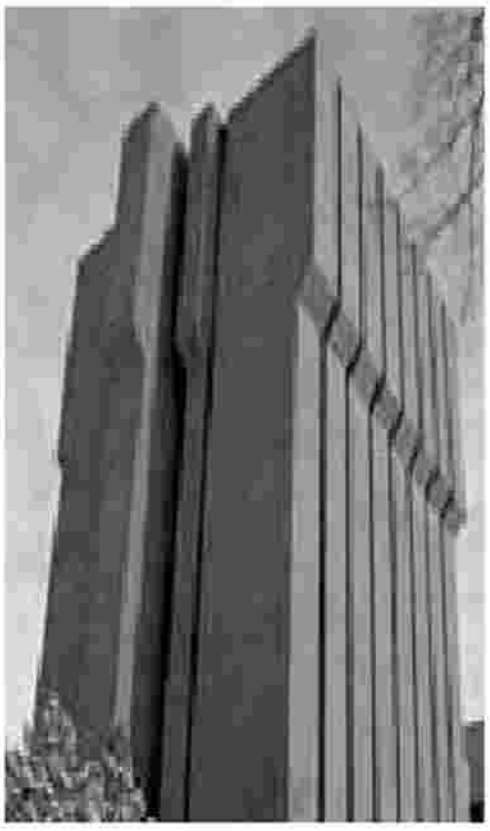

MEEM Newsletter

A joint publication by MEEM students, faculty & staff

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FEATURES

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Alumni Profile:

"Don't let the French food ruin your race team."

By Raka Bandyo

Steve Wesoloski, seen recently at MTU lecturing at an SAE sponsored event, graduated from the ME undergraduate program in 1987. In the short years that have passed since that time, Steve has managed to land the racing engineer's dream job, Corvette Racing Team lead chassis engineer.

The Corvette Racing Team competes in ten races in North America (American Le Mans) and the 24 hours of Le Mans race in France. The team has won 22 of the 30 events in which it has participated. Steve says that this level of quality and reliability is due to "90% preparation, 10% execution." During his favorite race, the 24 hours of Le Mans in France, the British fans go wild over the sound of the Corvettes mean V8 Thunder.

As the lead chassis engineer on the Corvette racing team, Steve is the only full time GM employee on the team. His major responsibility is to act as the liaison between production and racing for GM. His position operates in a three-year rotation between production engineers and racing engineers. This enables GM to make the affordable commercial Corvette more similar to its 1/2 million dollar racing model than any other affordable racecar on the market. The job utilizes all of his engineering knowledge from vehicle dynamics, aerodynamics to body structural analysis. His non-racing weeks include rigorous testing and analysis equaling 50-hour weeks, while on race weekends 12-14 hour days are expected.

How did Steve land this instant gratification job? After completing a bachelor's degree in mechanical engineering from the most top quality of engineering schools, Steve spent approximately 16 years working on automotive projects with diesel trucks, minivans, Cadillac, and Corvette. Connections with a fellow Tech graduate got him into GM Cadillac and Corvette work, from where he met the engineer that held his current position previously. Once this exciting job was discovered, Steve never gave up an opportunity to job shadow or correspond with his predecessor. When the position was next available Steve made sure he was the right engineer for the job.

Steve Wesoloski

Steve's most valuable skills retained from MTU have been setting fundamental working groups, creating working relationships, and establishing excellent learning habits. He says that he really appreciates the professors' understanding of success in industry and how well prepared our department oriented him for hands-on projects. His message to the current hard working students, "continue working hard, the reputation of MTU Mechanical Engineering is incredible. If you work hard and succeed here, you'll be an excellent employee."

ADVISING ANNOUNCEMENT

We are pleased to announce that the spring advising meeting for our first-year ME students will be held in small groups at the request of FAB. Some of the topics to be covered are listed below, but there will also be a question and answer period.

- Curriculum – General Education, free electives, co-curricular activities.
- Registration – Priority schedule, academic calendar, summer classes at MTU or other university.
- Educational options – minors, certificates, co-ops, internships, study abroad and National Student Exchange.

Sign up sheets for the meetings are located in the First Year Office in Wads and in the Engineering Learning Center on the second floor of the ME-EM. All meetings will take place in 208 ME-EM. The meeting times and dates are as follows:

March 24, Wednesday at 11:00 or 12:00
March 25, Thursday at 2:00, 3:00 or 4:00
March 26, Friday at 9:00, 10:00 or 11:00

Sign up for your meeting today!

FAB CORNER

FAB has achieved a great deal this semester. A series of meetings with the Chair of MEEM Department and the Dean of Student Affairs has produced positive results. The implementation of small advising group meetings (see above announcement) is one such result. In addition, a FAB member now sits on the Student Advisory Council of MEEM Department, which meets every other Wednesday with the Department Chairperson to discuss ways to improve the department.

