

POSTGRADUATE HANDBOOK

2026/2027

Master of Science (Dentistry)
&
Doctor of Philosophy (PhD)
(By Research)



SCHOOL OF DENTAL SCIENCES
HEALTH CAMPUS
UNIVERSITI SAINS MALAYSIA (USM)
16150 KUBANG KERIAN, KOTA BHARU,
KELANTAN MALAYSIA

Disclaimer

This handbook has been prepared with the utmost care to ensure the accuracy of its content at the time of publication.

The university reserves the right to revise, amend, or update any part of the information as deemed necessary during academic and administrative reviews.

(August 2025)

Postgraduate programme links [Master of Science (Dentistry) & Doctor of Philosophy (PhD)]:

<https://dental.usm.my/index.php/en/academic/postgraduate-program/research-mode/master-of-sciences-msc>

<https://dental.usm.my/index.php/en/academic/postgraduate-program/research-mode/doctor-of-philosophy-phd>

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DEAN'S MESSAGE

Welcome to the School of Dental Sciences, Universiti Sains Malaysia, (USM).

It is a pleasure to welcome you to our postgraduate research community. At USM, we are committed to cultivating a rigorous, collaborative, and ethically grounded research environment that addresses current and emerging challenges in oral health.

Our school is structured around six research clusters, each reflecting key strategic areas in dental and health sciences:

- Craniofacial Biology and Regenerative Dentistry
- Biomaterial and Dental Technology
- Digital Dentistry and Artificial Intelligence
- Clinical and Therapeutic Dentistry
- Oral Microbiome and Medical Health Sciences
- Oral Health and Dental Education



These clusters represent the breadth and depth of our research ecosystem, and offer you opportunities to work alongside experienced supervisors, contribute to multidisciplinary research, and engage with pressing issues in dental science, locally and globally.

As a research-mode postgraduate student, you are expected to develop independence, maintain research integrity, and contribute meaningfully to knowledge. Your work here is not only academic; it has the potential to influence policy, practice, and the broader health landscape.

We are confident that your time with us will be intellectually challenging, personally rewarding, and a strong foundation for your future career. Welcome to the next phase of your academic journey.

Professor Dr. Norhayati Luddin

Dean
School of Dental Sciences
Universiti Sains Malaysia

DEPUTY DEAN'S MESSAGE

Welcome to the postgraduate research programme at the School of Dental Sciences, Universiti Sains Malaysia.

As Deputy Dean for Postgraduate, I'm pleased to support your academic and research development during this important phase of your training. Whether you are working toward a Master's or PhD degree, this journey requires discipline, curiosity, and a commitment to high research standards.

Our postgraduate programme is structured to help you succeed through close supervisory guidance, structured research training, and access to facilities aligned with our six research clusters. We encourage you to engage actively with seminars, academic discussions, and cross-disciplinary collaborations.

Communication is key. Please reach out early to your supervisors and the school's postgraduate office when questions or difficulties arise. Your academic progress is a shared responsibility, and we are here to guide you through each step, from proposal development to thesis submission.

We hope your time here is productive, meaningful, and leads to impactful contributions in the field of dental and medical sciences.

Dr. Fadzlinda Baharin

Deputy Dean (Postgraduate and International)
School of Dental Sciences
Universiti Sains Malaysia



POSTGRADUATE AND INTERNATIONAL OFFICE, SCHOOL OF DENTAL SCIENCES

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EDUCATIONAL GOALS OF UNIVERSITI SAINS MALAYSIA

USM Institutional Education Goal (IEG) is based on its HEBAT Agenda that aims to produce holistic, entrepreneurial mindset, balanced, articulate and thinking graduates to contribute to the wellbeing of society, as well as meeting national and global needs.

The five (5) Institutional Educational Goals (IEGs) of Universiti Sains Malaysia aim to produce graduates who are able to:

1. Demonstrate knowledge and skills, especially in their professional discipline with global mindset using critical thinking and problem-solving approaches
2. Exhibit balanced attributes of altruistic values and attitudes, ethics and professionalism, scientific thinking, arts and humanity toward good citizenry and nation building
3. Demonstrate socio-entrepreneurial skills and mindset, capable of contributing to the wellbeing of society in bridging inequality and enhancing sustainability
4. Communicate effectively and with confidence, encompassing intra-and inter-disciplines, society and technology
5. Demonstrate leadership, teamwork skills and practice lifelong learning, especially in their professional discipline

VISION AND MISSION OF USM

VISION:

Transforming Higher Education for a Sustainable Tomorrow.

MISSION:

USM is a pioneering, transdisciplinary, research-intensive university that empowers future talent and enables the bottom billion to transform their socio-economic wellbeing.

VISION AND MISSION OF SCHOOL OF DENTAL SCIENCES

VISION:

The School of Dental Sciences, USM is to be the center of excellence in academia, innovations, research and services, and to be the catalyst and leader for new knowledge in teaching, learning, research and services for Malaysian higher education and the world.

MISSION:

The School of Dental Sciences, USM is committed to the pursuit of excellence and innovation in academia, services, research, development of human resources by fostering a conducive educational environment and promoting holistic development programmes to meet national needs through exploring new frontiers of technology, and remain globally competitive to fulfill our community responsibility

BACKGROUND OF THE SCHOOL OF DENTAL SCIENCES

In the early 90s, University Sains Malaysia (USM) had begun the planning of School of Dental Sciences, to complement the existing School of Medical Sciences. The establishment of the school was approved by the university Board of Directors in October 1998. Assoc Prof Dr Ab. Rani Samsudin was appointed as the first Dean on 1st November 1998. The new school is located in USM, Kelantan Branch (now known as Health Campus) situated in Kubang Kerian, Kota Bharu, Kelantan. It was created to address the growing national need for qualified dental professionals and to complement USM's strong presence in the health sciences alongside the Schools of Medical and Health Sciences

The School started on 1st December 1998 at the Nursing Educational Unit. It was moved to a new location near the USM Hospital Accident & Emergency (A&E) Department on 26th January 1999. The initial small number of pioneer staff soon began to expand with the appointment of other professional and support staff. In early 2000, initial works on the development of the new building took place. By September 2001, the building was completed at an estimated cost of RM 12.5 million. On a historic day of 22nd March 2003, the building was officially inaugurated by the then Education Minister, Tan Sri Musa bin Mohamad.

The school welcomed its first cohort of 40 students in May 1999, offering the Doctor of Dental Surgery (DDS) programme, a comprehensive, five-year curriculum designed with a problem-based learning (PBL) approach and strong emphasis on community engagement and holistic care. This innovative teaching method positioned the school as a pioneer in progressive dental education in Malaysia. The first intake had graduated in August 2004.

Since its inception, the school has grown significantly in both capacity and reputation. It now offers postgraduate programmes including a coursework-based Master in Dental Science (MDS), research-based Master of Science (Dentistry) and Doctor of Philosophy (PhD) degrees, as well as clinical specialisation.

Over the years, the school has developed a strong research portfolio, with modern laboratories focusing on craniofacial science, biomaterials, digital dentistry, and oral pathology. It maintains close clinical collaboration with the Hospital Pakar Universiti Sains Malaysia (HPUSM), providing students with direct exposure to real-world patient care. Today, the School of Dental Sciences continues to be a leading centre for dental education and research in Malaysia, producing competent dental surgeons and specialists who contribute meaningfully to national and global oral health.

POSTGRADUATE RESEARCH MODE PROGRAMME

- **Master of Science (Dentistry)**
- **Doctor of Philosophy (PhD)**

All candidates and supervisors must follow all guidelines on good practice in postgraduate research studies at Universiti Sains Malaysia (USM).

The details on this matter can be obtained from the document of **USM's Code of Good Practice for Postgraduate Research Programme**

Registration, progress report and tuition fees:

Please refer to the IPS Postgraduate Student Handbook:

<https://ips.usm.my/>

MASTER OF SCIENCE (DENTISTRY)

Name of programme: **Master of Science (Dentistry)**

Mode: Research

Faculty: School of Dental Science

1. Programme structure

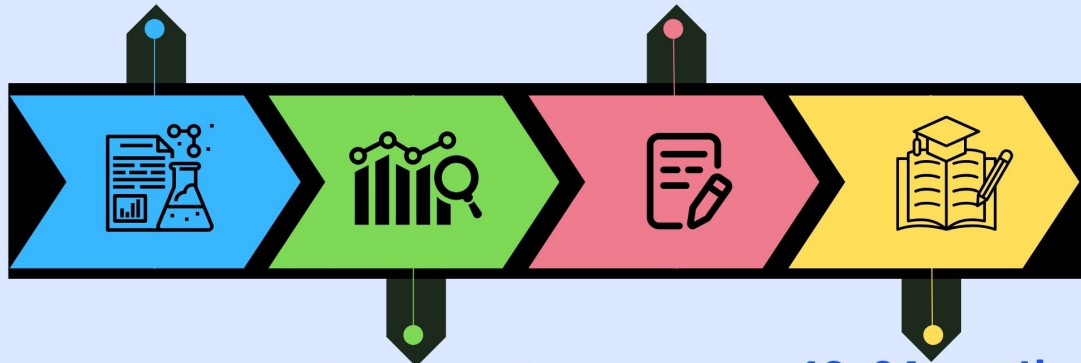
Suggested academic plan for Master's students

• 1-6 months

- Registration for Research Methodology course (TRX 500)
- Preparation and presentation of research proposal defense
- Conducting the study
- Apply ethic (if applicable)

• 13-18 months

- Registration of Malaysian Culture and Malay Language (LKM 111)
- Preparation of manuscript(s) for publication (review article)
- Data collection
- Data analysis



• 7-12 months

- Data analysis
- Preparation of manuscript(s) for publication (research article)
- Writing/ completing the first draft
- Submission of 'Notice of Submission'

• 19-24 months

- Submission of draft thesis
- Viva voce
- Thesis correction and submission of final thesis

2. Classification of Programme :

NEC Field (National Education Code) 0910 (Health not further defined)

3. Entry requirements:

In general, the admission pathways to postgraduate programmes (Master's Level) at USM are as follows:

a. Mainstream Pathway

- Bachelor's degree with Honours
- Bachelor's degree without Honours (with CGPA 2.50 and above or equivalent)

b. APEL A Pathway

(Accreditation of Prior Experiential Learning - Type A)

Applicants who wish to pursue postgraduate studies at the master's level via research mode must have the following qualifications:

- A good bachelor's degree with Honours from Universiti Sains Malaysia or other recognized universities, or an equivalent qualification accepted by the University Senate.
- However, candidates with a CGPA of 2.50 and above (or equivalent) may be admitted without a bachelor's degree with Honours.

