

Institute of



Mathematical
Sciences



UNIVERSITI
MALAYA

BACHELOR OF SCIENCE IN MATHEMATICS

BRIEFING BY PROGRAM
COORDINATORS

ORIENTATION WEEK

SESSION 2021/2022

*“Do not worry too much about your difficulties in mathematics,
I can assure you that mine are still greater.”*

Albert Einstein

PROGRAM GOAL

To produce graduates with a sound knowledge of mathematics, capable of analysing and solving problems and thinking critically, able to adapt to diverse environments and contribute significantly in various professions.

PROGRAM EDUCATIONAL OBJECTIVES

1. Graduates are able to work in professions related to mathematical sciences or related fields.
2. Graduates are able to practice continuous learning in their careers.
3. Graduates are able to communicate and leverage learned concepts/methods effectively and ethically.

INTRODUCTION TO PROGRAM



Recent alumni can be found in ...

Banking / Finance

Amat Teknik Sdn. Bhd.
Khazanah Nasional Berhad
RHB Bank
Panasonic Air Conditioner Malaysia

Education

Ardent Educational Consultants Sdn. Bhd.
Learning Port Sdn Bhd
SMI AL-AMIN Gombak
SRA Ash-Shafie Taman Maluri
Tati University college (TATIUC)
Universiti Kebangsaan Malaysia
Asia Pacific University of Technology & Innovation
International University of Malaya – Wales
Universiti Malaysia Perlis
Universiti Sains Islam Malaysia

Management

Central Sugars Refinery Sdn. Bhd.
Sapura Energy Sdn. Bhd.
Sime Darby Industrial
Pfizer Malaysia Sdn. Bhd.
Indah Water Consortium

Research

University of New South Wales
Universiti Malaya
Monash University

Information Technology

Accenture Solutions Sdn. Bhd.
Phitomas Enterprise Solutions Provider

Recent alumni can be found in ...

Manufacturing / Production

Lumileds (M) Sdn. Bhd.

Protection Technologies (M) Sdn. Bhd.

Data Analysis and Services

TCRS Restaurant Sdn. Bhd.

Schlumberger Limited

Kenanga Investment Bank Bhd.

Logistics

Westports Malaysia Sdn. Bhd.

Self-employment

Public Services

Ministry of Communications & Multimedia Malaysia

Taxation

Kwai Fatt & Associates

PricewaterhouseCoopers Malaysia

Sales / Marketing

Roza Station Sdn. Bhd.

Astro Malaysia Holdings

and more ...

Academic Staff of PURE MATHEMATICS Division



PROGRAM COORDINATOR
DR. LOO TEE HOW



ASSISTANT PROGRAM
COORDINATOR
DR. ONG SIEW HUI



PROFESSOR DR.
ANGELINA CHIN YAN MUI



ASSOC. PROF. DR.
CHOOI WAI LEONG



ASSOC. PROF. DR.
DENG CHAI LING



ASSOC. PROF. DR.
WONG KOK BIN



DR. TAN TA SHENG



DR. OON SHEA MING



MR. MOHAMAD BAKRI
ZUBIR

Academic Staff of APPLIED MATHEMATICS Division



PROGRAM COORDINATOR
DR. AMIZAH MALIP



ASSISTANT PROGRAM
COORDINATOR
DR. MUHAMAD HIFZHUDIN
NOOR AZIZ



ASSOCIATE PROFESSOR
DR. ZAILAN SIRI



ASSOCIATE PROFESSOR
DR. WAN AINUN MIOR OTHMAN



DR. SITI SUZLIN SUPADI



DR. NOOR FADIYA MOHD
NOOR



DR. KWA KIAM HEONG



DR. ELAYARAJA ARUCHUNAN



University Courses
(12 credits)

Core Courses
(79 credits)

Elective Courses (43 credits) ← Program Elective Courses (≥ 35 credits)
← Student Holistic Empowerment (8 credits)

PROGRAM STRUCTURE

CREDITS AND COURSES

University Courses (12 credits)

| Course Code | Course Title | Credit | |
|-----------------------------|--|--------|------------------------------|
| GLTxxxx | English Courses (subject to the PATH) | 4 | ← Semester 1 ← Semester 2 |
| GKA/GKI/GKK/ GKP/GKS/GKU | Co-curriculum | 2 | ← Semester 3 |
| GIG1012/ GLT1017* | Philosophy and Current Issues/ Basic Malay Language | 2 | ← Semester 1 |
| GIG1013 | Appreciation of Ethnics and Civilisations | 2 | ← Semester 2 |
| GIG1003 | Basic Entrepreneurship Culture | 2 | ← Semester 3 |

*Only for international students.

