford High School pursues opportunities for the development of career pathways designed to build the competencies and foundational knowledge necessary for future success in a variety of industries.

INNOVATION PATHWAY PROGRAMMING

Innovation Pathways are designed to create strong partnerships with employers in order to expose students to career options and help them develop knowledge and skills related to their chosen field of study before they graduate high school. All pathway programs are designed based on the following five elements:

Guiding Principle 1: Equitable Access

Designated programs should prioritize students underrepresented in education enrollment and completion. To facilitate this, programs should be structured to eliminate barriers to student participation. Design might therefore include, but not be limited to, tuition-free participation, open enrollment without regard to prior academic performance, student supports to promote success, scalability, multiple entry points for students, and student supports to prepare students for entry into the program.

Guiding Principle 2: Guided Academic Pathways

Designated programs should be structured around clear and detailed student academic pathways from secondary to post-secondary education with regard to coursework, sequencing, and experiences beyond the classroom. Programs should offer students substantive exposure to career opportunities in high demand fields, allowing them to make an informed decision about which career pathway to pursue. Students should also be exposed to the authentic experience and academic rigor of postsecondary education.

Guiding Principle 3: Enhanced Student Support

Designated programs should incorporate sufficient wraparound services to promote academic success and course completion, taking into consideration the needs of diverse populations of students.

Guiding Principle 4: Connection to Career

Designated programs should expose students to a variety of career opportunities, including greater depth in careers relevant to their selected pathway, by providing, for example, opportunities for targeted workforce and career skills development, career counseling, and elements of experiential and work-based learning.

Guiding Principle 5: Effective Partnerships

Innovation Pathway programs require a formal partnership with a workforce development (MassHire) board and or one or more employers or an employer association. Programs should be sufficient in size to capture economies of scale goals and to ensure long-term sustainability.

ADMISSIONS

Students may apply for their chosen pathway in the spring of 8th or 9th grade. Students in 10th grade may also be considered depending on available space in the program. Students who intend on applying or would like more information about the pathways and entrance criteria can set up a meeting with the Innovation Pathways coordinator, Alex Cunningham by emailing: cunninghamalex@chelmsford.k12.ma.us. An application will be available to all students in grades 8-10 in early January. Students accepted into the program will begin in the program the following school year. Applications can be accessed on Chelmsford High School's website under the Innovation Pathways Tab. Applications are due by January 30th, including additional documentation required from the student's Assistant Principal or Dean and one teacher. Students must ask their Assistant Principal or Dean to complete the Certification Form as well as ask a teacher of their choice to complete the teacher recommendation form. Completion of these three components is required for your application to be considered.

If there are more applicants than space in the program, Chelmsford High School will hold a lottery the first week of March. Students will be notified about the status of their application on or before March 15th and have until April 1st to accept. Spaces will be prioritized for those who turn applications in on time. If a student completes an application after the deadline, they will be considered for the program, in order, based on availability.

TUITION & FEES

Students who are enrolled in the program will take their two designated Advanced (Dual Enrollment or Advanced Placement) courses at no cost to the student, as long as grant funding is available from the state. In order to receive the benefit of having an advanced course paid for, students need to be completing Innovation Pathway requirements. This included attending Innovation Pathway scheduled events and completion of the Career and College Readiness 1 & 2 course on Edgenuity. Students have the option to take their technical courses for Dual Enrollment credit where available, but it is not required for the program and the student/family will be responsible for the cost of the credits.

INNOVATION PATHWAYS AT CHS

Business and Finance

In the Business and Finance pathway, the exact course choice is left with the student (with guidance from their counselor and the Career and College Readiness Facilitator) as they create a path toward their industry internship. With any four Business courses, students will be well prepared to enter college with an understanding of a business' core functions and a firm foundation in one of the department functions: Finance,

Marketing, Management, Innovative, General Business, or Human Resources. Students will be well prepared to continue postsecondary study in a Business major and specialize in any of the above areas.

All students in the Business and Finance Pathway must take Career and College Readiness 1 and 2 followed by 2 technical courses (Business Career Pathways and Microsoft Office Certification) and complete the pathway with 2 Advanced courses (choices listed below).

Technical Course 1: All Grade 9 students take the **Business Career Pathways CP, DE course**.This course provides the required interpersonal and organizational skills employees need to succeed in any career and simultaneously provides a glimpse into the major disciplines of the business world. The major learning concepts of Marketing, Management, Accounting, and Finance are discussed in a survey format to afford students the background knowledge and opportunity to find their niche and focus their future course choices in a topic of their interest. Students taking this course as Dual Enrollment are responsible for payment of MCC credits.

Technical Course 2: All Grade 10 students In the Business & Finance Pathway complete the technical courses by taking **Microsoft Office Certification DE course** which develops skills in word processing, slides for presentations, spreadsheets, and Access Database. Becoming proficient in these foundational digital literacy skills prepares them to succeed in the concentrations below. Students taking this course as Dual Enrollment are responsible for payment of MCC credits. However, the cost of related certifications offered through our partnership with MCC will be covered through grant funding.

Advanced Course Offerings:

- Accounting (DE)
- Marketing (DE)
- Management (DE) (Prerequisite; Business Career Pathways DE)
- E-Commerce (DE)
- Entrepreneurship (DE)
- AP Psychology
- Introduction to Statistics (DE)
- AP Statistics

In Grade 11 and during the first semester of Grade 12, students must choose any two advanced courses from the list above, free of charge for credit from MCC (pending available grant funding). All students in the pathway will enroll in the Internship/Capstone Course in second semester senior year.

Information Technology

The technical courses for the IT Pathway ensure students have strong fundamentals related to cross-cutting concepts related to other STEM courses and core digital literacy standards. Because of this foundation, students also have preparation to successfully engage in any of the designated advanced courses for the IT Pathway. The advanced courses for the IT Pathway prepare students to enter college and some careers with a firm foundation in coding and will be successful majoring in Computer Science, Digital Forensics, IT Cybersecurity, Mathematics, Mathematical Sciences, Robotics, Electrical & Computer Engineering, Biological Sciences, Bioinformatics, Applied Computational Mathematics, Data Science, and Biomedical Engineering. Because of the internship or capstone experiences students will complete senior year, they are also significantly qualified for further internship, co-op and apprenticeship opportunities within the Information Technology field.

