



Students from Waterpower Essentials tour the Stanley Adams GS in Peterborough

# TEACHING WATERPOWER

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It's been another exciting year for the fledgling waterpower courses at the University of Toronto's engineering program. 2022 marked the launch of the new course *Renewal of Waterpower Facilities*. A dozen students gathered online weekly from early January to late April to learn about the many aspects of overhauling, upgrading, refurbishing or redeveloping an existing waterpower facility. Students were grouped to work on an existing real-life project for which data was provided by Ontario Power Generation, H2O Power or New Brunswick Power. They learned to differentiate and describe the equipment and structures of the facility of their choice and developed options for improving its safety, reliability and technical, social, environmental and economic performance. For the preferred option the details of schedule, budget, risks and their mitigation was worked out. A host of industry-experienced instructors, led by Michael Morgenroth, a waterpower practitioner of over 30 years, guided students on their tour of historic sites to be renewed with a touch of innovative ideas. In January, the course is going into its

second year, and welcomes students with an interest in the waterpower industry to enroll. Course information can be found [here](#).

Meanwhile, the fall term was second year for *Waterpower Essentials*. Building on the success of last year, the course was adapted to a hybrid delivery model. University of Toronto students meet in-person weekly, joined by a subject matter expert. The sessions were streamed to make them accessible to students outside the Toronto area. The multi-disciplinary course centres on a project based on the greenfield development of the Namakan River and the proponent Lac La Croix First Nation. With support from industry experts, students grapple with the complex challenges, both technical and social, which are inherent not only to waterpower development but to the many domains in engineering. In addition to the Essentials course, the Water Resources Engineering course now features a waterpower based feasibility assessment allowed the students to develop the skills of doing statistical analysis on a water course and to come up with a

realistic assessment of waterpower potential and related hydrological constraints.

The courses are made possible by the contributions from OWA member instructors from the following companies; Stantec, Ontario Power Generation, Chant Construction, Touzel BSi, Mavel, Arcadis, HydroOne, and the International Hydropower Association. In addition to the high degree of subject matter expertise, students encounter a real-world perspective on waterpower and invaluable mentorship.

## THE JAMES L GORDON – HYDRO TRAVELER GRADUATE AWARD

We are also excited to announce that the James L. Gordon Graduate Student Award is now accepting scholarship applications, and is always

open for donations from those inclined to show their generosity: <https://engage.utoronto.ca/site/SPageServer?pagename=donate#fund/1811>

Starting in 2023, an amount of \$5,000 will go towards a student with a documented interest in waterpower studies. Please contact Bryan Karney at [bryan.karney@utoronto.ca](mailto:bryan.karney@utoronto.ca) for more information and any updates on application details for this award.

## GET INVOLVED

If you are interested in enrolling in Waterpower Essentials, Renewals of Waterpower Facilities or the full Masters of Engineering, please contact Sharon Mandair at [Sharon.Mandair@stantec.com](mailto:Sharon.Mandair@stantec.com). Renewals will be launched in January 2022, it's not too late to enroll! Learn more at <https://gradstudies.engineering.utoronto.ca/emphasis-in-waterpower/>