

SCHOOL OF DENTAL SCIENCES



2025/2026

SCHOOL OF DENTAL SCIENCES

DOCTOR OF DENTAL SURGERY



Transforming Higher Education
for a Sustainable Tomorrow

2025/2026

<https://www.usm.my>



Doctor of Dental Surgery
School of Dental Sciences
Universiti Sains Malaysia
Academic Session 2025/2026

USM Vision

Transforming Higher Education for a Sustainable Tomorrow

USM Mission

USM is a pioneering, transdisciplinary research intensive university that empowers future talents and enables the bottom billions to transform their socio-economic well-being.

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Telephone No. (Residence)	:	
Mobile Phone No.	:	
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Name of Academic Advisor	:	

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**DOCTOR OF DENTAL SURGERY ACADEMIC CALENDAR, ACADEMIC SESSION 2025/2026
SCHOOL OF DENTAL SCIENCES, HEALTH CAMPUS, UNIVERSITI SAINS MALAYSIA**

WEEK	DATE	PUBLIC HOLIDAY	ACTIVITY								
			YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5				
	28.09.2025 (Sunday) - 04.10.2025 (Saturday)	Sultan of Kelantan's Birthday - 29.09.2025 (Monday) & 30.09.2025 (Tuesday)	Registration for New Student : 30.09.2025 (Tuesday) Orientation Week : 30.09.2025 (Tuesday) – 04.10.2025 (Saturday)								
1	05.10.2025 (Sunday) - 11.10.2025 (Saturday)		Teaching & Learning	Teaching & Learning	Teaching & Learning	Teaching & Learning	Teaching & Learning				
2	12.10.2025 (Sunday) - 18.10.2025 (Saturday)										
3	19.10.2025 (Sunday) - 25.10.2025 (Saturday)	Deepavali - 20.10.2025 (Monday)									
4	26.10.2025 (Sunday) - 01.11.2025 (Saturday)		Teaching & Learning	Teaching & Learning	Teaching & Learning	Teaching & Learning	Teaching & Learning				
5	02.11.2025 (Sunday) - 08.11.2025 (Saturday)										
6	09.11.2025 (Sunday) - 15.11.2025 (Saturday)										
7	16.11.2025 (Sunday) - 22.11.2025 (Saturday)										
8	23.11.2025 (Sunday) - 29.11.2025 (Saturday)										
9	30.11.2025 (Sunday) - 06.12.2025 (Saturday)										
10	07.12.2025 (Sunday) - 13.12.2025 (Saturday)										
										Professional Qualifying Examination – Part II, Component 1 (20.11.2025)	
										Teaching & Learning	

11	14.12.2025 (Sunday) - 20.12.2025 (Saturday)								
12	21.12.2025 (Sunday) - 27.12.2025 (Saturday)	Christmas - 25.12.2025 (Thursday)	Holiday						
13	28.12.2025 (Sunday) - 03.01.2026 (Saturday)		Teaching & Learning	Teaching & Learning	Teaching & Learning	Teaching & Learning	Teaching & Learning	Teaching & Learning	
14	04.01.2026 (Sunday) - 10.01.2026 (Saturday)								
15	11.01.2026 (Sunday) - 17.01.2026 (Saturday)								
16	18.01.2026 (Sunday) - 24.01.2026 (Saturday)								
17	25.01.2026 (Sunday) - 31.01.2026 (Saturday)								
18	01.02.2026 (Sunday) - 07.02.2026 (Saturday)								Year 5 Professional III Examination (Remedial)
19	08.02.2026 (Sunday) - 14.02.2026 (Saturday)								Year 5 Professional III Examination (Remedial)
20	15.02.2026 (Sunday) - 21.02.2026 (Saturday)	Chinese New Year - 17.02.2026 (Tuesday) & 18.02.2026 (Wednesday)	Teaching & Learning - Online						
21	22.02.2026 (Sunday) - 28.02.2026 (Saturday)		Teaching & Learning	Teaching & Learning	Teaching & Learning	Teaching & Learning	Teaching & Learning	Teaching & Learning	
22	01.03.2026 (Sunday) - 07.03.2026 (Saturday)	Nuzul Al-Quran - 07.03.2026 (Saturday)							
23	08.03.2026 (Sunday) - 14.03.2026 (Saturday)	Nuzul Al-Quran - 08.03.2026 (Sunday)							
24/1	15.03.2026 (Sunday) - 21.03.2026 (Saturday)	Eid al-Fitr - 21.03.2026 (Saturday)	Teaching & Learning	Teaching & Learning	Teaching & Learning	Teaching & Learning	Teaching & Learning	Teaching & Learning	
25/2	22.03.2026 (Sunday) - 28.03.2026 (Saturday)	Eid al-Fitr - 22.03.2026 (Sunday) & 23.03.2026 (Monday)	Holiday						