All students in the Information Technology Pathway must take Career and College Readiness 1 and 2, 2 technical courses (Robotics and PLTW Introduction to Engineering Design) and will complete the pathway with 2 Advanced courses.

Technical Course 1: Students begin the IT Pathway with the **Robotics** course which is an introduction to programming and bridges the Grade 8 course with the Advanced courses below. Students work in teams to brainstorm ideas and design a robot using VEX components. They develop these ideas into sketches and plans for their robot and commence construction. Once the robot has been built, the students begin to program their robot so that it can accomplish defined tasks and they can compete with other classmates. This course can be fit into almost all CHS student schedules in Grade 9 or 10 and prepares them for the more advanced programming courses in Grades 11 and 12.

Technical Course 2: In Grade 10 students continue the Information Technology Pathway with the PLTW course **PLTW Introduction to Engineering Design CP, H, DE** for their first Project Lead the Way (PLTW) course. Introduction to Engineering Design combines the basic Engineering design skills, software, CAD and 3D printing.

Advanced Course Options:

- Programming 1 DE (prerequisite; Algebra I)
- PLTW Computer Science Principles DE (prerequisite; Algebra I)
- PLTW Principles of Engineering (prerequisite: Programming I)
- AP Computer Science A (prerequisite; Programming 1)

In Grade 11 and during the first semester of Grade 12, students must choose any two advanced courses from the list above, free of charge for credit from MCC (pending available grant funding). All students in the pathway will enroll in the Internship/Capstone Course in second semester senior year.

Life Sciences: Environmental Technology & Biotechnology

Life sciences includes a broad range of industries including biomedicine, pharmaceuticals, biophysics, neuroscience, cell biology, biotechnology, and environmental sciences. Students at Chelmsford High School have the option of pursuing a designated "lane" within the Life Science Pathway, where they can choose Environmental Technology or Biotechnology. These two options will help students prepare for industry recognized credentials relevant to their senior internship.

All Students in the Life Sciences Pathway must take Career and College Readiness 1 and 2, 2 technical courses (Biology- H and Chemistry- H) and will complete the pathway with 2 Advanced courses depending on their designated ".

Technical Course 1: Students will begin the Life Sciences Pathway with **Honors Biology**. This first year Honors or CP Biology course is designed to prepare students for the next generation of science standards and practices. The high school biology content standards are built from middle school and allow grade 9 or 10 students to explain additional and more complex phenomena related to genetics, evolution, the functioning of organisms, and interrelationships between organisms, populations, and the environment. There are significantly higher academic expectations of students in honors level courses.

Technical Course 2: In grade 10, students continue the Life Science Pathway with **Honors or CP (DE) Chemistry**. The major focus of chemistry is on matter and its interactions. Quantitative and qualitative methods can be used to explain how matter interacts. Fundamental basics of matter are determined by the structure of atoms and the compounds they compose. Reactivity and properties of compounds are explored

through a variety of inquiry-based laboratory activities. Please note that DE Chemistry is not paid for as it is a technical course.

Advanced Course Options (Environmental Technology):

- Environmental Studies DE (Prerequisite; Biology or Chemistry)
- AP Environmental Science (Prerequisite; Biology or Chemistry)
- Introduction to Statistics- CP/DE (Prerequisite; Algebra II H or CP)
- AP Statistics(Prerequisite; Teacher recommendation and completion of summer work is required for all students. Additionally, Algebra I H and Algebra II H students must have a grade of 80% or higher, and Algebra II CP students must have a grade of 90% or higher)

Advanced Course Options (Biotechnology):

- Biotechnology I CP/ DE- required (Prerequisite; Successful completion of a Biology Course)
- AP Biology (Prerequisite; success in Honors Biology, and concurrent enrollment or credit in an Honors Chemistry Course)
- Introduction to Statistics- CP/DE(Prerequisite; Algebra II H or CP)
- AP Statistics (Prerequisite; Teacher recommendation and completion of summer work is required for all students. Additionally, Algebra I H and Algebra II H students must have a grade of 80% or higher, and Algebra II CP students must have a grade of 90% or higher)

In Grade 11 and during the first semester of Grade 12, students must choose any two advanced courses from the list above, free of charge for credit from MCC (pending available grant funding). All students in the pathway will enroll in the Internship/Capstone Course in second semester senior year.

Advanced Engineering & Manufacturing

Careers in advanced manufacturing are abundant and expected to grow in both the near and short term. According to the Northeast Labor Market Blueprint, advanced manufacturing is identified as one of the top three industries in the Northeast region of Massachusetts.

According to the Massachusetts Executive Office of Labor and Workforce Development's Greater Lowell long term industry projections, there are expected to be 17,970 people employed in advanced manufacturing — second only to the healthcare industry in terms of number of jobs. The Manufacturing Pathway at Chelmsford High School offers a cohesive and hands-on approach through engaging Project Lead the Way courses prior to the Senior Internship or Capstone.

All Students in the Advanced Engineering & Manufacturing Pathway must take Career and College Readiness 1 and 2, 2 technical courses (Robotics- CP and PLTW: Introduction to Engineering and Design- CP, DE or H) and will complete the pathway with 2 Advanced courses.

Technical Course 1: Students begin the Advanced Engineering and Manufacturing Pathway with **Robotics CP** course which is an introduction to programming and bridges the Grade 8 course with the Advanced courses below. Students work in teams to brainstorm ideas and design a robot using VEX components. They develop these ideas into sketches and plans for their robot and commence construction. Once the robot has been built, the students begin to program their robot so that it can accomplish defined tasks and they can compete with other classmates. This course can be fit into almost all CHS student schedules in Grade 9 or 10 and prepares them for the more advanced programming courses in Grades 11 and 12.

Technical Course 2: In grade 10, students continue the Advanced Engineering & Manufacturing Pathway with **PLTW: Introduction to Engineering and Design CP, H** This full year Science course is ideal for

students who want to dig deeper into the engineering design process, applying math, science, and engineering standards to hands-on projects. Students work both individually and in teams to design solutions to a variety of problems using 3-D modeling software, and use an engineering notebook to document their work. The Project Lead the Way (PLTW) courses engage students in hands-on activities, projects and problems, empower them to develop in-demand knowledge and skills, and inspire them to reimagine and see themselves as successful in STEM fields.

