PTEC

Pembina Trails Early College

START SLIDE

INTRODUCTION PTC ADMIN

Jacqui Kroeker & Jane Bachart - Admin Team

Pembina Trails Early College @ Pembina Trails Collegiate 2024/25

INTRODUCTION PTC STAFF

Scott Hardman, Ashley Hoitink and Lana Francis

Pembina Trails Early College (PTEC) Teachers

AGENDA

History

Partners and how we collaborate

Who we are

Offerings in the grades

TECH MB

MITT

Application process

Questions

OUR PARTNERS

01.
PEMBINA TRAILS

Pembina Trails School Division and Pembina Trails Collegiate work in collaboration with all thirteen sending schools to offer this type of programming
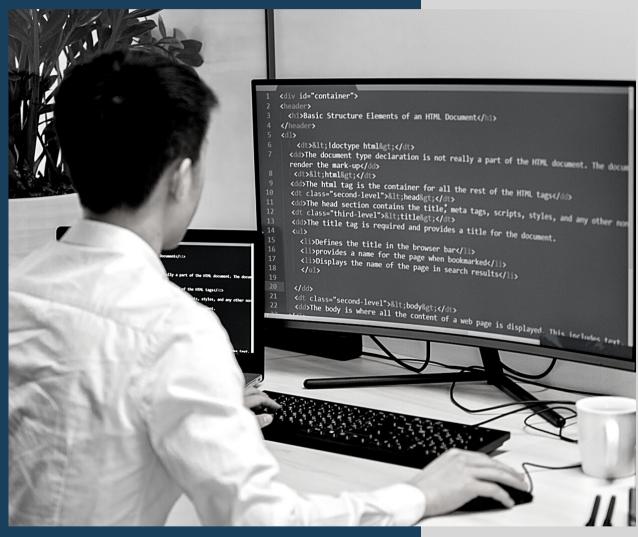
02.
TECH MB

Manitoba's major tech industry association, dedicated to facilitating connections and growing Manitoba's tech sector.

03.
MITT

Manitoba Institute of Trades and Technology is a leading provider of post-secondary in the field of technology and trades.

WE BUILD!

Pembina Trails Early College (PTEC) is a program that has been specifically designed through collaboration with industry involvement and support, Pembina Trails Collegiate, and the Manitoba Institute of Trades and Technology.

By delivering accelerated programming in the sought-after technical streams of software development, cyber defence, and networking, our program has created a comprehensive and authentic experience for students who are interested in the digital world as a career.

HISTORY OF PTEC PROGRAM

Grades 9 - 12 - PTC for their compulsory courses

Grades 9 & 10 - PTC for their PTEC high school courses

Grades 11 & 12 - MITT to complete their post-secondary education in one of two streams: Full Stack Developer OR Cloud & Network Technician

2016

2019

2023

SENDING SCHOOL SELECTION

There are currently over 1000 students in grade 8 in Pembina Trails School Division:

- **Acadia Junior High School**
- **Arthur A. Leach School**
- **BISON RUN School**
- **Ecole Charleswood School**
- **Ecole South Pointe School**
- **Ecole Van Walleghem School**
- **Ecole Viscount Alexander School**
- **General Byng School**
- **Henry G. Izatt School**
- **Laidlaw School**
- **Linden Meadows School**
- **River West Park School**
- **Westdale School**

DEVICES

During your time at PTEC and PTC, (grade 9 and 10) students will have access to divisional devices to support their learning.

In grades 11 & 12 students will have to save for a more robust machine to build their dreams!

TRANSPORTATION

Students who reside in OP or SH catchment

PTEC students that are located in the OP or SH catchment can utilize the divisional school bus. This bus will also take them back to either OP or SH.

Students who reside in VM, FR or PTC catchment

PTEC students that are located in the VM, FR or PTC catchment need to find there own personal transportation to school

EXTRA CURRICULAR

Students who attend PTC can also participate in the schools extra-curricular clubs and activities.