Applicants with CGPA ≥ 2.75 or equivalent:

Applicants who clearly meet the entry requirements — i.e., their degree is recognized, and they have a CGPA of 2.75 or above — must be endorsed by the Dean/Director of the respective School/Institute. The endorsement must be made within 14 days from the date of receipt of the application forwarded by the Institute of Postgraduate Studies (IPS). The offer will be issued directly by IPS without being tabled at the University Postgraduate Studies Meeting (MPSU).

- If the applicant does not meet the admission requirements and the School/Institute does not wish to consider the application, the Dean/Director may reject it outright.
- All decisions made must be presented at the School/Institute Committee Meeting for record.

Applicants with CGPA 2.50–2.74 or equivalent:

Applications with a CGPA between 2.50 and 2.74 must meet the following criteria to be considered by the School/Institute's Graduate Degree Programme Committee. Endorsement must be made within 30 days from the date of receipt of the application forwarded by IPS. IPS will issue the offer letter without bringing the application to MPSU:

- ≥1 year research experience; or
- ≥1-year relevant professional experience; or
- One (1) academic publication in the applied field; or
- Grade B in major/elective courses; or
- Grade B+ in final year project

Applicants with CGPA 2.00–2.49 or equivalent:

Applications with a CGPA between 2.00 and 2.49 must meet the following criteria to be considered by the School/Institute's Graduate Degree Programme Committee. Endorsement must be made within 30 days from the date of receipt of the application forwarded by IPS. IPS will issue the offer letter without bringing the application to MPSU:

- ≥5 years research experience; or
- ≥5 years relevant professional experience; **and**
- One (1) academic publication in the applied field; or
- Grade B in major/elective courses; or
- Grade B+ in final year project.

Nevertheless, beyond the qualifications stated above, an applicant may also be considered if they have relevant research experience and are able to demonstrate the ability to pursue postgraduate studies.

**Terms and Conditions Apply. Please refer to:*

<https://admission.usm.my/postgraduate/programmes>

English requirements

For admission to postgraduate programs at School of Dental Sciences at Universiti Sains Malaysia (USM), a minimum English language proficiency is required. This can be demonstrated through standardized tests like IELTS, TOEFL, or MUET, or by proving that English is the applicant's mother tongue or the medium of instruction at their previous institution.

**Language requirement (Applicable for International Applicants Only)*

The minimum score for each programme can be vary from the below list, candidates are required to check for each programme requirements:

- A minimum score of 40 for TOEFL (Internet-based); or
- A minimum of Band 7.5 for TOEFL Essentials (Online); or

- A minimum of Band 5 for IELTS; or
- A minimum score of 47 for PTE; or
- A minimum score of 154 for Cambridge English (CAE/CPE); or
- A minimum score of 154 for Linguaskill Online; or
- A minimum of Band 3.5 for Malaysian University English Test (MUET)

Exemption is given to the candidate if:

- English is the candidate's mother tongue or National Language; or
- Candidate graduated from an Institution of Higher Learning in which the medium of instruction at the Bachelor degree level is English (statement of proof required).

4. Duration of Study

A student who registers for Master (by research) study must fulfil the duration of candidature as stated in the offer letter to submit a draft thesis.

Programme	Full-Time		Part-Time	
	Minimum	Maximum	Minimum	Maximum
Master (Research)	2 semesters	6 semesters	4 semesters	10 semesters

Please refer to page 30-31 for further details on the following matters:

- Extension of candidature
- Postponement of studies
- Withdrawal from the programme
- Termination of candidature
- Reactivation of candidature
- Conversion of status (part time/full time)

5. Structure of Programme

- Research methodology (TRX 500) -*Please refer to page 22-23 for more details*
- Thesis/ Dissertation- *Please refer to page 32-34 for more details*

6. Programme Educational Objectives (PEOs) and Programme Learning Outcomes (PLOs) for Master of Science (Dentistry):

PEO 1	Capable of integrating concepts, theories, methods, and current knowledge to conduct quality research that benefits both the local and global community
PEO 2	Graduates who are skilled in analyzing problems critically and accurately and capable of exploring creative and innovative solutions through various modern digital platforms
PEO 3	Practicing professional, sustainable, and ethical values in fulfilling responsibilities to employers, society, and the nation
PEO 4	Possess effective and confident communication skills in conveying knowledge orally and in writing and be able to apply entrepreneurial mindsets and skills in research work.
PEO 5	Capable of exploring new knowledge and cross-disciplinary collaboration that impacts the socio-economic development and sustainability of society and the nation.

Master's Degree by Research (Level 7, MQF)

At the end of the programme, graduates must be able to:

- i. Demonstrate in-depth and frontier knowledge and understanding in the relevant field/s or practice;
- ii. Critically and creatively apply knowledge in one or more fields to resolve complex disciplinary and practical problems;
- iii. Conduct rigorous and independent research or investigation with minimal supervision;
- iv. Perform research adhering to legal, ethical, professional and sustainable practices;
- v. Demonstrate intellectual leadership qualities and management skills;
- vi. Communicate effectively in the field/s and interact with specialist and general audience;
- vii. Select and use suitable digital and analytical tool techniques to research problems; and
- viii. Demonstrate commitment to lifelong learning and personal development.

USM uses 11 programme learning outcomes (PLO) (updated 2024) across school to describe the general and specific knowledge, skills, attitudes, and abilities that students should demonstrate upon graduation according to the sequence of MQF (2024) learning domains. Therefore, the PLO are set as follows:

PLO 1	Demonstrate in-depth and frontier knowledge in the related field.
PLO 2	Apply knowledge critically and integratively to manage and solve complex problems using various techniques, tools or skills for the purpose of producing new ideas or innovative solutions.
PLO 3	Demonstrate effective and innovative research skills by utilising specialised research methods and the latest investigative techniques in the relevant field with minimal supervision.
PLO 4	Demonstrate the ability to collaborate with various parties in carrying out the research.
PLO 5	Present knowledge, skills, ideas, and research findings clearly using appropriate methods to various parties.
PLO 6	Utilise appropriate digital technology and software to analyze and enhance research findings.
PLO 7	Use appropriate methods to analyse and evaluate data for the purpose of solving problems.
PLO 8	Demonstrate leadership qualities and be responsible when collaborating with others in managing research.
PLO 9	Demonstrate commitment to lifelong learning and personal development in the relevant field.
PLO 10	Apply entrepreneurial skills to identify opportunities and implement projects related to the field of research.
PLO 11	Comply with safety rules and instructions, and demonstrate principles, professionalism, ethics, and sustainable practices in conducting research.

Matrix of programme learning outcomes against the programme educational objectives:

Programme Learning Outcomes (PLO)	Programme Educational Objectives (PEO)				
	PEO1	PEO2	PEO3	PEO4	PEO 5
PLO 1	/				
PLO 2	/				
PLO 3		/			
PLO 4					/
PLO 5				/	
PLO 6		/			
PLO 7		/			
PLO 8			/		
PLO 9					/
PLO10				/	
PLO11			/		

DOCTOR OF PHILOSOPHY (PHD)

Name of programme: **Doctor of Philosophy (PhD)**

Mode: Research

Faculty: School of Dental Science

1. Academic plan/ structure

Suggested academic plan for PhD students

1-6 months

- Registration for Research Methodology course (TRX 500)
- Preparation and presentation of research proposal defense
- Conducting the study
- Apply ethic (if applicable)

13-18 months

- Data collection
- Data analysis

25-30 months

- Data collection
- Data analysis
- Preparation of manuscript(s) for publication (research article)

37-42 months

- Submission of draft thesis
- Viva voce
- Thesis correction and submission of final thesis

7-12 months

- Registration of Malaysian Culture and Malay Language (LKM 111)
- Preparation of manuscript (s) for publication (review article)
- Data collection
- Data analysis

19-24 months

- Data collection
- Data analysis

31-36 months

- Writing/ completing the first draft
- Submission of 'Notice of Submission'

2. Classification of Programme :

NEC Field (National Education Code) 0910 (Health not further defined)

3. Entry Requirements

Qualifications (any of the below):

Master degree (Coursework or Mixed Mode)

- CGPA of at least 3.00 / 4.00; or
- CGPA of 2.50 - 2.99 with;
 - Research experience – 2 years; or
 - Professional experience in related field – 2 years; or
 - Two (2) academic publications in the field; or
 - Grade B+ for major/elective courses; or
 - Grade B+ for Coursework Mode or P for Mixed Mode dissertation/project;

Master degree (Research Mode)

For non-CGPA qualifications, please refer to IPS for confirmation.