Advanced Course Options:

- PLTW Principles of Engineering
- PLTW Computer Integrated Manufacturing (Prerequisite; Robotics OR PLTW Principles of Engineering)

In Grade 11 and during the first semester of Grade 12, students must choose any two advanced courses from the list above, free of charge for credit from MCC (pending available grant funding). All students in the pathway will enroll in the Internship/Capstone Course in second semester senior year.

CAREER DEVELOPMENT ACTIVITIES

All students in the Innovation Pathways Program will be offered pathway relevant networking opportunities each year with industry partners, guest speakers, panels, MassHire Workforce Development Board Career Advisor visits, field trips and other activities. Students are required to attend these events to build upon their skills and knowledge in their pathway.

Students also have the opportunity to earn industry recognized credentials throughout their time at CHS. Industry recognized credentials include: Microsoft Office Certification, OSHA- 10, Wastewater Certification and Drinking Water Certification.

INTERNSHIP/CAPSTONE

All students in the pathway program will enroll in the Internship/Capstone Course second semester senior year. To complete the Business Pathway, Information Technology Pathway, Advanced Manufacturing Pathway or the Life Sciences Pathway students will take either the Industry Internship or the Capstone Experience. Students enrolling in the Industry Internship will be connected with a local business where they will experience first hand the day to day operations and learn valuable skills required to be successful in their industry. Students enrolling in the Capstone Experience will be conducting supervised research in an area of particular interest in order to prepare a professionally formatted research report illustrating their findings and learning about the business field they are interested in pursuing.

During the 3rd quarter, students will participate in the course in which they are working to prepare for their internship experience. An internship Advisor will facilitate the course. During the 4th quarter (approximately 6 weeks in length for seniors) interns will be required to work during the school day for approximately 20 hours per week for 5 weeks, for a total of 100 hours.

3rd/4th quarter instruction in the Capstone/Internship course overview:

● Students will be enrolled in a course to enhance career readiness, skills needed within the workplace
  including, but not limited to lessons about professional language, development of important documents, appropriate workplace attire, and other necessary skills.
● Students will be expected to participate in their internship for approximately 20 hours a week for a minimum

of 100 hours. Students will complete a weekly reflection to be reviewed by the Chelmsford High School faculty; intervention for students will be offered with these reflections.
- Internship/Capstone Advisor will check student progress with the internship site and serve as the intermediary between the company, student and the school. Should a student need additional support to find success in their research process or their internship, the Advisor will be the individual tasked with connecting with the Career and College Readiness Facilitator to address areas of need.
- If any assistive technologies are needed at the site, the Career and College Readiness Facilitator will work, in advance of the start of the internship, with the company to provide reasonable and appropriate access.
- During the fourth quarter, students completing their internships will complete approximately 20 hours per week, for 5 weeks in order to meet the 100 hour requirement.

Community Partners: FLIR Technologies, MassHire Board of Greater Lowell, Workers' Credit Union, Town of Chelmsford Sewer Division, Chelmsford Water District, WNA, A Novolex Brand, New England Interstate Water Pollution Control Commission, Axis Communications.

EXPECTATIONS

Students are expected to follow CHS guidelines for attendance. As written in the CHS handbook:

"Credit for courses is based on classroom attendance and academic performance. To comply with the state requirement as well as our own goal of a 95% attendance rate, a student cannot be absent in excess of 6 days per semester. Once a student reaches 6 classroom absences in a semester, the teacher will call the parent, follow-up with an email and notify the student's Dean. Any student who has an excess of 6 absences (excused or unexcused) in a course in a semester will receive No Credit for that course for that semester. This will be recorded on the student's report card as an "N" for no credit due to attendance. Any student who fails to earn credit for a semester due to poor attendance shall have the right to appeal that decision to the Principal or his/her designee. The Principal or his/her designee will review the appeal initiated by the parent/guardian and or student and render a timely decision based on documentation and testimony provided during the hearing. Attendance information is available on both the student and family portals for review, and students should review their attendance frequently. Questions about class attendance should first be directed to the teacher of the class before contacting the student's dean."

Google Classroom

Students are required to regularly check and utilize the Innovation Pathways google classroom to maintain connected with upcoming events and information regarding their pathway.

STUDENT SUPPORTS

Contacts

Throughout the Innovations Pathways curriculum, students and their families will have access to a wide range of support services. The following individuals will support the experience and will serve as the point person for various needs.

Role	Description
The Career and College Readiness Facilitator	The lead individual and point of contact working with students in each cohort. The Facilitator is responsible for organizing the career development activities both virtual and in-person that are offered throughout the school year. The Facilitator meets with the cohorts monthly for discussions around key concepts related to the topics

	addressed in their coursework and related to any upcoming career development activities, those that are offered to our Innovation Pathway students and those that are offered to the general student population.
Guidance Counselors	Guidance Counselors are also involved in the career and college readiness process and are a great asset to the students. Students in the Innovation Pathways will meet with their counselors regularly. Guidance Counselors have the best understanding of how to utilize Naviance to keep record of accomplishments towards the pathway as well as what still needs to be completed. Guidance will work with their students and families to support their use of the platform to help guide their work throughout the entirety of the pathway experience.
Teachers	Teachers of courses tied to each of the pathways will also be a significant source of support for students and families. Teachers have a list of each student in the cohort connected to their department so that they may regularly check in with students in their pathway required courses. In addition to individual extra help sessions, our schedule includes a FLEX block during the school day. FLEX is a dedicated time for students to connect with teachers for additional support, questions or feedback.
Special Services Teachers	If assigned, Special Services Teachers support individual students participating in the program including Special Education students and English Language Learners. These individuals are constantly monitoring the progress of their students in their academic classes and communicate regularly with other teachers who support the students as well as with the students and their families concerning student progress towards goals.
Mentors	Mentors will be involved in the program as well as individuals within each of the companies we work with that will serve as mentors to our students participating in the program. Occasionally, our relationship with the Chelmsford High School Alumni Association may be used to secure more mentors per cohort to meet with students virtually or in person, coinciding with the meetings of the Career and College Readiness facilitator.
Internship/Capstone Advisors	The Internship/Capstone Advisors oversee and connect regularly with students who are completing their internship or capstone requirements. The Advisor will instruct all internship and capstone candidates within a cohort during the 3rd quarter of a student's senior year and then serve as the contact between the school, business and student to monitor student progress and hours. The Advisor will also collect, review and offer feedback on student reflections throughout the internship or capstone research project.