26/3	29.03.2026 (Sunday) - 04.04.2026 (Saturday)		Teaching & Learning	Teaching & Learning	Teaching & Learning	Teaching & Learning	Teaching & Learning					
27/4	05.04.2026 (Sunday) - 11.04.2026 (Saturday)											
28/5	12.04.2026 (Sunday) - 18.04.2026 (Saturday)											
29/6	19.04.2026 (Sunday) - 25.04.2026 (Saturday)											
30/7	26.04.2026 (Sunday) - 02.05.2026 (Saturday)	Labour Day - 01.05.2026 (Friday)										
31/8	03.05.2026 (Sunday) - 09.05.2026 (Saturday)											
32/9	10.05.2026 (Sunday) - 16.05.2026 (Saturday)							Professional Qualifying Examination – Part II, Component 3 (13.5.2026)				
33/10	17.05.2026 (Sunday) - 23.05.2026 (Saturday)							Professional Qualifying Examination – Part II, Component 2 (20.5.2026)	Teaching & Learning			
34/11	24.05.2026 (Sunday) - 30.05.2026 (Saturday)	Arafah Day - 26.05.2026 (Tuesday) Eid al-Adha - 27.05.2026 (Wednesday) & 28.05.2026 (Thursday)						Holiday				
35/12	31.05.2026 (Sunday) - 06.06.2026 (Saturday)	Wesak Day - 31.05.2026 (Sunday) Yang di- Pertuan Agong's Birthday - 01.06.2026 (Monday)						Teaching & Learning	Teaching & Learning	Teaching & Learning	Teaching & Learning	Teaching & Learning
36/13	07.06.2026 (Sunday) - 13.06.2026 (Saturday)											
37/14	14.06.2026 (Sunday) - 20.06.2026 (Saturday)	Awal Muharram - 17.06.2026 (Wednesday)										
38/15	21.06.2026 (Sunday) -		Professional Qualifying									

	27.06.2026 (Saturday)				Examination – Part II, Component 1 (25.6.2026)		
39/16	28.06.2026 (Sunday) - 04.07.2026 (Saturday)		Revision Week	Teaching & Learning	Teaching & Learning	Teaching & Learning	Teaching & Learning
40/17	05.07.2026 (Sunday) - 11.07.2026 (Saturday)		Year 1 Professional Examination				
41/18	12.07.2026 (Sunday) - 18.07.2026 (Saturday)		Holiday	Revision Week			
42/19	19.07.2026 (Sunday) - 25.07.2026 (Saturday)		Holiday	Year 2 Professional Examination	Revision Week		
43/20	26.07.2026 (Sunday) - 01.08.2026 (Saturday)		Holiday	Holiday	Year 3 Professional Examination	Revision Week	
44/21	02.08.2026 (Sunday) - 08.08.2026 (Saturday)		Revision Week	Holiday	Teaching & Learning	Professional Qualifying Examination Part I	Teaching & Learning
45/22	09.08.2026 (Sunday) - 15.08.2026 (Saturday)		Year 1 Professional Examination (Remedial)	Revision Week		Teaching & Learning	
46/23	16.08.2026 (Sunday) - 22.08.2026 (Saturday)		Holiday	Year 2 Professional Examination (Remedial)	Revision Week	Teaching & Learning	Revision Week
47/24	23.08.2026 (Sunday) - 29.08.2026 (Saturday)	Maulidur Rasul - 25.08.2026 (Tuesday)	Holiday	Holiday	Year 3 Professional Examination (Remedial)	Revision Week	Year 5 Professional III Examination
48/25	30.08.2026 (Sunday) - 05.09.2026 (Saturday)	National Day - 31.08.2026 (Monday)	Holiday	Holiday	Teaching & Learning	Professional Qualifying Examination Part I (Remedial)	Year 5 Professional III Examination
49/26	06.09.2026 (Sunday) - 12.09.2026 (Saturday)		Holiday	Holiday		Teaching & Learning	Teaching & Learning
50/27	13.09.2026 (Sunday) - 19.09.2026 (Saturday)	Malaysia Day - 16.09.2026 (Wednesday)	Holiday	Holiday			Holiday
51/28	20.09.2026 (Sunday) - 26.09.2026 (Saturday)		Holiday	Holiday	Holiday	Holiday	Holiday
52/29	27.09.2026 (Sunday) - 03.10.2026 (Saturday)	Sultan of Kelantan's Birthday - 29.09.2026 (Tuesday) & 30.09.2026 (Wednesday)	Holiday	Holiday	Holiday	Holiday	Holiday



