

THE MANITOBA TECHNOLOGIST

Certified Technicians and Technologists Association of Manitoba

CTTAM CONTEST WINNERS READ ABOUT THEIR EFFORTS — PAGE 8

CTTAM SCHOLARSHIP
DEADLINE SOON

CPD-QUALIFYING COURSES
OFFERED

WELCOME NEW
REGISTRANTS

On the cover, CTTAM student members Phoemela Miranda, Mina Mattner and Karl Monsalud, winners of our ARP contest.

Registrant profile

Mark Townsley C.E.T.
Page 10

Scholarship offered

Application deadline soon
Page 17

Celebrating our history

Qualifying exam starts
Page 15



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Connect, share ideas and build relationships
Our governing body
The BOD provides leadership, direction and oversight to ensure our success and long-term sustainability





It may be summer but...

I hope this summer has given you a chance to catch your breath — I know it can be a busy time for many of our registrants. As we move through the second half of the year I wanted to take a moment to reconnect and highlight some of the great work happening across the organization.

Celebrating our first NEAT week winners

I am proud to announce that a team of recent structural engineering technologist graduates from Red River College Polytechnic were the first recipients of CTTAM's NEAT Week award.



The group worked tirelessly on their applied research project, and we are excited to have them represent Manitoba at Technology Professionals Canada's national competition in November.

Congratulations Mina, Phoemela and Karl!

To read more about NEAT week and this group please turn to page 8.

The value of continuing CPD

In a profession built on innovation, technology and public trust, Continuing Professional Development isn't just a requirement — it's a responsibility and an opportunity. Examples of CPD activities are listed below.

Formal activities (more than four hours)

- Post-secondary technical education
- Structured courses
- Attend seminars
- Technical writing

Informal activities (less than four hours)

- Learning technical application
- Learn on the job
- Participate in a workshop
- Read a technical manual

Peer and professional interaction/participation

- Demonstrate a technical application to colleagues
- Involvement with the profession
- Learn a technical application from colleagues
- Mentor or be mentored

Contributions to the profession

- Present research
- Tutor
- Volunteer as a subject matter expert
- Volunteer in the workplace or community

The landscape we work in is constantly shifting and CPD ensures we stay current, capable, and confident in the face of that change. It's about more than meeting standards — it's about growing in ways that directly benefit our careers, our teams, and the communities we serve. CPD also builds leadership, communication, ethics, and

**TWO PROFESSIONAL DEVELOPMENT ACTIVITIES,
+ DONE IN 12 MONTHS
= CPD COMPLIANCE**



problem-solving skills—qualities that strengthen our roles not just as professionals, but as collaborators, mentors, and decision-makers. CPD with CTTAM is designed to be flexible and can take many forms —attending a seminar, mentoring a colleague, completing a course, or even learning through project work. The intent is to record at least two activities from the four provided categories; *formal activities, informal activities, peer and professional interaction and contributions to the profession.*

Many of us complete these activities on a regular basis. Just remember to log in to your online profile and record those efforts throughout the year.

As an organization, we're here to support your learning journey — with resources, events, and tools to help make CPD accessible and rewarding. If you have suggestions for future CPD training topics please contact Marian Parreno at mparreno@cttam.com.

Wishing you a wonderful rest of your summer — hopefully with a few patio evenings, road trips or quiet moments in between all the busy.



Shannon
Shannon Nordal, C.E.T.
CTTAM President

Our President

Shannon graduated with honours from the Environmental Engineering Technology program at RRC Polytech. She was awarded Co-operative Education Manitoba's 2017 Co-op Student of The Year, and received a national honourable mention from CEWIL Canada. In 2019 Shannon was awarded the CTTAM President's Volunteer Award for helping drive student registration numbers and participating in CTTAM's strategic planning session. Shannon works at RRC Polytech in the Civil Engineering Technology and Construction Management Department, instructing the environmental management course.

Our leader's role explained

According to a recent online search, regulatory organization's CEOs and Registrars typically lead the organization's overall operations with the specific duties of a registrar, who manages registration, licensing and registration processes. This dual role means they are responsible for both the strategic direction and operational execution of the organization, ensuring it fulfills its mandate and serves its registrants and the public effectively and responsibly.

Bob has been our leader at CTTAM for almost ten years. He retired from the City of Winnipeg after 31 year as the Supervisor of Public Service Operations.

He has served as our President, Panel of Examiners Committee Member, Canadian Council of Technicians and Technologists Director and past Chair and Program Reviewer for the Canadian Technology Accreditation Board and for Technology Accreditation Canada.

Today our organization consists of:

- CEO/Registrar, **Robert Okabe**;
- Deputy Registrar, **Lauren Gluck**;
- Registration Program Coordinator, **Marian Parreno** and
- Administrative Assistant, **Cathy Penner**

For 60 years CTTAM has been the regulator for technologists and technicians in Manitoba. Our philosophy guides us as we advocate



Robert Okabe attends Board of Directors meeting. He develops and recommends policies and reports on our organization's operations.

for our over 2,800 registrants and growing. We serve our registrants and work with our strategic partners (listed on page 18), industry counterparts and educational institutes to promote technology and applied science careers and education not only in the province but across Canada.

