



# MECHANICAL ENGINEERING NEWS

October 22, 2003

A newsletter for the UML Mechanical Engineering community (also available online at <http://m-5.eng.uml.edu>)

Any items you would like to see included in the newsletter or any suggestions/comments?

Please email them to: [peter\\_avitabile@uml.edu](mailto:peter_avitabile@uml.edu) or leave them with Jackie Paradise in the Mech Eng office.

## Mechanical Engineering Seminar Series - Speakers for Fall 2003

**Oct 15** Tim Kostar, UMASS Lowell  
**Oct 22** David Desault, Aerodyne  
**Oct 29** (open)  
**Nov 5** Joe Whitney, Sycamore Net  
**Nov 12** (open)  
**Nov 19** Ray Champagne, Venture Technologies  
**Dec 3** Ken Woodard, Kollsman Industries

## Nels Wirkkala - Experiences on Studying Abroad

Last year, Nels spent a year abroad in Sweden. Some of his experiences are contained in his writeup presented below.

I spent 10 months in northern Sweden last year as an exchange student. It was an excellent experience that I would recommend for anyone who likes to travel, meet new people, and learn. I attended Luleå Tekniska Universitet (Luleå Technical University) and studied two hydraulics classes, a manufacturing and design course, Swedish language courses and more.

The overall quality of instructors, facilities, and resources was comparable to what we have here at UML, but LTU differed from UML in many aspects of its structure. One major difference was the number of exams. In Sweden, nearly all courses have only one exam, the final, which accounts for 100% of your grade. All finals were given in large halls which served only that purpose (as far as I know). Each student was required to show identification (passport, license,

etc.), a student ID card, and provide verification by signing the test. On the contrary, finals at UML are conducted in a more informal manner.

Grades did not seem to mean as much at LTU and in Sweden as they do here in the USA. In fact, my own mentality changed when studying for a test in Sweden. All I wanted to do was pass the test. Here at UML, the goal is always an A or B. I noticed this attitude in the Swedish students, as well. One classmate told me that he finally passed an exam on his 5th attempt.

That brings up another difference. If a person fails an exam, he or she simply re-takes the exam during the next exam period. A person does not need to re-take the class. There are pros and cons with this system. However, I view this as a negative because a person may tend to slack off and not really try to learn the material knowing that a re-take is an option.

I was impressed by some of the projects and courses that were offered at the university. Many of the courses were group projects which were contracted by major companies (e.g. Volvo-Aero, Saab, etc.) to design and build products that may eventually be used in production. Another project utilized state-of-the-art robots which the students programmed to manufacture simple products like rubber band guns.

Some of the different practices of Sweden were difficult to get used to and often confusing. More than once, I missed a bus because I thought 1540 was 5:40 pm. I would glance at the bus timetable, then my watch, and simply would not think long enough about when the bus departed.



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Commas and decimal points are reversed between Sweden and here. For example, when writing numbers: 2 000,55 = 2,000.55. This took a while to get accustomed to but I learned eventually. The date format and weekly calendar are different as well. Dates are written Year/Month/Day and the calendar week starts on Monday and ends on Sunday.

Editor's Note:

Nels educational experiences are quite common throughout Europe higher education. One final test, however, may not be as good as it sounds. Your whole success in a course is dependent on that one test. And remember, if you are taking 5 courses, then you have 5 finals ALL at the same time at the end of the semester !!!

Now that's a heavy final schedule.

## Student Advising is just around the corner

It is not too much longer and student advising will be upon us. When you have a chance, take a look at where you are in your program of studies. Start to think about what elective courses, required courses and general education courses you still need to take. Take time to revisit your program of studies to figure out what additional courses are needed to keep your degree on track.

Another good idea is to sign up EARLY with your advisor to get your schedule defined and get the registration process finished as soon as possible.



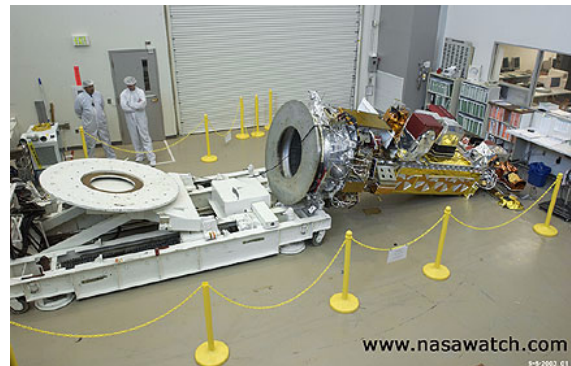
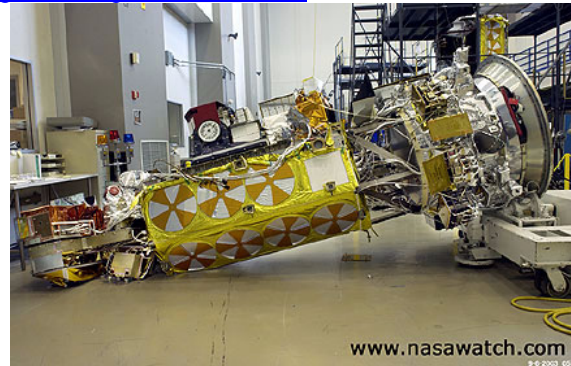
DEPARTMENT OF  
MECHANICAL  
ENGINEERING

University of Massachusetts at Lowell

## NASA Anomaly Report - Ooops!

You know some days it would be better to stay in bed. At least that's what the folks at NASA felt like after this incident. (You wouldn't want to be the engineer on this job.)

<http://www.spaceref.com/news>



<http://www.spaceref.com/news/viewsr.html?pid=10299>

There are several operations that require the spacecraft to be rotated into different orientations using a "turn over cart". It turns out that someone needed to borrow the bolts for another application and no one checked the joint before using the "turn over cart".

Now we all know that bolt torque is an important issue to guarantee the integrity of any joint – but you have to remember to actually use the bolts!

(Maybe it was one of those European educated students who only took a final test – this guy probably took the final numerous times !!!)