For more info on University Courses, refer to
<https://citra.um.edu.my/handbook-buku-panduan>

Which English Courses to Take?

PATH 1

| | | | | | |
|------------------------|---------------------------|---|--|--|---|
| MUET BAND 2 | IELTS Band 4.0 | TOEFL Paper – Based Test (437 – 473) | TOEFL Computer – Based Test (123 – 150) | TOEFL Internet – Based Test (41 – 52) | PTE (Academic) – (10 – 28) |
|------------------------|---------------------------|---|--|--|---|

Students need to complete 2 courses as stated below from this PATH

| Course Code and Title | Credit |
|---|----------|
| GLT1018 Proficiency in English I | 2 |
| <u>and choose one of:</u> | |
| GLT1019 Let's Speak | 2 |
| GLT1020 Fundamental Writing | 2 |
| Refer to https://fs.um.edu.my/undergraduate-handbook-amp-booklet | |

Which English Courses to Take?

PATH 2

| | | | | | |
|------------------------|---------------------------------|---|--|--|---|
| MUET BAND 3 | IELTS Band 4.5 - 5.0 | TOEFL Paper – Based Test (477 – 510) | TOEFL Computer – Based Test (153 – 180) | TOEFL Internet – Based Test (53 – 64) | PTE (Academic) – (29 – 41) |
|------------------------|---------------------------------|---|--|--|---|

Students need to complete 2 courses as stated below from this PATH

| Course Code and Title | Credit |
|---|---------------|
| GLT1021 Proficiency in English II | 2 |
| <u>and choose one of:</u> | |
| GLT1022 Speak Up | 2 |
| GLT1023 Effective Workplace Writing | 2 |
| Refer to https://fs.um.edu.my/undergraduate-handbook-amp-booklet | |

Which English Courses to Take?

| PATH 3 | | | | | | | | |
|--|----------------------------|---|---|--|----------------------------------|----------------|---|---|
| MUET BAND 4 | IELTS Band 5.5 - 6.0 | TOEFL Paper – Based Test (513 - 547) | TOEFL Computer – Based Test (183 - 210) | TOEFL Internet – Based Test (65 - 78) | PTE (Academic) – (42 – 57) | FCE (B & C) | GCE A Level (English) (Minimum C) | • IGCSE/ GCSE (English) (A, B & C) |
| Students need to complete 2 courses as stated below from this PATH | | | | | | | | |

| Course Code and Title | Credit |
|--|--------|
| GLT1024 Proficiency in English III | 2 |
| <u>and choose one of:</u> | |
| GLT1025 Effective Oral Communication | 2 |
| GLT1026 Writing at the Workplace | 2 |
| Refer to https://fs.um.edu.my/undergraduate-handbook-amp-booklet | |

Which English Courses to Take?

PATH 4

| MUET BAND 5 & BAND 6 | IELTS Band 6.5 - 9.0 | TOEFL Paper – Based Test (550 - 677) | TOEFL Computer – Based Test (213 - 300) | TOEFL Internet – Based Test (79 - 120) | PTE (Academic) – (58 – 90) | FCE (A) | GCE A Level (English) (B & A) |
|--|----------------------------|---|---|---|----------------------------------|------------|--|
| Students need to complete 2 courses as stated below from this PATH | | | | | | | |

| Course Code and Title | Credit |
|--|--------|
| GLT1027 Advanced Oral Communication * | 2 |
| GLT1028 Advanced Business Writing * | 2 |
| (* Students can only register one course per semester) | |
| Refer to https://fs.um.edu.my/undergraduate-handbook-amp-booklet | |

Program Core Courses (79 credits)

Level 1 (30 credits)

| Course Code | Course Title | Prerequisite | Credit | |
|--------------------|---------------------------------|---------------------|---------------|--------------|
| SIX1015 | Science, Technology and Society | - | 2 | ← Semester 2 |
| SIX1016 | Statistics | - | 3 | ← Semester 1 |
| SIM1001 | Basic Mathematics | - | 4 | ← Semester 1 |
| SIM1002 | Calculus I | - | 4 | |
| SIM1003 | Calculus II | SIM1002 | 4 | ← Semester 2 |
| SIM1004 | Fundamentals of Computing | - | 3 | ← Semester 1 |
| SIM1005 | Fundamentals of Spreadsheets | - | 2 | ← Semester 2 |
| SIM1006 | Ordinary Differential Equations | SIM1002 | 4 | ← Semester 3 |
| SIT1001 | Probability and Statistics I | SIM1002 | 4 | ← Semester 2 |