Bob has shown an unwavering dedication to continue to help grow our registrant numbers and their professions.

Key roles

As CTTAM's leader, Bob's responsibilities are multifaceted and require a combination of leadership, management and regulatory expertise.

Listed below are some of his main duties.

Operational management

He oversees our day-to-day operations, including managing staff and resources. He also oversees our finances with budgeting, revenue generation and expense management.

Strategic leadership

Working with the Board of Directors, he sets the overall vision and strategic direction for the organization, aligning it with our strategic plan and regulatory framework. Bob develops and recommends policies to the Board, ensuring they are aligned with the our strategic goals and regulatory requirements.

Regulatory oversight

He manages the registration, the certification and the ongoing professional development of our registrants, ensuring compliance with relevant regulations and standards.

Stakeholder relations

Bob builds and maintains relationships with various stakeholders, including government agencies, registrants, partners, industry, vendors and the public.

Public protection

He protects the public interest by ensuring the competence and ethical conduct of our certified registrants.

Editor's note — Back grounder

We thought it was a good time to let our readers know more about our CEO/Registrar, Robert (Bob) Okabe, what his role is in our organization and how he uses his title and expertise to promote not only CTTAM but the skills and professionalism of our registrants.

Bob has been our CEO/Registrar since 2015 and certified for ten years. He was also our President from 2002-04.

He has a diploma in Civil Engineering Technology from RRC Polytech.

Representation

Bob serves as our primary spokesperson for the organization, representing our interests to various stakeholders.

Leadership

He displays a collaborative and engaging leadership style that inspires trust both within the organization and with external stakeholders. He possesses strong interpersonal skills, with the ability to influence and provide strategic advice at all levels.

Above all, he is passionate about our organization shown through his promotion of ethical practices for our registrants.

CTTAM has come a long way since our humble beginnings in 1965. It is because in no small part of our solid leadership and no matter what the future brings we have strong, innovative and confident people leading the way.

We are thankful for all their efforts.



Technology solutions for the workplace

Several courses offered over the fall months

RRC Polytech's Technology Solutions for the Workplace program offers several short courses, workshops and seminars to provide academic and professional development in the areas of architecture, infrastructure, construction and the environment. The courses are intended to be practical and relevant to anyone looking to upgrade their skills and knowledge in the current technologies of our industry.

Building code courses offered this fall

These courses provide essential knowledge and skills for understanding and applying construction regulations and standards. Courses typically cover topics such as structural integrity, safety protocols, accessibility requirements and energy efficiency. They are designed for building officials and professionals in the construction industry, including architects, engineers and contractors, to ensure compliance with local and national building codes.

Part 3 Large Buildings (Course Code: CODE-1016 and ID: 273421)

Sept. 9 – Oct. 3 Microsoft Teams Sessions
Fee: \$830 Registration deadline: Sept. 2

Prerequisite: Part 9 Small Buildings

This course has been designed to enhance the knowledge of existing code practitioners and those practitioners who wish to improve their competence in interpreting and implementing the principles of the 2010 National Building Code of Canada (NBC) with respect to large buildings.

Part 3 Large Buildings Exam (Course Code: CODE-1017 and ID: 273423)

October 7, 9am – 12pm Fee: \$200
Registration deadline: Sept. 29
The exam will be available online.

Introduction to the Manitoba Construction Codes

(Course Code: CODE-1005 and ID: 273422)

Sept. 15 – Oct. 1 Microsoft Teams Session: Sept. 15
Fee: \$597 Registration deadline: Sept. 8

Prerequisite: None

This online course is designed for those individuals who either currently use the MBC in their day-to-day work, and especially for those individuals who are going to be using the codes for the first time.

Part 9 HVAC (Course Code: CODE-1022 and ID: 274697)

October 1-22 Fee: \$949 Registration deadline: Oct. 10

Prerequisite: None

Note: This course has two parts and is delivered entirely online. The pre-requisite self-paced unit must be completed prior to the three mornings of instructor-led learning.

Part 9 HVAC Exam (Course Code: CODE-1023 and ID: 274712)

Oct. 23, 8:30am to 12pm Fee: \$200
Registration deadline: Oct. 17
The exam will be available online.

Part 9 Small Buildings (Course Code: CODE-2005 and ID: 273424)

Nov. 4-28 Microsoft Teams Sessions
Fee: \$830 Registration deadline: Oct. 27

Prerequisite: Part 9 The House

This course has been designed to enhance the knowledge of existing code practitioners and those practitioners who wish to improve their competence in interpreting and implementing the principles of the 2010 National Building Code of Canada (NBC) with respect to small buildings (Vol. 2 Division B Part 9).