Fast-Track To PhD:

Be on the Fast-Track to a PhD from a Bachelor's Degree

Eligibility:

- Applicants with a CGPA of 3.67/4.00
- Passed interview
- Other requirements set by the University

Note: The nominated potential supervisor is compulsory has graduated at least one PhD student.

**Terms and Conditions Apply. Please refer to:*

<https://admission.usm.my/postgraduate/programmes>

English requirements

For admission to postgraduate programs at School of Dental Sciences at Universiti Sains Malaysia (USM), a minimum English language proficiency is required. This can be demonstrated through standardized tests like IELTS, TOEFL, or MUET, or by proving that English is the applicant's mother tongue or the medium of instruction at their previous institution.

**Language requirement (Applicable for International Applicants Only)*

The minimum score for each programme can be vary from the below list, candidates are required to check for each programme requirements.

- A minimum score of 40 for TOEFL (Internet-based); or
- A minimum of Band 7.5 for TOEFL Essentials (Online); or
- A minimum of Band 5 for IELTS; or
- A minimum score of 47 for PTE; or
- A minimum score of 154 for Cambridge English (CAE/CPE); or
- A minimum score of 154 for Linguaskill Online; or
- A minimum of Band 3.5 for Malaysian University English Test (MUET)

Exemption is given to the candidate if:

- English is the candidate's mother tongue or National Language; or
- Candidate graduated from an Institution of Higher Learning in which the medium of instruction at the Bachelor degree level is English (statement of proof required).

4. Duration of Study

A student who registers for Doctor of Philosophy study must fulfil the duration of candidature as stated in the offer letter to submit draft thesis.

Programme	Full-Time		Part-Time	
	Minimum	Maximum	Minimum	Maximum
Doctor of Philosophy	4 semesters	10 semesters	6 semesters	15 semesters

Please refer to page 30-31 for further details on the following matters:

- Extension of candidature
- Postponement of studies
- Withdrawal from the programme
- Termination of candidature
- Reactivation of candidature
- Conversion of status (part time/full time)

5. Structure of Programme

- Research methodology (TRX 500) -Please refer to page 22-23 for more details
- Thesis/ Dissertation- Please refer to page 32-34 for more details

6. Programme Educational Objectives (PEOs) and Programme Learning Outcomes (PLOs) for Doctor of Philosophy:

PEO 1	Capable of integrating concepts, theories, methods, and current knowledge to conduct high-quality research that benefits both the local and global community
PEO 2	Field experts who are skilled in critically and accurately analyzing problems and capable of exploring creative and innovative solutions using the latest digital platforms
PEO 3	Field experts who practice professional, sustainable, and ethical values in fulfilling responsibilities to employers, society, and the nation
PEO 4	Possess effective and confident communication skills in conveying knowledge orally and in writing and be able to apply entrepreneurial mindsets and skills in research work
PEO 5	Capable of generating new knowledge through high-performance research and cross-disciplinary collaboration that impacts the socio-economic development and sustainability of society and the nation.

Doctoral Degree by Research (Level 8, MQF) – PhD level

At the end of the programme, graduates should be able to:

- i. Demonstrate a critical and in-depth understanding of frontier knowledge by generating substantial and original contributions to a field and/or practice;
- ii. Synthesise existing and new knowledge in one or more discipline areas to develop new concepts or interpretations or applications;
- iii. Conduct rigorous and independent research or investigation with minimal supervision;
- iv. Demonstrate intellectual leadership qualities and management skills;
- v. Perform research adhering to legal, ethical, professional and sustainable practices;
- vi. Communicate cogently in the field/s and interact with specialist and general audience;
- vii. Select and use suitable digital and analytical techniques to research problems; and
- viii. Demonstrate commitment to lifelong learning and personal development.

USM uses 11 programme learning outcomes (PLO) (updated 2024) across school to describe the general and specific knowledge, skills, attitudes, and abilities that students should demonstrate upon graduation according to the sequence of MQF (2024) learning domains. Therefore, the PLO are set as follows:

PLO1	Integrate significant knowledge by using appropriate approaches to address current critical issues and generate original and impactful contributions to the relevant fields.
PLO2	Critically analyse and synthesize new, complex, and abstract ideas and solve contemporary issues through advanced research methods to produce original contributions that meet international standards.
PLO3	Develop original, complex, and specialised research methods and techniques to address emerging problems and create high-quality solutions in the relevant fields with minimal supervision.
PLO4	Demonstrate the ability to collaborate cogently with various parties in carrying out research.
PLO5	Present research findings, ideas, issues, and solutions clearly, confidently, and effectively to the research community, peers, and society.
PLO6	Utilise digital technologies and appropriate software to support, enhance, and justify research findings.
PLO7	Validate findings by using analysis that is appropriate to the research methods to ensure that conclusions are accurate and impactful.
PLO8	Exhibit intellectual leadership qualities and skills in managing research and related resources.
PLO9	Demonstrate commitment to lifelong learning and personal development in shaping future directions within the related field.
PLO10	Apply entrepreneurial skills to identify opportunities and implement innovative projects in related research.
PLO 11	Comply with safety rules and instructions, ethics and professionalism, and sustainable practices as well as identify the related issues for research advancement in the field and their impact to society.

Matrix of programme learning outcomes against the programme educational objectives

Programme Learning Outcomes (PLO)	Programme Educational Objectives (PEO)				
	PEO1	PEO2	PEO3	PEO4	PEO 5
PLO 1	/				
PLO 2	/				
PLO 3		/			
PLO 4					/
PLO 5				/	
PLO 6		/			
PLO 7		/			
PLO 8			/		
PLO 9					/
PLO10				/	
PLO11			/		

LKM 111, TRX 500 & PROPOSAL DEFENCE

1. Malaysian Culture And Malay Language (*Bahasa Malaysia*) (LKM 111):

Compulsory for all international students and to be passed prior to graduation. The minimum required passing grade is C. Registration of the course is through Online Registration System (ORSPG) during stipulated time for course registration. Classes are online and accessible through student e-learning portal.

Exemption can be given to students who have taken and pass the equivalent course. Application for exemption must be submitted for approval to the Dean, School of Languages, Literacies and Translation.

For any enquiries, please e-mail to ppblt_courses@usm.my.

2. Research Methodology In Medicine And Health Sciences (TRX 500):

It is COMPULSORY for all research mode students to enroll in TRX500 - Research Methodology in Medicine and Health course in the first semester. Students must register through Campus Online (new and re-registration). If the student missed the deadline of registration in the 1st semester, he/she could register in the 2nd semester.

In this course, students must conduct a literature review, construct a detailed methodology, and present the proposal. The presentation should not exceed 15 minutes and must have all the details of how the research project will be conducted to allow the school's academic staff to give constructive feedback. The student needs to re-register for the course if the initial one is unsatisfactory. The school will arrange for the presentation session, and students and their supervisor must attend it.

A. Course learning outcomes

At the end of the course, students should be able to:

- Apply principles of health sciences and medicine research methodology in planning, managing, and executing a research project ethically.
- Develop advanced analytical and critical thinking skills during literature review and research question development.
- Identify and design research approaches used in research and experiment conduct.
- Display research proposal presentation skills.
- Demonstrate continuous education in implementing research projects and disseminating research findings.

B. Synopsis

This course introduces research methodologies for planning, conducting, analysing, and reporting research in medicine and health sciences. It equips students with core research and transferable skills essential for Master's and PhD studies by research mode. Topics include research planning and design, ethical issues, literature review, data collection, statistical analysis, and scientific dissemination.

C. Main reference

1. Polgar, S., & Thomas, S. A. (2000). *Introduction to research in the health sciences*. Edinburgh: Churchill Livingstone.
2. Wan Muhamad Amir W Ahmad et al. (2019). *Statistical Analysis Using SPSS Version 24*. Penerbit USM.
3. National Science Council. (2017). *The Malaysian Code of Responsible Conduct in Research*.
4. Cryer, Pat. (2006). *The Research Student's Guide to Success* (3rd ed.). Open UP.
5. Wan Muhamad Amir W Ahmad et al. (2017). *Statistical Analysis Using SPSS for Health Sciences*. Penerbit USM.

D. Assessment weightage

- Continuous Assessment (Research Proposal): 70%
- Final Assessment (Proposal Presentation): 30%

*The Research Proposal Presentation- MUST PASS.

E. TRX 500 course exemption

The course is a prerequisite course for graduation. If you have previously taken a research methodology course in medicine and health sciences, you can apply for the course exemption at your school/institution up to week 3 during the semester. However, your school/institution reserve the right to approve/reject your application, depending on your justifications. The course provides essential knowledge in Research Methodology and is expected to be useful during research studies, hence, students are highly encouraged to attend the course.