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1.0 INTRODUCTION

1.1 School of Dental Sciences

The School of Dental Sciences or more commonly known as PPSG (*Pusat Pengajian Sains Pergigian*) was established in October 1998. Located in the North Eastern part of Peninsular Malaysia within the Health Campus of Universiti Sains Malaysia (USM), the School of Dental Sciences offers not only the undergraduate degree programme Doctor of Dental Surgery (DDS), but also several postgraduate programmes including research mode programmes (MSc and PhD) and speciality programmes in Oral Maxillofacial Surgery, Prosthodontics, Conservative Dentistry, Periodontics, Pediatric Dentistry and Dental Public Health.

The School of Dental Sciences is committed to produce competent dental professionals with appropriate social and technical skills and a commitment to life-long learning through provision of conducive and supportive learning environment to ensure excellent teaching, innovative research and high-quality patient care.

1.2 Mission and Vision of the School of Dental Sciences

Mission

The School of Dental Sciences, USM is committed to the pursuit of excellence and innovations in academia, services, research and 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.

Vision

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

1.3 Doctor of Dental Surgery Programme

The DDS programme was first offered in May 1999. The programme is structured based on a multi-disciplinary approach. Among the unique features of the DDS programme are the integrated organ-system and problem-based curriculum. Emphasis is given on the holistic approach to patient care in relation to his or her family and community. It is hoped that this will initiate community awareness in a wider context. It also aims to nurture leadership characteristics among dental professionals in oral health care as well as continuing dental education.

1.4 Programme Educational Objectives (PEO)

- i) Graduates will have sound knowledge and understanding and are able to apply the theory and practice of dentistry in delivering high standard oral health care in an environment safe for both patients and staffs.
- ii) Graduates will have relevant numeracy and digital skills to search and comprehend new evidence and development in the field of dentistry to enhance their knowledge and skills such that they can respond effectively to the changing needs of patients and of the communities that they serve.
- iii) Graduates will be clinically competent and practice evidence-based dentistry within various cultural environments with appropriate communication skills, personal skills, ethics, and professionalism.
- iv) Graduates will have good interpersonal, managerial, and entrepreneurial skills by being able to lead a dental team and accept personal responsibility for decision-making.

1.5 Programme Learning Outcomes (PLO)

- i) Possess scientific knowledge to support the practice of dentistry – (Cognitive).
- ii) Apply current scientific information and techniques in the practice of dentistry – (Cognitive).
- iii) Perform clinical dental procedures independently and safely – (Psychomotor).
- iv) Communicate effectively with dental and other health professionals, patients and the community – (Psychomotor & Affective).
- v) Manage digital and numeracy information skills in the field of dentistry – (Psychomotor).
- vi) Display leadership skills and work autonomously in managing oral health care for individuals and community – (Psychomotor & Affective).
- vii) Display entrepreneurial skills in the management of dental practice – (Cognitive & Psychomotor).

- viii) Display skills for life-long learning and continuing professional development– (Cognitive & Psychomotor).
- ix) Display ethical values and professionalism in practicing dentistry within the confine of the laws and guidelines governing the profession – (Cognitive, Psychomotor & Affective).