- The CHS website
- Videos and virtual or in person "coffees" with members of the Innovation Pathways team
- Students and families will hear from students, teachers and industry leaders involved with the pathway program
- Middle School educators, guidance counselors and administration will meet with members of the Innovation Pathways Team, including the Career and College Readiness Facilitator, to develop an understanding of the program (its purpose, goals and expected outcomes) in order to better assist their students with their questions and the process of enrolling.

Supports Available to All Students

In addition to the specialized support systems within the Innovations Pathway, Chelmsford High School utilizes a house system to organize students into three houses for the purpose of scheduling and support. Within each house, there are two guidance counselors and one dedicated psychologist. All students have access to a PLUS block multiple times a week in which they can connect with the same teacher over their 4 years at CHS, building relationships and having time built in their day to debrief , catch up on assignments, and learn more about their school community. Several FLEX blocks are also built into the weekly schedule, allowing time for extra help or support in any course. Additionally, teachers provide additional help sessions after school on a weekly basis.

MYCAP Information
All students at Chelmsford High School begin their road to college and career readiness their freshman year. This is achieved through the freshman health class where students meet with their guidance counselor to receive their login information for SCOIR. SCOIR is a career and college readiness tool that assists students with researching colleges, careers, scholarships, financial aid information, colleges with disability service programs. Students and parents have access to SCOIR for all four years of their high school career. Students meet with their counselor in group and individual settings over their four years to go over necessary graduation requirements, career and post high school planning as well as specific application assistance depending on what the student wants to do after high school. Guidance counselors also work with students to ensure post-secondary planning is aligning with course load and selection.

All students have access to the Career and College Center. The Career and College Center will sponsor a variety of workshops, programs, information sessions, etc. for all grade levels throughout the school year. Annual events include College Admissions Counselor Visits, Reverse College Day, NACAC College Fair, Options Fair, career and college panels and speakers. Students can also set up one on one meetings for resume, interview and cover letter support as well as career and college guidance.

Supports Specific to Innovation Pathways
For students enrolled in the Innovation Pathways Program, they will be organized into cohorts to provide additional small group check in and focused career and college resource connections in our monthly meetings after school. Professionals from the fields of interest will be integrated into the classroom and cohort meetings where students can engage in hands-on authentic activities to grow interest and understanding of career opportunities. Visits to college campuses and local businesses, which will improve exposure to the chosen pathway field, will be both supported and organized. The goal will be to build a network and consortium of students engaged in these similar programs to reflect, share, and collaborate.

Finally, the program will continue to build on our current relationship and partnership with Middlesex Community College. Students will have full access to their library, resources, tutoring and professors. Along with supporting all stakeholders, students, and their families, will receive mentoring throughout their pathway process. By creating a mentoring program, professionals from different backgrounds can mentor students within each pathway offering role model mentoring, as well as career coaching. These assigned mentors can also support parents with any additional support to ensure the success and completion of the pathway program for their child. The goal is to utilize members of the community, specifically affiliated with these career pathways as mentors. The objective of the mentor will be to promote career success and persistence throughout their pathway coursework and internship.

CHANGE OF PROGRAMMING

If a student chooses to leave the program or switch pathways within the program must meet with their school counselor and the Career and College Readiness Facilitator to complete an exit/

Students who struggle with academic or attendance requirements for Chelmsford High School will have an intervention meeting. This meeting will consist of at least two representatives from the Innovation Pathways

team, the student, and their guardian(s) to determine logical next steps of support and intervention. These steps include but are not limited to:

- Peer tutoring
- Targeted intervention with subject area teachers
- Scheduled individual check-ins with the Innovation Pathway Team
- Exit interview (if the student no longer wishes to be in the pathway or is not meeting expectations).

Even with additional support and accommodations, a student may fail a course in the pathway progression. Should a student fail one of the IP designated courses, they may remain in the program if the following conditions are met:

- The Student indicates that they want to remain in the program.
- A full review of the student's progress in the pathway including the successful completion of any required courses, attendance, participation in cohort meetings, overall progress at CHS towards meeting graduation requirements and use of any and all support will take place.
- The appropriate individuals (student, parent/guardian, Pathway Teacher, Special Education Teacher, ELL Teacher, and guidance counselor) meet to review and discuss the supports to determine what changes might need to be made.
- The individuals mentioned above along with the Career and College Readiness Facilitator, will work with the family to establish a plan for successful completion of 4 courses in the pathway. The student/family, Guidance Counselor and the Career and College Readiness Facilitator will each receive a copy of the plan.

Students at CHS should have enough flexibility in their schedule to either retake the course, or choose an alternative course in the pathway from the list of approved courses and still meet all MassCore requirements.

Should a student demonstrate that they are on a path towards failing more than one course, despite student interest and efforts to support the student in the pathway, the team mentioned above will need to reconvene to discuss a possible exit strategy from the program or probationary period and determine the best path forward for the student's social-emotional and academic well-being. The team will need to consider the student's progress towards and proximity to graduation before making any final determination about continuation in the program.

FAQs

Innovation Pathways - FAQ's

APPENDIX

Appendix 1: Business and Finance Program of Studies and Summary

The two technical courses in the Business & Finance pathway: are Business and Career Pathways and Microsoft Office Certification. Successful completion of these two courses prepares students for study in the advanced courses of this pathway.