F. TRX 500 course deferment

You can apply for course deferment from the IPS up to week 3 from the start of the semester and provide a strong justification for the deferment. Application for course deferment at the end of the semester is not allowed. Should the student be exempted from taking the course, an official letter will be issued by IPS and a refund of the fee paid will be made.

3. Research Proposal defence and ethical approval application:

All research proposals must undergo a Research Proposal Defence at the school level, in which the proposed study is presented and evaluated by reviewers with relevant expertise to ensure its objectives, methodology, and feasibility meet academic and institutional requirements. Only after successfully completing this defence may the proposal be submitted for ethical approval, if such approval is required for the study. The Research Proposal Defence may be conducted as a stand-alone session or, upon the supervisor's request, held simultaneously with the TRX proposal presentation.

RESEARCH FIELD & EXPERTISE

RESEARCH FIELD AND SPECIALISATION



EXPERTISE BY RESEARCH CLUSTER

Cluster	Lecturer	Research field	E-mail
Craniofacial Biology and Regenerative Dentistry ○ Craniofacial growth and anomalies ○ Oral tissue regeneration and wound healing ○ Genetic factors in oral diseases ○ Mineralised tissue regeneration and repair ○ Signalling pathways and cellular response	T. P. Kannan [Prof. Madya Dr.]	Human Genetic / Molecular Biology	kannan@usm.my
	Azlina Ahmad [Prof. Madya TS Dr.]	Biochemistry / Molecular Biology	azlinakb@usm.my
	Khairul Bariah Ahmad Amin Noordin [Dr.]	Biochemistry / Molecular Biology	kbariah@usm.my
	Asilah Yusof [Dr.]	Craniofacial Biology	asilah@usm.my
	Saidi Jaafar [Dr.]	Developmental Biology / Molecular Biology	saidijaafar@usm.my
	Norhayati Yusop [Dr.]	Biochemistry / Molecular Biology	norhayatiusop@usm.my
	Siti Aishah Zainal [Dr.]	Biochemistry / Molecular Biology	sitizainal@usm.my
	Mogana Das Murtey [Dr.]	Oral Biology	moganadasmurtey@usm.my
	Nurhafizah Ghani [Dr.]	Anatomy	drnurha@usm.my
	A S M Rafiul Haque [Dr.]	Anatomy	rafi07.dr@usm.my
	Marzuki Omar [Dr.]	Oral & Maxillofacial Surgery	marzukie@usm.my
	Zurairah Berahim [Prof. Madya Dr.]	Periodontics/ Tissue Regeneration	zurairah@usm.my
	Nusaibah Sakinah Nordin [Dr.]	Periodontics/ Tissue Regeneration	nusaibahsakinah@usm.my
Biomaterials and Dental Technology ○ Development of bioactive materials for dental restorations ○ Drug-loaded nanomaterials ○ Biopolymers in dental applications ○ Biomaterials synthesis and characterization	Dasmawati Mohamad [Prof. Madya TS Dr.]	Biomaterials	dasmawati@usm.my
	Mohd Firdaus Yhaya [Dr.]	Biomaterials	firdausya@usm.my
	Nur Fatiha Ghazalli [Dr.]	Biomaterials /Chemistry	fatiha85@usm.my
	Nor Aidaniza Abdul Mutlib [Dr.]	Prosthodontics	aidaniza@usm.my
	Yanti Johari [Prof. Madya Dr.]	Prosthodontics	yjohari@usm.my
	Zaihan Ariffin [Prof. Madya Dr.]	Prosthodontics	zaihan@usm.my
	Nik Rozainah Nik Abdul Ghani [Prof. Madya Dr.]	Conservative Dentistry	rozainah@usm.my
	Rabihah Alawi [Dr.]	Conservative Dentistry	rabihah@usm.my
	Rosnani Mamat [Dr.]	Conservative Dentistry	drrosnani@usm.my

○ Fabrication of 3D scaffold	Hafizah Ibrahim [Dr.]	Conservative Dentistry	hafizahibrahim@usm.my
	Huwaina Abdul Ghani [Dr.]	Conservative Dentistry	huwaina@usm.my
	Kasmawati @ Norhidayati Mokhtar [Dr.]	Conservative Dentistry	hidayah@usm.my
	Saleem [Dr.]	Conservative Dentistry	saleemdm@usm.my
Oral Microbiome and Medical Health Sciences ○ Antimicrobial resistance studies in oral microbiomes ○ Periodontal disease mechanisms and host response research ○ Biomarkers of disease ○ Natural products ○ Oral cancer and therapy	Nur Karyatee Kassim [Prof. Madya Dr.]	Pathology [Chemical Pathology]	karyatee@usm.my
	Suharni Mohamad [Prof. Madya Dr.]	Molecular Microbiology	suharni@usm.my
	Masitah Hayati Harun [Dr.]	Oral Medicine & Oral Pathology	masitahh@usm.my
	Nurhayu Ab Rahman [Dr.]	Oral Medicine & Oral Pathology	nurhayu@usm.my
	Norhaslina Mohd Rokemi [Dr.]	Oral Medicine and Oral Pathology	haslinakemi@usm.my
	Norzalana Zawawi [Dr.]	Pathology [Anatomic Pathology]	norzalana@usm.my
	Hanim Afzan Ibrahim [Dr.]	Pathology [Chemical Pathology]	afzankk@usm.my
	Wan Suriana Wan Ab Rahman [Prof. Madya Dr.]	Pathology [Hematology]	suriana@usm.my
	Wan Majdiah Wan Mohamad [Dr.]	Pathology [Clinical Immunology]	wmajdiah@usm.my
	Nik Aloesnisa Nik Mohd Alwi [Dr.]	Physiology	niknisa@usm.my
	Nurulezah Hasbullah [Dr.]	Physiology	drezah@usm.my
	Raja Azman Raja Awang [Prof. Madya Dr.]	Periodontics	rjazman@usm.my
	Haslina Taib [Prof. Madya Dr.]	Periodontics	haslinakk@usm.my
	Tuan Nadrah T Ismail @ T Manah [Dr.]	Pharmacology	tnadrah@usm.my
	Rosmaliza Ramli [Dr.]	Pharmacology	rosmalizakk@usm.my
	Siti Rosmani Md Zin @ Zakaria [Dr]	Clinical Anatomy/ Natural Product/Toxicity	siti_rosmani@usm.my
Clinical and Therapeutic Dentistry	Tahir Yusuf Noorani [Prof. Madya Dr.]	Conservative Dentistry	tahir@usm.my
	Rozita Hassan [Professor Dr.]	Orthodontics	rozitakb@usm.my
	Norma Ab Rahman [Prof Madya Dr.]	Orthodontics	drnorma@usm.my
	Zuryati Ab. Ghani [Prof. Madya Dr.]	Prosthodontics	zuryati@usm.my

○ Regenerative approaches in periodontal therapy ○ Paediatric oral health and developmental disorders ○ Advances in minimally invasive restorative dentistry ○ Pain management strategies in oral surgery ○ Craniofacial development & malocclusion	Sarliza Yasmin Sanusi [Dr.]	Paediatric Dentistry	sarliza@usm.my
	Aimi Kamarudin [Dr.]	Paediatric Dentistry	draimi@usm.my
	Fadzinda Baharin [Dr.]	Paediatric Dentistry	lindabaharin@usm.my
	Noraida Mamat @ Mohd Yusuff [Dr.]	Paediatric Dentistry	noraida@usm.my
	Norsamsu Arni Samsudin [Dr.]	Paediatric Dentistry	arnisamsudin@usm.my
	Azirrawani Ariffin [Dr.]	Prosthodontics	wani@usm.my
	Norhayati Luddin [Professor Dr.]	Prosthodontics	norhayatikck@usm.my
	Noor Huda Ismail [Dr.]	Prosthodontics	noorhuda@usm.my
	Akram Hassan [Prof. Madya Dr.]	Periodontics	akram@usm.my
Digital Dentistry and Artificial Intelligence ○ AI and machine learning applications in dental diagnostics ○ CBCT and imaging innovations ○ 3D printing, digital scanning, and CAD/CAM in dentistry ○ Computational modeling for oral diseases ○ Imaging advancements for diagnosis and treatment planning	Johari Abdullah [Dr.]	Craniofacial Imaging	johariyap@usm.my
	Ahmad Hashridz Ruslan [Dr]	Orthodontics	hashridzruslan@usm.my
	Matheel Zohair Yousif Alrawas [Dr.]	Prosthodontics	matheel@usm.my
	Mohd Fadhli Khamis [Prof. Madya Dr.]	Forensic Dentistry / Oral Biology	fadhli@usm.my
	Nurul Hanim Othman [Dr.]	Prosthodontics	drnurulhanim@usm.my
	Mohd Faizal Abdullah	Oral & Maxillofacial Surgery	mohdfaizalkk@usm.my
	Liyana Ghazali [Dr]	Orthodontics	gliyana@usm.my
	Umi Mardhiyyah Mat Ali [Dr]	Orthodontics	drumi@usm.my
	Mohamad Syahrizal Halim [Dr.]	Conservative Dentistry	drsyah@usm.my
	Mohammad Majduddin Sulaiman [Dr.]	Prosthodontics	mmajduddin@usm.my
	Nurul Wahida Mohd Hasan [Dr.]	Periodontics	nurulwahida02@usm.my
	Nurulaqmar Iwani Samsudin [Dr.]	Endodontics	drnurulaqmar@usm.my
	Wan Muhamad Amir W Ahmad [Prof. Madya Ts. Dr.]	Biostatistics	wmamir@usm.my
Oral Health and Dental Education	Normastura Abd. Rahman [Professor Dr.]	Dental Public Health	normastura@usm.my
	Munirah Mohd Adnan [Dr.]	Dental Public Health	muniraha@usm.my

