



بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

Editorial Board

Patron

Prof. Ir. Dr. Mohamad
Nor Bin Berhan

Advisor I

Prof. Madya Mohd Zaki
Abdullah

Advisors II

Tengku Muhaini Tuan Mat
Abd. Halim Abd. Hamid

Chief Editor

Nor Hanim Abd Rahman

Layout

Hasfazilah Ahmat
Nhar2

Contributing Editor

Mohd Noor Ali
Azrinawati Mohd Zin
Ch'ng Pei Eng
Marina Mokhtar
Siti Husniah Chumiran

*Bulletin FSM is a
newsletter published by
Department of Science
Mathematics UTM
Penang Branch Campus.*

Articles, cartoons, photos and
any contributions for the
bulletin are most welcomed

In this Issue :

◆ DID U KNOW?

◆ WHY STUDY
MATHEMATICS?

◆ SENARAI
MAKMAL

◆ WOMEN IN
CHEMISTRY

◆ THE MIRACLE
OF MAGNESIUM

◆ RESEARCH &
PAPERS
PRESENTATIONS

◆ JTMSK&JES'S
ACTIVITIES

◆ CARTOONS

Bulletin

JTMSK & JSG

Issue 8 (internal circulation) -free
<http://10.100.30.45/bulletin>

OCT/NOV/DEC 2005

Pejabat JSK/FSM kini berubah wajah....2006

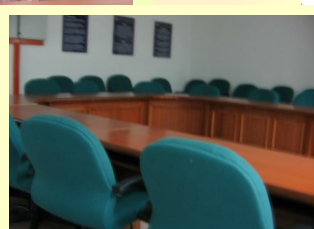
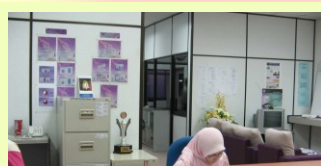


Dulu dikenali sebagai 'Jabatan Sains Kejuruteraan' atau 'Fakulti Sains dan Matematik'.

Kini, seiring dengan perubahan zaman dan bilangan pelajar yang kian mencecah 4000 orang, tibalah masanya JSK/FSM bertukar nama dan wajah. JSK/FSM kini telah dibahagikan kepada 2 bahagian terdiri daripada

Jabatan Teknologi Maklumat dan Sains Kuantitatif (JTMSK)
dan
Jabatan Sains Gunaan (JSG).

Lokasi kedua-dua Jabatan terletak di Kompleks Perdana, Level 3 (bertentangan dengan lif). Pintu Utama (tengah) digunakan bagi siswa-siswa mengajukan sebarang kemusykilan dan di seksyen ini kedudukan pejabat-pejabat rasmi



Koordinator JTMSK, Koordinator JSG, Koordinator Pra-Sains, dan Koordinator Sistem Teknologi Maklumat di tempatkan.

Pintu sebelah kanan merupakan Bilik Mesyuarat Jabatan yang dikongsi bersama dan Bilik MultiMedia.



Manakala, pintu sebelah kiri menempatkan pejabat-pejabat

pensyarah, Pengerusi Tunas Mekar, dan ruang rehat.

SELAMAT DATANG!



Pihak Bulletin ingin mengucapkan:
SELAMAT TAHUN BARU 2006
SELAMAT EIDULADHA
SELAMAT KEMBALI
& SELAMAT DATANG

Kepada semua warga uitmpp-pelajar & staf

-juga kepada semua siswa-siswa yang baru di'transfer'kan dari semua cawangan & semua pelajar semester 1, diploma dan ijazah.

-ditulis oleh nhar2



JTMSK & JSG ACTIVITIES (April 2005 – January 2006)

“BENKEL PENYEDIAAN DAN PENYERAHAN KERTAS KERJA PROJEK PENYELIDIKAN IRDC”

Objektif

Menggalakkan pensyarah untuk membuat penyelidikan bermutu di bawah biayaan IRDC.

