professor andy khong says...
Words from the Analog Electronics professor to the students. Includes his thoughts, his musings, his observations, and of course - his love for us.

the oh-eight batch
Features some of the students and their say on IEM after one year. Right choice, wrong choice - find out what they really think.

académie
Follow us around the school in our daily lives! Thoughts of seniors who have gone for exchanges and a showcase of some of the nicer works in our non-engineering modules.

presse écrite
On-the-go reports and photos of our wilder side of life. Who said engineers were boring?!

palette
A showcase of the various talents and achievements of the IEMies! We’re not just engineering students!
Introduction
I joined NTU in May 2008 and was given the opportunity to conduct a course on Analog Electronics (AE) for our IEM students. Although the course content is very similar to the ones I delivered in the United Kingdom, I must admit that I was apprehensive at first as this course was historically one of the toughest in NTU. The fact that previous IEM cohort faced a lot of challenges trying to pass this course didn’t make my job easier either. As most of my students had a pre-conditioned state of mind before this course, I felt that the most important aspect of my job is to reassure my students from time to time. Indeed, I feel very honoured to be able to deliver this course as I would like to think that I am playing a crucial role in the making of a good (and hopefully a creative) electrical engineer.

My AE class comprises of about 60 students and most of these students do leave lasting impressions on me. I do have recollection of a student who is consistently running late (especially in the morning) and am rushing from one place to another. Upon chatting with this student, I found that this student had problems hearing the alarm clock going off in the morning. As the AE paper was in the morning, my only worry at that time was that this student will be late for the AE examination. I was indeed very glad when I saw this student in the examination hall on time.

There is a particular student who sighs without fail in nearly every tutorial. It would seem quite interesting to see this student sigh and I would like to think that he/she felt a sense of relief every time he/she sighs. I am happy to know that this student passed and that he/she is happy with his/her results. There are also some students who insist on seeing me on a weekly basis. Although I enjoyed our weekly consultation sessions, I think these students are capable of achieving and that they should be more confident of themselves. Indeed, our weekly meetings turn out to be reassuring sessions rather than technical sessions.

Of course it is nearly impossible to list all my impressions. I must say I looked forward to and enjoyed delivering every lecture as well as interacting with my students. Although they have learnt the basics of AE through this course, I have certainly learnt a lot from them throughout the 13 weeks and with that I would like to make use of this opportunity to thank each student in the IEM-2009 cohort for working with me to make AE as interesting as possible. Lastly, allow me to quote from Randy Pausch’s Last Lecture- “The brick walls are not there to keep us out. The brick walls are there to give us a chance to show how badly we want something. Because the brick walls are there to stop the people who don’t want it badly enough. They’re there to stop the other people.” My only hope is that every student sees beyond learning AE or any courses they do in NTU but, most importantly, also pick up self-learning as well as analytical and other soft-skills which will carry them forward throughout their degree in NTU and certainly for their careers in the very near future.
The Oh-Eight Batch.

An incomplete exploration of the IEMies’ psyche.

Wadja waiting for? »
Zhengquan

I was attracted to IEM course purely due to its curriculum setup and cross-disciplinary nature of this course offers. I am a part-time photography fan too. I love travelling and taking photos of beautiful natural scenery. IEM offers courses from WKWSCI that are related to my hobby too.

After my first year, I found I made the right choice, simply because I really learned something that is totally new to me and IEM also expands my knowledge base beyond Engineering border.

Judy To

IEM allows me to get exposed to other areas such as media and art to help spur my creativity. I can never forget the first time we had to draw MALE nude models. I was so embarrassed that I kept hiding behind my classmate, forcing myself to censor off those sensitive areas. My classmates were laughing and teasing at my burning red face. What makes the whole incident even more hilarious was that I ended up getting sore eyes the following day.

Although I have to admit that some modules are totally brand new to us, making it difficult to score well - I had fun during lessons and thinking back, these are wonderful memories that are unique only to IEM students.

Zhao Yang

As part of IEM, it has been a fun learning process. Besides acquiring skills and knowledge, I have also embraced some meaningful life values. This course is special and unique in that it is a hybrid of media, arts and engineering. It is through this course that I explored and discovered my hidden potential to excel in arts which I never felt before previously.
I am proud that I am part of the IEM community now. Many things have happened in my life since joining an IEM event for the first time (i.e. IEM orientation and welcome tea). I’ve never changed my opinion: IEM is really an interesting course where TECHNOLOGY meets ART. This course expects me to do many things like learning how to program, drawing almost 100 sketches in one semester, and is very challenging for me. However, I have learnt so many things and I have bigger plans for my future from now on. I have also met a lot of super good friends, who helped me a lot with my studies, and wonderful IEM professors and staff.

Arnold

I think IEM is the only course in NTU until now that combines engineering and art together in same program. I can’t believe that I can both develop my artistic skills and learn engineering in same time. Once again I say: I AM PROUD TO BE PART OF IEM!!!!!!!