○ Epidemiology of oral diseases and community-based prevention ○ Oral disease prevention strategies at the community level ○ Health promotion and policy development	Norkhafizah Saddki [Prof. Madya Dr.]	Dental Public Health	fizah@usm.my
	Khuzaimah Kamarazaman [Dr.]	Dental Public Health	khuzaimahk@usm.my
	Mohd Zulkarnain Sinor [Dr.]	Dental Public Health	zulkarnainsinor@usm.my
	Basaruddin Ahmad [Dr.]	Biostatistics	basaruddin@usm.my
	Noraini Mohamad [Dr.]	Family Medicine	mnoraini@usm.my
	Zainab Mat Yudin @ Badrin [Dr.]	Family Medicine	mnoraini@usm.my
	Siti Nur Syakinah Md Sabudin [Dr.]	Family Medicine	syakinahsabudin@usm.my
	Zuliani Mahmood [Dr.]	Paediatric Dentistry	zuliani@usm.my
	Ruhaya Hasan [Dr.]	Dental Public Health (Nutrition)	ruhaya@usm.my

For more information, please visit: <https://dental.usm.my/index.php/en>

OTHER CANDIDATURE MATTERS

OTHER CANDIDATURE MATTERS

1. Management of candidature matters and status

A. Extension of candidature

- Applications for extension of candidature must be made two (2) months prior to the date of expiration of a student's candidature. The maximum period of extension allowed is two (2) semesters only.
- Applications must be made using the form (IPS/HEP-03) from the IPS website:
<https://ips.usm.my/index.php/download/candidature>

B. Postponement of studies

- Postponement of studies is only allowed after registration and completion of at least one (1) semester, except for medical reasons or valid personal reasons.
- Application for postponement of studies can be made through <https://campusonline.usm.my>. Students are allowed to postpone their studies for a maximum of two (2) semesters throughout the entire duration of the candidature period, subjected to the tuition and retaining fees charges.

C. Withdrawal from the programme

- Withdrawing can be done by sending a withdrawal letter to the Dean, School of Dental Sciences.
- Refund of all fees (except registration and smart card fees) will be made for withdrawal up to two (2) months from the date of registration.

D. Termination of candidature

The University reserves the right to terminate a student's candidature based on:

- The student's failure to renew the registration before a new semester commences.
- Unsatisfactory academic performance - research progress.
- Failure to pay the tuition fees.
- Exceed the maximum candidature period.
- Disciplinary action taken on the student after found guilty of offence/s.

E. Reactivation of candidature

- All students may reactivate their candidature within ONE (1) year after termination subjected to period of candidature by writing an application letter to the Dean, School of Dental Sciences.

- Reactivation for research mode student (terminated due to maximum period of candidature) will only be considered if the student submits draft of thesis within one (1) year from the date of maximum candidature. The reactivation of the candidature is subjected to the decision of the University.

F. Conversion of status (part-time/full-time)

- A student can apply for conversion of status from full-time to part-time or vice versa.
- Application must be made using the *Conversion of Status* form available at IPS website.
- The conversion of status is only permitted TWICE during the entire period of candidature.
- The forms can be downloaded from the IPS website:

<https://ips.usm.my/index.php/download/candidature>

2. Overseas travel

A student planning to travel overseas must obtain approval from their Main Supervisor, the Dean of the School of Dental Sciences, and the Deputy Vice Chancellor for Student Affairs & Development. Kindly submit completed application form to Administrative Office. The form can be downloaded from:

https://imcc.usm.my/images/Content/Mobility/Short%20Term%20Summer%20Program/BORANG_KE_LUAR_NEGARA_IPS - JAN 2024.doc

3. Conversion of Degree Level (Master to Ph.D.)

- Students can apply for conversion within the first 12 months (full-time student) or 24 months (part-time student) from registration date by submitting an official request to the School of Dental Sciences in writing.
- Students are required to submit the development of research progress proposal to be evaluated by the Main Supervisor and interviewing panel.
- The School may request the student to sit for an examination/interview to present the research output.
- The application will be reviewed by the School Board, School of Dental Sciences and endorsed by the University.
- If the application for conversion is successful, the candidature period for Doctor of Philosophy (Ph.D.) begins from the registration date of the Master's degree.

4. Thesis amendments

If during the candidature, a student and the Main Supervisor need to make changes to the Thesis Title, Full-Time/Part-Time Status, Programme Mode or Field of Study, the student must submit a form (*IPS/HEP-03*) to the Administrative Office. The Main Supervisor may also appoint a co-Supervisor or Field Supervisor to assist in supervision, by submitting another form (*IPS/HEP-03(P)*), at any time BEFORE the Notice of Thesis Submission is handed in.

The forms can be downloaded from the IPS website:

<https://ips.usm.my/index.php/download/candidature>

5. Notice of thesis submission

Masters or PhD student is required to submit the Notice of Submission of Thesis form, at least three (3) months prior to submitting copy of the draft thesis. A student's status must be active during the submission of this notice.

6. Submission of draft copies of the thesis

Submission of a thesis must be made after a candidate has fulfilled the minimum period of candidature. IPS will not accept any thesis that has not been written in accordance with the prescribed format. Format checking must be made at IPS before submitting the draft thesis. Student is compulsory to submit the softcopy of the draft thesis from first until the last chapter for Turnitin screening to the respective School. Draft Thesis Submission Form must be completed properly. Should there be any changes to the thesis title, written confirmation from the main supervisor and approval from the respective Dean of the School need to be obtained before the thesis is submitted to IPS in respective campus. Payment of the Thesis Examination Fee must be made and a copy of the receipt should be submitted to IPS together with the draft thesis.

The thesis format guideline is available at the IPS website. This guide is to facilitate the processes involved in the submission of the thesis. Details regarding the thesis format are provided in the Postgraduate Student Handbook at this link:

<https://ips.usm.my/index.php/download/candidature>

The steps for submitting draft copies of the thesis are available at this link:

<https://ips.usm.my/index.php/download/viva-voce>

7. Plagiarism

Plagiarism is the act of using, quoting, copying, paraphrasing, or presenting ideas, images, processes, works, data, or words whether one's own or those of others without properly acknowledging, referencing, or quoting the original source(s). Instances of plagiarism include but are not limited to the following actions:

- Directly quoting the work of others without alteration.

- Paraphrasing another person's work by altering some words or the order of words without appropriately acknowledging the source(s).
- Submitting another person's work, either in full or in part, as one's own.
- Self-plagiarising by reusing one's previous work, or work that has already been submitted for assessment or any other academic award and presenting it as new without citing the original content.
- Providing insufficient or misleading references that prevent the reader from verifying whether the work has been accurately and fairly cited, thereby obscuring the original author's specific contributions in the submitted work.
- Any other actions that, in the opinion of the University, fall under the definition of plagiarism.

Students are required to submit a digital copy of their thesis draft to the Administrative Office for plagiarism screening using Turnitin software. The School of Dental Sciences allows a maximum similarity index of 25%. For more information, please refer to this link:

<https://ips.usm.my/index.php/current-student-v2/others/usm-policy-on-plagiarism>

8. The Viva Voce Examination:

A viva voce (oral) examination serves as a thesis defense where the student is required to demonstrate their understanding of the research and the originality of their work to a designated panel. This panel typically includes a chairperson, external and internal examiners, the Dean's representative, and a secretary. Although the supervisors are invited to attend the viva, they do not participate as panel members. The student may begin the viva with a brief presentation lasting about 10-15 minutes. To pass the examination, the student must answer questions in a manner that shows adequate knowledge of the subject. On the day of the viva, the student should arrive at the venue at least 30 minutes prior to the scheduled start time.

Viva voce result are as follows:

Scale 1 – Pass

A student is awarded a Doctor of Philosophy/Master's Degree

Scale 2 – Pass with minor corrections

A student is awarded Doctor of Philosophy/Master's Degree subject to changes/corrections to the thesis as listed in the Viva-voce Panel Report.

Scale 3 – Pass with major changes/corrections

A student is awarded Doctor of Philosophy/Master's Degree subject to changes/corrections to the thesis as listed in the Viva-voce Panel Report. The thesis MUST be revised and verified by the Viva- voce Panel after the student has made the changes/corrections

Scale 4 – Re-examination (Re-viva)

*A student is allowed to re-submit the thesis for re-examination after the candidate has made the changes/corrections to the thesis as required in the Viva-voce Panel Report. The thesis **MUST** be re-examined, and the candidate **MUST** attend another viva-voce. The result will be only **PASS** or **FAIL**.*

Scale 5 – Fail

A student is not eligible to be awarded a Doctor of Philosophy/Master's Degree and is not allowed to resubmit the thesis for examination.

9. Procedures after the Viva:

After the viva, the student will receive the results and feedback, outlining the necessary corrections and improvements as recommended by the panel. The student will be given a specific timeframe to make these corrections and finalise the thesis before submitting the required two (2) hardbound copies and two (2) CDs. It is important that the student allocates sufficient time for both the supervisors and the appointed panel member to review and approve the corrections.