Penyerahan Kertaskerja sekurang-kurangnya 10 tajuk penyelidikan ke pihak IRDC.

Tempat : ‘Coffee House’
Tarikh: 24-25hb. Mei, 2005
Participants: 45 orang

“JOURNAL WRITING WORKSHOP”



Invited Speakers:

*P.M. Dr. Abd. Latif Ahmad
Sch. Of Chemical Eng, U.S.M.
P.M. Dr. Ishak Hj. Abd. Azid
Sch. Of Mech.Eng. U.S.M.*

Objective

To develop and to create effective journal writing from UiTMPP staffs.

Venue : Dewan Seminar Utama / Computer Lab
Date : 22nd-23rd. June 2005
Participants: 55 participants.

SPSS WORKSHOP:

Speakers: Mrs. Teoh Sian Hoon
: Mrs. Tg. Muhaini Tuan Mat

Date

23 June 2005
SPSS Workshop
(organized by JTMSK & JSG)

1 Oct 2005
SPSS Workshop
(under HEP Programme & conducted by JTMSK lecturers)

Objectives

Using Factor Analysis & Discriminant Analysis

At the end of workshop, students can:

1. Define variables in SPSS
2. Enter data for the preparation of data analyzing
3. Use Chi-square test, t-test and F-test



PTK3
10-20/12/2005 di Interkma Resort

SENARAI MAKMAL SAINS: FAKULTI SAINS DAN MATEMATIK, UiTM P. PINANG

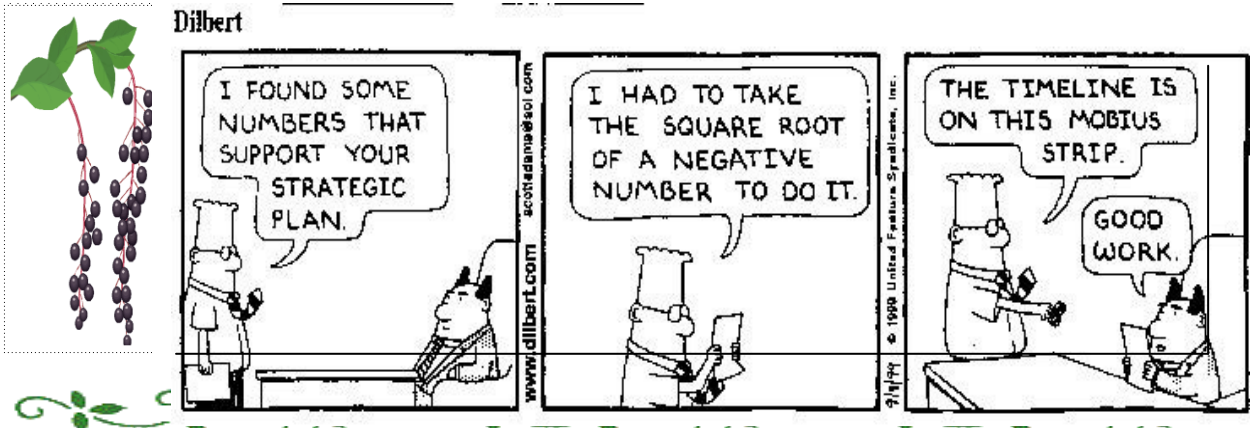
1. MAKMAL SAINS FIZIK

BIL	MAKMAL FIZIK	PENGGHUSUSAN	LOKASI
1	MAKMAL FIZIK A	PHY 140	TINGKAT 2, BLOK PERDANA
2	MAKMAL FIZIK B	KJM 110	TINGKAT 3, BLOK PERDANA
3	MAKMAL FIZIK C	PHY 081, PHY 082, PHY 190	TINGKAT 3, BLOK PERDANA
4	MAKMAL FIZIK D	PHY 142	TINGKAT 3, BLOK PERDANA