BUSINESS & CAREER PATHWAYS—CP, (DE)
5 Credits (#62024) Open to Grades 9-12
Syllabus Business Career Pathways DE
Where do you see yourself in five years? This is a common interview question and most students won't have

an answer. In addition the American Economy is changing at a rapid pace and we're educating students for careers that aren't even invented yet. No matter what path our students choose they will require business skills and knowledge to survive. In this course we will investigate various industries and careers within those industries through research, speakers and field trips. We will gain a general understanding of the major disciplines of business in the 21st century, such as US and Global Business Environments, Entrepreneurship, and Personal and Business Finance, through the use of hands-on, enjoyable, and challenging activities. Lastly, students will develop skills essential to success in any career such as time management, communication, leadership, social media etiquette, public speaking and accountability. Students in this course are also eligible for DECA.
Prerequisites: None

MICROSOFT OFFICE CERTIFICATION- CP (DE)
5 Credits(#61524) Open to Grades 9-12)
Syllabus Microsoft Office Certification
Demonstrate that you have the skills needed to get the most out of Microsoft Office by earning a Microsoft Office Certification in a specific Office program. Master the Office 2016 **Word**, **PowerPoint**, **Excel** and **Access** in this hands-on course where instructor demonstrations and directions guide you through the tips and techniques of optimal use of these software packages. While it is not required, students can take the optional Microsoft Office certification test at the completion of the course if they wish or they can just learn the programs for use in school and future career. *Prerequisites: None*

Business & Finance Advanced Courses

ACCOUNTING 1— CP (DE)
5 Credits (#62424) Open to Grades 9-12
Syllabus Accounting DE
Accounting 1—CP is a one semester course open to all students. Students will explore the fundamental concepts of Financial Accounting. High emphasis is placed on computerized Accounting practices. Students will complete a variety of short and long term projects using Aplia Online Working Papers and customized Google Sheets spreadsheet templates. Students will also get a taste of authentic Accounting in action as they observe and assist in the bookkeeping activities of DECA's Lions Locker School Store and Custom Apparel business. Accounting Students are eligible for the DECA team and competition.
Prerequisites: None

MARKETING —CP (DE)
5 Credits (#65024) Open to Grades 9-12
Syllabus Marketing DE
A college oriented course designed to cover key topics such as: the role of marketing in our economy; consumer behavior; market planning; the development of the marketing mix; market segmentation; pricing strategies; selling and advertising. Discussions, case studies, oral presentations, and writing assignments will be a part of the required coursework. Computer simulation programs will be used to enhance student understanding in multiple areas. Students are eligible for and are encouraged to participate in DECA and compete with other students in specific areas of study they are interested in: concert/event promotion, fashion buying, displaying and showcasing. Students will explore the determination of target markets, the psychological influences that cause people to buy, and the appropriate advertising methods used to reach the appropriate audiences. Students will be encouraged to participate in DECA competitions and events where they will have a chance to successfully apply their knowledge in a variety of academic and hands-on settings.
Prerequisites: None

MANAGEMENT—CP (DE)
5 Credits (#65424) Open to Grades 9-12
Syllabus Management DE
This semester course introduces basic functions and how organizations/businesses are owned, managed, and controlled. The managerial roles of planning, leading, organizing and controlling provide the framework that course materials are built around. Areas of concentration include legal and ethical considerations in management, decision-making and communication skill development, and leadership principles. Computer simulations are utilized to enhance student understanding. Students are eligible and encouraged to participate in DECA competitions and events where they will have a chance to successfully apply their knowledge in a variety of academic and hands-on settings.
Prerequisites: None

E-COMMERCE MARKETING - CP (DE)
5 Credits (#65124) Open to Grades 9-12
Syllabus E-Commerce Marketing
This CP level course is ideal for students interested in exploring how to conduct business online. Students will study how implementing technology can engage cardholders, merchants, issuers, payment gateways and other parties in electronic transactions. The importance of proper integration between an e-commerce website and various social media promotions will be a heavy focus of this course. In this experiential learning students will evaluate and update a working internet commerce site for the Lions Locker, CHS school store. Students will learn the importance of positioning a retail brand against target consumers, choosing category assortment, negotiating certain terms with vendors, setting prices and promotions, managing inventories, developing messaging and advertising through traditional methods as well as social media marketing while factoring in competition, and constructing a viable online business model. The creative outlets for students in the class are endless. DECA eligible course.
Prerequisites: None

ENTREPRENEURSHIP - CP (DE)
5 Credits (#64124) Open to Grades 10-12
Syllabus Entrepreneurship
This course will introduce individual components of entrepreneurship and their implications for society. Special emphasis is placed on decision-making and problem solving in society through an understanding of opportunity recognition, economic/financial models, value creation, and basic entrepreneur-related concepts.This course also introduces students to the theory of entrepreneurship and its practical implementation. Students will have the opportunity to use state of the art software and apparel decoration equipment to aid in the learning process. Centered around a mixture of theoretical exploration as well as case studies of real-world examples and guest lectures, students will develop an understanding of successes, opportunities and risks of entrepreneurship. Students will also develop skills in written business communication and oral presentations that allow students to integrate entrepreneurship concepts and interact with business experts. Students in this course are eligible for DECA team and competition.
Prerequisites: None

BUSINESS ETHICS - CP (DE)
5 Credits (#61324) Open to Grades 10-12
Syllabus Business Ethics DE
This course provides an introduction to corporate social responsibility and ethics in strategic business settings. Through examining traditional and contemporary ethical philosophies, we look to gain a better understanding of how ethics is applied in business activities. To accomplish this, students will have to examine their own moral decision making in determining right and wrong. This course will develop the ability of each student to read and reason critically.

Students will:

- Differentiate the legal point of view from ethical point of view
- Demonstrate an awareness of the primary governmental restraints on morality in business, and to anticipate common occupational hazards
- Read closely, critically analyze and construct arguments
- Communicate effectively via written and oral discourse
- Students will identify the diversity and commonality of moral values across cultures

Students in this Business Ethics course are also eligible for DECA.
Prerequisites: None

PSYCHOLOGY I CP (DE)
5 Credits (#36824), Grade 11 + 12
Syllabus Psychology I DE
This course for juniors and seniors is designed to introduce students to the biological and theoretical foundations of psychology. The course will encourage students to develop analytical skills, conduct research, investigate the mind-body connection, analyze the concepts of consciousness, evaluate the theories of personality, develop an understanding of psychological disorders, evaluate the role and effectiveness of treatments, and analyze the theories of intelligence. Students will be expected to demonstrate their understanding of psychology through various projects, discussions, and assignments.