If the panel requires the student to resubmit the thesis for re-examination, the student must complete the Re-submission of Thesis form. This form, along with seven (7) softbound copies of the thesis, must be submitted to the School and IPS.

Should the student exceed the allotted timeframe for completing all these steps, even by a single day, they will be considered to have failed the viva.

10. Submission of final copy of thesis:

After making and incorporating all necessary corrections into the thesis, the student must submit the "Submission of Final Copy of Thesis" form. The final version of the thesis should be saved onto a CD, with the relevant thesis information clearly labeled on the CD. Two (2) copies of the CD, along with two (2) hardbound copies of the final thesis, must then be submitted to the School and the IPS.

GRADUATION REQUIREMENTS

A Research mode student must comply with the following graduation requirements:

1. Fulfill the minimum duration of the candidature.
2. Pass the pre-requisite courses (if any) as determined by the School/Centre/Institute.
3. Pass the Malaysian Culture and Malay Language (LKM 111) course, compulsory to all international students. Minimum grade C must be obtained prior to graduation.
4. Fulfill the publication requirements.

Publication requirement

All postgraduate (research mode) candidates must fulfill the following publication requirements for graduation:

Cluster	Master	Doctor of Philosophy
Sciences / Health & Medical	At least ONE (1) journal article, accepted or published in journals/proceedings indexed by ISI/SCOPUS	At least TWO (2) journal articles, accepted or published in journals/proceedings indexed by ISI/SCOPUS
Authorship	Article must be published with the supervisor(s). The candidate must be the first student author. Only the first student author is allowed to use this article to fulfill his/her graduation requirement	
Plagiarism	Plagiarised article will not be accepted for graduation requirement	
Topic of Publication	Publication must be related to the project of his/her thesis	
Affiliation	Publication accepted must carry School of Dental Sciences, Universiti Sains Malaysia affiliation	

FACILITIES

FACILITIES AT THE SCHOOL OF DENTAL SCIENCES (PPSG) USM

1. Postgraduate Room

A postgraduate room is available for postgraduate students, subject to availability. For more information, please contact Puan Marina at the Postgraduate Office, School of Dental Sciences (PPSG), via marinacms@usm.my.

2. Laboratories

At PSG, we provide laboratory facilities to support student research, including that of postgraduate students:

- A. Craniofacial Science Laboratory (CSL)
- B. Biomaterial Science Laboratory (BIOM3D)
- C. Oral Pathology Laboratory (OPATH)
- D. Skill lab 1 MDL (including skill lab 2)
- E. Dental technology lab

All users are expected to follow the established guidelines on laboratory usage, safety procedures, and chemical management Please refer to this link for full details:

<https://dental.usm.my/index.php/en/discover-us-rl/location-rl>

3. Research Equipment

The School of Dental Sciences is equipped with a range of research facilities to support both fundamental and advanced scientific investigations. Our laboratories house various research equipment essential for dental and biomedical research, accessible to both staff and postgraduate students. These resources are maintained to ensure accuracy, safety, and efficiency in research activities. Below are some of the key facilities and equipment available at PSG.



4. Information Technology (IT) lab/ Digital lab
5. Discussion room

Bilik seminar, bilik mesyuarat serbaguna (PG office, R&I office, TDA office, BJIM office, Kabin Farmasi, Kabin IPPT

6. Student Lounge

The Student Lounge at PSG provides a designated space for students to rest, study, or meet in between classes and research activities.

HEALTH CAMPUS (USM) FACILITIES

In addition to the facilities provided by the School of Dental Sciences (PSG), students also have access to a range of facilities available across the Health Campus, Universiti Sains Malaysia. These include library, Central Research Laboratory and hospital facilities:

1. Library: *Perpustakaan Hamdan Tahir* – a central academic resource for students and staff. Library and Research Support Services are as follows:

Research support

- Research grant book submission procedure
- Research support training
- Journal verification
- Merging Scopus ID
- Open Science / Research Data Management (RDM) consultation and training
- E-publication support

Access to resources

- Journal-on-demand service
- Article delivery service
- Interlibrary loan services
- Postal book loan service (PJJ)
- Request Book/Article System (RBAS)
- Journal collection request
- Purchase request

Facilities and learning spaces at the library

Study and learning spaces:

- Study areas with Wi-Fi and Quiet Zone
- 24-hour study area with vending machine and Wi-Fi
- Carrel rooms (daily or monthly rental)
- Discussion rooms (free use)
- Postgraduate room (Level 3, PHS 1)
- Collaborative learning space (Engineering Library)

- Self-learning space
- Leisure area (Ground floor and Level 1)
- Bibliotherapy room

Technology and equipment:

- OPAC PCs (Online Public Access Catalogue)
- SiR Corner (high-speed access to journals, magazines, eBooks, online news)
- Self-check machines (borrow, return, renew books)
- Book drop stations (24-hour return)
- Smart TV (Level 1, PHS 1)
- Computer lab

Special facilities and services

- Media room (CDs, VCDs, tapes)
- Exhibition space (for rent)
- Interactive room (games, chess, 3D movie)
- Library café

Accessibility and support

- Lockers (free, daily, or monthly rental)
- Prayer rooms (Level 1 and Level 2, PHS 1)
- Accessible toilets (all levels)
- Disabilities study area (Level 1, PHS 1)

For more information, please visit:

<https://lib.usm.my/visiting-the-library/library-branches/pht>

or contact:

HAMDAN TAHIR LIBRARY

Universiti Sains Malaysia, Health Campus, Kubang Kerian, 16150 Kota Bharu, Kelantan

Tel : +609-7671473

E-mail : infopht@usm.my

2. Central Research Laboratory (CRL):

Established in 2002, the Central Research Laboratory (CRL) provides advanced research facilities, including comfortable workspaces and state-of-the-art equipment, to staff, postgraduate students, and external researchers. With well-equipped laboratories, technical support, and research-based programs such as seminars and workshops, CRL fosters an environment that enables active scientific research and supports researchers in achieving excellence in their work.



Laboratory equipment available via online booking system:

- Real-time PCR (BioRad)
- Waterbath
- Embedding-Thermal Unit (Medite)
- Analytical Balance
- Lyophilizer

For more information, please visit:

<https://rni.kk.usm.my/index.php?view=article&id=159&catid=2>

or contact:

CRL & Secretariat of KPI

Central Research Laboratory, School of Medical Sciences,
Universiti Sains Malaysia, 16150 Kubang Kerian, Kelantan

Tel : 609-767 6878 | Fax: 609-765 3370 | Email : yychan@usm.my / faris@usm.my

3. The Animal Research and Service Centre (ARASC)

The Animal Research and Service Centre (ARASC) at Universiti Sains Malaysia offers comprehensive facilities and services for research involving laboratory animals:

Health Campus:

- Laboratory animal supply (mice, rats, rabbits)
- Aquatic & arthropod research rooms
- BSL 2 & ABSL 3 laboratories
- Sanitation & sterilization room
- Sheep holding facility

Main Campus:

- Laboratory animal transport services

Both Campuses:

- Animal care and research procedure services
- Euthanasia and biological waste disposal
- Competency training for laboratory animal handling and procedures
- Animal holding, procedure, quarantine, necropsy, and operating rooms
- Teaching & training rooms

For more information, please visit:

<https://arasc.usm.my/index.php>

or contact:

- Main Campus: 04-6535227, arasc_penang@usm.my
- Health Campus: 09-7671221, arasc_general@usm.my

4. Hospital facilities with ambulatory services

ACADEMIC CALENDAR (2026/2027)



ACADEMIC CALENDAR - ACADEMIC SESSION 2026/2027

Note:

- Registration for new Coursework, Mixed Mode, and Online Mode students for Semester 1, Academic Session 2026/2027 (September 2026) can be completed online from 28 July 2026 to 27 September 2026.
- Registration for new Coursework, Mixed Mode, and Online Mode students for Semester 2, Academic Session 2025/2026 (March 2026) can be completed online from 02 February 2026 to 16 March 2026.
- Registration for new Research Mode students can be completed at any time within the validity period of the offer letter.