2. MAKMAL SAINS KIMIA

BIL	MAKMAL KIMIA	PENGGHUSUSAN	LOKASI
1	MAKMAL KIMIA 1	CHM 081, CHM 082, CHM 140, CHM 142	TINGKAT 2, BLOK PERDANA
2	MAKMAL KIMIA 2	CHM 081, CHM 082, CHM 140, CHM 142	TINGKAT 2, BLOK PERDANA
3	MAKMAL KIMIA 3	CHM 081, CHM 082, CHM 140, CHM 142	TINGKAT 3, BLOK PERDANA

3-MAKMAL SAINS MATEMATIK (Tiada pengkhususan lagi)



Selamat Melahirkan Cahayamata:

Puan Hasfazilah Ahmat –girl
Puan Shakirah Md. Abd.Rahman - boy
Puan Haslina Hamid-girl
Puan Rozita Kadar-boy
Puan Muniroh Hamat—girl
En. Mohd Muzafar Jumidali - girl

Tahniah Anugerah Cemerlang

Puan Noor 'Aina Abd Razak
Mr Cheng Siak Peng



Why study Mathematics?

The main reason for studying mathematics to an advanced level is that it is interesting and enjoyable. People like its challenge, its clarity, and the fact that you know when you are right. The solution of a problem has an excitement and a satisfaction. You will find all these aspects in a university degree course.

You should also be aware of the wide importance of Mathematics, and the way in which it is advancing at a spectacular rate. Mathematics is about *pattern and structure*; it is about logical analysis, deduction, calculation within these patterns and structures. When patterns are found, often in widely different areas of science and technology, the mathematics of these patterns can be used to explain and control natural happenings and situations. Mathematics has a pervasive influence on our everyday lives, and contributes to the wealth of the country.

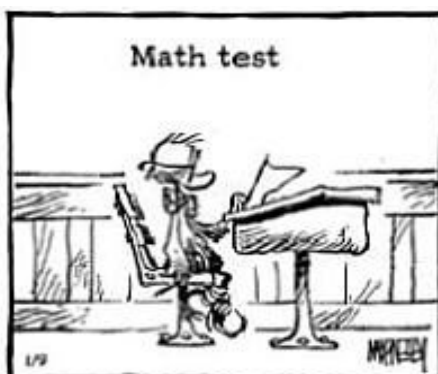
The importance of mathematics

The everyday use of arithmetic and the display of information by means of graphs, are an everyday commonplace. These are the elementary aspects of mathematics. Advanced mathematics is widely used, but often in an unseen and unadvertised way.

- The mathematics of error-correcting codes is applied to CD players and to computers.
- The stunning pictures of far away planets sent by Voyager II could not have had their crispness and quality without such mathematics.
- Voyager's journey to the planets could not have been calculated without the mathematics of differential equations.
- Whenever it is said that advances are made with supercomputers, there has to be a mathematical theory which instructs the computer what is to be done, so allowing it to apply its capacity for speed and accuracy.
- The development of computers was initiated in this country by mathematicians and logicians, who continue to make important contributions to the theory of computer science.
- The next generation of software requires the latest methods from what is called *category theory*, a theory of mathematical structures which has given new perspectives on the foundations of mathematics and on logic.
- The physical sciences (chemistry, physics, oceanography, astronomy) require mathematics for the development of their theories.
- In ecology, mathematics is used when studying the laws of population change.
- Statistics provides the theory and methodology for the analysis of wide varieties of data.
- Statistics is also essential in medicine, for analysing data on the causes of illness and on the utility of new drugs.
- Travel by aeroplane would not be possible without the mathematics of airflow and of control systems.
- Body scanners are the expression of subtle mathematics, discovered in the 19th century, which makes it possible to construct an image of the inside of an object from information on a number of single X-ray views of it. Thus mathematics is often involved in matters of life and death.

Enjoy your Mathematics!

By Ronnie Brown & Tim Porter(1996)





Selamat Menyambut Aidul Adha 1426H

THE MIRACLE OF MAGNESIUM

by Dr. Carolyn Dean

What Does Magnesium Do?