A recent email from Bonnie, the Associate Dean for Students, shows that the university is heeding to what FAB is saying on behalf of first year students:

> "Below is the orientation staff response to the recommendations from the FAB group--I think they'll be pleased that we will be making some changes. Thank the students again—it was a pleasure to meet them.
>
> Bonnie

The email continues with a list of action items for Fall orientation that she and her colleagues will implement based on FAB's comments and suggestions.

MY FAVORITE CLASS:

"A full size dryer"

By Drew Even

Dominick Cianfarani

Dominick Cianfarani is a senior ME student from Hermansville, MI. When Dominick isn't working on class work and senior design, he enjoys golfing, playing basketball, and spending time in the outdoors. Dominick also works part time as a chef at Gemignani's in Hancock.

Out of all the classes that Dom has taken here at Tech, Mechanical Vibrations (MEEM 3700) was the class he liked the most. For those unfamiliar with the course, Vibes mainly deals with the dynamic behavior of single and multiple degree of freedom systems.

Dominick noted that in the beginning of the course, the concepts seemed difficult to grasp because they required an understanding of differential equations, and it had been over two years since he took a relevant course in solving DE's.

The underlying reason that Dominick enjoyed Vibes was due to the teaching methods of Professor Van Karsen. "In the beginning of the course, Van Karsen brought in a simple spring-mass system that he used to show the fundamentals behind single degree of freedom motion. Later on he also used multiple springs-masses to show the behavior of multiple degree of freedom systems."

Dominick noted that Van Karsen was one of the most involved professors he's ever had, simply for the fact that he was so sincere about helping students and making sure the concepts were clear before moving on. "There was never any ambiguity about what we needed to know for an exam."

"My most memorable experience in the class was when Van Karsen brought in a full size dryer and showed us how to analyze the vibration with software that engineers use in industry. It provided a lot of clarity about how the fundamental equations we use in class can be applied to more complex systems."

On a final note, Dominick added that the introduction of Laplace transformations at the end of Vibes helped immensely later on in Controls (MEEM 4700).

FACULTY/STAFF PROFILE:

By Eric Losiewicz

Mike LaCourt

If you are a freshman or sophomore, you may not even know that we have testing labs and a machine shop here in the MEEM. You probably are also unaware of the man who runs these facilities. If you are a junior, senior or grad student, you probably already know Mike LaCourt.

He is the head of the Integrated Design and Manufacturing labs and very active with Senior Design groups and grad research going on here in the MEEM. If you're curious just how involved he is run, a quick search on the MEEM website for "Mike LaCourt 2004." You'll find about 20 hits all labeled Senior Design.

Mike LaCourt is a true U-per. He grew up in Baraga and graduated from Michigan Tech in 1975. After working for two years at ALGOMA Steel, in downstate Michigan, as a Product Engineer, he returned to Michigan Tech to teach. He jokes that he came back because the hockey team was good at the time and that when his wife heard he had the offer she said, "Oh boy we can get hockey tickets!" Being close to his family and having a good place to raise his children was also a big reason for his return to the U.P.

Mike originally worked in the Mining Engineering department for about 19 years before he switched to the MEEM department, where he has worked for about the past 10 years. When asked what he likes most about teaching he replied, "Variety is the spice of teaching… I can go from a manufacturing setting, to material testing, to data acquisition, to senior design projects all in one day, which is really great."

In his spare time Mike likes to cruise the nation on his Goldwing Honda motorcycle. He mentioned with a chuckle that "Carl Anderson and I are always joking about who's bike is better…" Dr. Anderson is a Harley owner. Mike has been all over northern North America, from Ontario and Quebec, to Wisconsin as well as the Northwest United States. He is looking forward to touring Kentucky and North Carolina soon.

Although Mike has toured a lot in North America he has seen much more of the world than just the U.S and Canada. Before coming to Michigan Tech he served in the Marine Corp working on aviation electronics. His main task was calibrating flight-testing equipment. He was in the service during the Vietnam era and during his four years of service was stationed in Colorado, North Carolina, the Philippines, Taiwan, and Vietnam as well as other places on the east and west coast of the U.S.

ENTERPRISE UPDATE:

By Hwa Kim

The Full Spectrum

Have you noticed posters on campus advertising bottle openers? These bottle openers are specially made by CNC tools in the enterprise machine shop and treated by an anodizing process. The anodizing process is an electrochemical process to put a scratch resistant aluminum oxide coating on the surface.