SEM	WEEKS	ACTIVITIES	DATES	REMARKS
ONE	1	Teaching & Learning (T&L 7 Weeks)	Monday, 28.09.2026 - Sunday, 04.10.2026	29 & 30.09.2026, Tuesday & Wednesday - Sultan of Kelantan's Birthday (Health Campus)
	2		Monday, 05.10.2026 - Sunday, 11.10.2026	
	3		Monday, 12.10.2026 - Sunday, 18.10.2026	
	4		Monday, 19.10.2026 - Sunday, 25.10.2026	
	5		Monday, 26.10.2026 - Sunday, 01.11.2026	
	6		Monday, 02.11.2026 - Sunday, 08.11.2026	08.11.2026, Sunday - Deepavali**
	7		Monday, 09.11.2026 - Sunday, 15.11.2026	
	8	Mid-Semester Break (Sem I) (1 Week)	Monday, 16.11.2026 - Sunday, 22.11.2026	
	9	Teaching & Learning (T&L 7 Weeks)	Monday, 23.11.2026 - Sunday, 29.11.2026	
	10		Monday, 30.11.2026 - Sunday, 06.12.2026	
	11		Monday, 07.12.2026 - Sunday, 13.12.2026	
	12		Monday, 14.12.2026 - Sunday, 20.12.2026	
	13		Monday, 21.12.2026 - Sunday, 27.12.2026	25.12.2026, Friday - Christmas Day
	14		Monday, 28.12.2026 - Sunday, 03.01.2027	01.01.2027, Friday - New Year 2027
	15		Monday, 04.01.2027 - Sunday, 10.01.2027	
	16	Revision Week (1 Week)	Monday, 11.01.2027 - Sunday, 17.01.2027	
	17	Examination (3 Weeks)	Monday, 18.01.2027 - Sunday, 24.01.2027	22.01.2027, Friday - Thaipusam
	18		Monday, 25.01.2027 - Sunday, 31.01.2027	
	19		Monday, 01.02.2027 - Sunday, 07.02.2027	06 & 07.02.2027, Saturday & Sunday - Chinese New Year
	20	Mid-Semester Break / Industrial Training (4 Weeks)	Monday, 08.02.2027 - Sunday, 14.02.2027	08.02.2027, Monday - First Day of Ramadan
	21		Monday, 15.02.2027 - Sunday, 21.02.2027	
	22		Monday, 22.02.2027 - Sunday, 28.02.2027	24.02.2027, Wednesday - Nuzul Al-Quran
	23		Monday, 01.03.2027 - Sunday, 07.03.2027	
TWO	24/1	Teaching & Learning (T&L 7 Weeks)	Monday, 08.03.2027 - Sunday, 14.03.2027	10 & 11.03.2027, Wednesday & Thursday - Eid al-Fitr**
	25/2		Monday, 15.03.2027 - Sunday, 21.03.2027	
	26/3		Monday, 22.03.2027 - Sunday, 28.03.2027	
	27/4		Monday, 29.03.2027 - Sunday, 04.04.2027	
	28/5		Monday, 05.04.2027 - Sunday, 11.04.2027	
	29/6		Monday, 12.04.2027 - Sunday, 18.04.2027	
	30/7		Monday, 19.4.2027 - Sunday, 25.04.2027	
	31/8	Mid-Semester Break (Sem II) (1 Week)	Monday, 26.04.2027 - Sunday, 02.05.2027	01.05.2027, Saturday - Labour Day 02.05.2027, Sunday - Substitute Holiday for Labour Day (Health Campus)
	32/9	Teaching & Learning (T&L 7 Weeks)	Monday, 03.05.2027 - Sunday, 09.05.2027	
	33/10		Monday, 10.05.2027 - Sunday, 16.05.2027	
	34/11		Monday, 17.05.2027 - Sunday, 23.05.2027	17.05.2027, Monday - Eid al-Adha** 18.05.2027, Tuesday - Substitute Holiday for Eid al-Adha** (Health Campus) 20.05.2027, Thursday - Wesak Day
	35/12		Monday, 24.05.2027 - Sunday, 30.05.2027	
	36/13		Monday, 31.05.2027 - Sunday, 06.06.2027	06.06.2027, Sunday - Islamic New Year
	37/14		Monday, 07.06.2027 - Sunday, 13.06.2027	07.06.2027, Monday - Substitute Holiday for Islamic New Year (Main Campus & Engineering Campus) 07.06.2027, Monday - Yang di-Pertuan Agong's Birthday
	38/15		Monday, 14.06.2027 - Sunday, 20.06.2027	
	39/16	Revision Week (1 Week)	Monday, 21.06.2027 - Sunday, 27.06.2027	
	40/17	**Examination (2 Week)	Monday, 28.06.2027 - Sunday, 04.07.2027	
	41/18		Monday, 05.07.2027 - Sunday, 11.07.2027	07.07.2027, Wednesday - Georgetown World Heritage City Day 10.07.2027, Saturday - Penang Governor's Birthday
	42/19	Examination (3 Week)	Monday, 12.07.2027 - Sunday, 18.07.2027	
COURSES DURING SEMESTER BREAK	43/20	Semester II Break / Industrial Training (10-11 Weeks)	Monday, 19.07.2027 - Sunday, 25.07.2027	
	44/21		Monday, 26.07.2027 - Sunday, 01.08.2027	
	45/22		Monday, 02.08.2027 - Sunday, 08.08.2027	
	46/23		Monday, 09.08.2027 - Sunday, 15.08.2027	15.08.2027, Sunday - Prophet Muhammad's Birthday
	47/24		Monday, 16.08.2027 - Sunday, 22.08.2027	16.08.2027, Monday - Substitute Holiday for Prophet Muhammad's Birthday
	48/25	*T&L	Monday, 23.08.2027 - Sunday, 29.08.2027	
	49/26	Examination	Monday, 30.08.2027 - Sunday, 05.09.2027	31.08.2027, Tuesday - National Day
	50/27		Monday, 06.09.2027 - Sunday, 12.09.2027	
	51/28		Monday, 13.09.2027 - Sunday, 19.09.2027	16.09.2027, Thursday - Malaysia Day
	52/29		Monday, 20.09.2027 - Sunday, 26.09.2027	

**This Academic Calendar is subject to change

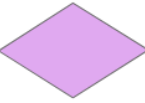
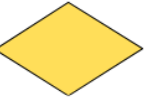
PUSAT TANGGUNGJAWAB (PTJ)/STAFF DIRECTORY

To access the staff directory of the School of Dental Sciences, please visit the Staff Directory System via this link:

<https://directory.usm.my/?direktorstaf/direktori&kod=00187>

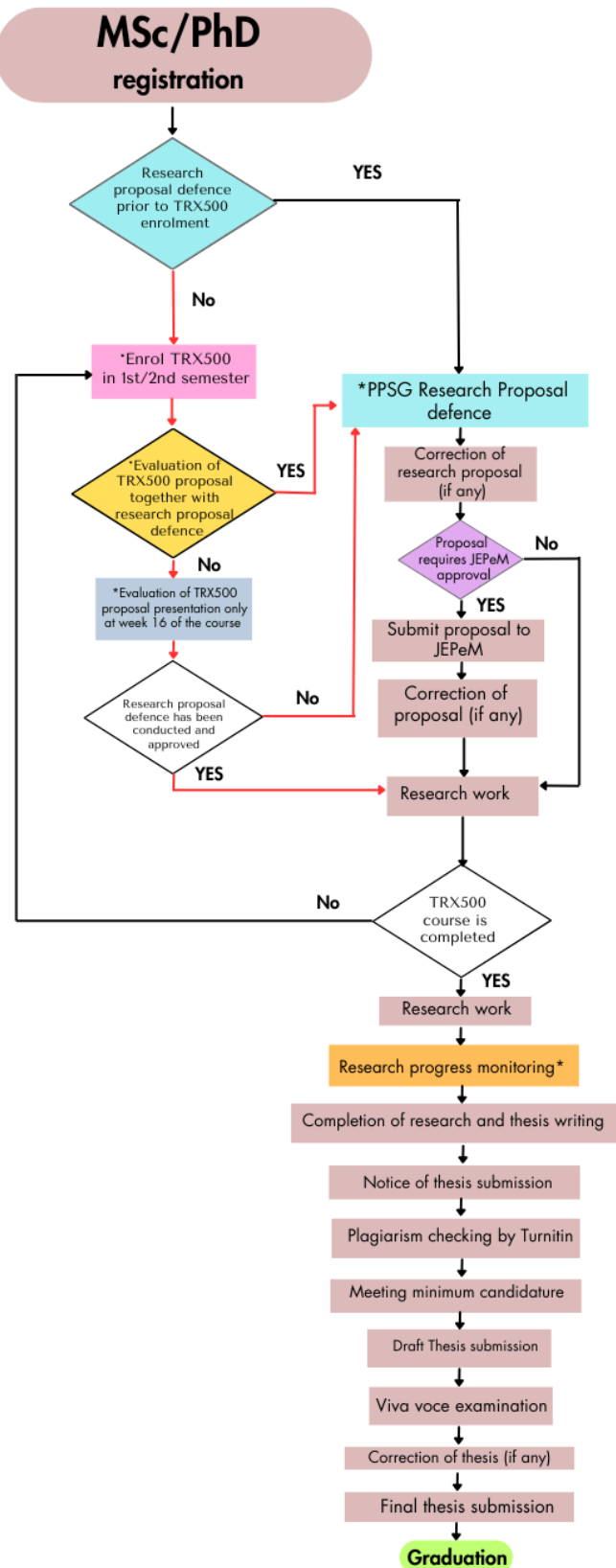
APPENDIX

FLOW CHART of MSc/PhD (Research mode) student progress

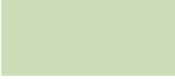
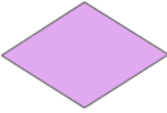
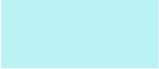
	Students are required to register for the TRX500 course at the first semester. Course enrolment is done by the student within the first two-week of the first semester according to the procedures stipulated in the registration guidelines from the IPS. In case the registration date is two weeks after the semester started, students are required to register the course in the second semester.
	Some research proposals must be submitted to the JEPeM Committee for ethical approval, while others may be exempted from this requirement.
	Student may conduct research proposal defence prior to or after TRX500 enrolment. The defence should be completed in less than 6 months after registration.
	Evaluation of TRX500 proposal presentation at week 16 of the course.
	Evaluation of TRX500 proposal presentation at week 16 of the course.
	Research progress monitoring will be conducted throughout the candidature

Important Notes:

- International students are required to register and pass the LKM III course
- The supervisor MUST propose reviewers with expertise in the study's research area for the proposal evaluation.