(Malaysian Dental Council - 23 July 2021)

1.6 Programme Profile

The DDS programme is a five-year programme. Its curriculum is integrated, problem-based and community oriented.

Year 1 : Basic Foundation in Medical and Dental Sciences

Year 2 : Pre-Clinical Dental and Medical Sciences & Medical Clinical Sciences

Year 3, 4 & 5 : Dental Clinical Sciences, Community Engagement & Research

The years are integrated through a spiral concept to ensure close association.

- S** - Student oriented
- P** - Problem-based
- I** - Integrated
- C** - Community oriented
- E** - Electives
- S** - Spiral and Systematic

1.7 List of Registrable Courses for DDS and Course Synopsis

YEAR 1																							
COURSE		UNIT																					
GNT111	Craniofacial Biology	9																					
GNT112	Human Biology I	10																					
GNT113	Cell And Tissue Biology	8																					
GNT114	Oral Biology	10																					
GNT100*	Year 1 Professional Examination	-																					
TOTAL UNITS FOR CORE COURSES IN YEAR 1		37																					
<p>In addition to the core courses, students are required to register for general university courses known as <i>Mata Pelajaran Umum</i> (MPU) and the English Language Courses.</p> <p>The MPU are categorised into 4 groups as follows: U1: appreciation of philosophy, values, and history U2: the mastery of soft skills U3: expansion of the knowledge about Malaysia and its history, and U4: practical community management skills such as community service and co-curriculum</p> <p>Students are required to take 15-22 credits of general university courses and English Language Courses to fulfil the graduation requirement.</p> <p>Students must register, complete, and pass the university courses as a graduation requirement. The passing grade is Grade C.</p> <p>List of recommended MPU for local DDS students:</p> <table border="1"> <thead> <tr> <th colspan="3">LOCAL STUDENTS</th> </tr> <tr> <th>U1</th> <th>U2 or U3</th> <th>U4</th> </tr> </thead> <tbody> <tr> <td>1) HFF225 (Philosophy and Current Issues), 2 credits. Taken in Year 2 (Semester I)</td> <td>1) WUS101 (Core Entrepreneurship), 2 credits. Taken in Year 1 (Semester I)</td> <td>1) WAR122 (Integrity and Anti-Corruption Course), 2 credits. Taken in Year 1 (Semester 2)</td> </tr> <tr> <td>2) HFE224 (Appreciation of Ethics and Civilisations) 2 credits. Taken in Year 2 (Semester II)</td> <td>2) English Language Courses, 4 credits. Taken in Year 1 (Semester 1 & II)</td> <td>2) Co-curricular courses, 1 credit. Taken in Year 1 and/or Year 2 (Semester I and/or II)</td> </tr> <tr> <td>3) LKM400 (Bahasa Malaysia IV), 2 credits. Taken in Year 1 (Semester II)</td> <td></td> <td></td> </tr> <tr> <td>6 Credit Hours</td> <td>6 Credit Hours</td> <td>3 Credit Hours</td> </tr> <tr> <td colspan="3" style="text-align: right;">Total MPU: 15 Credit Hours</td> </tr> </tbody> </table>			LOCAL STUDENTS			U1	U2 or U3	U4	1) HFF225 (Philosophy and Current Issues), 2 credits. Taken in Year 2 (Semester I)	1) WUS101 (Core Entrepreneurship), 2 credits. Taken in Year 1 (Semester I)	1) WAR122 (Integrity and Anti-Corruption Course), 2 credits. Taken in Year 1 (Semester 2)	2) HFE224 (Appreciation of Ethics and Civilisations) 2 credits. Taken in Year 2 (Semester II)	2) English Language Courses, 4 credits. Taken in Year 1 (Semester 1 & II)	2) Co-curricular courses, 1 credit. Taken in Year 1 and/or Year 2 (Semester I and/or II)	3) LKM400 (Bahasa Malaysia IV), 2 credits. Taken in Year 1 (Semester II)			6 Credit Hours	6 Credit Hours	3 Credit Hours	Total MPU: 15 Credit Hours		
LOCAL STUDENTS																							
U1	U2 or U3	U4																					
1) HFF225 (Philosophy and Current Issues), 2 credits. Taken in Year 2 (Semester I)	1) WUS101 (Core Entrepreneurship), 2 credits. Taken in Year 1 (Semester I)	1) WAR122 (Integrity and Anti-Corruption Course), 2 credits. Taken in Year 1 (Semester 2)																					
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3) LKM400 (Bahasa Malaysia IV), 2 credits. Taken in Year 1 (Semester II)																							
6 Credit Hours	6 Credit Hours	3 Credit Hours																					
Total MPU: 15 Credit Hours																							