Program Core Courses (79 credits)**Level 2 (41 credits)**

| Course Code | Course Title | Prerequisite | Credit |
|--------------------|-------------------------------|---------------------|---------------|
| SIM2001 | Advanced Calculus | SIM1003 | 4 |
| SIM2002 | Linear Algebra | SIM1001 | 4 |
| SIM2007 | Appreciation on Mathematics | SIM1003 | 2 |
| SIM2010 | Numerical Computation | SIM1003 | 4 |
| SIM2011 | Structured Programming | SIM1002 | 4 |
| SIM2012 | Basic Operations Research | SIM1001 | 4 |
| SIM2013 | Introduction to Combinatorics | SIM1001 | 3 |
| SIM2014 | Algebra I | SIM1001 | 3 |
| SIM2015 | Introduction to Analysis | SIM1003 | 3 |

Program Core Courses (79 credits)

Level 2 (41 credits)

| Course Code | Course Title | Prerequisite | Credit |
|--------------------|--------------------------------|---------------------|---------------|
| SIM2016 | Complex Variables | SIM1003 | 3 |
| SIM2018 | Partial Differential Equations | SIM1006 | 4 |
| SIT2007 | Foundations of Data Science | SIT1001 | 3 |

Program Core Courses (79 credits)

Level 3 (8 credits)

| Course Code | Course Title | Prerequisite | Credit |
|-------------|---------------------|--------------|--------|
| SIM3020 | Industrial Training | SIM2007 | 8 |

Students who wish to take SIM3020 are advised to have passed at least 90 credits of the listed courses in the program.

Program Elective Courses (≥ 35 credits)

Specialization

- ❖ Mathematical Science
- ❖ Applied Mathematics

| Course Code | Course Title | Prerequisite | Credit |
|-------------|--------------|--------------|--------|
|-------------|--------------|--------------|--------|

For a complete list of courses, refer to the handbook available at <https://ism.um.edu.my/undergraduate-info>

Student Holistic Empowerment (8 credits)

| Cluster | | Credit |
|--------------------|---|--------|
| (SHE) Cluster 1 | Thinking Matters: Mind and Intellect | 2 |
| (SHE) Cluster 2 | Emotional, Physical and Spiritual Intelligence: Heart, Body and Soul | 2 |
| (SHE) Cluster 3 | Technology/Artificial Intelligence and Data Analytics: I-techie | 2 |
| (SHE) Cluster 4 | Global Issues and Community Sustainability: Making the World a Better Place | 2 |

For further details, refer to

<https://citra.um.edu.my/external-elective-courses>

“Let our advance worrying become advance thinking and planning.”

Winston Churchill



PROGRAM COURSE PLAN

| Planning of Courses | | |
|--|------------------------------|---------------|
| Component | Year 1 | |
| | Semester 1 | |
| | Course | Credit |
| University Courses | GLTxxxx | 2 |
| | GIG1012/ GLT1017* | 2 |
| Program Core Courses | SIX1016 | 3 |
| | SIM1001 | 4 |
| | SIM1002 | 4 |
| | SIM1004 | 3 |
| Elective Courses | (SHE) Cluster 1 | 2 |
| Total Credits | | 20 |
| *Only for international students. | | |

| Planning of Courses | | |
|-----------------------------|----------------------------|---------------|
| Component | Year 1 | |
| | Semester 2 | |
| | Course | Credit |
| University Courses | GLTxxxx | 2 |
| | GIG1013 | 2 |
| Program Core Courses | SIX1015 | 2 |
| | SIT1001 | 4 |
| | SIM1003 | 4 |
| | SIM1005 | 2 |
| Elective Courses | (SHE) Cluster 2 | 2 |
| Total Credits | | 18 |

Planning of Courses

For a complete planning of courses, refer to the handbook available at

<https://ism.um.edu.my/undergraduate-info>

Lecture timetables for courses of Institute of Mathematical Sciences (ISM) are available:

<https://ism.um.edu.my/undergraduate-info>

For tutorial hours, consult the lecturer of the course.