Our students typically enjoy games club, eSports and other tech related games

GRADE 9 @ PTEC & PTC

01 Interdisciplinary & Math, PE
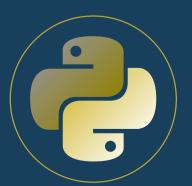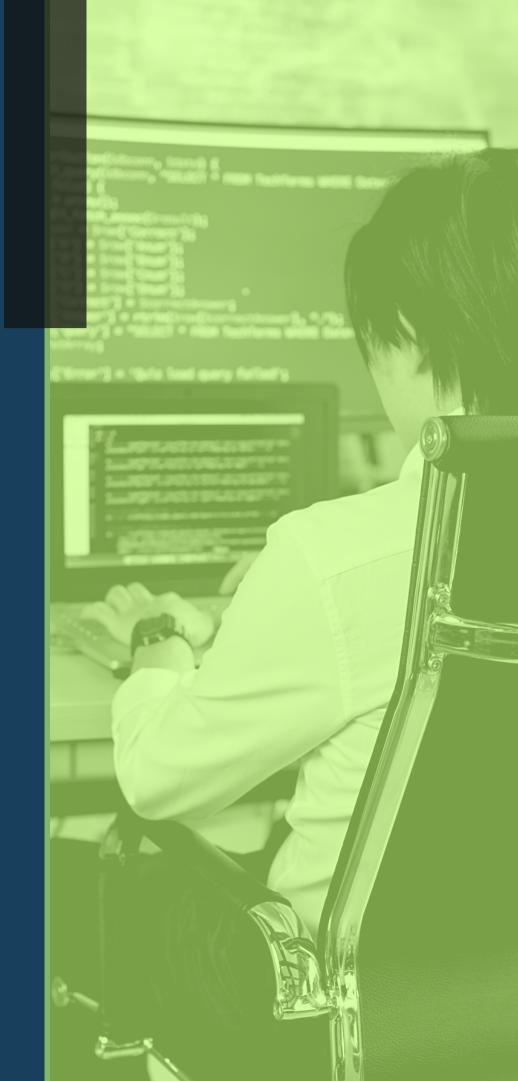PTEC: Software Developer

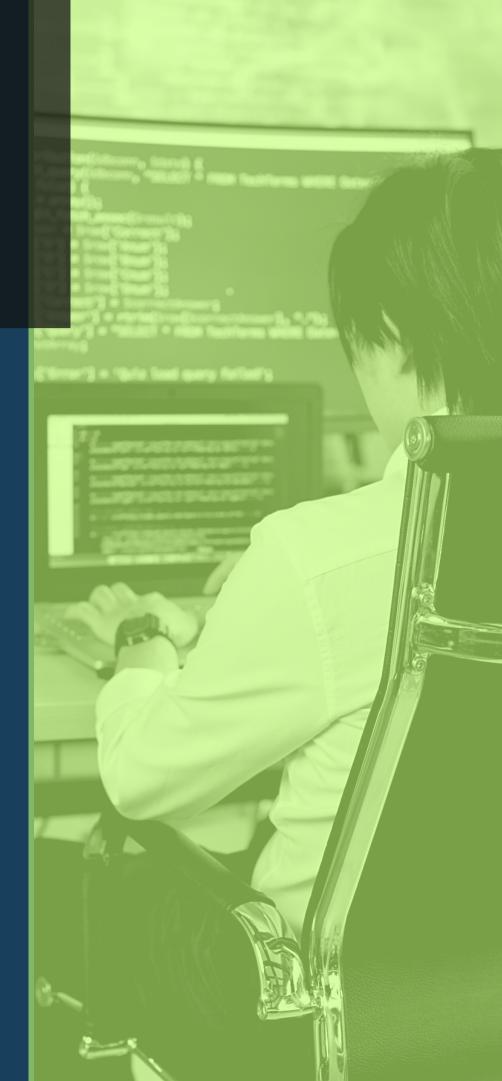**02** Interdisciplinary & Math, PE
PTEC: Cyber Security & Networking