List of recommended MPU for international DDS students:

INTERNATIONAL STUDENTS		
U1	U2 or U3	U4
1) HFF225 (Philosophy and Current Issues), 2 credits. Taken in Year 2 (Semester I)	1) SEA205E (Malaysian Studies), 4 credits. Taken in Year 2 (Semester II)	1) Co-curricular courses, 3 credits. Taken in Year 1 or Year 2 (Semester I or II)
2) LKM100 (Bahasa Malaysia I), 2 credits. Taken in Year 1 (Semester II)	2) English Language Courses, 4 credits. Taken in Year 1 (Semester I & II)	
4 Credit Hours	8 Credit Hours	3 Credit Hours
Total MPU: 15 Credit Hours		
YEAR 2		
GNT212	Human Biology II	10
GNT213	Dental Public Health I	2
GNT215	Restorative Dentistry (Pre-Clinical)	9
GNT217	Dental Materials	5
GNT218	Oral and Maxillofacial Radiology	2
GNT219	Basic and Clinical Pharmacology	3
GNT222	General Medicine and General Surgery	10
GNT200*	Year 2 Professional Examination	-
TOTAL UNITS FOR CORE COURSES IN YEAR 2		41
YEAR 3		
GNT311	Paediatric Dentistry I	8
GNT313	Dental Public Health II	4
GNT315	Conservative Dentistry I	14
GNT316	Prosthodontics I	11
GNT317	Periodontics I	9
GNT318	Oral Maxillofacial Surgery and Oral Radiology I	18
GNT319	Oral & Maxillofacial Pathology and Oral Medicine I	3
GNT300*	Year 3 Professional Examination	-
TOTAL UNITS FOR CORE COURSES IN YEAR 3		67

YEAR 4		
GNT411	Paediatric Dentistry II	7
GNT412	Orthodontics	15
GNT415	Conservative Dentistry II	10
GNT416	Prosthodontics II	13
GNT417	Periodontics II	7
GNT418	Oral Maxillofacial Surgery and Oral Radiology II	10
GNT419	Oral & Maxillofacial Pathology and Oral Medicine II	5
GNT400*	Professional Qualifying Examination Part I	-
TOTAL UNITS FOR CORE COURSES IN YEAR 4		67
YEAR 5		
GNT510	Research Project	5
GNT513	General Dental Practice	12
GNT514	Community Engagement	17
GNT515	Professional Development	3
GNT524	Research Methodology and Biostatistics	2
GNT500	Professional Qualifying Examination Part II & III	3
TOTAL UNITS FOR CORE COURSES IN YEAR 5		42
TOTAL UNITS FOR DDS CORE COURSES		254
TOTAL UNITS FOR GRADUATION (INCLUDING UNIVERSITY COURSES)		269

*GNT100, GNT200, GNT300 and GNT400 – students are required to register and pass the courses, but the grades and number of units obtained are not considered for graduation.

COURSE SYNOPSIS FOR YEAR 1

GNT111 (CRANIOFACIAL BIOLOGY)

Course Synopsis

This course introduces normal structure and function (gross anatomy, histology and physiology) of human craniofacial system, the brain, nervous tissues, eyes and ears. Learning session involves lectures, presentations, demonstrations, practicals, tutorials and e-learning. The heutagogy (self-directed learning) and peeragogy (peer-to-peer learning) aspects of education are achieved mainly through presentations where students are working in groups and through tutorials and practical sessions. For students to gain knowledge, they have to attend all learning sessions. Students' competencies will be assessed through scheduled coursework and final year examination.