Joyce Chee

My unique IEM experience has given me surprises one after another ever since I started my school term. I got to form my 4 Js clique and its members are Jessica, Janica, Qi Jun and Joyce of course! Because I have this special ‘illness’ of not responding to any alarm clocks, my friends would always give me morning calls to wake me up. It is an amazing feeling to always have your friends around you for day and night, because we all stay in halls!

Although IEM has a relatively small number of intakes as compared to other courses, we know almost everyone and it’s like a small yet bonded family. We help each other out academically and this is my ideal study environment.
I can also easily approach the lecturers for help. They are so friendly and willing to explain the difficult theory again in the one-to-one consultation. I think they understand that each of us has different learning speeds and they won’t mind to giving additional consultation sessions to ensure that we understand the notes well. I would especially thank Ms Goh Wan Ling and Mr Andy Khoong for their patience and guidance through the semester.

The modules that I am taking will mostly be very handy when I go out to the working society. With such amazing course mates and teachers, I look forward to going for class and enjoy my unique university experience.

He Li

Time just slipped through our fingers ever so swiftly. After almost one year, us IEM students, iemies as we call ourselves, have become one big family.

The first few days in school in which I got lost in the campus every day does not seem to be too far away yet. As a very small batch, we were like little chicks cuddling for warmth when first dropped into a completely foreign place. The support and immense understanding among ourselves were set up since then. We found friendship as time went by, something that would never fail to put a hearty smile on my face no matter how near the next quiz was or how lagging behind I was on my tutorials.

Although there are definitely people that one feels more comfortable with, the best part is, an iemie never feels too awkward to strike a little chat with another. As IEM students, we have experienced the highs and lows together, knowing we have our friends to count on.

Besides hopping onto an incredible academic roller-coaster ride, learning skills that would benefit me for a life time, being in this big IEM family is undoubtedly, one of the most precious gifts that I have ever unwrapped.
This past year had to be one of the most memorable ones of my life. Before I came into NTU, I was anxious about stepping into a new chapter of my life. Seniors and teachers alike warned us that for better or worse, university life would be very different from what we had gone through so far. I worried about whether I could cope with the new workload and where I could find a place to belong. I realised my fears were unfounded. IEM people are so nice, friendly and approachable that I settled into university life within a month! I feel very lucky to be in this course. We have had so many fun activities within the short time period.

It would be cliché to say that it has been extremely fun, fruitful and memorable for the past one year in IEM but it is indeed the case for me and I believe for everyone else in the course. I would often receive emails from my course mates, be it jokes, words of encouragement before examinations, extra notes from different subjects or just gentle reminders. These emails just make my university life more interesting. Perhaps it is this close knitted relationship that we share that has made it a joy in learning. In addition, I am optimistic that there would be more to expect in the rest of my university years.

Taking IEM program is like playing on a swing. It’s an exciting experience but filled with pressure and uncertainty. Looking back at the past year, I was really challenged physically and mentally, but finally I managed to overcome all the difficulties. I believe upon the completion of IEM program, I must have gained enough courage to face all possibilities awaiting in my life.
Initially, the only reason for me to choose IEM is that I like drawing. However, when I joined IEM, it opened up a wonderful new world for me. In the first semester we learned how to write for various media platforms, which is quite different from other engineering courses. And it was the first time for me to write as a journalist. In the second semester, we learned sketching. I loved this subject. We visited the Art Museum together and had zoo trips together. Although our course cohort is not big, but our course is united and like a family. Everyone is friendly. I enjoy every day spent with my coursemates.

Jessica

In my opinion, engineering was the last course which I thought I would enter as it was too technical for my taste. However this course has aroused my interest in engineering. It was retaining the engineering part with the artistic touch in us that captured my interest. Nevertheless, being (nearly) the pioneer batch of a new course posts many obstacles as many things are still at the preliminary trial stages. Even so, it did not deter me from staying steadfast in this course. It was as if I was caught in this endless thrill of exploring what I would become in the near future after graduation.

Yu Juan

In addition, as this course has a small cohort, I got to know people more than being just mere acquaintances; this in turn enhanced my experience here, as compared to normal engineering students. Therefore, given the time, I believe that this course will rise up to be one of the favourable choices in engineering some day.

First Year Intake
Due to the small course size, I frequently felt stressful and concerned about my academic results, especially after the release of Semester 1 results. Moreover, majority of the core modules were challenging as some were totally new to us, such as computing, basic media writing and conceptual drawing. Furthermore, the teachers’ expectation was rather high as the ART190 teacher asked us to draw live models only 1 week after the sculpture drawing. Others may be due to the arrangement of modules. For example, we learn both Analog and Math2 in Sem2. Yet, we only realised one of the most difficult part, LaPlace transformation in Analog actually made use of what we learn in the last part of Math2, differential equations.

However, I’ve never regretted in choosing IEM as my first choice for tertiary education, though I was shocked and sad upon hearing that Qijun quitted the program. My course mates are all so friendly and helpful and we managed to build a strong bond with each other. Indeed, while I suffer from writing TV scripts, programming Java 3D games or have 10 pieces of drawing assignment - and I may even complain about it, I still enjoy what I have been through, together with all my dear IEMies. In addition, Ms. Sandy and other course coordinators, our very own IEM lecturers, Prof. Chua, and others encouraged us, held gatherings for us, listen to us and cared about us now and then.

