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Rensselaer Chapter

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Welcome back for the spring semester! Hope everyone's winter break was a pleasant one! This semester has started off on a strong foot for our chapter. We have elected 3 new officers, including a webmaster and a newsletter editor for the first time! Three students are competing in the 12th annual IIE/Rockwell Student Simulation Competition. A few officers are currently undergoing means to obtain funding to attend the regional and annual conferences. Our events coordinator is planning plant tours with GE and Sealy for this semester. And, best of all, we have a new website! (http://www.iienet.org/rpi) As we gain more information about the above endeavors, it will be posted on this site. Please check regularly for updates.

I hope everyone's semester has started off just as good! And best of luck to the seniors in finding that 'perfect' job!

Best wishes,

Meaghan Faraca

President

From the Chair Lift

By Professor William 'Bill' Foley

For winter sports enthusiasts, the chair lift ride is time for pause, conversation, reflection, and planning. The view of the mountain directly below, behind looking down, and in front looking uphill provides a perspective on what others are doing, what just occurred, and what awaits. The ride up is time for working out problems with the last ride down and selecting the challenge for the next one down. The ride up is an integral part of the whole experience. It is what makes the ride down an ever better experience.

In college, a concentrated learning setting, frequent chair lift rides are a necessity. Without them, the activities of being a college student become things and not experiences.

- Those recurring mandatory appointments (classes) are just two hours seated in room that will happen again in three days.
- The assignments (homework, papers) given to you by 4 to 6 bosses (professors) are just things to get done.
- The frequent job performance evaluations (exams, quizzes) that result in a benchmarked numerical score recorded to you are barriers to overcome and then forget.
- Earning income through a job is a burden imposed on the status of college student.

Training and performance in a sport is a means to escape the other parts of being a college student.

In college, a chair lift rise needs to occur several times daily and the view needs to be directly below, behind looking down, and forward looking uphill. The short term focus needs to be working on the problems identified and selecting the challenge for the next time. The long term focus needs to be on development of the many skills required in both personal and professional life that might be used both frequently and infrequently. With changeable terrain, many skills are preferable to few.

In winter sports, chair lift rides are short but occur often. The same should be the pattern for college students.

Elective Reviews

Are you looking foreword to class registrations? Still can't figure out which electives you're going to take next semester? Well whether your looking for classes that will pad your GPA or put a dent in it, we've got the classes for you. Your peers, that's right people who have actually sat in the class, have reviewed the electives you can take; so you can stop waiting for the PDF of the course catalog to open and read something that will actually help you.

General Manufacturing Processes

It's one of the seven multidisciplinary electives offered to all engineering students. Now that I have finished my core engineering requirement and taken three of these electives at RPI, I can safely say that this course, GMP, is the most useful elective for IME students. The class gives a great introduction into the Industrial world by introducing various manufacturing processes through a series of on site field trips. There is also a research/ presentation project worth a good portion of the marks in this course, which allows students to pick any topic relevant to manufacturing that interests them and study it further. The instructor, Sam Chiappone, is motivated and eager to teach students in an interesting and exciting manner. His approach and behavior towards students, coupled with the applicable information learned in this course, makes General Manufacturing Processes an elective that all IME students should consider enrolling in.

SUDOKU

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						4		
3			7	5		2	8	
	3				8	7	4	
				2				
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	5	9		7	2			8
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6		3	8					

Rules:
Enter digits from 1 to 9 into the blank spaces.
Every row must contain one of each digit. So must every column, as must every 3x3 square.

Each Sudoku has a unique solution that can be reached logically without guessing.

Introduction to Management

To date, this is still the most useful, and applicable, course I have taken at RPI. It is not overtly challenging, but does require a good deal of effort on the part of the student. Homework is typically reading something, and then writing your reaction to it. Later in class, discussion will ensue. Discussion only lasts as long as the class keeps it going, so coming prepared is a must. This is without a doubt the only class at RPI that I have seen almost completely run by the students. If as a group they work together to achieve, success is very easy to come by, yet in the same regard, if everyone wants to idly sit back and be lazy, nobody will come out with any gain. I absolutely recommend this course to anyone with a motivation to learn about proper public speaking and presentation format, and I recommend that anyone who wants to sit back and do nothing NOT take this course. As for professors, the rumor is that Professor Russell is more laid back and lets the students choose their own path, whereas Professor Wright is more rigid, yet has a lot more information to impart on his students. Either one will prove useful; this is generally a class where you can take as much out of it as you want, regardless of professor.