INTRODUCTION TO STATISTICS – CP (DE)
10 Credits (#15423), Grades 11 + 12
Syllabus Introduction to Statistics
This full-year course is designed for students who have successfully completed Algebra II. The course will introduce students to statistical reasoning and methods that are relevant in the fields of medicine, business, education, political science, psychology and entertainment. Topics will include design of experiments and sampling techniques, data analysis and displays, probability and counting principles, discrete probability distributions, normal probability distributions, confidence intervals, and hypothesis testing. Students will be required to keep an organized notebook, read and interpret the textbook, and do independent work. Emphasis will be placed on investigating and solving real world problems that will include open response questions for a variety of applications.
Prerequisite: Algebra II H or CP

Business Pathway Course Offering Summary

Course number	Class name	Credits CHS	Grade/Level	MCC Dual Enrollment Credits available
72000	Career and College Readiness I	1	9	1
72100	Career and College Readiness II	1	10	1
62424	Accounting I CP- DE	5	9-12	4
62024	Business Career Pathways CP-DE	5	9-12	3
61324	Business Ethics CP-DE	5	9-12	3
61524	Microsoft Office Certification CP-DE	5	10-12	3

15423	Intro to Statistics CP-DE	10	9-12	3
65424	Management CP-DE	5	11/12	3
65024	Marketing CP-DE	5	9-12	3
36824	Psychology I CP-DE	5	11/12	3
7000	Pathways Internship	5	12	
7100	Pathways Capstone	5	12	
	*Technical Courses			

Appendix 2: Information Technology Courses Program of Studies and Summary

The two technical courses for Information Technology: are Robotics and PLTW Introduction to Engineering Design. Students have the opportunity to take these courses in grade 9 and 10. Each course provides the students with a unique aspect of the Computer Science, Engineering and Robotics Industry.There are no barriers to enrolling in the advanced courses for the Innovation Pathway.

ROBOTICS – CP
5 Credits (#69824), Grade 9 - 12
Syllabus Robotics
Robotics is a one semester course that focuses on creative problem solving and machine behaviors. The robots are built with VEX V5 Clawbots and can be programmed in blocks, Python or C++. Each class will be presented with the similar components and programming exercises, but the challenges that students will solve will vary from term to term. This Robotics course ties in with the after school Robotics Club and all course students can participate in the competitions if they wish. The general types of exercises will include: following a wall or a line, knocking things over, picking up and moving objects. The challenges will be inspired by real world problems that robots face—search and rescue, moving of hazardous waste, warehouse management, etc. This course may be used for Practical Arts credit.
Prerequisite: None

PLTW: INTRODUCTION TO ENGINEERING DESIGN - CP, H (DE)
10 Credits (#25323) Open to Grades 9-12
Syllabus PLTW Introduction to Engineering Design
This full year Science course is ideal for students who want to dig deeper into the engineering design process, applying math, science, and engineering standards to hands-on projects. Students work both individually and in teams to design solutions to a variety of problems using 3-D modeling software, and use an engineering notebook to document their work. The Project Lead the Way (PLTW) courses engage students in hands-on activities, projects and problems, empower them to develop in-demand knowledge and skills, and inspire them to reimagine and see themselves as successful in STEM fields.
Prerequisites: None

Information Technology Advanced Courses

PROGRAMMING 1 – CP (DE)
10 Credits (#17723), Grades 10, 11, + 12
Syllabus Programming 1
Programming 1 is a Dual Enrollment 4 credit lab course with Middlesex Community College. This course is a

project based course designed to provide students with an introduction to the processing of information by the computer, computer logic, memory, input/output processing, and programming in the C/C++ language. This course emphasizes the programming problem-solving process, problem organization, algorithms, coding, debugging and the elements of good programming style. Programming problems will include a wide variety of numeric and non-numeric applications. No prior programming experience necessary. This course is considered a practical art.
Prerequisite: Algebra 1

PLTW AP Computer Science Principles(DE):
10 Credits (#17613) Open to Grades 10, 11, + 12
Syllabus PLTW AP Computer Science Principles DE
Students begin by learning about how data is stored and transmitted over the internet, the history of why the internet was built, how it is built as well as global issues involving the Digital Divide. Students then continue with programming in JavaScript to build applications. The students use game development to identify the characteristics of an engaging game and then design, plan and implement their own game. Topics for the apps focus on the students' interest and begin with the brainstorming process. Students are encouraged to test their apps on classmates, family and friends for comments and redesign. Students keep a journal to document the issues they encounter and how they solved them. Students have the option to take the AP Exam or to take the course for Dual Enrollment Credit at Middlesex Community College.

PLTW: Principles of Engineering — H
10 Credits (#25413) Open to Grades 9-12
Syllabus PLTW Principles of Engineering
In this full year Science course students are engaged in challenging problems, exploring a broad range of engineering topics including mechanisms and automation, then apply what they know to take on challenges like designing a self-powered car. Students develop skills in problem solving, research, and design skills while learning strategies for design process documentation, collaboration, and presentation. The Project Lead the Way (PLTW) courses engage students in hands-on activities, projects and problems, empower them to develop in-demand knowledge and skills, and inspire them to reimagine and see themselves as successful in STEM fields.
Prerequisites: None

AP Computer Science A:
10 Credits (#17513), Grade 11 + 12
Syllabus AP Computer Science A
This course prepares students for the AP Computer Science A exam by emphasizing object-oriented programming methodology through problem solving and algorithm development and is meant to be the equivalent of a first-semester course in computer science. It also includes the study of data structures and abstraction. The course will cover Object-Oriented Program Design, Program Implementation, Program Analysis, Standard Data Structures, Standard Algorithms, and Computing in Context. This course is considered a practical art.
Prerequisite: Completion of Programming 1, teacher recommendation and summer work

Information Technology Course Offering Summary:

Course number	Class name	Credits CHS	Grade/Level	MCC Dual Enrollment Credit Available
72000	Career and College Readiness I	1	9	1
72100	Career and College	1	10	1

	Readiness II			
17513	AP Comp Sci A	10	11/12	
17613	PLTW AP Comp Sci Principles A	10	10-12	
25323	PLTW Intro to Engineering Design CP, DE, H	10	9-12	
17723	Programming I CP-DE	10	10-12	4
69824	Robotics CP	5	9-12	
7000	Pathways Internship	5	12	
7100	Pathways Capstone	5	12	
	*Technical Courses			

Appendix 3: Life Sciences Courses Program of Studies and Summary

The two technical courses in the Life Sciences pathway: are Biology and Chemistry. Successful completion of these two courses prepares students for study in the advanced courses of this pathway.