Part 9 Small Buildings Exam (Course Code: CODE-2006 and ID: 273426)

Dec. 4 from 9am – 12pm Fee: \$200
Registration deadline: Nov. 27
The exam will be available online.

Detailed course and program information can be found on RRC Polytech's [website](#).

Don't forget to note the different registration deadline dates. You don't want to miss out on attending a course.



Check out our new registrants

Welcome and congratulations on being certified

Technologists

Abdella Ahmed Abdelrahman Abdalla, C.E.T. New Flyer
Alain Franco Medenilla Nadres, C.E.T. AtkinsRéalis Group Inc.
Andrea Casanova, C.E.T. Standard Aero
Arpit Patel, C.E.T. KGS Group
Asghar Moradi Avarzamani, C.E.T. Sam Home
Bardia Eghbalian, C.E.T. FWS Group
Christian Konowich, C.E.T. City of Winnipeg
Damilare Ajuwon, C.E.T. City of Winnipeg
Domenico Maitland, C.E.T. Polycast International
Issah Lendor, C.E.T.

Janelle Norman, C.E.T.
Jay Arellano, C.E.T.
Julius Renz Vitug, C.E.T.
Mark Derksen, C.E.T.
Matthew Baschuk, C.E.T.
Mohammad Shirbeigi, C.E.T.
Nolan Dagg, C.E.T.
Riley Moreau, C.E.T.
William Gagne, C.E.T.

PCL Constructors Canada Inc.
 Access Credit Union
 Duncalfe Mechanical Ltd.
 Bird Construction
 Wood PLC
 Micro Tool & Machine Ltd
 Manitoba Hydro
 BellMTS
 Stantec

Technicians

Alazar Birhanu, C. Tech. KGS Group
Alireza Barati, C. Tech. Vipond Inc.
Anle Zhang, C. Tech. Shreem Systems & Solutions Pvt. Ltd.
Chirag Patel, C. Tech.
Daniel Sylvester, C. Tech. Canadian Kraft Paper

Donald Humphreys, C. Tech.
Manish Sadhu, C. Tech.
Muhammed Krubally, C. Tech.
Robert Dundas, C. Tech.
Valentin Weiss, C. Tech.

Manitoba Hydro
 PTI Transformers
 Polycast International
 Manitoba Hydro
 MB Hydro



Being certified earns our registrants the right to use one of two titles, Certified Engineering Technologist (C.E.T.) or Certified Technician (C. Tech.). Our professional registrants are highly attractive to employers and are recognized for their solid training and expertise. Certified registrants may also vote in our elections, hold office and participate on one of our many committees. Registrants can access discounts on different services and can explore career opportunities at the Canadian Technology Employment Network job bank at cten.ca.

Be the first to know

Subscribe to our **CTTAM news** to get posts on training, news and events sent directly to your in box. If you are not receiving these emails, please contact us at admin@cttam.com or call 204-784-1081. We will gladly help update your email address and/or your contact information on your registrant profile.



The Manitoba Technologist

The Manitoba Technologist is published by the Certified Technicians and Technologists Association of Manitoba (CTTAM). The opinions expressed by the authors do not necessarily reflect the official views of the Association. This newsletter acts as a moderator without approving, disapproving or guaranteeing the validity or accuracy of any data, claim, or opinion appearing under a byline or obtained or quoted from an acknowledged source. Articles, suggestions or constructive criticism regarding this publication, CTTAM or other matters of interest to engineering and applied science technicians and technologists should be sent to the CTTAM. We recognize that Winnipeg is on Treaty 1 territory, the territory of the Anishinaabeg, the Nehiyaw, the Ojibwe, the Dakota and the Dene Peoples and on the Homeland of the Métis Nation.

CTTAM office

870 Pembina Hwy (2nd floor)
 Winnipeg, MB R3M 2M7
 204-784-1088
admin@cttam.com

Office hours

Our office is open from 8 am to 4 pm, Monday to Friday (Fridays till noon, until after Labour Day, September 2)
Note: Appointments are required to meet CTTAM staff in person

CTTAM staff

Robert Okabe, C.E.T., FEC (Hon.), IntET (Canada)
 CEO and Registrar

Lauren Gluck
 Deputy Registrar/
 Registration Inquiries

Marian Parreno
 Registrant Services Coordinator

Cathy Penner
 Administrative Assistant



Top-rated students entered in national contest

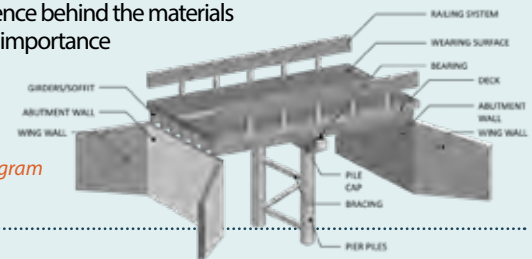
Team from RRC Polytech to compete in November

The students who are enrolled in the college's Structural Engineering Technology diploma program, recently won our applied research paper competition and will represent our province nationally in a NEAT Week event this fall. Their paper, *Pathology of Reinforced Concrete, Timber and Steel in Bridges*, provides a closer look into the pathology of materials used in bridge construction and the importance of knowing how these materials deteriorate.