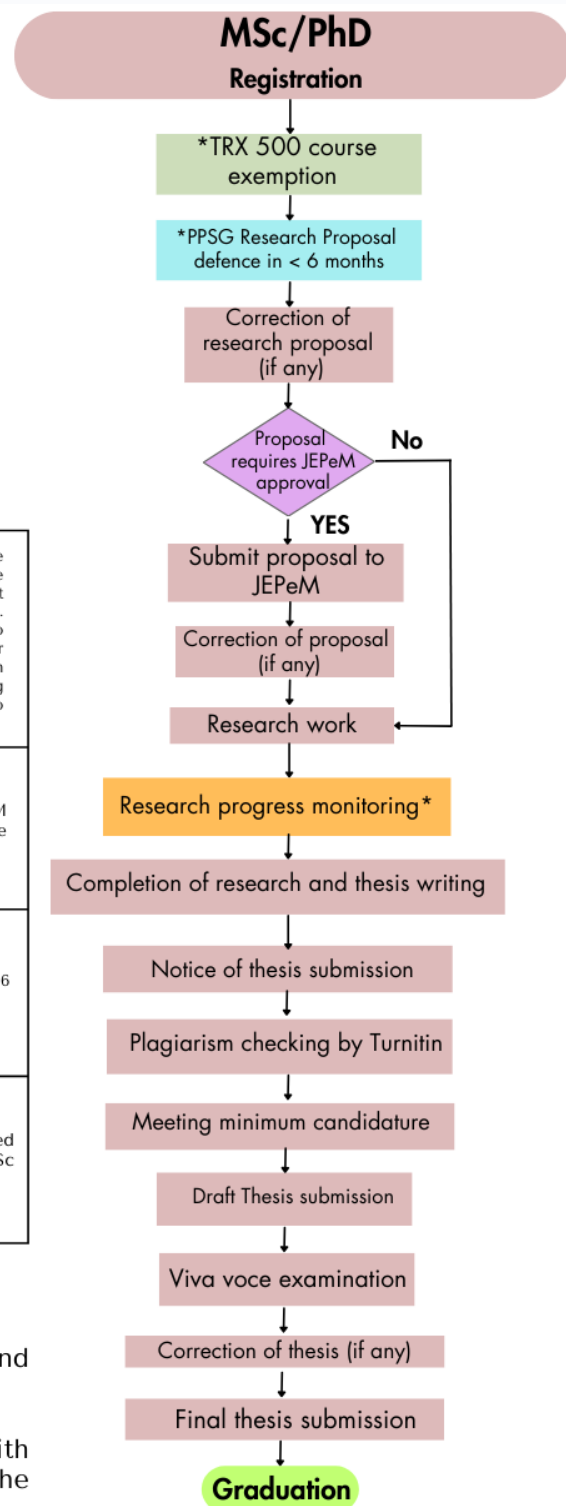


FLOW CHART of MSc/PhD (Research Mode) Student Progress (with TRX 500 course exemption)

	The course is a prerequisite course for graduation. If you have previously taken a research methodology course in medicine and health sciences, you can apply for the course exemption at your school/institution up to week 3 during the semester. However, your school/institution reserve the right to approve/reject your application, depending on your justifications. The course provides essential knowledge in Research Methodology and is expected to be useful during research studies, hence, students are highly encouraged to attend the course.
	Some research proposals must be submitted to the JEPeM Committee for ethical approval, while others may be exempt from this requirement.
	Research proposal defence should be completed in less than 6 months after registration
	Research progress monitoring will be conducted based on the Policy on Research Progress Monitoring for MSc and PhD Students

Important Notes:

- International students are required to register and pass the LKM 111 course
- The supervisor **MUST** propose reviewers with expertise in the study's research area for the proposal evaluation.





RESEARCH TITLE:

STUDENT NAME:

**School of Dental Sciences, Health Campus
Universiti Sains Malaysia**

**Research Proposal
Month, Year**

Supervisor name:

Co-supervisor (if applicable):

TABLE OF CONTENTS

LIST OF TABLES (if applicable)

LIST OF FIGURES (if applicable)

ABSTRACT:

The abstract should have research aim/objective, method, expected results, and current progress or preliminary conclusion.

CHAPTER 1

INTRODUCTION

1.1 Background of Study

Introduce the scope and context of the study. Describe the general area of research, the broader issues being addressed, and how your topic fits within the larger body of knowledge. This sets the foundation for understanding the significance of your research focus.

1.2 Problem statement & Study rationale

Explain the problem that your study seeks to address. What gap in knowledge, practice, or policy exists? Why is this problem important? Justify why the study is being conducted and how the findings could provide meaningful contributions or solutions.

1.3 Research questions

List the specific questions derived from the problem statement that your study aims to answer. These should guide your methodology and data analysis and help maintain focus throughout the research.

1.4 Research hypothesis

Present your research hypothesis (if applicable), especially for quantitative or experimental studies. A hypothesis is a testable prediction about the relationship between variables. Include null OR alternative hypotheses.

1.5 Research Objectives

General Objective:

A broad statement of the overall aim of your research.

Specific Objectives:

Detailed, measurable goals that your study will achieve to fulfil the general objective. These should align with your research questions and methodology.

CHAPTER 2

LITERATURE REVIEW

Critical review of previous published studies to:

- *Identify gaps of knowledge*
- *Justify your study rationale*
- *Justify your methodology*

Conceptual framework

Diagrammatic illustration of the study framework based on literature review with some text to explain the diagram

CHAPTER 3

METHODOLOGY

3.1 Study design

Describe the type of study you are conducting (e.g., cross-sectional, cohort, experimental, qualitative). Justify why this design is suitable for your research question.

3.2 Study population/samples

Define the population of interest and the sample you will study. Include reference population, target population, source population, sampling frame, demographic or clinical criteria, setting, and any relevant inclusion or exclusion criteria.

3.3 Sampling method

Describe the technique used to select the study sample (e.g., random sampling, purposive sampling).

3.4 Sample size determination

Explain how the sample size was calculated. Include formulas or software used, expected effect size, confidence intervals, and power if applicable.

3.5 Study variables

Define the key variables in your study. Distinguish between independent, dependent, and/or confounding variables (if any), and provide operational definitions.

3.6 Experimental procedure/data collection method

- *Description of experimental procedure, equipment, and materials needed (for experimental study).*
- *Description of data collection procedure, and instrument/tools used (for non-experimental study).*

3.7 Statistical analysis

List the statistical methods and software to be used in analyzing your data. Describe how data will be summarized, and which tests will be used.

3.8 Ethical considerations

Explain how you will protect participants' rights, ensure confidentiality, obtain informed consent, and secure ethical clearance from the appropriate committee.

3.9 Flow chart of the study

Provide a visual flow chart illustrating the sequence of research activities, from sample recruitment to data analysis. This helps readers understand the overall process.

CHAPTER 4

EXPECTED RESULTS/OUTCOMES

Dummy tables

Include sample tables that you expect to generate from your data analysis. These are not real results but show the intended format for presenting findings (e.g., mean values, group comparisons, regression outcomes).

CHAPTER 5

CONCLUSION (if any)/ WORK IN PROGRESS

5.1 Conclusions for work in progress

Briefly summarize the current status of the project. If the study has started, describe preliminary progress or partial findings.

5.2 Limitation (if any)

Discuss any potential limitations or challenges in your study (e.g., sample bias, measurement error).

5.3 Plan for future work

Describe the future steps for completing your research or extending the study, including analysis, writing, or follow-up studies.

5.4 Gantt chart for research activities

Provide a Gantt chart that visually outlines the timeline of each research activity, including proposal writing, data collection, analysis, and reporting.

REFERENCES

List all references cited in your proposal, formatted using APA, Vancouver or others style.

APPENDICES (IF ANY)

Note:

The following formatting guidelines should be followed:

- a. The research proposal must be written in English*
- b. One-and-a-half spaced type*
- c. Font size 12 pt, Times New Roman.*
- d. Submitted as a PDF file in A4 size layout in portrait format*

COMPLIANCE WITH THE UNIVERSITY'S RULES AND REGULATIONS

Students are required to adhere to the University's prescribed dress code and always maintain appropriate attire.

Formal Attire

Formal attire is mandatory for official functions, attending lectures, tutorials, laboratories, visiting the library, Pusat Sejahtera, Chancellory building, IPS office, Schools, Centres, Institutes, and during meetings with officials or lecturers. Acceptable formal attire includes sleeved shirts, uniforms, collared t-shirts, traditional clothing, proper shoes, and long pants or skirts. Access may be denied if students do not comply with the dress code.

Casual Attire

Casual attire is not permitted at official events where formal attire is required. Additionally, the University prohibits female students from wearing sleeveless shirts, miniskirts, very short shorts, or revealing clothing in any context. Flip-flops are not allowed for attending classes, interviews, or visiting University departments. Male students must keep their hair short, ensuring it does not touch the collar. Sports attire (e.g., shorts) is restricted to designated sports areas, and laboratory coats should only be worn while working in the labs.



Official



Lectures and Office Affairs



Sports Activities



Relaxing Activities



Prohibited Clothing

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School of Dental Sciences (PPSG)

Health Campus

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Kelantan, Malaysia.

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