

November 1999

How can students afford an engineering education without working full time?

Increasingly, we see students trying to work full time and pursue an electrical or computer engineering degree at the same time. We don't recommend it. Our curriculum is pretty much a full time job. It is perhaps one of the most concentrated learning experiences you'll have in your life. How do you maximize your learning experience and still get the cash to stay in school?

One answer is engineering co-operative (co-op) work experience and summer jobs. With a co-op job, the idea is to take a break from your engineering education to work a summer plus one or two semesters. Many companies **prefer to hire from their co-op pools**, because they have already "tried the goods" so to speak. The **pay is good**, and it's amazing to see the difference a co-op experience will have on students who return to finish their degrees. Interest, motivation, and appreciation of the material is considerably enhanced, **resulting in much better grades**. In addition, if you don't happen to be a straight A student, companies will look very closely at your co-op experience and references. You will be amazed at how much an engineering job experience that reveals your reliability, trustworthiness, integrity, and communications skills will do for your job prospects. And these have nothing to do with your technical engineering prowess!

Another way to lighten the financial burden is to cut back on course load. Note that we encourage students to work with faculty on projects and to meet other Departmental needs (e.g. grading and system administration duties). However, we don't want students working more than 10 hrs./week and if a student's financial needs cannot be met with this workload level, then co-op should be considered.

Whether you're a first year student or employer, please take a look at the [ECE Co-Op Center](#) created by Prof. Bruce Segee and his students with support from Butler Professorship funds. (Employers, note that **many** of our first year students **already** have the computer skills you need.)

New ECE Student Job Seeker Status web page lets employers know what's up!

The other day, I sent out an email to some seniors asking about their current job seeking status. First, let me thank them for responding. (Thank-you)

But it got me to thinking ... I was talking with Scott Springer, an alumnus and recruiter from IBM who came to campus a few weeks ago to interview students with an interest in microelectronics. We were talking about how nice it would be to have a page **where students could indicate their job seeking status** - whether they had already accepted a

job, were still looking, what their areas of interest are, and where they could post a resume or web page (if they wanted). And by the way, it would be nice to have this capability for **ALL** students (first year through graduate students) to enable them to indicate their interest in **summer positions or co-op too**.

Well, zip, bang, boom, and Andy Sheaff, one of our system administrators, has given us one! Take a look at the [ECE Job Seeker Status](#) page. I think this is going to be a hit! The combination of the [ECE Co-Op Center](#) and this new web page is hard to beat!

What are typical ECE starting salaries?

According to the November Prism (publication of the ASEE - American Society of Engineering Educators), the Labor Department projects that the demand for computer engineers will double between 1996 and 2006, ranking it as the second-fastest growing occupation in the country". It shouldn't be any surprise then, that the same issue gives the following table: (page 14)

Starting Salaries for Engineers

Electrical, electronic, computer and communications engineering	\$40,000	Mathematics and related sciences	\$29,900
Chemical engineering	\$40,000	Environmental life sciences including forestry	\$25,000
Industrial engineering	\$37,000	Political science and related sciences	\$25,000
Mechanical engineering	\$37,000	Chemistry	\$24,080
Computer science and information	\$36,000	Earth sciences, geology, and oceanography	\$24,000
Aerospace and related engineering	\$35,100	Agricultural and food sciences	\$22,000
Civil and architectural engineering	\$32,000	Biological sciences	\$22,000
Physics and astronomy anthropology	\$31,200	Sociology and anthropology	\$21,000
Economics	\$30,000	Psychology	\$20,000

How much do University of Maine ECE students make and where do they work?