Learning Outcomes

- i) Explain the structures and functions of normal and craniofacial including nervous system in term of anatomy, histology, physiology and abnormalities of nervous system.
- ii) Relate the structures and functions of normal craniofacial with clinical applications.
- iii) Reproduce craniofacial musculature attachments based on actual anatomy.

List of Text/ Reference Books

- i) Sherwood L. (2016): Human physiology: From cells to systems. 9th Edition. Belmont, CA: Brooks/Cole, Cengage Learning.
- ii) Norton NS. (2022). Netter's Head and Neck Anatomy for Dentistry. 4th Edition. Philadelphia: Saunders, Elsevier.
- iii) Splittgerber R. (2024). Snell's Clinical Neuroanatomy. 9th ed. Philadelphia: Wolters Kluwer/Lippincott Williams & Wilkins.

GNT112 (HUMAN BIOLOGY I)

Course Synopsis

This course introduces gross anatomy, histology, physiology, and developmental embryology. It emphasizes on the understanding of normal structures, functions and physiology processes in an integrated way for the system. Additionally, basics of biochemical properties in musculoskeletal, haemopoietic and lymphoid, endocrine, renal, cardiovascular, respiratory, gastrointestinal, reproductive, haematology, immunology, and microbiology will be emphasized.

Learning session involves lectures, seminars, demonstration, practical and e-learning. In order to ensure that students are knowledgeable and have up-to-date information,

they have to attend all learning sessions. Their knowledge is assessed through test, practicum, presentation (seminar) and final year examination.

Learning Outcomes

- i) Explain the normal structures of human body with their functions in terms of anatomy, histology, embryology, physiology, haematology, immunology, and microbiology.
- ii) Distinguish the normal from abnormal structure and function of the human body with regard to clinical application.
- iii) Reproduce histological images of tissues based on microscopic appearance.

List of Text/ Reference Books

- i) Hoffbrand, V., Steensma, D. P. (2018): Hoffbrand's Essential Haematology. 8th Edition. Wiley-Blackwell. ISBN 978-1-119-49590-1.
- ii) Dalley II, A. F. & Agur, A. M. R. (2022): Moore's Clinically Oriented Anatomy. 9th Edition. Philadelphia: Lippincott Williams & Wilkins.
- iii) Sadler, T. W. (2023): Langman's medical embryology. 15th Edition. Philadelphia: Lippincott Williams & Wilkins.
- iv) Netter, F.H. (2019): Atlas of Human Anatomy. 7th Edition. Saunders, Elsevier.
- v) Sherwood, L. (2016): Human physiology: From cells to systems. 9th Edition. Boston: Cengage Learning.
- vi) Abbas, A. K., Lichtman, A. H. & Pillai, S. (2021). Cellular and Molecular Immunology. 10th Edition. Saunders, Elsevier.
- vii) Samaranyake, L. P. (2018). Essential Microbiology for Dentistry. 5th Edition. Churchill Livingstone.

Additional References

- i) Drake, RL. Vogl, AW. Mitchell, AWM. (2023): Gray's Anatomy for Students, 5th Ed. Saunders: Elsevier.

GNT113 (CELL AND TISSUE BIOLOGY)

Course Synopsis

This course introduces the basic knowledge of cells and tissues comprising the fields of physiology, biochemistry, genetics, and molecular biology. The structures and functions of important biomolecules will be explained in relation to the human development at cellular, molecular, tissue and organ level. Laboratory practicals of fundamental techniques in analytical biochemistry and molecular biology are also included for relevant topics.

Learning sessions involve lectures, seminars, practicals, group discussion and e-learning (self-directed learning). Students are expected to attend all learning sessions

to ensure that they are knowledgeable and provided with up-to-date information. Students' grasp of knowledge on topics will be assessed via three scheduled tests.

Learning Outcomes

- i) Explain:
 - a) the biology, metabolism and regulation of cells and tissue at cellular and molecular levels.
 - b) the basis of chromosomal abnormalities and genetic disorders.
 - c) the various body systems and their maintenance for physiological functions.
- ii) Demonstrate cellular regulation with changes in physiological states.
- iii) Relate the principle of biomolecular techniques with clinical application.