PrISM is an enterprise team focusing on hands-on experience in high precision manufacturing processes. This year PrISM is redesigning main components of an RC car engine that is about 3 inches tall, wide, and deep. It is not easy to achieve high precision for such small components. Accordingly, members of PrISM first designed the components, then fabricated first-generation parts, and are now working to shorten manufacturing times and improve manufacturing tolerances. "You get to choose what project you want to work on." said Scott Vissers, ME student. "You conceive an idea, design, and you also manufacture it into products." Brad Plummer, also a ME major, added. PrISM offers intensive hands-on manufacturing experience. The enterprise writes technical reports and conduct regular videoconferences with their sponsor, Daimler-Chrysler. "It gives you a head-up on what to expect in the real world." David Blondheim noted.

PrISM is participating in the upcoming Undergraduate Expo to present who they are, what they have accomplished and what their goal is for the future.

They are considering selling more bottle openers during Spring Fling. For more information on the Undergraduate Expo, check http://www.enterprise.mtu.edu/news.html.

Most members of PrISM are ME and MET students. In fact, there is only one MY student on the team. He has enhanced the team's potential greatly by introducing the anodizing process for bottle openers and steel heat treatment practices for one of the RC engine parts. "It is a small sized group. Individuals are given chances to voice their opinions," Craig Mann commented, "and everyone is given enough work to do."

As many of members of PrISM are graduating, PrISM is looking for new faces that are interested in doing extensive manufacturing work. "From idea to product, get the full spectrum!"

PrISM meets every Monday from 7 to 9pm at MEEM 303. Email djblondh@mtu.edu or check the PrISM website for more info at http://prism.mtu.edu

ADVISING CENTER:

Enterprising

By Jim Mattson

Working in an enterprise gives students the opportunity to experience real-world engineering while still on campus. I like to characterize participation in an enterprise as the ultimate hands-on approach to an engineering education. We get a lot of questions at the Mechanical Engineering Advising Center about the details of participating in the Enterprise Program. Students frequently ask us which courses they need to take to be in an enterprise, how many credits are required to complete the Enterprise Minor, how these credits count toward their Mechanical Engineering degree, and can any of these credits substitute for required courses in their degree program?

The enterprise courses fall into two categories, project work and modules. The project work courses, ENG 2950(1 credit), 2960(1), 3950(1), 3960(1), 4950(2), and 4960(2), are your hours working on the enterprise project. The modules are one or two credit courses that deal with a specific topic associated with the Enterprise Program. An example of a module is ENG 2961, Teaming in the Enterprise. This two-credit course is the introduction to the teamwork aspects of the Enterprise Program. Another example is ENG 3958, a one-credit module on Engineering Ethics. The modules cover a wide range of technical, project management, and communications topics.

Completion of the Enterprise Minor requires the completion of 20 credits of appropriate enterprise project work and modules, along with some regular academic courses. A number of credits can count toward both the minor and the BSME, so in reality, completion of the minor will usually only require the completion of 5-8 additional credits.

The recommended approach for full participation in the Enterprise Program begins during the sophomore year. A student generally schedules ENG 2950(1), Enterprise Orientation, and ENG 2961(2), Teaming in the Enterprise, for the fall semester, and ENG 2960(1), Enterprise Project Work I, and ENG 2962(1), Communications Contexts, for the spring semester. This schedule gives you the opportunity to see exactly what the enterprise is all about. If, after the first year you decide that involvement in the Enterprise Program isn't for you, you can easily revert to the basic BSME curriculum. The credits you complete during the sophomore year can be used toward the BSME as distribution and free electives courses.

You can run into difficulties including the enterprise credits in your schedule. Your advisors can help you avoid situations where your schedule becomes overloaded. A student who starts on the model schedule can include the Enterprise Minor and still complete their program in four years. There are many opportunities to cut down the course loads by taking some summer courses or staying for an extra semester. We can help you look at some of these scheduling options, as well as the rest of the details associated with participation in the Enterprise Program.

Alpha Society

Alpha Society is a group of freshmen and sophomore engineering majors who want to improve campus and community life by volunteering their time and talents to help the community, build leadership skills, and have a great time.

One of the major service activities is mentoring, in which Alpha members will help any first year student with:
- Educational advice (from student's perspective)
- First-hand information on specific courses
- Information about leisure activities

If you need their service, please contact any one of the following students:

Amanda Marks	akmarks@mtu.edu	Craig Mann	camann@mtu.edu
Melissa Ulstad	maulstad@mtu.edu	Tom Young	tfyoung@mtu.edu
Brad Plummer	brplumme@mtu.edu	Adam Tittman	aftittma@mtu.edu
Molly Crouch	mscrouch@mtu.edu	Chad Morrison	chmorris@mtu.edu
Kathleen Bendick	kmbendic@mtu.edu	Justin Gillespie	jwgilles@mtu.edu

The Alpha Society members