



What is the Engineer-in-Residence Program?

www.eir.ca

The Engineer in Residence (EIR) program is a partnership between engineers, educators, industry and government that brings real-world experience to the teaching of science, technology and mathematics (STM). This pioneering project is an initiative of Professional Engineers Ontario (PEO), the body that licenses professional engineers, and regulates and sets standards for the engineering profession in Ontario.

Through the EIR program, a volunteer engineer is matched with an elementary or high school in his or her area. Working with teachers, administrators and students over an entire school year, the engineer becomes part of the community and helps bridge the gap that often exists between the real world and classroom theory. Seeing the practical applications of what they are taught piques the students' curiosity. They gain a better understanding of why they are learning certain subjects. At the same time, the engineer serves as a positive role model, motivating students to pursue education and careers in science, technology and math.

Volunteer engineers can enhance their training and communications skills while adding balance to their lives. Participating companies make a valuable contribution to their communities, and over the long term, industry may enjoy a larger pool of skilled graduates to fulfill their recruitment needs.

In the fall of 1998, the EIR program began as a four-month pilot in five Toronto-area schools. By September 1999 14 schools were involved. The 2009-2010 academic year opened with 73 EIR schools across Ontario.

The EIR program provides support and resources to all participants. This includes guides for setting up and running the program, a website (www.eir.ca), resource materials, curriculum-linked classroom-tested activities, training sessions and other opportunities for interaction, an on-line forum for sharing ideas, and public relations in the community.

PEO spearheads the program with the support of industry and government. Firms such as Gennum Corporation, Woodbridge Group, MD Robotics, Canatom and Wardrop Engineering, as well as organizations such as the National Research Council and the Canadian Microelectronics Corporation have allowed their employees time off from work to participate in the program.

In the fall of 2001, the Ontario Minister of Energy Science and Technology granted the EIR program four years of funding to expand the program, develop a presence on the Web and hold community events in different regions of the province. In 2005, the Ontario government renewed its commitment to the EIR Program. In 2009, the EIR Program received its second 3-year PromoScience grant from NSERC.

The EIR program gratefully acknowledges the support of:

- Professional Engineers Ontario
- The Impact Group
- Conestoga Rovers & Associates
- University of Waterloo, Faculty of Engineering
- Research in Motion (RIM)
- NSERC - PromoScience

Who's Who at the EIR Program

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EIR FAQ's

1. How can I/my school participate?

Interested engineers and schools should contact the EIR program office for an application, or visit www.eir.ca and go to About EIR/ Become an EIR or Become an EIR school.

2. What qualifications does an EIR need?

EIRs are engineers who are team players enthusiastic about what they do and have an interest and ability to work with young people.

3. Do I need a professional designation (P.Eng.) to become an EIR?

No, anyone with an engineering degree can volunteer.

4. How are schools and engineers matched?

The EIR program office matches engineers with schools in their area based on criteria provided on the application forms. The EIR meets with key school officials and together they decide if it's a good fit.

5. Are there differences between volunteering at an elementary and a high school?

Every school is slightly different, but on the whole, elementary schools tend to have fewer science specialists on staff than high schools. As a result, at the elementary level, the EIR's scientific knowledge may be most in demand. At a high school, the EIR may be asked to share his or her knowledge of real-world applications, contacts in industry, act as a mentor or role model, help with design projects and participate in career counseling.

6. How do we set-up the program?

A teacher at each school volunteers to be the primary contact teacher, the EIR's main contact in the school. Once the program matches the school and engineer, the EIR meets with the principal, lead teacher and other key people to plan activities. EIR program resource materials offer step-by step advice on how to get started. The program office can also help.

7. What does being a primary contact teacher involve?

The contact teacher is the engineer's primary liaison at the school and helps integrate the EIR into the school community. They plan together to make the best use of the EIR's time.

8. Is training provided?

There is an orientation session for new EIRs and teachers. The program also offers a variety of resource materials, including a Program Guide with curriculum-linked activities, and a website www.eir.ca. The EIR program office offers personal, one-on-one support in setting up the program, custom-tailored to the needs of the school.

9. How much time is an EIR expected to devote to this program?

There is no set number of hours, but we ask our EIRs to commit for the entire academic year. We urge engineers and schools to develop a custom-tailored plan that works for both. A consistent, ongoing relationship is more important than the total number of hours.

10. As an EIR, will I be expected to teach a class?

No, not necessarily. EIRs can support the teaching of science and technology in a number of ways: presentations, lab demos, suggesting and developing activities, helping with special projects, career counseling and forging links between the school and industry.

11. I work full-time, can I still be an EIR?

There are many EIRs who work full-time. Some make use of their employer's existing flextime policies, while others have made special arrangements with their supervisors. Often the only time away from work will be the time spent at the school. Planning and preparation can be done outside office hours. The EIR program office can help.

12. I would like to be an EIR at my local school, can I approach them?

Contact the EIR program office for more information first. If no schools in your area have applied to the EIR program, you can encourage a school to participate.

13. Who benefits from the EIR Program?

Everyone! Children gain a new perspective on learning, teachers and schools gain access to additional resources, engineers give something back to the community, add balance to their lives, and can enhance their communications and training skills.