List of Text/ Reference Books

- i) Murray R et al (2018): Harper's Illustrated Biochemistry. 31st Edition. McGraw-Hill Medical.
- ii) Lynn B. Jorde, John C. Carey, Michael J. Bamshad (2019) Medical Genetics. 6th Edition Elsevier.
- iii) Sherwood L (2016) Human physiology: From cells to systems. 9th ed. Belmont, CA: Brooks/Cole, Cengage Learning.
- iv) Emine E. Abali, Susan D. Cline, David S. Franklin, Susan M. Viselli (2021) Lippincott Illustrated Reviews: Biochemistry. 8th Edition. Wolters Kluwer. Philadelphia.

Additional References

- i) Natasha Ramroop Singh (2019) Open Genetics. Thompson Rivers University, Kamloops, British Columbia, Canada.

GNT114 (ORAL BIOLOGY)

Course Synopsis

This course introduces normal structure and function (gross anatomy, histology, and physiology) of oral biology as well as the development of oral cavity and odontogenesis. This course also introduces basic features of abnormality in the embryological development, structure, function, and basic pathology of oral and craniofacial biology. Learning sessions include lectures, seminars, tutorials, demonstration, practical, clinical, and e-learning. The heutagogy (self-directed learning) and peeragogy (peer-to-peer learning) aspects of education are achieved mainly through seminars where students are working in groups and also through tutorials, practical, and clinical sessions. For students to gain knowledge with up-to-date information, they have to attend all learning sessions. Student's competencies will be assessed through scheduled coursework and final year examinations.

Learning Outcomes

- i) Explain:
 - a) the structures and functions of normal dentition and oral biology in terms of its anatomy, histology, physiology, and embryological development, as well as the eruption of dentition and occlusion.
 - b) the differences in dentition and aging of animals in comparison to humans.
 - c) the abnormality of structure, function, and embryological development, as well as basic pathology pertaining to oral and craniofacial biology.
- ii) Construct labelled diagrams of human tooth based on actual tooth morphology.
- iii) Relate the structures and functions of normal and abnormal oral biology with clinical applications.

List of Text/ Reference Books

- i) Nelson SJ (2019). Wheeler's dental anatomy, physiology and occlusion. 11th edition. St Louis, Mo.: Elsevier, Saunders.
- ii) Nanci A (2018). Ten Cate's oral histology, development, structure and function. 9th edition. St. Louis, Missouri: Elsevier.
- iii) Barrett KE, Barman SM, Brooks HL, Yuan JX (2019): Ganong's review of medical physiology. 26th edition. New York: McGraw-Hill Education.
- iv) Kardong KV (2018). Vertebrates: Comparative anatomy, function, evolution. 8th edition. New York: McGraw-Hill Education.

Additional References

- i) Chiego DJ (2018). Essentials of oral histology and embryology: A clinical approach. 5th edition. St. Louis, Missouri: Elsevier.
- ii) Berkovitz BKB, Holland GR, Moxham BJ (2018). Oral anatomy, histology and embryology. 5th edition. Elsevier.
- iii) Farooq I, Ali S, Anderson P (2021). An Illustrated Guide to Oral Histology. 1st Edition. Wiley.

GNT100 (YEAR 1 PROFESSIONAL EXAMINATION)

Course Synopsis

This course assesses students' capability to horizontally integrate knowledge learnt from courses offered in Year 1. These include subjects in Basic Dental Sciences. The course utilises self-directed learning. The assessment includes final examination. This course does not contribute to credit unit and GPA however it is a must pass course.

Learning Outcomes

- i) Explain:
 - a) the normal structures of human body with their functions in terms of anatomy, histology, embryology, physiology, haematology, immunology and microbiology.
 - b) structures and functions of normal and craniofacial including nervous system in term of anatomy, histology, physiology and abnormalities of nervous system.
 - c) structures and functions of normal dentition and oral biology in terms of its anatomy, histology, physiology, and embryological development, as well as the eruption of dentition and occlusion."
- ii) Demonstrate cellular regulation with changes in physiological states.
- iii) Relate:
 - a) principle of biomolecular techniques with clinical application.
 - b) normal from abnormal structure and function of the human body with regard to clinical application.
 - c) structures and functions of normal craniofacial with clinical applications.
 - d) structures and functions of normal and abnormal oral biology with clinical applications.