The average starting salary for combined BS and MS 1999 ECE grads (sorry, I don't have the figures broken out between BS and MS), based on survey data taken by the [Career Center](#), was **\$46,876**. Note: This survey is a sampling and is not comprehensive. Sometimes, it's difficult to catch fleeing students. We hope to accumulate more comprehensive data in the future. A similar sampling shows that since 1996, ECE graduates have gone to:

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Alden Research Labs	Holden, MA
Analog Devices	Wilmington, MA
Champion International	Bucksport, ME
College of Business, UMaine	Orono, ME
Compaq	Nashua, NH
Computer Center Software	Falmouth, ME
Cutler - Hammer	Winthrop, ME
DeLorme Map Co	Yarmouth, ME
Digital Equipment Corp	Maynard, MA
Fairchild Semiconductor	Portland, ME
First Light Tech, Inc.	Saco, ME
Fitch Company	Bangor, ME
IBM Corporation	Essex Junction, VT
International Paper	Ticonderoga, NY
International Paper	Dexter, ME
International Paper	Jay, ME
Leeman Labs	Hudson, NH
Maine Public Service Co.	Presque Isle, ME
Me Mut Fire Ins/Dist Choice Intl	Island Falls, ME
MINT	Waterville, ME
Mitre Corporation	Bedford, MA
National Semiconductor	So Portland, ME
Parian Development Group	Chicago, IL
Purdue University	Lafayette, IN
Quadic Systems Inc.	So. Portland, ME
R.G. Vanderweil Engineers Inc.	Boston, MA
Rockwell Automation	Woodstock, CT
Rockwell Automation	Bangor, ME
Sanders-Lockheed Martin Co	Nashua, NH
Schneider Automation	N. Andover, MA
Science Applications Int'l Corp.	Burlington, MA
Sensor Research & Dev Corp	Orono, ME

Shively, div of Howell Labs, Inc	Bridgeton, ME
The Fitch Company	Bangor, ME
Thermal Systems, Inc.	Scarborough, ME
U S Marine Corp	Bangor, ME
UM Grad School	Orono, ME
UNH Grad School	Durham, NH
USMC	Escondido, CA

National Semiconductor ups the ante ...

National Semiconductor has recently doubled their scholarship commitment to the University of Maine. An additional \$5,000 will be coming to ECE, beginning next year. In next month's newsletter, I will be giving complete details on our scholarship situation - how to apply, how to contribute, and how to establish. Stay tuned!

Introducing new faculty member, Habtom Resson!

[Habtom Resson](#) joined the Electrical and Computer Engineering Department in November. His research interests focus on the application of intelligent systems for classification, system identification, virtual sensing, and process control. He plans to strengthen the activities of the Intelligent Systems group in both research and education. He received a Ph.D. in Electrical Engineering from the University of Kaiserslautern in Germany, where he was responsible for a number of projects dealing with neural network-based dynamic system modeling. He was involved in a team that worked on developing an engineering tool for the design and optimization of knowledge-based control schemes.

And finally ...

An engineer was crossing a road one day when a frog called out to him and said, "If you kiss me, I'll turn into a beautiful princess". He bent over, picked up the frog and put it in his pocket. The frog spoke up again and said, "If you kiss me and turn me back into a beautiful princess, I will stay with you for one week." The engineer took the frog out of his pocket, smiled at it and returned it to the pocket. The frog then cried out, "If you kiss me and turn me back into a princess, I'll stay with you for a month!" Again the engineer took the frog out, smiled at it and put it back into his pocket. Finally, the frog asked, "What is the matter? I've told you I'm a beautiful princess, that I'll stay with you for a month. Why won't you kiss me?" The engineer said, "Look I'm an engineer. I don't have time for a girlfriend, but a talking frog, now that's cool."!

Publications, proposals etc.

Vetelino, "Development of a Candidate Sensor for Tritium," Los Alamos National Labs, DIC, Nov. 12.

Musavi, M.T., A. Fern, D. Coughlin, "Paper Industry: System Identification and Modeling," Wiley Encyclopedia of Electrical and Electronics Engineering, Editor: John Webster, Vol. 15, pp. 579-592, John Wiley & Sons, 1999.

Whitney served on Examination Committee for State Board of Registration for Professional Engineers, Nov. 12.

Patton attended 29th ASEE/IEEE Frontiers in Education Conference and presented paper, "Instructional Technology Environments for Engineering Outreach," San Juan, Puerto Rico, November 10 - 13.

Vetelino, J., Caron, J., Haskell, R. and Freeman, C., U.S. Patent #599215, "Surface Acoustic Wave Mercury Vapor Sensors," Nov. 30, 1999.