Congratulations to the CTTAM student members and RRC Polytech students, for submitting the winning paper in our recent applied research paper contest. They will represent Manitoba on the national level with Technology Professionals Canada's at their Neat Week event in November.

In the photo, from left to right is author's Phomela Miranda, Mina Mattner and Karl Monsalud. Their winning report, *Pathology of Reinforced Concrete, Timber and Steel in Bridges*, discusses the science behind the materials used in bridge construction and the importance of knowing how these materials can deteriorate.



Bridge component diagram
by Mina Mattner.



Pathology of Reinforced Concrete, Timber and Steel in Bridges — Executive summary

This report provides a closer look into the pathology of materials used in bridge construction and shows the importance of knowing how these materials deteriorate. Some materials deteriorate at a faster rate than others but may not be as crucial due to their placement. Recognizing the severity of deterioration and when to act is important for structural engineering technologists. Unfortunately, this information is not taught in some educational institutions and there is no single paper or book specific to materials in bridges. That is why this report has collected all relevant information for each material and its most common deteriorations, whether they can be repaired, or the members must be replaced.

The scope of the report includes highlighting why bridges are important, studying each material (reinforced concrete, timber, and steel) in detail, providing the relevant common defects and material deterioration in accordance with the Ontario Structure Inspection Manual (and Manitoba Transportation and Infrastructure (MTI)). And lastly, to conclude with recommendations on when to replace the material in question or conduct possible repair methods.

Some methodologies used in this report included the review and analysis of existing inspection reports supplied by MTI, as well as using their images to show the deterioration over time. In addition, the team conducted their own site inspection and drew their own conclusions based on their observations. Other ways for gathering data included: research from books, news articles, and peer reviewed papers, as well as case studies which show deterioration or technological advancement.

The report outlines the way inspections are conducted by MTI and shows the importance of such inspections and the timing of monitoring for severe deterioration. When a bridge is in critical condition, it is paramount to repair or replace it to avoid damage to property or persons. In addition, it reduces the impact of an unplanned closure of a vital connection that could have been prevented by regular monitoring and maintenance.

National Engineering and Applied Science Technology Week 2025 — November 24 to 28

Technology Professionals Canada's (TPC) preparations for NEAT Week 2025 are underway! TPC uses this event to raise awareness of essential professions in engineering and applied science technology. Over 400,000 careers in technician and technologist roles exist across Canada and globally. With NEAT Week, TPC is celebrating opportunities in fields such as mechanical, civil, electrical, biomedical and environmental engineering, both for students and members of provincial member organizations across Canada.



More details are coming soon on their [website](#).

Don't leave money on the table

College offers several financial aid opportunities

Together with RRC Polytech we are dedicated to helping to develop future technology and applied sciences professionals. They offer awards, bursaries and scholarships that can launch a student's educational path.

Each year, RRC Polytech grants awards, bursaries and scholarships to provide financial assistance for students to help them achieve their academic goals.

These awards are intended to support students who have shown outstanding abilities in academic or vocational areas.

The College's Awards and Financial Aid Office provides a number of support services for students, including information on financial assistance programs available.

Tips for applying

- Explore the complete list of awards, scholarships and bursaries to see which ones you're eligible for and have an upcoming deadline;

- Once you've selected your award, scholarship, or bursary, log in to your RRC Polytech account to complete your application;
- Following your application submission, if supplemental documents are required, you will receive an email with further instructions and
- More information can be found on the RRC Polytech's [website](#).

Don't forget to apply. Good luck!



 We also encourage students to research and explore other scholarship opportunities at the institutions they are attending. Monetary awards can help pay for tuition fees, accommodation and research expenses. It can also minimize the financial burden on your family. An award, bursary or scholarship is not an end but rather a means to an end: producing professionals who expand the expertise in engineering technology and applied sciences across the province.

Photo submission deadline extended

Submit your photos and have them published

Show us your workplace as seen through your camera lens

Calling all photographers. Send us your workplace photos highlighting your daily tasks. Your photographs may be featured as an upcoming newsletter cover, in other CTTAM publications and on our website.

We are looking for pictures that show your relationships between colleagues, clients, your work, technology and your work spaces.

We want to celebrate the large diversity of settings and places where you work. Our hope is to build a library of images which represent the disciplines in which you are employed. All images submitted will be considered for future use. Share your photos, inspire us and other registrants.



It's easy to enter

- Take photos of where you work. You can include yourself in the photo or perhaps add your colleague(s);
- Submit photos by email to adminassistant@cttam.com;
- Submission deadline is no later than **midnight, Friday, October 31, 2025** and
- This contest is open to CTTAM registrants only.

Judging

All photographs submitted will be reviewed by CTTAM. Photo winners will be selected by CTTAM representatives. All decisions of the judging panel are final.