Materials Science

Be prepared for a sequel to Chemical Principals for Engineers, with a mixture of Strengths of Materials. Your professor likely won't speak English, and just as likely won't care about you. Good grades are hard to come by, and lots of studying is required for the weekly quizzes and tests. Homework is abundant, and lab reports are weekly. I recommend this class only if you are good at studying, as NO formula sheet is allowed (a general one is provided) and memorization is key. If you did well in Chem. Principals, and don't mind taking the extended version of it, you would thoroughly enjoy this class. Otherwise, steer clear!

Tour of the Solar System

Looking for an easy science elective? This is about as easy as it gets. For 2 credits, simply show up! You write down the first 3 facts you hear on a piece of paper, sign it, then pass out. Wake up in an hour, hand in your sheet, and get you're A. There are a few tests, but if you know how to read a PowerPoint presentation the night before a test, then you really should have no issue with this class. Did I mention half of the classes are movies?

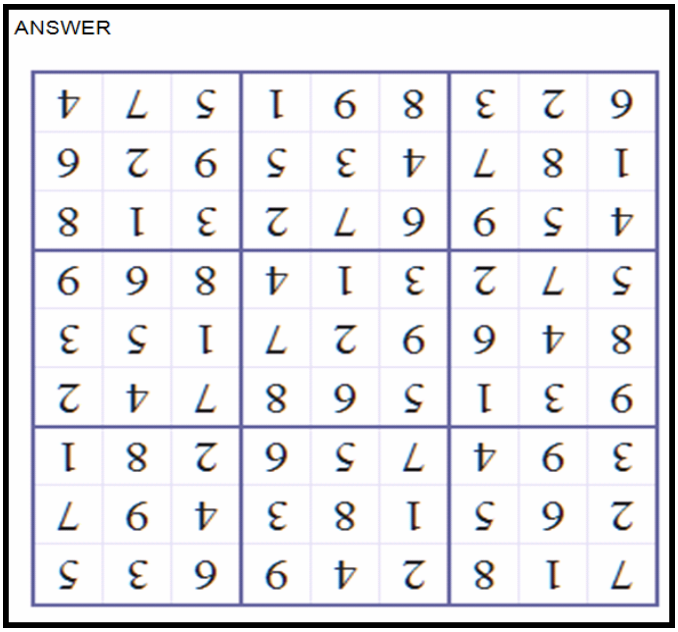
Quasars and Cosmology

The sequel to "Tour of the Solar System," this class rounds off the 4 credit science elective required of IME's. It is a little tougher, but still brainless. Class is half lecture, half lab. Lecture is the same as "Tour" in which you write down facts and pass out. Lab actually requires you to recall Algebra, which sadly most of the management students in the class have trouble with. If you can't earn at least a B, switch majors. Brainless and easy, the way electives should be….

Design and Analysis of Work Systems

Professor Foley is still amazing. If you enjoyed taking POMCA with him, think of it as POMCA with different material (sometimes). Test format is similar, with a mixture between multiple choice and worked problems. Class is almost entirely run by PowerPoint slides (again), but in typical Foley fashion, he rarely reads them, but throws in his own side chatter. Laugh at his jokes – it will make class go by faster! On a more serious note though, DAWS is one of the best tech electives out there. After spending a semester on co-op, I can safely say this is one of the classes where material shows up from the most. Many of the techniques and vocabulary learned in this class are used DAILY on the job, and having this class as part of your repertoire definitely makes you look much better. Class is in typical Foley fashion at 8:30 AM, so if you don't mind waking up early, take this class. Homework is few and far between, and tests aren't extraordinarily challenging, but be prepared to read. The textbook is excellent, and if read for understanding, this class shouldn't be too difficult. There are a few projects, but if done in a timely fashion, they shouldn't prove too much of an issue. This is an excellent class, but be prepared to learn. The ideas and concepts presented here are pertinent in the real world, and learning them now would only help you in the long run.

ANSWER



Industrial Safety and Hygiene

This class has amazing potential, but falls short when it comes to presenting the material. This class is relevant to any field you may enter, as safety is the most important aspect of any business. The material presented in this class is absolutely critical, and learning it just makes applying it in the workplace that much easier. Working in a manufacturing plant now, I see personal protective equipment, chemical safety, machine guarding, MSDS and many other things learned in this class on a day-to-day basis. Having had a background in these made the transition from student to employee much easier. The only downside is that this class was taught very poorly. Class was once a week for 3 hours, assuming we actually met. Class was frequently cancelled or a guest lecturer was brought in to discuss irrelevant topics. Most of what I learned came from studying for the tests by doing research on the topics and reading the prepared PowerPoint slides. Attending class was a waste of time, the benefit only being to get work for other classes done. The one highlight to this class was the end-of-semester site visit, which was awesome. We took everything we "learned" into a plant, where we did a mock-OSHA audit of the factory. This was an excellent chance to see everything we learned about in use, and for many, was their first opportunity to see a manufacturing plant. Given time, this class could become something very useful, if time and effort is spent in looking at better

ways of presenting the same material. The teacher was very knowledgeable, but I feel had little time to prepare for this class, as it was hard for her to convey her expertise. If she continues to be the teacher, I think after a few more classes she might be able to really help students learn the importance of Industrial Safety.