All together, they are my motivation to overcome difficulties, stay up late to finish projects and so on. IEM is definitely more exciting than other engineering courses and it provides us more opportunities and broader career aspects. Since we are the second batch, whatever statements we can make for IEM will be for use to prove. So hopefully, we can be excellent examples for future IEM juniors. Once I made up my mind with the choice of IEM, I also choose to go on without hesitation. CHEERS~!
Thank

View on the program:
After studying in this course for a year, and looking up on the course outline, I have come to the conclusion that this course is basically an EEE course, with extra filling in media and arts. No more, no less; just that, except the electives. I can’t say it was exactly what I expected a year ago, but it will do, and I think it is fine for my future. It will have to.

Experience:
As far as I have been through, campus life is just as enjoyable as I want it to be. That is, as much as I make it to be. There were fun times. There were dull times. That’s life, campus life. Apart from the exam stress and few projects, the past year was unexpectedly normal. It could be better, it could be worse; it was my first year of campus life and university student life.

Wan Ling

Being part of the IEM family has been both fulfilling and rewarding. I am not only picking the technical skills in the engineering side, but also very fortunately exposed to the art and media aspects, making me a well-rounded person.

As we are a small community, there are many opportunities to plan events and activities for our course mates. This enhances our undergraduate life in NTU and also trains our leadership skills.

Despite the heavy workload we have, our lecturers are meticulous and approachable. They are not only concerned with our studies but also our well-being. We are definitely not alone in IEM!
Baolai
When I heard that it is time for us to choose our major, I really did not know how to choose - until I found IEM, I like learning about the art and I made sure I will choose IEM as my choice. I think I made a good decision. We are just like a big family - we learn together, we play together, I really like IEM!!

Kaihui
The past year has really been enriching and fulfilling. I am glad to have met many like-minded people in this course. IEM has been stressful so far, but working together with wonderful course mates makes life a lot easier. In IEM, life is not only about books, frequent bonding sessions and excursions greatly enhanced university life. Projects, outdoor lessons and extra-curricular workshops motivate us to apply concepts in the real world, and to learn more than what’s taught.

Hoang
After a year of fun and joy, I have had so many memorable moments. I can feel our unity when we overcame Basic Media Writing and Object-Oriented Programming as well as when we enjoyed the drawing course altogether. The most important point is, I am proud of our new and unique course, especially when talking with my friends about our very own events like T-shirt Design Competition, Mid-Autumn Festival and Singapore Zoo trip. From deep inside my heart, I strongly believe that 4 years with IEM will be 4 memorable years in my life.
The past one year in IEM has truly been a fun and enriching experience for me. I have always enjoyed a multi-disciplinary education and this is what IEM has given me over the past year. Through courses in art, media and engineering, I have learnt and experienced the different learning styles and methods required in each different areas of study. This is truly enriching and powerful, as all these combined can help one solve many problems with creativity and innovation.

Besides the academic experience, there is also a strong sense of belonging in IEM because of its small size. Hence, all of us are more closely-knitted than other programme, having our lectures and tutorials together.

This has made the lessons much more interesting and enjoyable as all of us would have pre and post lessons chats. Because we all know each other and are comfortable with each other, we often have fun discussions during lessons regarding various subjects.

The IEM Year 1s also often go out together for outings, both of academic and non-academic purposes. One such example would be the Art190 outing to Christian Lacroix exhibition. Even though the cohort was largely split into 2 groups for this course, we turned up at the exhibition as an entire cohort. This goes to show how closely knitted we are. The whole IEM experience is made even more worthwhile because of this bond among all of us.

No experience will be complete without its hardship and hard work. Being in IEM does not only mean fun and games, it also means that we have to put in extra work for the non-engineering areas of study as well. Apart from that we also have to deal with the hectic schedule of the programme, but with the enriching university life that the IEM provides as well as support and help from fellow IEMies, I believe that there will only be more fun, experience and knowledge in the following 3 years!
I really love IEM, because of its modules, course mates and the feeling of being taken good care of.

From the whole year of studying in IEM, I have come to love IEM even more. From writing news, to t-shirt designing, from drawing models to programming in Java - I have experienced a lot and have a great sense of fulfillment each time I manage to tackle the task. Life in IEM is challenging and colorful.

The course mates in IEM are kind. We came to know each other from doing projects and taking part in IEM activities together. I have learned a lot from them. We had a wonderful time during mid-autumn gathering as well as the BBQ gathering. We had an post-exam celebration at the end of April, too. Many activities are organized by Prof. Chua and the two kind course coordinators, Ms Sandy and Ms Serene. They are like our parents and I feel lucky to be taken good care of by them. We also have a “boss” in IEM Year 1 - lovely Dustin. He would always remind us about things about past year paper, etc.

