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Iron Man

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**By Ben Rayner, Sound Senior Staff
Writer:**

BRANFORD:

Even though our lives are enriched every day by it, some people still think of engineering as a dull career and profession. However, Professor Steve Ross of the University of New Haven (UNH) is promoting a new program that instills excitement in his students.

Steve and his junior intro to mechanical design class at UNH are helping a local non-profit company design and implement innovative ways to assist its disabled workers.

Steve says that from a very early age he was intrigued with how machines operated and seemed destined for a job in engineering. Encouraged by his father, Steve graduated from Johns Hopkins and has a PhD in mechanical engineering. He says he's never lost the excitement and enthusiasm for his craft.

"As a kid I just wanted to take everything apart. I was fascinated by how things worked. I remember at nine years old taking apart an alarm clock and putting it back together," says Steve. "I did have one spring left over that I

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couldn't figure out, but I never lost my fascination. I like to figure out how things work—and I am still that way.”

Steve and his wife just moved to Branford last year, but having lived in New Haven, they knew and loved the shoreline.

“We love Branford. We loved the food and the restaurants, and the Green. It is such a lovely town. Besides I was getting too old to take care of a house, and a condo was just fine,” he jokes.

Steve has taught at UNH for 25 years and when the department chair of the Taglietela College of Engineering suggested a new practical program in conjunction with a local non-profit, he jumped at the chance to be involved. The company, CW Resources Inc. of New Britain, is an accredited organization that provides employment opportunities and vocational services throughout the state.

“We tried it last year and we're really enthusiastic about helping these folks,” recalls Steve. “It is such a nice group of people up there and a practical challenge like this was really exciting.”

What was needed were simple machines that could be created, tested, and built, allowing clients to manipulate and handle intricate pieces for assembly. Steve's class this year was tasked with inventing a machine that could hold sections of metal “dog tag” links while the two halves were connected, a difficult task for someone with full manipulation, all the harder with someone with limited mobility or under the side effects of medication.

“It is not easy to do. These chains are difficult to manipulate; there was a lot of design and thought that went into the projects,” Steve says. “Their mission is to help disabled people and we are proud to be a part of that.”

Like any design these prototypes need to be used and refined, but Steve says the company is pleased with the initial machines from this year and last year and believes they can be built and implemented into the workforce.

Steve says that the lack of engineering and technology candidates is something that he sees

firsthand. But according to Steve, a career in the engineering field is a challenging and rewarding choice for hardworking students.

“This is a real problem for us here. There is definitely a lack nationally,” says Steve. “The thing is, you don’t need to be brilliant to be an engineer, just a hard worker. It think it is harder to become an engineer than some other high profile professions—it is difficult. But these kids who are graduating are walking right into high paying jobs straight from school.

“You certainly won’t become a millionaire, but it is a great career path,” he says. “It may not be glamorous, but it is very challenging and a great solid career that you will be able to support a family on.”

Steve is encouraged by the diverse crop of students he teaches and sees this program as an example of how vital the profession is to a community and the positive impact of engineers.

“They do meaningful work and it is great experience for the students,” says Steve. “We feel good about doing this type of work. It has been a great motivator for the students. All they need is that motivation.”

Most people just don’t think about it, Steve notes, but engineering rules everyday life. Mechanical engineers design everything from sports equipment to kitchen gadgets and home heating and air-cooling systems.

“It’s a creative and wonderful way to work,” Steve says. “Taking what we learn as engineers and applying those ideas to solve a problem is very satisfying. To analyze ideas and make something you can be proud of is great.”

In the accompanying photo, Steve Ross is holding a prototype Stirling engine his UNH class designed for another project. For more on this centuries-old invention and how it’s being used today to help solve energy problems, visit www.pureenergysystems.com or web search using keyword Stirling engine.