1. Magnesium helps to relax muscles
2. Magnesium helps to transmit nerve signals
3. Magnesium produces and transports energy
4. Magnesium is necessary for the synthesis of protein
5. Magnesium is a cofactor assisting enzymes in catalyzing most chemical reactions in the body, including temperature regulation
6. Magnesium also gets rid of constipation the natural way without all those expensive pills. It also helps calm down hyperactive kids, who don't get enough magnesium through eating vegetables.



M
A
K
M
A
L
I
F
I
Z
I
K

Perbanyakkanlah di bulan Ramadhan ini dengan mengerjakan

EMPAT perkara.

DUA daripadanya menyakakan Allah,

manakala

DUA lagi ialah perkara yang sangat kamu hajatkan.

Perkara yang disukai Allah itu :

1. Syahadah (La ilaha illallah)
2. Istighfar (mohon keampunan)

Manakala 2 perkara yang kamu hajati :

1. Memohon syurga dari Allah
2. Memohon perlindungan dari api neraka

Barang siapa yang memberi minum orang yang berpuasa nescaya Allah akan memberinya minuman dari air kolan Rasulullah dihari kiamat kelak. Dan mereka tidak akan merasa dahaga sehinggalah masuk ke syurga. (Hadith riwayat Ibnu Khuzaimah)

3
0
5
0
6
4
0
2



M
A
P
I
E
W
K
P



Congratulation to Mrs Teoh & her colleagues!!!

The following papers were successfully presented in the 3rd International Seminar on Learning and Motivation "Enhancing Student Engagement", on 10-20 September 2005, at The City Bayview Hotel, Langkawi, Kedah. Organized by Faculty of Cognitive Science and Education, Universiti Utara Malaysia.

APPLYING MASTERY LEARNING IN TEACHING

Teoh Sian Hoon, Peridah Bahari, Sarina Md Jam, Salina Hamed

Abstract

Mastery learning is applied based on two concepts - repetition of study and learning on own paced. In mastery learning, students' engagement is emphasized. In normal teaching and learning process, although most of instructions are the same across the classrooms in terms of the cognitive level of instruction, differences emerged in mastery learning are the greater emphasis placed on the intrinsic value of the tasks and on the specific promotion of meaningful learning by the teachers whose students tended to be high on mastery-orientation. Students are more likely to adapt to the learning structures that provides variety of activities. In the planning and design of instruction in mastery learning, a table of specification is an essential element that is adapted to fit to the learning needs of students. The above advantages of mastery learning were tested in an experiment. The effectiveness of mastery learning in teaching mathematics was reported in this study. An experiment was carried up among the first semester electrical engineering students in Universiti Teknologi MARA Pulau Pinang. Two groups were compared. Students in both groups learned the topic of Logarithm in mathematics through the systematic well-designed instruction. The difference between these two groups was students in mastery learning group engaged in motivational feedback activities before proceeding to another unit of learning. The effectiveness of mastery learning was analyzed from students' mathematics gain score for one of the chapters learned in a semester. Result showed that gain scores for students in mastery learning were higher than non-mastery learning.