BIOLOGY—H, CP
10 Credits (#22413, #22423), Grade 9,10, Lab-based
Syllabus Biology H
Syllabus Biology CP
This first year Biology course is designed to prepare students for the next generation of science standards and practices. The high school biology content standards are built from middle school and allow grade 9 or 10 students to explain additional and more complex phenomena related to genetics, evolution, the functioning of organisms, and interrelationships between organisms, populations, and the environment. There are significantly higher academic expectations of students in honors level courses. Students are required to complete daily homework assignments and are expected to be more independent and highly motivated. 26 Frequent laboratory exercises, designed to correlate with text materials, provide students with opportunities to learn and use techniques and equipment associated with biological research. Independent reading, research and writing assignments extend learning beyond the classroom. Students are expected to take the MCAS Biology assessment in the spring. Prerequisite for Honors: Recommendation of Environmental Science teacher; incoming freshman must have term average of 93 or higher in 8th grade science and 3 of the following: Benchmark average in the exceeding range, placement into honors math, advanced score on the grade 7 ELA MCAS Exam, teacher recommendation.
Prerequisite: None

CHEMISTRY—H, CP (DE)
10 Credits (#24213, #24223), Grades 10 + 11, Lab-based
Syllabus for Chemistry H
Syllabus for Chemistry CP (DE)
The major focus of chemistry is on matter and its interactions. Quantitative and qualitative methods can be used to explain how matter interacts. Fundamental basics of matter are determined by the structure of atoms and the compounds they compose. Reactivity and properties of compounds are explored through a variety of inquiry-based laboratory activities. Topics covered include: atomic theory, stoichiometry, gas laws, bonding, solutions, and thermodynamics. Honors Chemistry is a full year course created for students who have demonstrated a sincere interest in the sciences with students independently using algebra skills in the

context of the chemistry curriculum. Honors students should expect to have 1-2 hours of independent work per night. Chemistry CP provides a foundational understanding of chemistry and may be taken as a Dual Enrollment course with Middlesex Community College as a general science credit (CHE 121). Prerequisite for Honors: Successful performance in Honors Biology, successful performance in an Honors level Algebra-based Mathematics course or advanced performance in CP algebra-based mathematics course, teacher recommendation.
Prerequisite: None

Life Sciences Advanced Courses (Biotechnology):

BIOTECHNOLOGY I CP (DE)
5 Credits (#22124), Grade 10, 11, 12
Syllabus Biotechnology
This second year Biology elective provides students with basic biotechnology laboratory skills in order to introduce them to biotechnology concepts, in addition to the business aspect of the industry. A "hands-on" laboratory course, it focuses on widely used biotechnological techniques and theoretical application in biotech industry standards including biological molecule manipulation, transformation and identification. Students will learn techniques that apply to biological drug applications, bioinformatics, and Good Lab Practices (GLP), such as sterile technique and maintaining
Prerequisite: A Biology Course

AP BIOLOGY
10 Credits (#22013), Grades 10, 11, 12, Lab-based
Syllabus AP Biology
This second year Biology course will consist initially of a review and enrichment of the major concepts from first year Biology. This will be followed by a fast-paced, intensive study of selected topics in Biology as set forth by the College Board. Included among these are, but not limited to: plant and animal growth and development; embryology; cellular physiology; genetics; animal structure; biological systems and relationships. The course emphasizes the unifying themes in biology, showing the connections between the different areas of study. AP Biology is designed for highly motivated science students who intend to pursue a science related major in college. Students in this course should be prepared for some independent learning due to the volume of material covered. In addition to in-class discussions, laboratory experimentation, and independent learning, students will have an opportunity for peer share learning. The course will also emphasize techniques in preparation for the AP Biology exam in May. Students will be required to complete summer homework prior to the beginning of the academic year. Homework Requirements: Students are expected to read chapter material prior to in-class discussions. Nightly homework will average 1 to 2 hours.
Prerequisite: Success in Honors Biology or teacher recommendation from CP Biology,concurrent enrollment Honors Chemistry Course or completion of Chemistry course.

INTRODUCTION TO STATISTICS- CP (DE)
10 Credits (#15423), Grades 11 + 12
Syllabus Introduction to Statistics
This full-year course is designed for students who have successfully completed Algebra II. The course will introduce students to statistical reasoning and methods that are relevant in the fields of medicine, business, education, political science, psychology and entertainment. Topics will include design of experiments and sampling techniques, data analysis and displays, probability and counting principles, discrete probability distributions, normal probability distributions, confidence intervals, and hypothesis testing. Students will be required to keep an organized notebook, read and interpret the textbook, and do independent work. Emphasis will be placed on investigating and solving real world problems that will include open response questions for a variety of applications.
Prerequisite: Algebra II H or CP.

AP STATISTICS
10 Credits (#15413), Grades 11-12 predominantly, with special exceptions for Grade 10.
Syllabus AP Statistics
Advanced Placement Statistics is a yearlong course for students who are interested in studying statistics in depth. The AP Statistics course will prepare students to take the AP Statistics exam. Emphasis will be given to real-world applications in a variety of disciplines, including medicine, business, education, political science, psychology, sports, and entertainment. Major topics will include: · Exploring Data – observing patterns and departures from patterns · Sampling and Experimentation – planning and conducting a study · Anticipating Patterns – producing models using probability theory and simulation · Statistical Inference – estimating population parameters and testing hypotheses Students will be required to keep an organized notebook, read and interpret the textbook, and do independent work. Homework will require students to identify appropriate methods for solving problems, show detailed work to support their answers, and provide thorough explanations of their results. In communicating results to problems, particular attention will be given to the proper use of statistical vocabulary and accurate explanations of statistical concepts and methods. The TI Nspire CX CAS graphing calculator is used for this course. Students will also use statistical software to practice and strengthen their understanding of statistical concepts. In addition to frequent assessments that include both multiple choice and open response type questions, there will be 1-2 projects per term. Projects will provide students an opportunity to gain hands-on experience and make connections between different parts of the course.
Prerequisite: Teacher recommendation and completion of summer work is required for all students. Additionally, Algebra I H and Algebra II H students must have a grade of 80% or higher, and Algebra II CP students must have a grade of 90% or higher.