Students are advised to follow the Program Course Plan to avoid crashing of courses.

How to Register for Courses?

<http://maya.um.edu.my/>

**Click <https://youtu.be/Wk7BhYPTpAM>
for a video guiding you through MAYA.**

2021/2022



**ACADEMIC
CALENDAR**

Academic Calendar for Semester I, Session 2021/2022

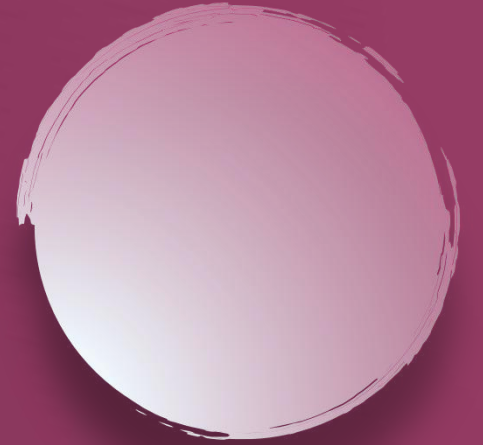
| | | |
|-------------------------|-----------------|---------------------------|
| Registration of Courses | 2 weeks | 24 Sept 2021 - 8 Oct 2021 |
| Week of Welcome | 1 week | 10 Oct 2021 - 17 Oct 2021 |
| Lecture | 7 weeks | 18 Oct 2021 - 5 Dec 2021 |
| Mid-Semester Break | 1 week | 6 Dec 2021 - 12 Dec 2021 |
| Lecture | 7 weeks | 13 Dec 2021 - 30 Jan 2022 |
| Study Week | 1 week | 31 Jan 2022 - 6 Feb 2022 |
| Final Examination Week | 2 weeks | 7 Feb 2022 - 20 Feb 2022 |
| Semester Break | 3 weeks | 21 Feb 2022 - 13 Mar 2022 |
| Total | 24 weeks | |

Academic Calendar for Semester II, Session 2021/2022

| | | |
|-------------------------|-----------------|----------------------------|
| Registration of Courses | 2 weeks | 18 Feb 2022 - 4 Mar 2022 |
| Lecture | 7 weeks | 14 Mar 2022 - 1 May 2022 |
| Mid Semester Break | 1 week | 2 May 2022 - 8 May 2022 |
| Lecture | 7 weeks | 9 May 2022 - 26 June 2022 |
| Study Week | 1 weeks | 27 June 2022 - 3 July 2022 |
| Final Examination Week | 2 weeks | 4 July 2022 - 17 July 2022 |
| Total | 20 weeks | |

*“Better to be three hours
too soon, than a minute too
late.”*

William Shakespeare



**GRADING
SCHEME**

| Grading Scheme | | | |
|-----------------------|--------------|--------------------|-------------------------|
| Marks | Grade | Grade Point | Meaning |
| 90 - 100 | A+ | 4.0 | High Distinction |
| 80 - 89 | A | 4.0 | Distinction |
| 75 - 79 | A- | 3.7 | Distinction |
| 70 - 74 | B+ | 3.3 | Good |
| 65 - 69 | B | 3.0 | Good |
| 60 - 64 | B- | 2.7 | Good |
| 55 - 59 | C+ | 2.3 | Pass |
| 50 - 54 | C | 2.0 | Pass |
| 45 - 49 | C- | 1.7 | Fail |
| 40 - 44 | D+ | 1.3 | Fail |
| 35 - 39 | D | 1.0 | Fail |
| 00 - 34 | F | 0.0 | Fail |

For more info, refer to Universiti Malaya (Bachelor's Degree) Regulations 2019.