IEM feels like a family - warm and safe.

IEMies are all very kind and warm. It’s very comfortable to stay in a course like this. People know each other well and will help each other generously. I think I’ve made a right choice not only because the interesting courses but also the classmates. :-)

I love IEM! :-)
Mengyu

IEM program is very interesting. Attending modules from different schools can be very challenging since I don’t have background in courses like drawing or media writing. Sometimes the assignments can drive us crazy, but we do learn a lot by pushing ourselves to finish all the work. These experiences are new and very interesting.

IEMies are warm and friendly. We exchange notes, share experiences and help each other. We are connected in the IEM family. I really enjoy IEM program and feel lucky to be one of the IEM family.

Shiyun

IEM has really changed me a lot over the course of 1 year. Previously, I saw myself as a “passerby” kind of character (read: a complete nobody), but here - I have found myself through learning the things that I actually really love. Academics aside (the assignments for basic media writing and object-oriented programming were pure tortures by the way), my year 1 life is nothing short of “wonderful”. Meeting really interesting people from the Boyband (includes the Hairstylist and the “God”) and the Chipmunks to the Perpetually Missing and People in the Dark side is the one key factor.

I am grateful for the opportunity to make a lot of international friends. The size of the cohort surprised me initially, but I think it made us a lot closer as a result. I really look forward to see how each and everyone will change further over the course of 3/4/5 years.
Janica

For the past one year, the most common question I got when I met people would be which course am I from. I would take a deep breath and say “Information Engineering and Media and Economics” in one go. The person probably will be stunned for a moment and go “pardon me”. And so I would repeat myself. After numerous encounters, I learnt to be smarter and pronounced my course name really slowly, enunciating every word when asked for my course. Often, I would add a short introduction to my course after that since they would ask what it is about anyway. It will keep them in awe for another moment. Meanwhile, I would flash him my widest smile.

This is probably one of the most memorable scenes I have in mind as a proud student of IEM/IEEC.

I am secretly proud that no one goes “ewww, engineering!” after they hear what I have got to say about IEM/IEEC. IEM-ies can write like journalists, draw like artists, programme like pros, communicate effectively, solve the complicated circuits and analog electronics etc, etc, etc. What can you say when I am part of the coolest engineering course in Singapore? You go “Wah, Wah, Woah!”

Let me share how you can “use” the course name “Information Engineering and Media (and Economics)”:  

1. When you meet someone new and need to introduce yourself. 
2. When you need to campaign for something, you say you are in the coolest engineering course in Singapore. 
3. When you go for an interview, you say the course name and you will impress the interviewers along with a introduction stating figures like 20% media course, 60% engineering cores...we draw, write...MAYBE we should include acting and dancing modules too...how cool will it be? Ultra cool!
4. When you need something for someone to remember about you, you say you have one of the longest course names in the College of Engineering! (for those in IEEC)
5. Use it as an MSN nickname.
6. Use it as a Facebook profile tagline.
7. Etc, etc, etc. (I watched the arts movie ‘King and I’ recently, thus, the influence to use ‘etc, etc, etc’)

Although the past one year as an IEEC student has not been exactly smooth-sailing for me academically (and I am sure I was not the only one who ever thought of giving up before), the thoughts I shared are part of the reasons why I kept myself going on. Silly as it may sound! IEM-ies, we press on as a Family!
When I browse through the photos taken in Europe again, unconsciously one year has passed. However, when looking at those pictures, I still giggle as those stories and those people are still so fresh in my memory. In fact, it was rather unexpected - joining the summer study program, when lots of friends were preparing to go to America in the Work and Travel program; just when I started to regret not signing up for it, the registration for the GSS program began. Finally, I could be occupied during the three-month-long vacation.

Paris, which had been always a distant dream, became a reality when I got the letter of admission. ‘Easygoing’ is the first impression that Parisian give me. If you say that the Parisians embody the essence of romance, it must be because they never care about the rules, and of course those rules do not have any effect on them at all. Sometimes it feels just like the way naughty children hate the rules set by parents - people will hold strikes every now and then there. I encountered it once in fact, and we had to wait for more than one hour at the metro station then as a result. On the other hand, they are cute in their easygoing ways - as the Frenchmen’s command of English are not that good, whenever there are language barriers they will use funny voices, eye contact and all kinds of body language to express themselves.

I will not talk too much about French Food since you’ve probably heard about it due to its reputation. An advantage of GSS is that the host school usually will take us out every week for a dinner, which is really splendid and said to cost over forty Euros per person. With-
out any hassle, you can easily taste the unique flavors of the area.

GSS provides a good chance to know new friends who come from different countries, communicate with the same language, taste the same food and enjoy the same beautiful view. What a wonderful time! It was a meaningful summer, wasn’t it?