GRADE 9 PTEC STUDENT

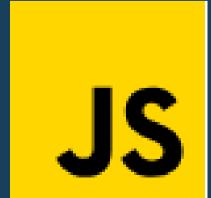**Please welcome: Zara Sajjadieh**

GRADE 10 @ PTEC & PTC

01 PTEC: Full Stack Developer
Interdisciplinary & Math, PE

02 PTEC: Cloud & Network Technician
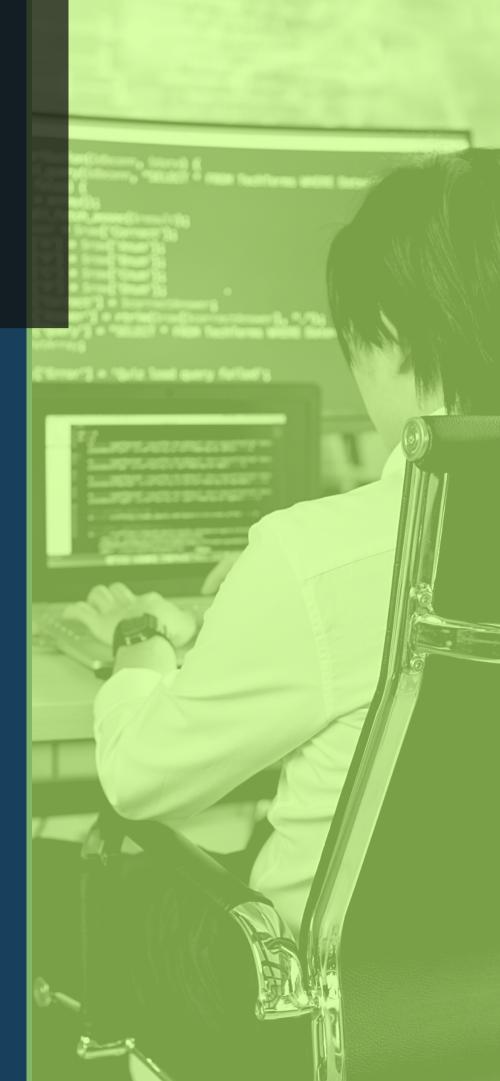Interdisciplinary & Math, PE

GRADE 10
PTEC STUDENT

Please welcome: Sadie Cutts

GRADE 11 @ PTC & MITT

01
Interdisciplinary & Math, PE

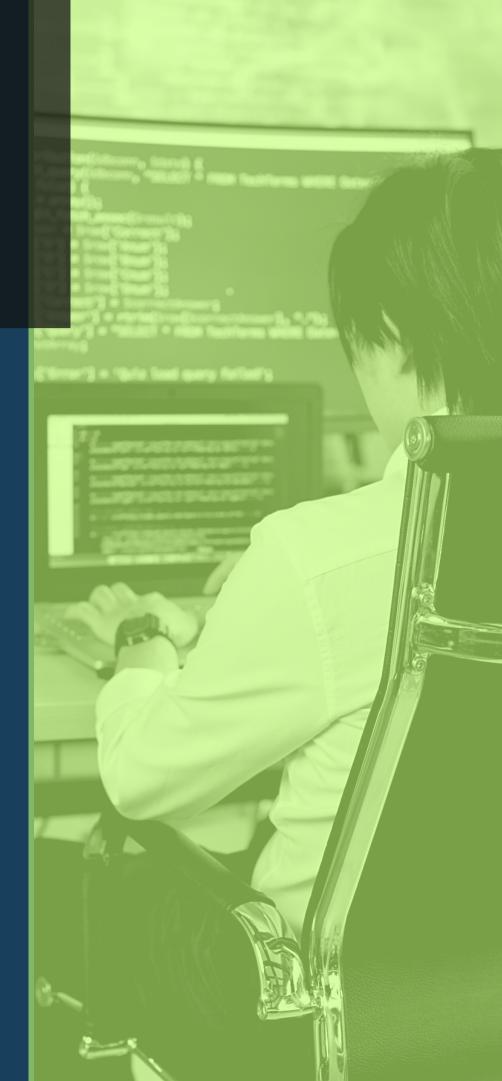MITT: Full Stack Developer OR
Cloud & Network Technician

02
Interdisciplinary & Math, PE

MITT: Full Stack Developer OR
Cloud & Network Technician

GRADE 11 PTEC/MITT STUDENT

Please welcome: Daria Pinegin

GRADE 12 @ PTC & MITT

01

MITT: Full Stack Developer OR
Cloud & Network Technician
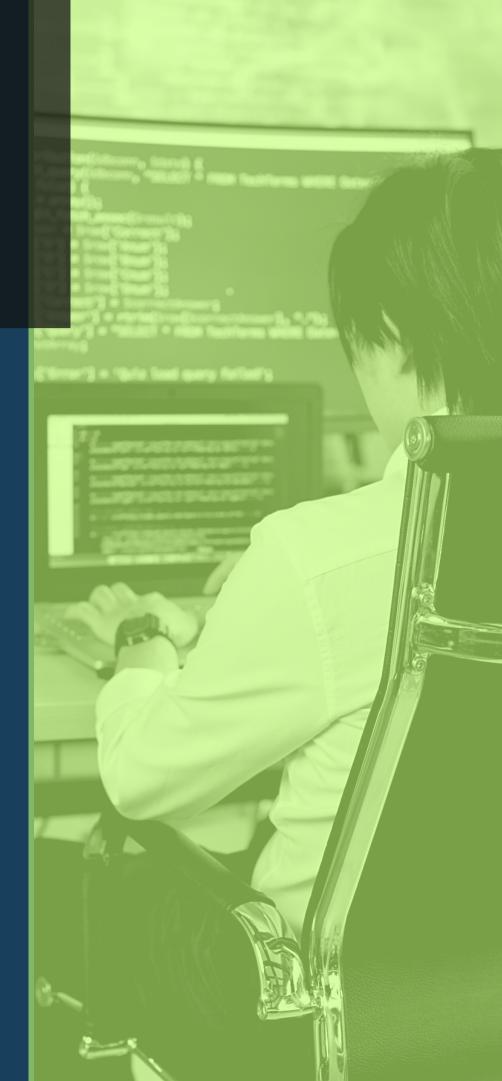
Compulsory Courses

02

MITT: Full Stack Developer OR
Cloud & Network Technician

Compulsory Courses

GRADE 12 PTEC/MITT STUDENT

Please welcome: Hamza Haque

ALUMNI PTEC/MITT CYBER SECURITY GRADUATE

Please welcome: Rory Keown & Sam Rosales

ALUMNI PTEC/MITT SOFTWARE DEVELOPER GRADUATE

Please welcome: Brett Bowley

OUR PARTNERS

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TECHMB

Who we are:

- Tech Manitoba represents Manitoba's growing tech sector.