An Example of GPA and CGPA Calculation

Semester 1

| Course | Grade | Grade Point | Credit | Credit × Grade Point |
|----------|-------|-------------|--------|----------------------|
| Course 1 | A+ | 4.0 | 4 | 4×4.0 = 16.0 |
| Course 2 | C+ | 2.3 | 3 | 3×2.3 = 6.9 |
| Course 3 | C- | 1.7 | 3 | 3×1.7 = 5.1 |
| Course 4 | C | 2.0 | 3 | 3×2.0 = 6.0 |
| Total | | | 13 | 34.0 |

Credit counted: 13

Total grade point: 34.0

Total credits accumulated: 13

Total grade point obtained: 34.0

$$\text{GPA} = 34.0/13 = 2.62$$

Semester 2

| Course | Grade | Grade Point | Credit | Credit × Grade Point |
|----------|-------|-------------|--------|----------------------|
| Course 5 | B+ | 3.3 | 3 | 3× 3.3 = 9.9 |
| Course 6 | B | 3.0 | 3 | 3× 3.0 = 9.0 |
| Course 7 | C | 2.0 | 3 | 3× 2.0 = 6.0 |
| Total | | | 9 | 24.9 |

Credit counted: 9

Total grade point: 24.9

Total credits accumulated: 22

Total grade point obtained: 58.9


$$\text{GPA} = 24.9/9 = 2.77$$

$$\text{CPGA} = 58.9/22 = 2.68$$

An academic advisor:

- assists students in selecting courses and the number of credits prior to the commencement of the semester, and
- provides guidance to students in overcoming problems related to learning, if any, based on the students' academic performance.

Refer to Universiti Malaya (Bachelor's Degree) Rules 2019 available at <https://umsitsguide.um.edu.my/>.



ACADEMIC ADVISORS



- **Name : Associate Prof. Dr. Wong Kok Bin**
- Designation : Associate Professor
- Telephone : +603-79674317
- Email : kbwong@um.edu.my



- **Name : Dr. Loo Tee How**
- Designation : Senior Lecturer
- Telephone : +603-79674207
- Email : looth@um.edu.my