Global Summer Studies
Han Feimin

The summer of 2008 was definitely an unforgettable time for me. I went on summer study programme in Europe for about two months. The school I went for exchange was Institut National Polytechnique de Grenoble, located in the city of Grenoble, southeast of France. For the first four weeks, I spent most of the time in school. I had courses on French language, culture, and science as well. During the weekends, me and my international friends took time to explore the fun and excitement of the this lively city. After four weeks, it’s time to say goodbye to school and hello Europe! I went to Normandie for about one week to meet two of my friends from high school. Our trip started there. We went to Paris, the simply most charming city of the world. We stayed for four days, yet it wasn’t to enough to fully appreciate the magnificence about Paris. Afterwards, we went to Tours to see the castles; and then further south to the Avignon, Nice, Nime and Monaco to experience the golden beach and clear blue sea of Mediterranean. We spent the last ten days in Italy. Starting from Milan, we went on to Venice, Florence, Pisa, and all the way down to Rome and Vatican City. We visited a lot of museums, saw a lot of fine arts, and had a lot of great food. For me this trip couldn’t be better. I’m thankful that I got the chance to be there.
The URECA stands for the Undergraduate Research Experience on CAmpus. It gives the participants an experience of academic research at the undergraduate level. All the participants are free to choose the subject of his or her interest. This year, we are involved in a project of building a low-cost multi-touch table. The theory was completely new to us, and there were a lot of practical problem to be solved. We started the project by research, studying relevant materials online and sending emails to people with similar experience. After collecting enough information, we started to go out to hardware shops and search for the components. It was not an easy job; a lot of things had to be taken into consideration and we have encountered many practical problems. After all, the research is a process of trial and error. We have to firstly repeat what other people had done and see what we can do to improve it. We have learnt a lot through this programme and we really appreciate this great research opportunity.

UROP stands for Undergraduate Research Opportunities Program. The purpose is to give undergraduate students a chance to gain some research experience. In EEE, you will register it as an UE carrying three AUs. I took UROP in year 2 semester 1 and my topic is human interface device. With the program I wrote you are able to use your head to control a mouse. In the end of that semester, I submitted a 20-page report and a 4 to 6-page two columns conference style paper. Doing research is not like studying, your hardwork may result in nothing and you are guaranteed to meet difficulties and hardships in the process. The deeper you know about the topic, the more difficulties you will meet.
Design Innovation Project

Design and Innovation Project (DIP) program is a five-week compulsory program for all full-time second year EEE/IEM students, held during the special semester in May. There is a Design and Innovation Competition held during the last week of the program. The following IEM group working on the Human-Computer Interface Project came in first for the competition, defeating 5 other EEE groups.

Human-Computer Interface Project (Gold Prize)

Mi Qi: DIP aims to provide us an opportunity to exercise our creative and innovative qualities in a group project environment. As a group leader, I really learned a lot during the unforgettable five weeks. We built a multi-touch whiteboard from scratch. It brought us the gold prize in the final competition. Thank you for all my group members for what they did during the whole month.
**Project Survivor**

**Serena:** 5 weeks of DIP was a fabulous experience. People from different background came together before they all knew each other. Somehow, they managed to work on a project as a unit. Best of all, they found friendship, alongside the valuable learning journey of engineering a project.

We have learnt so much from each other, from animation to configuring software and building hardware component. Every single one of us was indispensable. We made full use of our strengths and we complemented each other’s weaknesses. None of this could have been possible without a positive attitude from the start.

Inevitably, we encountered difficulties and stress. It was such a blessing because what could not break us only made us stronger. Passionate team mates even stayed overnight to modify and fine tune our work. Nevertheless, we managed to keep ourselves sane with a dose of laughter every day.

During this period, our supervisor guided and steered us towards success. On top of that, our wonderful IEM technicians and support group stood by us and made sure we had the best. That is what makes IEM different. Thank you all! =))
Wireless Interactive Interface Entertainment Module (WI-IE M)

Human-computer Interaction: The keyboard and the mouse have been an integral part of people’s lives. But the usage of wired peripherals still has its own limits. User requirements are beginning to expect more freedom of choice as well as frustrations of restrictions in controlling. The team aims to pursue an ideal modern lifestyle without the burden of added hardware. With reference to Wii Remote Projects by Johnny Lee, a Microsoft Engineer, the team identified this as an inspiration for the project.

The project team is using finger tracking technology to enable free hand control over the computer. This technology taps on low-cost Infra-Red Light-emitting Diodes (LEDs) and the Wii Remote to achieve finger detection. As the Wii Remote is programmable, users will be able to emulate mouse events. With this technology, free hand control is achieved.

This advancement can be applied to improve the way people interact with computers. User interface plays an equally important role in this whole new experience. As such the software developed will fully utilize the freedom of control of the hardware.

And then there is Art and Fun…:

The appeal of major entertainment systems includes state-of-the-art hardware as well as the highly aesthetical intuitive interface. The project team aims to develop a series of applications that perfectly matches the controlling system with an appealing graphical user-friendly interface.

These fantasies and ideas can be brought into reality. The group is looking forward to bring forth the revolution that would influence consumer choice today. The Wireless Interactive Interface Entertainment Module will be a fine blend of both the Technology and the Arts.
la galerie d’art

What makes IEM unique (besides the awesome lecturers and tutors, the students, the course co-ordinators and the course name itself)? The non-engineering modules of course!