Embedded Control (LITEC)

Waste of time. This class is an excellent elective for Mech Es, Comp Sys, and EEs. The class is a combination of programming and wiring, and never ties together the process of utilizing the system for efficiency. The class is simply following pre-set laboratory manuals, following instructions and doing the same thing that everyone else is doing. The actual workplace will never have you doing something this mundane, without any innovation. Sure, at the end of the semester you are allowed to design and implement your own modifications, assuming your class ever gets that far. There were frequent technical issues with the Blimp in particular, which limited the amount of time spent testing code. It is very difficult to finish "FLITEC" in the time allotted. This class will frequently be frustrating and will require dedication and time.

Electronic Instrumentation

is an introductory course and is a good course if you don't have any experience of electronics (like me). There is weekly homework on WebCT and all the experiments and projects are done in groups. I really liked the course because I learned a lot and it was taught well

Regression

Stephens did a pretty good job with this course. Anyone who thought Stats with Willemain was great would like this course. It gets a little intensive with the proofs and the matrices though, so be prepared. The grade was made up of three tests and a final project.

Strength of Materials

This class is a good follow-up if you enjoyed IEA. I recommend taking it as soon as you can after IEA, seeing as we stop using these skills in the IME program, and the class is easier if IEA is still fresh in your mind. There is a homework due every week, and the tests usually consist of 4 problems (at least mine did). You're allowed a cheat-cheat on the exams, and the final is just a compilation of all the exams. There's a lot of formulas, but that's what the sheet is for. As long as you know how to use each formula, you'll do fine.

Physical Modeling

This is one of the easiest classes that I have taken here at RPI besides some of my Art courses. The only difference is that this class fulfills the science elective requirement. The professor is really easy going and doesn't care if you don't attend the full class. There is no homework, nor are there tests. The grade is based completely on in class lab exercises. Most of the times you can get out of class within 30 mins. even by doing the work there. You also have the option of doing them at home. All of the exercises are done in Microsoft Excel. The professor basically gives you all of the formulas you need so don't worry about not knowing something. He's very helpful too. This should be an easy A. At the same time you may learn some things about excel that you never knew. I would recommend this class to anyone

Facilities Design and Industrial Logistics

Facilities, for short, is a very useful class. Although there is a lot of math involved, but it is very practical and not to difficult if you pay attention. There is no homework for the exception of studying and a final project. The project, however, does require a lot of time and effort. Although the class does not go in depth about computer modeling, it does give you a basic understanding of the mathematical principles in facilities design. This class also provided an opportunity to learn about practices in industry that you may not know much about unless you've seen it at a co-op or internship. My only recommendation is that you either take OR 2 before or at the same time as this class.