- We are an industry-led association that helps companies thrive and grow through collaboration, education, and promotion

- Tech Manitoba leverages 120 corporate members

SOME OF OUR MEMBERS!

industry in the classroom

Inspire the Next Generation of Tech Professionals

Tech Manitoba is collaborating with Pembina Trails Early College (PTEC) to show students what a career in tech can look like. Our *Industry in the Classroom* series gives Tech Manitoba members the opportunity to share elements of their career via an interactive 45-minute presentation.

TECHMB
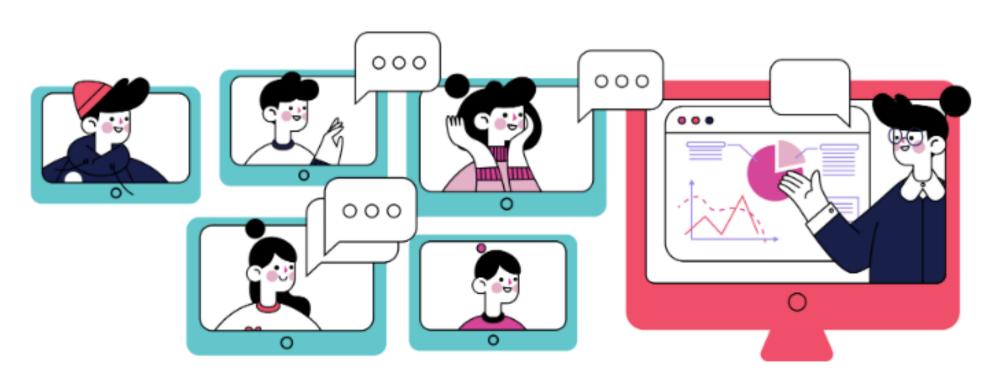
Grade 9
Mentorship Program

- **Industry in the Classroom**
  45-minute presentations twice a month, from a wide variety of industry professionals to chat about what they do, where they work, career path story, followed by time for Q and A

TECHMB

Grade 9
Mentorship Program

SEMESTER I (Networking & Cyber)

- Deloitte: What is the cloud
- Mozilla: Social Engineering
- Canada Life: Red Teams/Blue Teams
- 365 Technologies: Service Technician
- Neo Financial: Fintech
- Wawanesa Insurance: Pen testers and Ethical Hacking
- Skip: Networks for Large Organizations

TECHMB

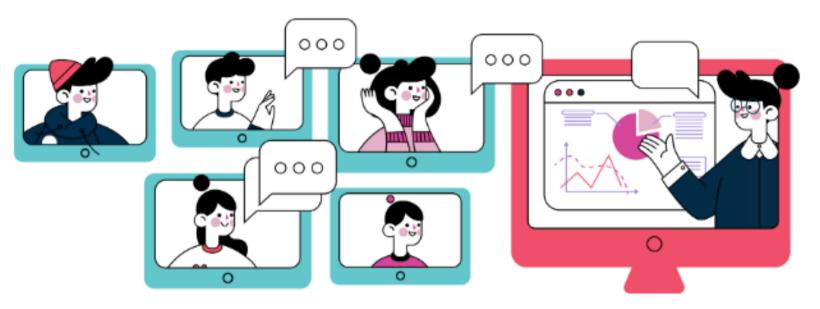# Grade 9
Mentorship Program

SEMESTER II (Software Developmer)

- Ilummia Labs: Virtual Reality
- Wawanesa: Machine Learning
- Neovation: App Develpment
- Parallell: Artificial Intelligence
- Greelow: App development and building secuirty into your code
- Ubisoft: Tools Programmers

TECHMB

project based **mentorship**

Guide the Next Generation of Tech Professionals

Tech Manitoba in collaboration with Pembina Trails Early College (PTEC) is providing grade 10 students with an industry mentored project-based learning experience. Learning beyond the classroom with industry support and expertise lets students invest time in projects that appeal to them.

Mentored by Tech Manitoba industry members, student teams individually select a problem to solve via a tech application in one of five following areas:

- App Development
- Machine Learning/AI
- Hardening Operating System
- Pen Testing
- Robotics

PTEC Group

Brady, Eileen, Bukunmi, Jordyn

Our Problem

People don't know how accessible a restaurant is.

There are limited ways to find out if restaurants in Winnipeg are accessible without going to the restaurant itself.

Our Solution

To create an app that informs people if a restaurant is accessible or not.