Basic Media Writing (COM 204), Drawing as a Conceptual Tool (ART 190), Visual Literacy and Communication (COM 206), and Visual Workshop I (ART 290) are the modules that IEM students took in 08-09. As a tribute to the students’ efforts (and to show that IEM engineers really can draw), this is a little showcase of artworks done by the students. Enjoy and envy.
import java.io.*;
import java.util.InputMismatchException;
import java.util.Scanner;

public class GameMain {
    // sets the state of the game to playing
    public State gameState = State.PLAYING;
    public static final int SIZE = 9;
    // whether file is to be loaded
    private static char loadFile;
    // number of hints the user has asked for
    private static int hintsUsed = 0;
    // constructor
    public GameMain() {
        // get the difficulty level from the user if user does not load new file
        int diffLevel = 0;
        if (loadFile == 'n') {
...
Presse Écrite
It was the time for A-Level students and polytechnics graduates to decide which university to study in, as well as the course to be undertaken. To help these students make a better choice, the School of Electrical and Electronic Engineering (EEE) held the EEE Tea Reception on 10 May 2008 at Level 1, Marina Mandarin Ballroom.

The invited potential students started to flock in by 2pm and enquired on the courses offered to them. Each Academic Advisor was assigned to some students to help clarify the students’ queries. Student ambassadors from the IEM programme were also available to share their undergraduate experience with the potential students.

The tea session began at 3pm sharp with an introductory video presentation on the School of EEE. This was followed by the welcome address by Professor Kam Chan Hin, Chair of the School of Electrical and Electronic Engineering. Assoc. Prof Lalit Goel enlivened the next half an hour by giving an overview of Undergraduate Programmes of School of EEE and offered a few glimpse of the expectation and lives of a NTU undergraduate.

EEE Tea Reception was indeed a successful one. We look forward to seeing all of you again in the upcoming Freshmen Orientation Programme.
The orientation programme was a three hour event to welcome the freshmen to the IEM family. The event started off with the professors and the senior students giving the freshmen some tips and advice to survive their four years in NTU. Through the various info-sharing and student activities, lasting bonds were forged and the budding of new friendships proliferated.
Campus life will never be complete without social events. Organized by the IEM students and supported by IEM Support Office, a special arrangement had been made to hold the mid-autumn festival celebration together with the Student-Meet-Mentor session on 12 September 2008 at the SRC Clubhouse, Yunnan Corner. The purpose was to build up a closer relationship between the students and their mentors, and to facilitate the advice seeking opportunities under a happy and harmonious atmosphere.

The party kick-started with the design showcase for all entries submitted for the IEM Design Competition. After tallying the votes casted by Assistant Prof Joan Marie Kelly from the School of Art, Design and Media, year 1 student, Lim Shiyun and Nguyen Xuan Huy clinched the much-anticipated title of IEM T-shirt and the poster design. The night ended on a high note with the lantern lighting ceremony.

All in all, the students and guests had a wonderful time; it was indeed an unforgettable night of laughter and fond memories.
In preparation for our art modules in IEM, we went down to the Singapore Biennale 2008 on 4 and 11 October. The theme of the exhibition was Wonder – and indeed there were many installations and exhibitions that were simply fascinating. There were a couple of interactive artworks instead of the usual which only required the visitor’s observation. For example, there was an installation for which people could actually physically tag a map of Singapore with Post-it notes, and it was really fun reading what other people have to write about places which hold greater meaning for them. In another, the artist created a room made entirely from objects that we use in our daily lives. Mostly, they were provocative and intriguing, and allowed us to draw a huge amount of inspiration from them. All in all, the visit to Singapore Biennale was an interesting experience, and definitely eclipses any other that we might have with the time spent.
The Olympus DSLR Outdoors Training was very beneficial to me, as I have always been interested in photography. This course introduced me to the basic concepts of good photography skills, allowing me to understand how to take a good picture.

Around 40 of us turned up. The training commenced at 7pm, and was held in the Olympus Studio at Valley Point. It was the first time many of us actually handled a DSLR camera. The course covered a broad range of introductory topics and was kicked start by a short 45-minute briefing on basic concepts.

The theory session was enlightening as the instructors made use of simple analogies such as see-saw and faucets to explain complicated terms and theories such as shutter speed, aperture and exposure. The timing of the session was also appropriate, allowing me to retain the information and hence use it more effectively in the practical.

The practical session at Boat Quay was especially essential as I could test out what I’ve learnt in the theory session earlier on. This allowed me to experiment with the different functions of the camera and test out what kind of effects the different compositions have on the photograph taken. The instructors were also very helpful in pointing out the usage of the different functions and explaining to us how different compositions affect our pictures.