We look forward to seeing your entries.

Additional details on photo requirements and their uses can be found on our [website](#).

Registrant profile

Mark Townsley, C.E.T.

Mark has been a certified registrant since 1990.



The Xcelsior CHARGE FC™ is New Flyer's next generation, zero-emission hydrogen fuel cell-electric bus. Photo courtesy of New Flyer.

In his role as a Senior Mechanical Designer in New Product Development, at New Flyer Industries, Mark leads the design, development and implementation of cutting-edge transit and inter-city bus products and systems, ensuring they meet customer needs, industry standards and sustainability goals. He collaborates with cross-functional teams to bring concepts to life, from initial ideation to production, while driving innovation and efficiency in the transportation industry.

What single project or task would you consider the most significant accomplishment in your career so far?

I have been fortunate throughout my career to have been at the right place and the right time for major projects.

I believe it was my involvement with the design and development of the MCI E4500 intercity coach, which brought together many international partners and shaped my professional career for the last 25 years.

This project ranged from design of dynamic structural steel automotive components to composite reinforced plastic and materials development.

What is the most important part of your work?

An important and satisfying part of my work involves problem solving through creative mechanical design solutions. I work through solutions, using a few steps:

- Identify the problem;
- Understanding its root cause;
- Develop and implement a solution, and
- Evaluate the outcome.

How would your friends and colleagues describe you?

I think I would be described

as friendly, mindful, honest and a hard worker.

What do you find most satisfying about your job?

Design! I have had the fortunate luck of finding my passion early in my career and being able to harness that passion into a meaningful and satisfying lifelong career.

What part of your work experience/job position did you find the most challenging?

I was once in a management position responsible for a mechanical design department of seven engineers and technologists. I ran this department for almost 10 years.

This position was for a small to medium sized business so I wore many hats to ensure all my people were engaged in meaningful projects. These hats ranged from setting up test procedures to full up technical sales to working design solutions in CAD.

What has your work experience taught you about yourself?

I have learned to be patient and aware of others. I have also learned to sweat the details in a balanced way that not only delivers but allows me to still keep a positive attitude.

Personal strategy

Simple solutions to complex problems — this is my methodology.

It's my belief that anyone can come up with a complex solution for a complex problem. It's always been my passion to find the simple solution in order to make it practical, cost effective and less problematic.

I think of myself as a creative problem solver. Whether it's a situation at home or a situation at work. I've always found I look at things differently. It's in my DNA.

I run the scenarios with what I define as perceptive lateral thinking to look for integrated and value add opportunities. It's what I do best.

My expertise includes product development, manufacturing, design for manufacturing, project management, innovation, product branding and marketing.

Away from work, you can catch me sailing, which reminds me simplicity and power can be synonymous.



Mark has worked for five years for New Flyer. New Flyer was founded in 1930 and is now the largest transit bus manufacturer in North America, with fabrication, manufacturing and service centers in Canada and the United States. They continue to build on their 95-year legacy of innovation to deliver innovative mobility solutions and technology that meets the demands of communities today and into the future.



Around and about

Registrants hit the greens at golf event

On Thursday, June 19, the 2025 *Making Links Engineering Classic* golf tournament was held at Quarry Oaks in Steinbach.

The tournament provided a day on the links for golf, prizes and an opportunity to network with fellow professionals.

In attendance were several current and past CTTAM Board of Directors members.



From L to R: Robert Okabe, CTTAM CEO & Registrar; Glenn Lelyk, Board member; Andrew Procca, Past President and Bernardo Pasco, President Elect.

Investments in the future

Helping students realize their full potential



Donations from our registrants and RRC Polytech alumni has helped the college grow into a robust and agile educational institution

Endowments help technology students at the college to not only successfully graduate but also to become valued working professionals in the applied sciences industries within Manitoba.

Donations accepted

CTTAM graciously accepts donations to this endowment fund on our registrants behalf. Our donors will receive a tax receipt directly from RRC Polytech.

How funding works

RRC endowments are gifts of cash where the college invests the entire donation. Only the interest is used to fund initiatives for the purpose established at the time the fund was initiated. You can add to the endowment fund at any time.

Endowments are the perfect vehicle to fund a scholarship, a bursary or an award. Your gift can:



- Transform learning and research spaces;
- Enhance a student's experience;
- Advance Indigenous achievements and
- Support a specific program area.

It's easy to donate

You retain the power to change your bequest at any time as your plans or financial circumstances change.

For more information, please contact Robert Okabe, CTTAM's CEO and Registrar, at 204-784-1080.

Information on established endowments and details on how to donate, can also be found on the RRC Polytech [website](#).

The generosity of our registrants inspires us everyday.

Thank you for your significant contributions.





Registrant feature, written by Ruben Eliett-Araujo, C. Tech.

Staying technically up-to-date in the digital transformation era

Practical strategies to future-proof your skills as a technologist or a technician in an ever-evolving industry.