THE LEVEL OF MOTIVATION AND EFFICIENCY AMONG STUDENTS IN LEARNING MATHEMATICS

Teoh Sian Hoon, Sarina Md Jam, Rozita Kadar

Abstract

Most of the first semester students were exposed to the environment of the university for one week during orientation. Many activities had been done for them. They were introduced to the system of the university. In order to prepare the students to adapt to university life, and to understand more about the students, prior arrangement of many beneficial activities, the level of motivation and efficacy were investigated. This study found that students who scored 'A' in mathematics had higher level of motivation compare to students who did not score 'A'. However, there was no significant difference in terms of level of motivation between gender and among the study programs. Result showed that both efficacy and motivation had a significant correlation with the first semester mathematics result. In addition, there was a correlation between efficacy and motivation. Therefore, there was a relationship between efficacy and motivation in learning mathematics. Finally, result showed that the proportion 0.5428 or 54.28% of 351 students were getting distinction in mathematics for the average motivation level (motivation level = 100.73). Although results showed that there was no significant difference in terms of efficacy for different levels of SPM mathematics results, gender and programme, this situation might be different for different time of study. It was believed that the concept of self-efficacy is situation-specific in which one will have a range of both high and low self-efficacy expectations at one time depending on specific situation, task, or behavior. Increasing and decreasing of the level of efficacy will happen and it directly influences the level of motivation. Nonetheless, sources of increasing the motivation are various. Effort to increase the level of motivation must be put attention because the result in this study showed that motivation significantly contributed to determine a distinction achievement of mathematics.



DID YOU KNOW?

At a typical concentration of 20 ppm (milligrams per liter = milligrams per kilogram), a liter of diet soda would release 1.6 mg methanol, enough to trigger migraine headaches and other similar symptoms common to methanol poisoning.

• According to Dr. Reg McDaniel, the human body is able to perform its own natural "stem cell therapy" when it receives enough glyconutrients. According to Dr. Reg, there are numerous free-floating stem cells in your blood that are available to be assigned to do "stem cell therapy" wherever it is most needed in the body, and they are ACTIVATED and enabled to do their work by glyconutrients. •

According to a report published in last month's issue of the Journal of Agricultural and Food Chemistry, a new study suggests that chamomile tea - especially the German variety (also called manzanilla) - may relieve a wide variety of health problems, including colds and cramps. • Chamomile has long been championed as a panacea for all types of low-level illness, stress-related symptoms, and muscle pains.

This newest study is among the first to prove such claims in humans (many animal studies have previously confirmed these positive effects). • If healthy bacteria (a protective factor) are missing within the intestinal wall, unhealthful bacteria, yeast, parasites and toxins may accumulate, damaging the intestinal wall and producing poor intestinal health. Your gastrointestinal tract is a "tube" approximately 15 feet long, running through the body from your mouth to the anus.

As early as 1989 according to EPA records, more than 1 billion pounds of chemicals were released into the ground, threatening the soil where we grow our food and in the groundwater in which we get drinking water. Over 188 million pounds of chemicals were discharged into lakes and rivers. More than 2 billion pounds of chemicals were pumped into the air we breathe. This produces a grand total of over 5 billion pounds of chemical pollutants released into the environment in just that one-year. Vitamins A, C, B6, magnesium and potassium are just some of the substances that support kidney activity. Excess fat provides a ready storage site for fat-loving toxins, such as methanol in aspartame. Once deposited in the fat, it is difficult to remove them. Unless the excess fat is removed, toxins remain there with the possibility of being a continual source of toxicity.

By Dr. Janet Hull, USA (2005)

Selamat Datang:

Puan Norazah Umar
Cik Rafizah Kechik
Puan Sopia Ishak
Cik Nor Hafizah A. Rahman
Cik Nor Aini Hasanuddin
Cik Julida Ghazak
Cik Shamsunarni Mohamed Zukri
En. Mohd Saiful Nizam Abu Bakar
Cik Siti Zatusy Elyana Mat Rashid

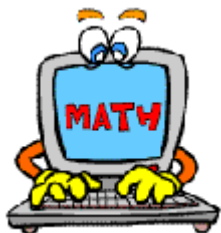
Tahniah &

Selamat Kembali

Siti Balqis Mahlan (Tetap)
Suryaefiza Karjanto (Tetap)
Maisurah Shamsuddin
Norpah Mahat
Adri Nirman Ahmad
Nur Maizatul Azra Mukhatar



JTMSK /JSG CALENDER



April 2005

- 9-Seminar in Journal Writing ,Arau
(wakil: Pn Hanim & Mr. Lim)
- 14-Bengkel IRDC
- 20-Meeting FSM