This app would include:
- Why the restaurant is accessable
- Why the restaurant is not accessible.
- Location of the restaurant
- Pictures of the restaurant

Tools and Software we used

Android Studios

Kotlin
JavaScript

Mapping Software

Google maps
Open Street Map
Snazzy Maps
ZeeMaps

Organizers & Helpers

Todoist
Word
Email
YouTube
Tutorials

- No steep stairs or ramps if applicable
- Stairs have railings
- Automatic doors
- Accessible washrooms
- Accessible parking
- Menus with images, braille, or online
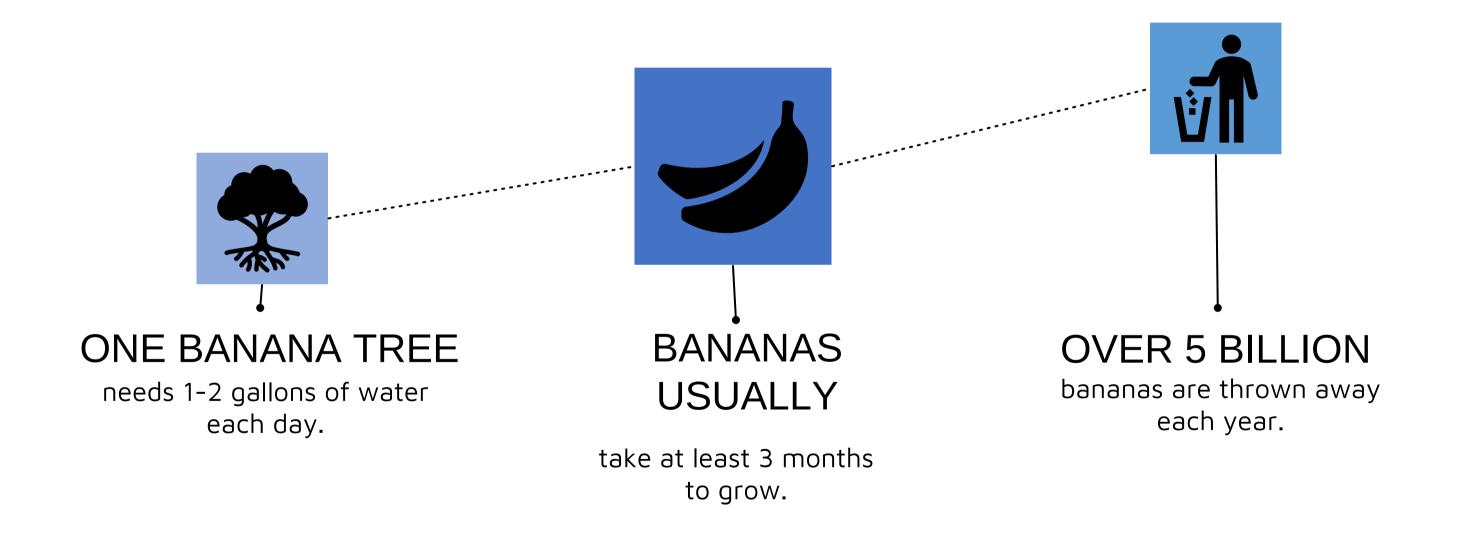- Space for walking sticks
- Non harsh lighting
- Low noise level

Access Eats

10:20

Access Eats

McDonald's
(2027 Pembina Hwy, Winnipeg, MB)

IHOP
(455 Sterling Lyon Pkwy, Winnipeg, MB)

What we Completed

- List of what makes a restaurant accessible.
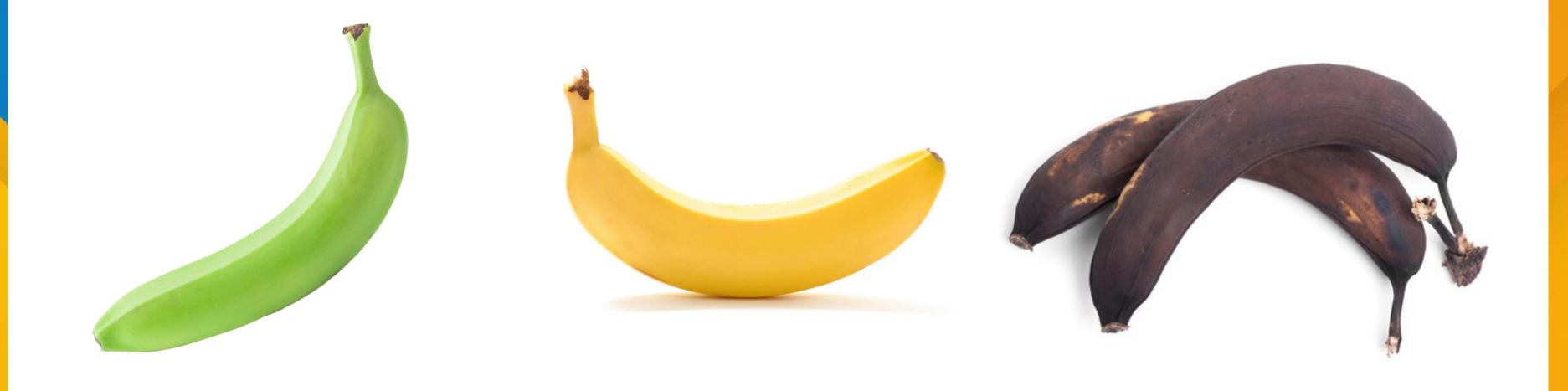- List of restaurants and what makes them accessible.
- A Logo
- The app

SCANana

FOOD WASTE – AN ONGOING CRISIS

ONE BANANA TREE
needs 1-2 gallons of water each day.