Overall, the training was a fun and educational one, imparting me the basic skills of digital photography. Though, it would be more effective if it was not held so late in the night.
27th November marked the end of the exams for most year 1 students in IEM, and the next day was a day filled with fun and laughter for some of us. To celebrate the end of the gruelling exams, the upcoming holidays and essentially to just ‘chill out’ together – the twenty or so of us from IEM went down to Sentosa for a get-together session. The weather was great and it was unusually sunny for this time of the year. We first met at Vivocity for lunch, and thereafter took the Sentosa Express to Sentosa’s Siloso Beach. We toured around via the beach tram and visited exciting attractions like the Luge. Thereafter we went to Imbiah. It would be an understatement to say that the day was perfect – with other games such as Murderer and Ultimate Password lined up for us. Indeed, we will definitely be holding more of such gatherings in the future.
Despite the busy schedules of the IEM students, we have come together on 23 February 2009 at the SRC Yunnan Corner. On this very day, the two pioneer batches of IEM students had come together to have some BBQ fun and chats with our mentors. Not just so, the year 2 students had a comprehensive briefing for their upcoming Design and Innovation Project (DIP) and also the Industrial Attachment that will commence very soon. Amidst the good food, there were also strategic games prepared, such as UNO Stacko and Mastermind, to stimulate our students’ challenging minds. Many of us had also seized this great opportunity to catch up with our mentors, updating each others’ lives and etc. Not to forget the rain that almost caused us to call off the BBQ, it was a great bonding session not only within ourselves, but also with our mentors. The rain definitely did not dampen our spirits! We had great fun cooking, playing and talking altogether. A big thank you to all participants and the support of the school that have made this event happen. We look forward to another great bonding session!
There were two information sessions for prospective students - on 31 July and 14 February for Polytechnic graduates and JC students respectively. The information sessions were held in one of the Suntec City Convention Halls. Some IEM students, like Sitti, volunteered to help out as student helpers by handing out information brochures and sharing their experiences with interested students. The turnout was good, with a lot more queries about IEM coming in after a combined EEE/IEM talk. Hopefully, this session was helpful for students still uncertain about their choices!
It's time of the year again for the NTU Open House. Just like the NTU Information Session previously held, some of us were tasked to be student helpers for the event to help prospective students make their choices. We had to hand out EEE and IEM brochures, share our experiences, and do our best to explain the course to students and parents alike. It was certainly a show of how bonded the course is when a few more IEM students turned up in the afternoon on their own accord and enthusiastically volunteered their help. With the eye-catching IEM polo tee and our overwhelming (student helper) numbers that day, we certainly hoped we attracted a lot more students to consider IEM as one of their options.
To catch the exhibition by Christian Lacroix, a French couturier, we went down to the National Museum on March 29. The trip was suggested and organised by Prof Joan Marie Kelly – our course instructor for the module “Drawing as a Conceptual Tool”. We had to sketch costumes that we thought were interesting, and these sketches would be included in our portfolio for grading later on. Who would have thought an educational trip to the museum could be this fun? The costumes were certainly unusual and beautiful, with each having interesting background reads. I’d have to say it really was a very unique experience – how many actually have tried sketching in a museum? While we knew that our works would be graded, we didn’t actually feel pressurized to draw extremely well – instead, it was a nice change from all the math and science that we battle with on a near daily basis. I’m seriously thankful for this trip, otherwise I never would have found out how fun a trip to the National Museum can be.
Besides the trip to the Singapore Art Museum the week before – this time round we went to the Singapore Zoological Gardens. The excursion was once again organised by Prof Joan Kelly, and the aim this time was quite obviously to sketch animals. I'd have to say – it wasn't an easy task. The animals definitely weren't being as cooperative as the models we work with in class, so we had to be really fast or be unable to draw anything at all. We started the day looking at the elephants take their baths, and many lost their focus (to sketch) right from this start. Ultimately, it turned into a camwhoring session for some – and we demonstrated how exactly 20 year olds can turn into 8 year olds, just by seeing a tiger snoozing or a baby peacock strut past. At 11 – we regrouped and went for the elephant show. Sadly, the excursion ended shortly after that and we had to take the shuttle bus back to NTU or face the horrible thought of travelling back to NTU by ourselves from Mandai.
Once again - it's holiday time! Marked by the end of the Data Structures and Algorithms examination, some of the year 1s decided that it's time for another gathering. To make it convenient for those returning home or travelling overseas, it was decided that the lunch would be a simple and quick lunch at Thai Express @ Jurong Point. It was a nice break from all the studying, and geared everyone up for the fun that will be to come during the holidays.
Some IEM students were tasked to help out with the EEE/IEM Tea Reception at Marina Mandarin Hotel during the summer holidays. The tea reception was aimed welcome the next batch of IEM-ies and clear any doubts they might have before deciding to take up the IEM course offer. The tea reception had a pretty good turnout, and the current students were all eager to meet with their future juniors. Wearing the now iconic IEM polo tee, student helpers tried their best to answer any queries posted. Professor Andy Khong also had a mini-“lecture” to introduce prospective students to the course.
Achievements
The original IEM website is designed by first batch students in Aug 2008. One year after when it is published, the design team decided to upgrade the whole website to match the new needs.