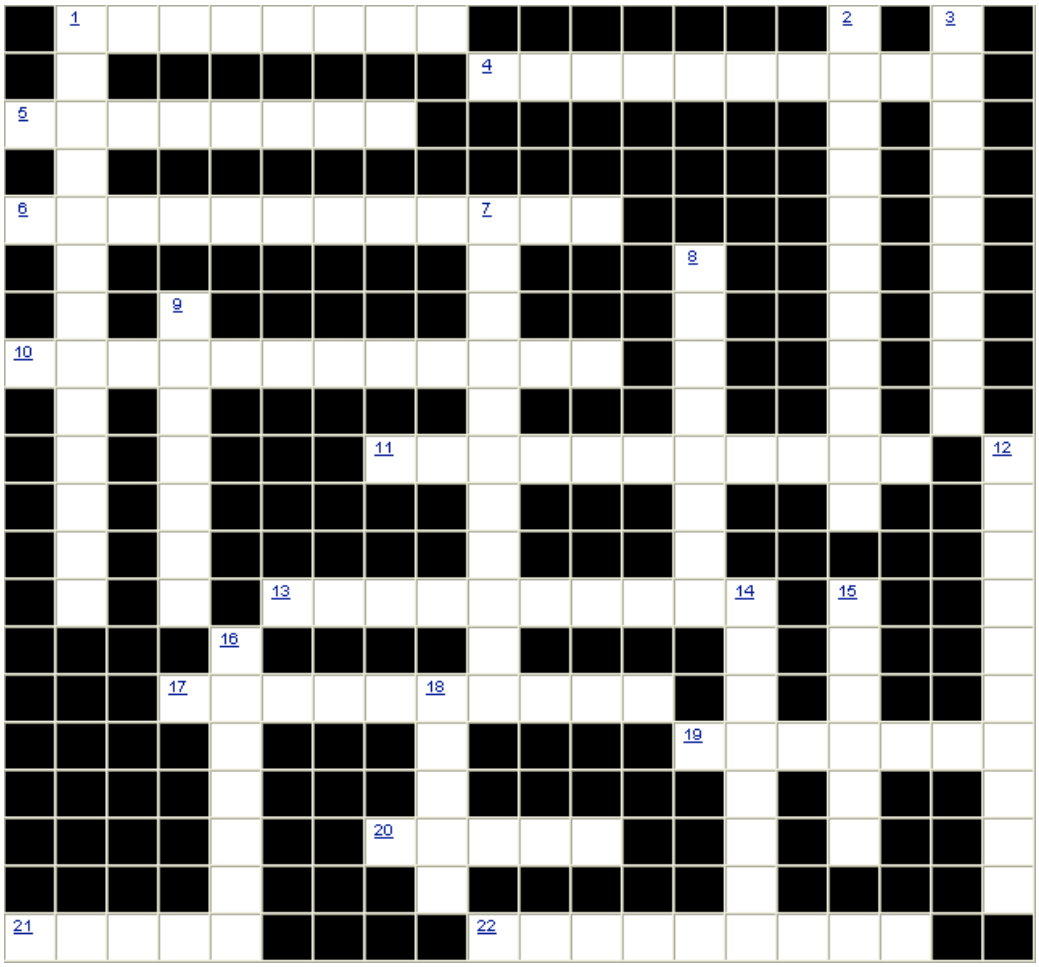
Alpha Pi Mu

By: Meaghan Doran

Alpha Pi Mu was established in 1949 within the School of Industrial and Systems Engineering at the Georgia Institute of Technology. Since receiving its charter from the national organization in 1985, the RPI Chapter has won fourteen Regional Outstanding Chapter Awards and has been ranked among the top ten chapters nationally for eight of the past ten years. The organization was founded to confer recognition upon outstanding Industrial Engineering students at the bachelor's level, and outstanding students in Industrial Engineering and closely related fields at the graduate level. Alpha Pi Mu is closely linked to the Institute of Industrial Engineers and has chapters in nearly all of the nation's ABET accredited, IE academic programs.

During the fall semester Alpha Pi Mu participated in various recruitment events including Medalist Weekend, Engineering Discovery Fair, Family Weekend and the RPI Open House in order to expand the DSES department. Officers could be seen speaking with potential students about the depth of an IE degree and the breadth of the department. Additionally, invitations were given to eligible students to join APM. Eligibility is determined by academic merit. The top third of the senior class and the top fifth of the junior class are invited to join each year. On March 8th, Alpha Pi Mu will be inducting its new members into the Society. There will be a brief initiation ceremony with refreshments to follow. This will celebrate the achievements of our new inductees and welcome them into the society.

Crossword:



Across

1. The second ----- is known as median.
4. Demonstrated ability to apply knowledge and skills.
5. ----- analysis. A range of techniques that is useful to determine to what extent a product's perceived value changes if some particular product feature is changed.
6. A non-parametric test. It checks the equality of medians of two populations.
10. Developing a process without waste -- at least in mind.
11. This is useful to summarize a set of bivariate data.
13. The methodology developed by Box and Jenkins to identify patterns in time series.
17. Its value for uncorrelated variables is zero.
19. ----- effect. The form forming ability of human brain. May be useful to validate perception surveys.
20. ----- of a hypothesis testing. It indicates the test's ability to reject null hypothesis when the alternate hypothesis is true.
21. Any collection of outcomes of an experiment.
22. It could be estimated using a statistic.

Down

1. A method of sampling widely used in market research and opinion survey.
2. A situation in which change in response variable with respect to one factor depends on the setting of another factor.
3. ----- distribution. It is useful to predict fast failure. Also, it is a special case of the negative binomial distribution.
7. We can count but not order or measure them.
8. Binomial is a ------ distribution, whereas "normal" is not.
9. Flexibility with ability to make rapid changes.
12. It could contain a number of samples.
14. A measure of how much influence a single observation has on a fitted regression model.
15. An independent variable in a DOE.
16. It is a plot of the 25th, 50th, and 75th percentiles, as well as values far removed from the rest.
18. A DFSS methodology. (acronym)

Thanks to iSixSigma
For solutions email Lynchw@rpi.edu