Metra is coming to campus!

Metra is looking for talent to recruit into the company. They are particularly interested in engineering students (undergrads and MS) in Civil, Electrical, Structural and Mechanical Engineering. Come by and hear from the Chief Engineering Officer, Bruce Marcheschi and Chief Mechanical Officer, Jim Derwinski. They will talk about the interesting projects Metra is undertaking as well as the challenging and long-term opportunities for Northwestern students at Metra – Internships and full-time opportunities. Also speaking will be the Chief HR officer Brenda Smith to answer questions about career opportunities at Metra.

### Metra Information Session

**Thursday, October 23**  
5:00 pm – 6:30 pm  
Tech, M345

Meet Bruce Marcheschi, Chief Engineering Officer and Jim Derwinski, Chief Mechanical Officer

Join us to learn about the Metra Internship Program!

Looking for undergraduate and MS students in Civil, Mechanical and Electrical
Ongoing Projects at Metra

Positive Train Control
Positive Train Control (PTC) is a newly mandated system to provide a safety overlay on the existing signal system. The four (4) main functions include preventing train-on-train collisions, to prevent a train to speed over the established limits, to prevent a train to pass a "stop signal", and to prevent a train to encroach a work zone. This complicated system will use various techniques and subsystems to accomplish this such as GPS, VHF radio networks, wifi, Cellular, and multilevel networks to communicate with other railroads.

Upgrade of Entire Leased Telecom Network
It has been declared by AT&T that most analog telephone circuits as you know them, will be unavailable by the year 2020. Metra currently uses over 2000 of these types of circuits including 4 wire voice, analog data, and even T1 circuits. Over the next few years, Metra will redesign out entire 6 county analog network and develop a new IP based digital network that will still carry all circuits required.

Microwave System
Metra owns and operates an eight (8) hop Microwave system that carries Voice, Data, Signal, and other circuits vital to Metra operations. The system, which was originally installed in 1989 and upgraded in 1999 is now due for another overhaul. What was originally a Direct-to-direct analog system, then converted to an OC-3 scheme, will now be replaced with a network based system. This project entails path studies, FCC licensing, procurement, and project management.

Englewood Flyover
Grade Separation of RID and NS/Amtrak at 63rd St. in Chicago, Over 2000 Ft of new elevated 3 track structure, Construct 12000 Ft of new main line track, Construct new bridges at 61st St., Wentworth, 67th St.

31st Street Substation
New Traction Power substation - takes ComEd power distributes DC Power to Catenary system

Union Pacific North Line Bridges
Replace 11 Bridge in City of Chicago, also reconstruct Ravenswood Station