Registrant Ruben Eliett-Araujo, C. Tech., is a mechanical engineering professional with international experience in Venezuela and Argentina, specializing in the energy and aeronautics industries. A TEDx speaker and renewable energy researcher, he is passionate about mentoring junior professionals and embracing emerging technologies. Ruben has been a proud member of CTTAM since April of this year. Welcome to CTTAM Ruben!



From artificial intelligence-driven

predictive maintenance to digital twins in industrial design, the world of technology is evolving at a never-before-seen pace. For technologists and technicians, staying current is no longer optional—it's essential.

The rise of digital technologies, automation and Industry 4.0 has not only introduced new skills but also transformed workflows across manufacturing, energy, construction and software industries.

So how do experts handle the change without getting overwhelmed? This article offers practical, easy-to-follow tips on how to stay up to speed with change without getting bogged down.

Why digital skills matter now more than ever

Digital transformation is more than adopting new tools; it represents a fundamental shift in how work is done.

For example, mechanical technologists can now use IoT-enabled sensors for condition monitoring in hydroelectric plants, while electrical technicians might leverage cloud-based software for diagnosing grid issues.

Embracing these changes not only enhances employability but also positions technologists and technicians as leaders in implementing innovative solutions.



However, staying updated comes with challenges. Rural areas, for instance, may face limited access to high-speed internet or advanced training programs, making it harder for technologists and technicians to engage with cutting-edge technologies.



Invest in targeted online learning

Continuous learning is one of the most effective ways to stay current. Fortunately, several platforms offer affordable or free courses tailored to technical professionals:

- **Coursera:** Courses on AI, electrical systems and mechanical design, often in collaboration with leading universities like the University of Manitoba;
- **edX:** Micro-credentials from institutions such as MIT and the University of British Columbia, focusing on topics like renewable energy and automation;
- **LinkedIn learning:** Skill-based videos on CAD, PLCs, project management and technical communication and
- **Khan Academy:** Ideal for refreshing foundational knowledge in math and physics.

When choosing a course, seek content that features industry-specific examples or simulations that mirror real-world situations in key sectors, such as energy and agriculture.

Leverage local resources and networks

You don't have to navigate this journey alone. Membership in organizations like CTTAM provides access to workshops, webinars and networking opportunities. Additionally, subscribing to specialized websites and publications — like Canadian Manufacturing — can help you stay informed about trends and innovations.



For Manitobans, attending local tech expos or joining industry-specific forums can also provide valuable insights into emerging technologies.

Use free tools and simulators to practice new skills

Practicing new skills doesn't always require expensive software or lab time. There are many free or open-source tools available, including:

- **TinkerCAD and FreeCAD:** For 3D modeling and prototyping;

Continued on page 13.



Registrant feature, Written by Ruben Eliett, C. Tech.

Staying technically up-to-date in the digital transformation era

- *Logisim*: For simulating digital circuits;
- *MIT App Inventor*: For developing mobile applications;
- *OpenPLC*: To practice ladder logic for industrial automation and
- Siemens S7-PLCSIM Advanced (demo): For testing programmable logic controllers.

These tools allow you to experiment with new workflows before applying them in real-world settings, reducing the risk of errors and enhancing confidence.

Stay curious and read widely

Technical skills aren't just developed in classrooms—they're improved through continuous learning. Dedicate time each week to reading industry press releases, white papers and technical blogs:

- *Engineering.com*: Covers a wide range of engineering topics;
- *IEEE Spectrum*: Focuses on cutting-edge technologies and innovations and
- *TechBriefs.com*: Offers insights into emerging trends in technology.



You can utilize RSS feeds, email digest, or browser extensions like Pocket to streamline your reading. This ensures you stay informed without feeling overwhelmed.

Prioritize regular development

Time is often the biggest barrier to staying updated. To overcome this, set aside 30–60 minutes per week for learning or practicing new skills. Define monthly objectives, such as “learn basic Python for data logging” or “attend a webinar on smart grid technology.” Small, consistent investments in your development translate into long-term capabilities.

Final thoughts

In a world where technology evolves monthly, curiosity and adaptability are indispensable traits for any technologist or technician. Whether you're just starting your career or have decades of experience, there's always something new to learn.

By embracing lifelong learning and leveraging local resources, you can not only future-proof your skills but also lead Manitoba's transition to a smarter, more sustainable future.



Our technology ring

Showcase your commitment to your profession

Only certified technologists and technicians in good standing are entitled to wear our technology ring.

The sterling silver band features a repeating pattern of five gears bracketed by a maple leaf on each side.



The technology ring represents the union between the member, CTTAM and fellow members.

It may be worn according to your preference but professional rings are traditionally worn on the pinky finger. The maple leaf design was chosen to reflect our country and make it more likable by members across Canada. The ring is distinctive enough so that the public could identify at a glance that it is a symbol of Certified Engineering, of an Applied Science Technician or a Technologist.