BANANAS USUALLY
take at least 3 months to grow.

OVER 5 BILLION
bananas are thrown away each year.

OUR SOLUTION?

Determining banana ripeness with a computer vision application!

PLANNING STAGES

GENERAL PROCESS - ROBOFLOW

CREATE ANNOTATIONS (BOUNDING BOXES)

- Width
- Height
- X position
- Y position

TRAIN THE MODEL

- Feeding data
- Validating
- Testing

ADD ADDITIONAL FEATURES, UI

- Upload via API
- Plan layout
- Create webapp

98.3% **97.6%** **93.6%**
mAP   precision recall

build your
career in tech
mentorship

Support the next Generation of Tech Professionals

TECHMB

Grade 11 & 12 Mentorship Program

- **Tech Resume building mentorship**
- **Interview Skills Workshop session**
- **Mock Interview sessions with industry**
- **Summer Internship Program at MITT**

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INTRODUCTION MITT STAFF

Team PTEC at MITT

- Frank Gallo, Dean
- Jared Miskimmin, Program Manager
- Jill Ma, Academic Coordinator
- Tavaré Tulloch, Instructor
- Justin Ducharme, Instructor
- Alex Gilmer, Instructional Assistant

PTEC at MITT

- PTEC reinvents high school education as we know it. Through an innovative model that provides high school students with academic, technical, and professional skills and industry-recognized credentials for competitive tech jobs in Manitoba.
- The early college model enables youth to graduate with both their high school diploma and a post-secondary credential by the end of grade 12.
- Before entering MITT at the start of Grade 11, students choose to specialize in one of two streams: Software Developer (SD) and Cloud & Network Technician (CNT)

What does it mean to be a PTEC/PTC/MITT Student

- You will be taking all of your compulsory courses at PTC
- You will want to prepare for any type of post secondary education that might take place after MITT.
- Planning for entrance requirements for University or scholarships and courses is something that needs to be done now
- Time Management and Disciplined Focus are critical for success
- Upon completion you graduate with dual credits

What are dual credits?

- Upon the successful completion of a dual credit course, a student earns a post secondary credit.
- This also counts towards fulfilling the credit requirements for high school graduation.

PTEC Full Stack Software Developer Program

Mix of Hands-On and Theoretical Learning
- Developing Websites
- Creating Games
- Designing and Coding Applications
- Potential to work in one of the fastest-growing industries in Manitoba

Cloud and Network Technician (CNT) Program

- Mix of Hands-On and Theoretical Learning
- Cloud and Networking Technologies
- Network Security
- Fundamental Automation
- Build and Configure Servers - Networking Equipment – Cloud Services

Industry Certifications

Students can take Industry Certifications that students can take during or after the CNT Program:

- CompTIA ITF+
- CompTIA A+
- CompTIA Security+
- Cisco CCNA
- Microsoft Azure Fundamentals (AZ 900)
- Microsoft Azure Fundamentals (AZ 104)

Pathway to Postsecondary at MITT

- Upon completion of the PTEC CNT Program students have a choice to enter MITTs post secondary Cyber Security Analyst (CYSA) Program
- Program length is 28 months* to include a 4 month unpaid practicum