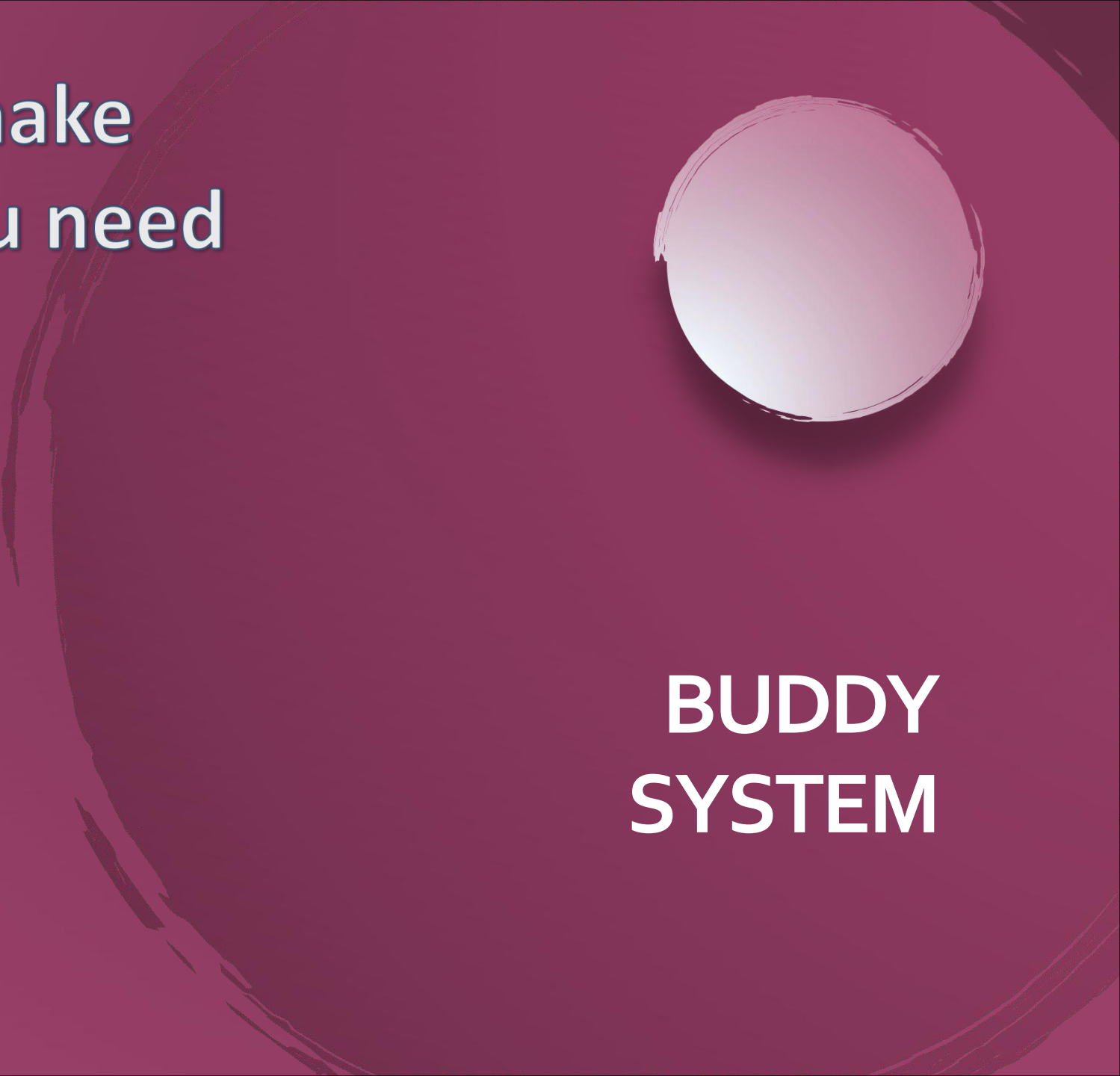


- **Name : Dr. Tan Ta Sheng**
- Designation : Senior Lecturer
- Telephone : +603-79677134
- Email : tstan@um.edu.my

More info can be found at
<https://ism.um.edu.my/academic>

“The best time to make friends is before you need them.”

Ethel Barrymore



**BUDDY
SYSTEM**

Need more help and company?

Connect to your peers through buddy system to

- **create and share experience,**
- **talk about and solve problems together,**
- **etc.**

Further info such as the groups will be given at

<https://ism.um.edu.my/undergraduate-info>

*“Just when the caterpillar
thought the world was over,
it became a butterfly.”*

Chuang Tzu



**RELATED
MATTERS**

Kaedah-kaedah Universiti Malaya (Ijazah Sarjana Muda) 2019

Universiti Malaya (Bachelor's Degree) Rules 2019

Peraturan-peraturan Universiti Malaya (Ijazah Sarjana Muda) 2019

Universiti Malaya (Bachelor's Degree) Regulations 2019

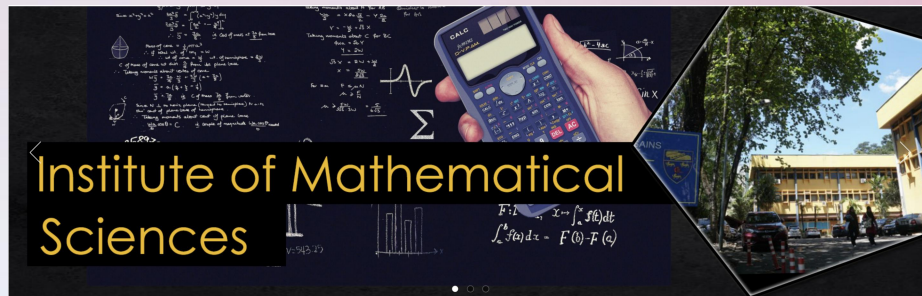
are available at the download section of

<https://umsitguide.um.edu.my/>.



Faculty of Science,
Universiti Malaya

<https://fs.um.edu.my/>



Institute of Mathematical Sciences

<https://ism.um.edu.my/>



MAYA

<http://maya.um.edu.my/>



SPeCTRUM

<https://spectrum.um.edu.my/>



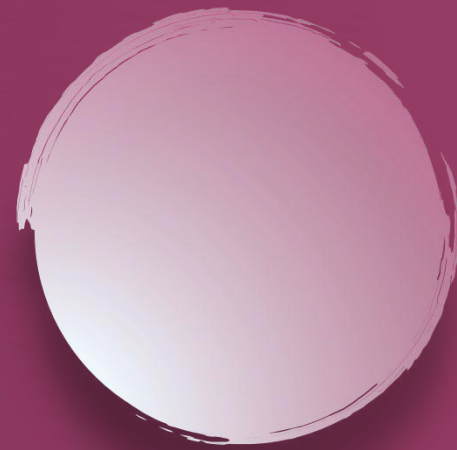
Library Resources

<https://umlib.um.edu.my/>

<https://pendeta.um.edu.my/>

“The two hardest things to say in life are hello for the first time and goodbye for the last.”

Moira Rogers



THANKYOU

INSTITUTE OF MATHEMATICAL SCIENCES

+60379674207

secretary_maths@um.edu.my

www.ism.um.edu.my