The gears represent the five members of an engineering team:

- Trades person - Technologist - Technicians
- Engineers - Scientists

The technology ring is available to all certified technologists and technicians at a cost of \$110.

Affordable

The technology ring is available for registrants at a cost of \$110. You will have to book an appointment for ring sizing and the pickup of any ring orders.

Professional rings are typically worn on your pinky finger but of course can be worn on any finger. This is something to consider when it comes to selecting your ring size.

Order your ring today!

If you have questions or would like to purchase a ring please contact our Deputy Registrar, Lauren Gluck at 204-784-1081.

March 1996

Celebrating our history

Starting in 1996 applicants now have to write a law and ethics exam as a requisite for certification

Below is an article published in 1996, explaining the introduction of a written exam requirement for certification.

CTTAM is committed to the introduction of a Professional Practice examination as a requisite for certification. All applicants for certification after October 31, 1996 will be required to satisfy the requirement.

The examination will have two general parts – law and ethics.

Technicians and Technologists must be aware of the various laws, regulations and codes that affect them in their occupation and as a professional. In many instances, it is not that one has set out consciously to break a law or regulation but rather it is more due to ignorance of them.

Unethical conduct reflects adversely on all certified technicians and technologists. One distinguishing feature of any profession is that membership in that profession entails an ethical obligation to temper one's selfish pursuit of economic success by adhering to standards of conduct that could not be enforced either by legal fiat or through the discipline of the market.



Ethical decisions are not always obvious or easy. Ambiguity, incomplete information, points of view and conflicting objectives can make an ethical decision difficult. Written standards, codes of ethics and a well developed decision-making process make these decisions easier.

The format of the Professional Practice examination, scheduling, fees, etc. are being studied by an ad hoc committee of CTTAM. They will welcome input from members now rather than later.

First-time course offered

Asset management fundamentals

Opportunity to learn new skills

This course provides a valuable learning chance to stay current with industry trends, learn new skills and advance your career.

Asset management fundamentals involve a systematic approach to managing an organization's assets throughout their lifecycle to maximize value and achieve organizational objectives. This includes planning, acquiring, operating, maintaining and disposing of assets, while balancing costs, risks and performance.

This full-day introductory workshop is designed to provide you with a foundational understanding of asset management (AM) principle and practices. Using real-world examples from municipal infrastructure, while drawing parallels to private sector asset systems, the course provides a practical and engaging overview of AM as a strategic discipline. This course is open to both registrants and non-registrants.

Course details

Friday, October 3, 2025
9:00 am to 4:30 pm (with 30 minutes lunch break)
Norwood Hotel, 112 Marion Street, Winnipeg
Registrants - \$500 Non-registrants: \$600

Learning objectives

By the end of this course, you will be able to:

- Define asset management and explain its relevance;
- Describe the key components of an asset management system;
- Understand the role of lifecycle planning, levels of service and risk management;

- Identify how asset information supports informed decision-making;
- Recognize common tools, standards and frameworks used in asset management and
- Apply basic asset management principles to real-world municipal and industrial examples.

To register, please visit our [website](#).

If you have any questions, contact us at 204-784-1083.

Instructor background

Instructor, Chad Buhlin is a Certified Asset Management Professional (CAMP) and founder of Buhlin Asset Management. He brings over a decade of experience working with municipal infrastructure projects across Canada, having held roles in both engineering consulting and municipal public works.





Reclassify to a technologist

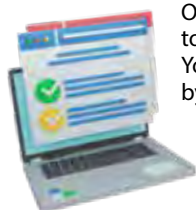
Competency exam allows for a technologist certification

Technicians who have completed a qualifying program can write an exam which once passed, allows them to obtain a technologist title.

Our competency exam is designed to test the skill and knowledge of engineering and applied science technicians who wish to earn the certified technologist title without having to take additional courses or training.

The process

You must be certified as a certified technician (C. Tech.) and a registrant in good standing to qualify to write.



Once you pass the exam, you can reclass to a C.E.T. by submitting a reclass application. You must also provide proof (validated by three references) that you have a minimum of one year of relevant work experience at the technologist level.

The exam

The examination consists of 110 multiple-choice questions, including questions with graphs, diagrams, schematics and questions that require calculations.

The exam is designed to assess and validate certain aspects of a candidate's technical abilities.

Exam questions vary in the level of cognitive difficulty. The exam is closed-book and is three hours in duration.

There are ten competency exams available:

1. Architectural;
2. Civil;
3. Construction;
4. Electrical;
5. Electronics;
6. Engineering design and drafting;
7. Instrumentation;
8. Mechanical;
9. Petroleum and
10. Fundamentals of technology

Background

The Association of Science and Engineering Technology Professionals of Alberta (ASET) developed the competency exams as part of a pathway for technicians to reclass to a technologist.

There is significant cost to develop these exams so we have partnered with ASET in order to be able to offer our members this opportunity.

Educators and technology professionals have also reviewed the competency exams content to ensure that all four of the modules encompassed the correct scope of knowledge.