May 2005

- 3-Meeting FSM
- 9-Meeting JWW
- 14-Hari keluarga UiTM
- 15-Forum Perdana
- 15-Meeting FSM
- 18-lawatan ke UiTM Kedah
- 24/25-Bengkel Penyediaan Kertas Cadangan
IRDC-FSM

June 2005

- 10/12-CSSR, Kuala Terengganau
- 21/22-Journal Writing Workshop
- 23- Intermediate SPSS Workshop

July 2005

- 'Timetable' Meeting

August 2005

- 30- HEA Meeting
- 31-Majlis Mlm Kemerdekaan

September 2005

- 6-Bengkel Kualiti FS m
- 17-Meeting J/KDisiplin
- 28-JTMSK Meeting

October 2005

- 14-JTMSK Meeting
- 26-HEA Meeting

November 2005

- 23/29 - 'Timetable' Meeting
- 26- Kursus Induksi , Kg Gajah
- 29-Jamuan Raya UiTMPP

December 2005

- 2-JTMSK Meeting
- 14/15-Maple Workshop
- 10/23-PTK3-6, Shah Alam
- 21-Perasmian MWS

January 2006

- 4-Amanat Pengarah 2006
- 12-Jamuan Hari Raya Qurban 1426H
- 13-JTMSK Meeting



Women in Chemistry : Women have always been involved in chemistry. In fact, the first chemist to be identified by name was Tapputi-Belatekallum from Babylonia who made perfumes and cosmetics. In recent times other women such as Marie Curie and Dorothy Hodgkin have made great advances in chemistry, for which they were awarded Nobel Prizes in Chemistry.

Historically, however, chemistry has been a male dominated profession. This is an aspect of the chemical world that is changing. High school and undergraduate university classes are now approximately 50/50 women to men. Chemistry is a challenging discipline, which requires hard work. One of the biggest fallacies about chemistry is that it is too difficult for women. This is not true because many women excel in chemistry. In university, many chemistry departments offer co-op programs, which allow the student to gain work experience in industry. Again, these programs are often 50% women. Co-op is a wonderful opportunity to gain self-confidence and learn that chemistry can be interesting and fun.

Chemistry offers a wide variety of interesting opportunities for women in any of its three major fields: chemistry, chemical engineering and chemical technology. Chemists, chemical engineers, and technologists (technicians) can all work in areas such as academic institutions, industry, medical laboratories, and teaching. Chemists invent new substances and develop theories to explain chemical reactions or processes. They can choose to work in areas such as analytical, inorganic, organic, theoretical, polymer, and environmental. Chemical engineers are probably the most versatile type of engineers. They develop industrial processes, use electronics and computers to simulate processes and analyze data. Chemical engineers can also conduct research and development for things such as plant production, operation, and construction. On the other hand, chemical technicians are skilled in operating scientific equipment and often record and evaluate the reliability of data. Chemical technicians are equally important, as their knowledge is essential for the smooth function of instruments.

After obtaining a B.Sc. many students continue on to graduate school where they enter into a Masters or a Ph.D. program. It is only at the Ph.D. level and above where the distribution of men and women in chemistry and chemically-related positions is not equal. Here, men outnumber women by a large proportion. This is slowly changing. However, many women feel that time commitment needed to obtain a Ph.D. or even tenure at an academic position is discouraging if they also want to have a family. In order to encourage women to pursue chemical careers, academic institutions and industry now allow time off for maternity. Some academic institutions even allow shared faculty positions so that the husband and wife can both work part-time and take care of their children. At present there are not many women who choose to have chemistry careers and families who are visible to the undergraduate and graduate women students. Hopefully, as more women discover the opportunities available to them they will decide to pursue a chemical career. This will provide the aspiring female chemists much needed positive reinforcement that women can excel in chemistry and have a family if they so choose.

Every year more women are deciding to enter into chemistry. As a result, the number of women in graduate school is starting to increase. Hopefully, some will decide to continue on and become professors or enter into industry as research supervisors.

Source:http://www.cheminst.ca/ncw/articles/1996_womeninchemistry_e.html