CYSA Program

- Extensively Cybersecurity Focused
- Automation & Scripting
- Networking and Information Security
- Ethical Hacking &Penetration Testing
- Digital Forensics
- Firewall Applications
- Project Management
- IT Ethics
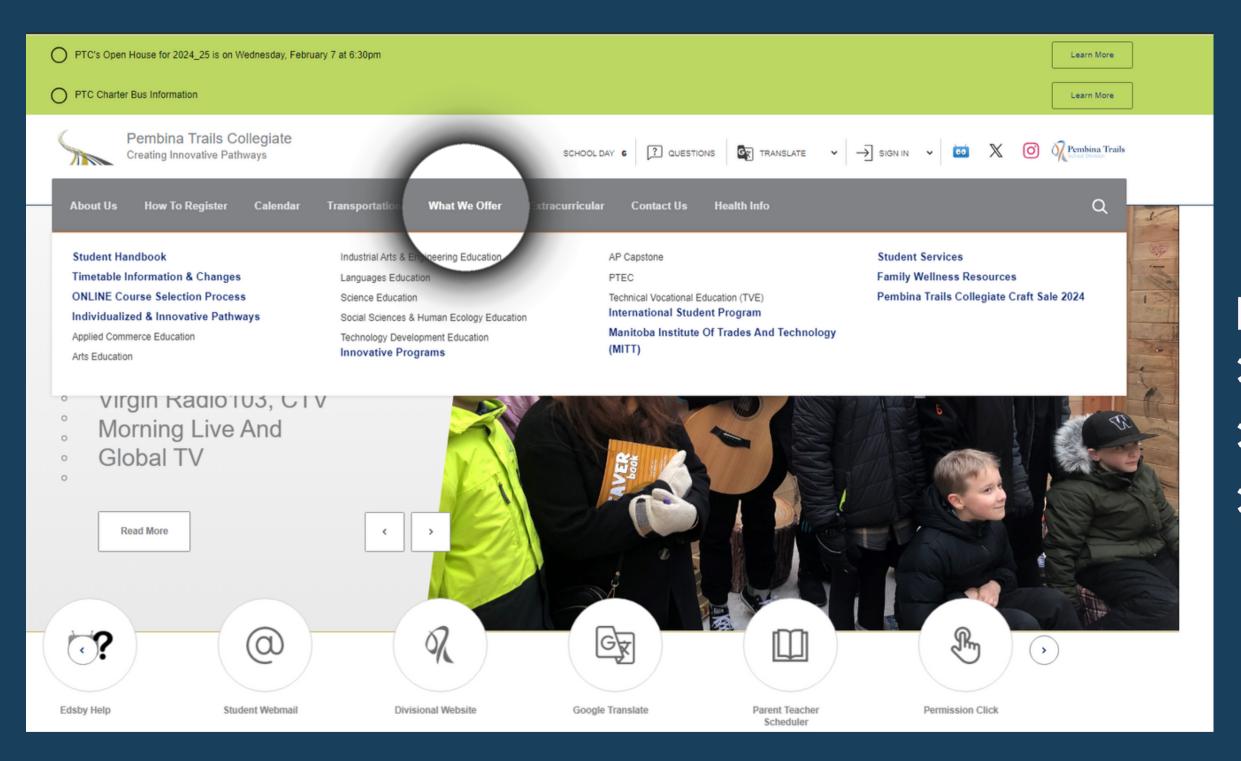
Additional Industry Certifications

- Red Hat Systems Administrator
- CompTIA Pentest+
- EC-Council Ethical Hacking
- Fortinet – Palo.Alto – Checkpoint

PTEC Success
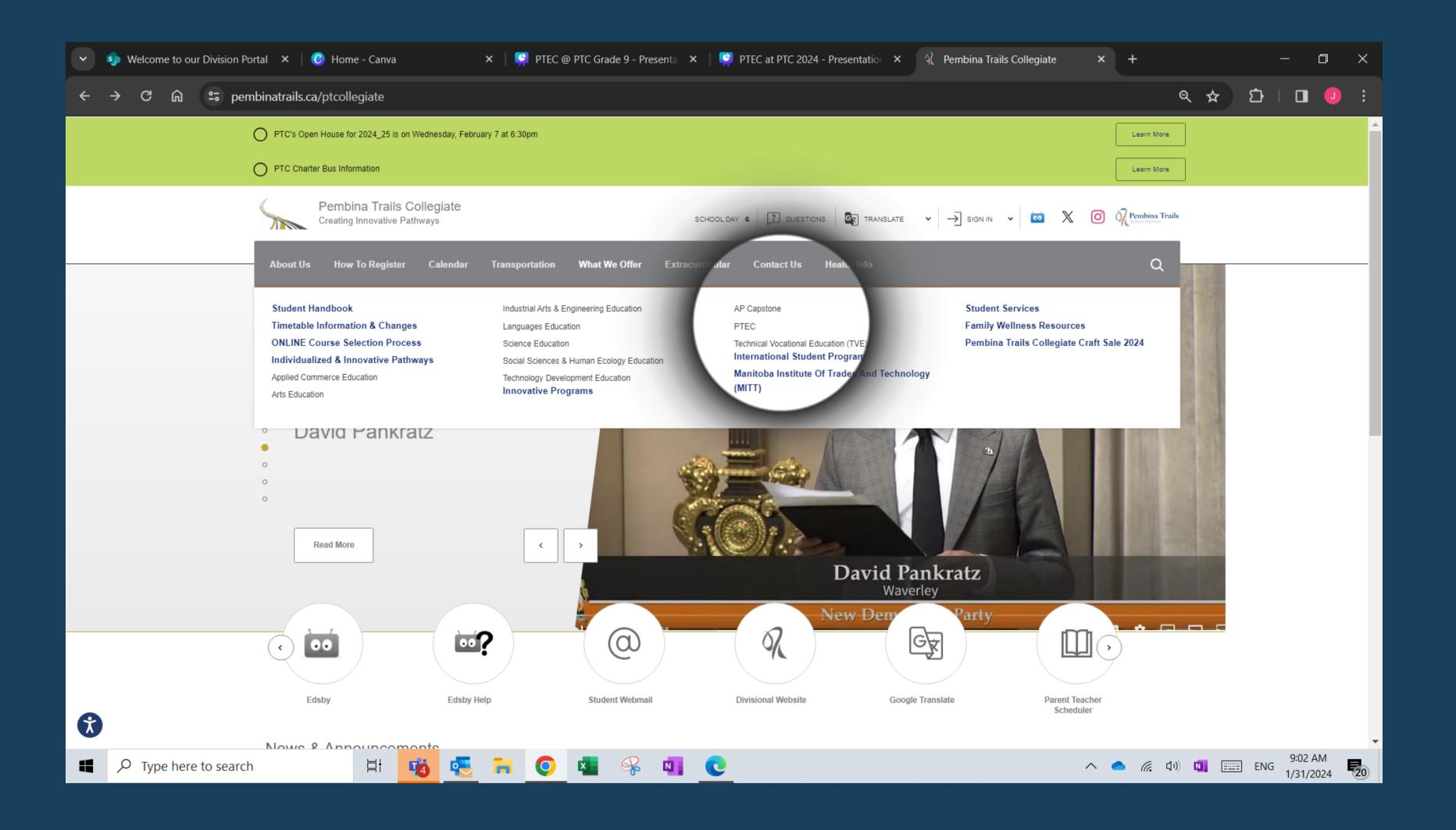
- NSA PTEC students have participated in CyberStart Canada forums
- PTEC SD and NSA students have been interviewed by the Deputy Prime Minister of Canada which highlights that the program is recognized nationally
- PTEC current and past students have been successful in A+, Azure Fundamentals and Azure Administration Certifications
- Students learn to build websites, games, and applications; configure and test physical hardware and equipment in a work-simulated environment
- Real Cloud Technology Exposure
- High student satisfaction
- Safe & comfortable learning environment