The examination content contains four modules:

- Technical analysis;
- Technical design;
- Technical evaluation and
- Project coordination

Competency exams have been available to members since 2017.

It is important to note that one year of relevant work experience at the technologist level along with writing and passing a competency exam is required in order for you to submit a reclass application.

To date, sixty-two CTTAM members have written a competency exam, with the majority of members passing the exam.

Anyone wanting to explore this option further should visit our [website](#).



Upcoming exam dates

Exam date	Registration deadline
September 17	August 12
October 22	September 23
November 19	October 23

Please note that dates are subject to change.

Our competency exam is designed to test the skill and knowledge of engineering and applied science technicians who wish to earn the certified technologist title without having to take additional courses or training.

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to learn more and enrol in the plan that is best for your lifestyle.

Scholarship opportunity

\$1,000 in funding available

By helping support technology and applied sciences students financially, we hopefully make the decision to attend and finish a college or university program a little easier.

A top priority and core principle for our organization is expanding access to post-secondary education for students whose parents are CTTAM registrants.

Every year, a \$1,000 scholarship is made available to students who meet our qualifying criteria.

Details

To qualify for our scholarship, you must:

- Be a child of a registrant in good standing;
- In second- or third-year level of a recognized program;
- Attend either RRC Polytech or the University of Manitoba and
- Be a full-time student.

Our scholarship assists with expenses incurred while undertaking studies for second or third-year engineering or applied science technology students enrolled at either RRC Polytech or the University of Manitoba.

Additional scholarship details along with the application form can be found on our [website](#).

All qualifying submission are coded and the winning recipient will be chose by the lottery method.

Qualifying students are encouraged to apply. Good luck!

Editor's note

We also encourage students to research and explore other scholarship opportunities at the institutions they are attending.

Scholarships can help pay for tuition fees, accommodation and research expenses. It can also minimize the financial burden on your family.



Our strategic partners

Building on our industry connections

Having strategic partnerships with like-minded organizations, provides us and our associates with mutual opportunities to build brand loyalties with our members, along with increased opportunities to attract and retain highly-skilled technicians and technologists.





Upcoming networking event

Connect, share ideas and build relationships

As part of CTTAM's 60th anniversary celebrations, we're inviting registrants from Brandon and nearby communities across Western Manitoba to join us for a special gathering.

The event will be held on Thursday, September 25, from 5:30 to 9 pm at the Victoria Inn Hotel and Conference Centre in Brandon. Brandon is Manitoba's second-largest city and is located approximately 214 kilometres west of Winnipeg.

In attendance will be Board Directors, staff, registrants and industry representatives.

If you live in Brandon or are within driving distance (up to 2.5 hours away), we'd love to have you join us.

To register, please fill out the form that is available on our [website](#).

If you have questions, feel free to contact us at 204-784-1083.

Our governing body

The Board of Directors provides leadership, direction and oversight to ensure our success and long-term sustainability

President

Shannon Nordal, C.E.T.

President Elect

Bernardo Pasco, C.E.T.

Past President

Josee Remillard, C.E.T.

Board Intern

Michelle Ewashko

Lay Person

Glenn Lelyk

Directors

Aylen Aussant, C.E.T.

Clive Bryson, C.E.T.

Peter McDougall, C.E.T.

James Schmidt, C.E.T.

Julie Schneider, C.E.T.



Key responsibilities include:

Strategic direction — They help define our mission, vision, and long-term goals, shaping our overall direction;

Oversight and governance — They establish and monitor policies, ensuring we adhere to legal and ethical standards and manage risks;

Executive management — They hire, evaluate, and set compensation for the CEO/Registrar;

Financial management — They review budgets, financial reports and major financial decisions, ensuring our financial health;

Stakeholder relations — They engage with stakeholders (including registrants, industry and government);

Risk management — They identify, assess and mitigate potential risks and.

Compliance — The Board ensures we comply with all applicable laws and regulations.

Our committees

Board committees are specialized groups of board members formed to delve deeper into specific areas, providing in-depth analysis and focused expertise to help form the Board's decision-making.

We have three committees:

- The Certification Board;
- The Leadership and Development Committee and
- The Nominations Committee

The Certification Board is responsible for the evaluation of an applicant's work history, professional reference information and classification level. Recommendations of the regulatory category — either a technologist or technician, is provided to the Board of Directors.

The Leadership and Development Committee

recommends educational courses specifically designed for the professional growth and development of our registrants. Committee work includes researching courses, identifying speakers for educational events, reviewing course materials, recommending programs and sponsorship opportunities.

One of the primary duties of our **Nominations Committee** is to seek out potential candidates to fill Board member positions. The committee is trusted to review candidates' qualifications to ensure they match our requirements. This includes examining how candidates are assessed.



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Individual circumstances may vary. Conditions, limitations, and exclusions apply. See policy for details. You may contact one of Manulife's Licensed Insurance Advisors or your licensed insurance agent if you need advice about your insurance needs.

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