Life Sciences Advanced Courses (Environmental Technology):

ENVIRONMENTAL STUDIES - CP (DE)
10 Credits (#26123), Grade 11 + 12, Lab-based
Syllabus Environmental Studies
This is a full year lab based elective course designed for students who intend to go to college as non-science majors, and replaces last year's Environmental Science course. The course focuses on local, national and world sustainability of resources, such as conservation of material cycling, human and environmental influences, succession, and environmental problems. Students will demonstrate mastery of the concepts by addressing authentic issues that affect the world today through completion of a variety of group and individual projects, presentations, and other collaborative exercises.
Prerequisite: Successful completion of Biology or Chemistry

AP ENVIRONMENTAL SCIENCE
10 Credits (#26013), Grade 12, Lab-based
Syllabus AP Environmental Science
The goal of the AP Environmental Science course is to provide students with the scientific principles, concepts, and methodologies required to understand the interrelationships of the natural world, to identify and analyze environmental problems both natural and human-made, to evaluate the relative risks associated with these problems, and to examine alternative solutions for resolving or preventing them. Coursework is designed to prepare students for the AP Environmental Science Exam in May. Students in this course should be prepared for some independent learning due to the volume of material covered. Homework Requirements: Students are expected to read chapter material prior to in-class discussions, complete study guides, practice exams, and complete lab reports. Nightly homework can average 1 to 2 hours. Summer homework will be required; see the instructor for resources before the end of the school year.
Prerequisite: Advanced performance in CP or H Biology & CP or H Chemistry; Algebra proficiency, including scientific notation and dimensional analysis.

Life Science Pathway Course Offering Summary

Course number	Class name	Credits CHS	Grade/Level	MCC Dual Enrollment Credits available
72000	Career and College Readiness I	1	9	1
72100	Career and College Readiness II	1	10	1
22413/22423	Biology H,CP	10	9/10	
24213/24223	Chemistry H,CP	10	10/11	4
22124	Biotechnology I CP- DE	5	10-12	4
22013	AP Biology	10	10-12	4
15423	Intro to Statistics CP-DE	10	11/12	3
15413	AP Statistics	10	11/12	3
26123	Environmental Studies CP- DE	10	11/12	4
36824	AP Environmental Science	10	12	4
7000	Pathways Internship	5	12	
7100	Pathways Capstone	5	12	
	*Technical Courses			

Appendix 4: Advanced Engineering and Manufacturing Courses Program of Studies and Summary

The two technical courses in the Life Sciences pathway: are Robotics CP and PLTW: Introduction to Engineering Design- CP. Successful completion of these two courses prepares students for study in the advanced courses of this pathway.

ROBOTICS – CP
5 Credits (#69824), Grade 9 - 12
Syllabus Robotics
Robotics is a one semester course that focuses on creative problem solving and machine behaviors. The robots are built with VEX V5 Clawbots and can be programmed in blocks, Python or C++. Each class will be presented with similar components and programming exercises, but the challenges that students will solve will vary from term to term. This Robotics course ties in with the after school Robotics Club and all course students can participate in the competitions if they wish. The general types of exercises will include: following a wall or a line, knocking things over, picking up and moving objects. The challenges will be inspired by real world problems that robots face—search and rescue, moving of hazardous waste, warehouse management, etc. This course may be used for Practical Arts credit.
Prerequisite: None

PLTW: INTRODUCTION TO ENGINEERING DESIGN - CP (DE)
10 Credits (#25323) Open to Grades 9-12
Syllabus PLTW Introduction to Engineering Design
This full year Science course is ideal for students who want to dig deeper into the engineering design process, applying math, science, and engineering standards to hands-on projects. Students work both individually and in teams to design solutions to a variety of problems using 3-D modeling software, and use an engineering notebook to document their work. The Project Lead the Way (PLTW) courses engage students in hands-on activities, projects and problems, empower them to develop in-demand knowledge and skills, and inspire them to reimagine and see themselves as successful in STEM fields.
Prerequisites: None

Advanced Engineering and Manufacturing Advanced Courses:

PLTW: PRINCIPLES OF ENGINEERING — H
10 Credits (#25413) Open to Grades 9-12
Syllabus PLTW: Principles of Engineering
In this full year Science course students are engaged in challenging problems, exploring a broad range of engineering topics including mechanisms and automation, then apply what they know to take on challenges like designing a self-powered car. Students develop skills in problem solving, research, and design skills while learning strategies for design process documentation, collaboration, and presentation. The Project Lead the Way (PLTW) courses engage students in hands-on activities, projects and problems, empower them to develop in-demand knowledge and skills, and inspire them to reimagine and see themselves as successful in STEM fields.
Prerequisites: None

PLTW: Computer Integrated Manufacturing – H (More to Come)
10 Credits (#25513) Open to Grades 10- 12
Syllabus PLTW: Computer Integrated Manufacturing

Computer Integrated Manufacturing is one of the specialization courses in the PLTW Engineering program. The course deepens the skills and knowledge of an engineering student within the context of efficiently creating the products all around us. Students build upon their Computer Aided Design (CAD) experience through the use of Computer Aided Manufacturing (CAM) software. CAM transforms a digital design into a program that a Computer Numerical Controlled (CNC) mill uses to transform a block of raw material into a product designed by a student. Students learn and apply concepts related to integrating robotic systems such as Automated Guided Vehicles (AGV) and robotic arms into manufacturing systems.

*Prerequisite: Robotics OR PLTW Introduction to Engineering H, CP, DE **OR** PLTW Principles of Engineering H*

Advanced Engineering & Manufacturing Course Offering Summary:

Course number	Class name	Credits CHS	Grade/Level	MCC Dual Enrollment Credit Available
72000	Career and College	1	9	1

	Readiness I			
72100	Career and College Readiness II	1	10	1
25413	PLTW Principles of Engineering	10	9-12	
25513	PLTW Computer Integrated Manufacturing	10	11/12	
25323	PLTW Intro to Engineering Design CP	10	9-12	
69824	Robotics CP	5	9-12	
7000	Pathways Internship	5	12	
7100	Pathways Capstone	5	12	
	*Technical Courses			