Questions?

HOW TO APPLY

pembinatrails.ca/ptcollegiate
>What We Offer
>PTEC
>click on the form and print

pembinatrails.ca/ptcollegiate

PTC's Open House for 2024_25 is on Wednesday, February 7 at 6:30pm   Learn More

PTC Charter Bus Information   Learn More

Pembina Trails Collegiate
Creating Innovative Pathways

SCHOOL DAY 6   ? QUESTIONS   TRANSLATE   SIGN IN

About Us   How To Register   Calendar   Transportation   What We Offer   Extracurricular   Contact Us   Health Info

Student Handbook
Timetable Information & Changes
ONLINE Course Selection Process
Individualized & Innovative Pathways
Applied Commerce Education
Arts Education

Industrial Arts & Engineering Education
Languages Education
Science Education
Social Sciences & Human Ecology Education
Technology Development Education
Innovative Programs

AP Capstone
PTEC
Technical Vocational Education (TVE)
International Student Program
Manitoba Institute Of Trades And Technology (MITT)

Student Services
Family Wellness Resources
Pembina Trails Collegiate Craft Sale 2024

David Pankratz

Read More

David Pankratz
Waverley
New Dem... Party

Edsby   Edsby Help   Student Webmail   Divisional Website   Google Translate   Parent Teacher Scheduler

News & Announcements

Type here to search

9:02 AM
1/31/2024

If you are currently in grade 8 and are a Pembina Trails School Division student, or reside in the Pembina Trails catchment area and are interested in applying to PTEC, please note that there are two parts to the application process.

International Students or students who do not reside in the Pembina Trails School Division can not apply.

Deadline for applications is March 20th, 2024 at noon (12:00 pm).

PTEC APPLICATION PROCESS: 2024-2025:

1. Complete the application by clicking on this form and filling it out.

2. **Write a letter of intention** and let us know why you are interested in being a student at PTEC, and why it would be a good fit for you. Most students send approximately a one-page intention letter.

3. After filling in the application and writing your intention letter, please send both through email to Mrs. Lana Francis at lafrancis@pembintrails.ca. If both are not attached, your application will not be considered. Once Mrs. Francis receives both your application and letter, she will send you a confirmation receipt.

Please join us at the Grade 9 information session on February 1, 2024, at 5:30 pm to learn more about PTEC and PTC.

WHAT TO COMPLETE

email to lafrancis@pembinatrails.ca > application > letter of intention

THE LOTTERY DRAW

email to lafrancis@pembinatrails.ca > application > letter of intention

- Applications and letter of intent due by Wednesday, March 20 at NOON
- The lottery will take place, Monday, April 1
- The 32 students who receive a spot will be sent an email to accept
- The next 10 spots will be reserved as "waiting list" spots
- The other students who applied will receive a letter letting them know that they did not receive a spot or a waiting list spot.
- If a student declines their seat, we move to the waiting list
- Good luck and if you have any questions, please call 204-489-8989

CONTACT INFORMATION

pembinatrails.ca/ptcollegiate

204.489.8989

lafrancis@pembinatrails.ca

THANK YOU

Pembina Trails Collegiate and PTEC