The team spent one month of their December vacation working out the content and finalizing the design. The new website is improved in a way such that it is more consistent, aesthetic and intuitive to the web viewers. A fine example would be that the team has changed the navigation bar into user-friendly flash clip, so that the viewers would be able to get information in a more efficient way.

IEM website design team
Designers:
Dai Miao, Wu Han, Zhang Yang
Editors:
Lim Shiyun, Ma Yiwei, Yee Miao Ling, Zhang Yuzhuo
The IEM T-shirt & Poster Design Competition was held during the first semester of academic year 2008-09. Designs were judged by Professor Joan Marie Kelly and a round of voting was also held during the Moonlight Party for Mid Autumn Festival. The top 3 entries for each respective competition are as shown below:

**T-Shirt Design**

- **First Prize**
  - Done by: Lim Shiyun

- **Second Prize**
  - Done by: Yee Miao Lng

- **Third Prize**
  - Done by: Dai Miao

**Poster Design**

- **First Prize**
  - Done by: Nguyen Xuan Huy

- **Second Prize**
  - Done by: Li Yue

- **Third Prize**
  - Done by: Huang Jiesi & Lau Yanling
He Li: To be selected to represent the school of Electrical and Electronics Engineering and my own course, IEM in the NTU College of Engineering undergraduate marketing video is a great honor. I was thrilled knowing that I was selected to be the student spokesperson after my videoed interview with the professional production crew. This is the very first time that an undergraduate marketing video is filmed and several student speaks persons from different courses under the College of Engineering are chosen to be featured.

In my part of the video, I briefly introduced what my course is about, the reason why I chose to study engineering and how I was attracted by the IEM course. Also, I walked the camera through various places of the beautiful campus including the state-of-art Art, Design and Media building and the fascinating semiconductor characterization lab.

The two-day filming had been a great experience. Under the guidance of the professionals, I have learnt how to communicate well with the audience, namely the camera, through my body language and most effectively, through genuine eye contact. Being personally involved in the casting, some of the mysteries of films were unveiled and I realized this industry is not all about the glamour and dazzle. The casting crews amazed me by demonstrating how much hard work, discipline, leadership, teamwork and professionalism is actually required for the making of a good film and I have thus developed the utmost respect towards the nameless heroes working in the filming industry.
Apart from her studies and research, Cherlynn is an enthusiastic member of the NTU Astronomy Club. Besides attending lectures on astronomy, club members sometimes gather at the rooftop garden of NTU’s Art, Design and Media Building, which provides amazing, unobstructed views of the night sky. On “good” nights, she is able to observe and appreciate constellations and sometimes, even meteor showers. Like the stars she observes, Cherlynn’s career prospects are bright – an NTU-EEE degree would allow her to carve out a career in many industries. The broad-based skills that undergraduates are equipped with will help prepare them even for non-engineering related jobs, including careers in banking, finance or hospitality industries. Despite the flexibility of her degree, Cherlynn is certain of her interest. She said, “There are a lot of career possibilities but I would like to do something related to what I am studying now.”

Currently in her first year, Cherlynn finds the environment in NTU a very warm and welcoming one. She said, “My first-year course mates and I are very close and most of us live in the hall, so we find that NTU is not just a place to learn – it is also like a home to us!”

Lim Shiyun, who is pursuing a double degree in Information Engineering & Media (IEM) and Economics, could not agree more. “My course has a very small cohort. With only about 43 of us in our first year, we can get to know everyone else in our course, so we are like one big family,” said the 19-year-old.

S hiyun: I felt rather honoured to be interviewed by Brightsparks for their annual magazine. Frankly - I had no clear idea what the interview was to be about beforehand. After learning that the interviewer was also an NTU student, I felt more at ease. Essential-ly, we went through the reasons as to why I chose IEEC over other courses, and my impres-sion of the course thus far. I had to say it was a pretty unique and interesting experience - with the photo shoot and all.
Photo of some of the wonderful, amazing, brilliant, enthusiastic etc (insert every possible virtue here) students who have made academic year 2008-09 perfect on the next page. Now then, ill the next yearbook - cya!

- Collé team

From Top Left, first row:
Thank, Arnold, Arvind, Dustin, Quang, Chongyang, Huy, Pang Boon, Chong Long (far right)

Second row:
Jessica, Yu Juan, He Li, Jing Jing, Mengyu, Liu Zhe, Yuzhuo, Huang, Ree Gann, Dai Miao, Mingxu, Hooze, Kangran, Feimin, Ji Xuan

Third row:
Yong Ping, Kiahui, Jingya, Yiwei, Leyu, Chenxi, Qiaoqi, Maoqing, Xukun, You Ran, Khue, Zhang Yang, Qiu Min, Wu Han

Fourth row:
Jiesi, Yanling, Wanling, Jiapei, Xu Li, Lin Lin, Ai Mengying, Miaoling (right in front), Li Yue, Diep, Liu Shuang, Sin Yi, Mi Qi, Siew Mooi, Feng Yi, Wang Bei, Wang Bei