COURSE SYNOPSIS FOR YEAR 2

GNT212 (HUMAN BIOLOGY II)

Course Synopsis

This course describes the basic pathology and pathophysiology of respiratory, cardiovascular, musculoskeletal, haematology, central nervous system, endocrine, gastrointestinal, genitourinary, reproductive, psychiatric, microbiology, pathology, immunology and chemical pathology. The history taking, signs and symptoms, physical examination and formulation of diagnosis will be taught. In addition, tests or investigations to aid in diagnosis will be explained.

Teaching sessions involve lectures, seminars, practicals (clinical skill), e-learning and problem-based learning (PBL), case-based learning (CBL). Students are required to attend all sessions in order to be competent and gain optimum knowledge regarding the course. This course also emphasizes the teaching and learning approaches of Heutagogy, self-determined learning and peer group learning (peeragogy). Their knowledge will be assessed through two continuous examinations (tests), seminar presentations, clinical practical tests and Professional Examinations II.

Learning Outcomes

- i) Apply basic pathology with pathophysiology of disease, signs and symptoms, and laboratory investigations, as well as formulate diagnosis

- based on problems involving respiratory system, cardiovascular system, musculoskeletal system, haematology, nervous system, endocrine, gastrointestinal system, genitourinary system, reproductive system, psychiatry, microbiology, pathology, immunology and chemical pathology.
- ii) Demonstrate communication skills during history taking from simulated patients.
 - iii) Perform physical examination on simulated patients.

List of Text/ Reference Books

- i) Parveen Kumar And Michael Clark (2020). Clinical Medicine. 10th Edition. Saunders Elsevier
- ii) Robbins SI, Contran RS, Kumar V (2020). Robin's Pathologic Basis Of Disease 10th Edition. Philadelphia: Saunders
- iii) Samaranayake L (2018) Essential Microbiology For Dentistry, 5th Edition, Elsevier
- iv) A. Victor Hoffbrand, David P. Steensma (2019). Essential Haematology. 8th Edition. Oxford: Wiley Blackwell.
- v) Talley, O'Connor (2018). Clinical Examination: A Systematic Guide To Physical Diagnosis. 8th Edition. Churchill Livingstone
- vi) Marshall W (2020). Clinical Chemistry 9th Edition. Elsevier
- vii) Scully C, Cawson RA (2014). Medical Problems in Dentistry. 7th Edition. Churchill Livingstone

Additional References List

- i) Ryan & Sherris (2021). Medical Microbiology. 8th Edition. McGraw-Hill Education
- ii) Michael Glynn William M Drake (2022). Hutchinson's Clinical Methods. 25th Edition. Saunders Elsevier

GNT213 (DENTAL PUBLIC HEALTH I)

Course Synopsis

This course includes topics that expose students to principles in dental public health. Natural history of diseases, concepts in preventive dentistry, risk factors for oral diseases such as plaque and diet and methods of assessment and control, oral health education principles and key oral health care messages will also be discussed. Critically proposed diet counselling trained the students towards self-determined learning as well as peer learning in solving the oral problems in the community.

Learning Outcomes

- i) Explain the:
 - a) basic principles of dental public health in dental practice.
 - b) concepts of preventive dentistry based on the natural history of disease.

- c) principles of oral health education and key messages in oral health education to patient.
- d) methods of oral disease prevention.
- ii) Produce diet counselling plan for caries prevention based on individual dietary habit and pattern analysis.
- iii) Demonstrate oral hygiene instructions to control dental plaque.

List of Text/ Reference Books

- i) Alison Chapman & Simon H. Felton (2021). Basic Guide to Oral Health Education and Promotion. John Wiley & Sons Ltd.
- ii) Nor Azlida Mohd Nor & Norintan Ab-Murat (eds) (2021). Preventive Dentistry Handbook. UM Press, Kuala Lumpur.
- iii) Gerry McKenna (eds) (2021). Nutrition and Oral Health. Springer Cham
- iv) Ronnie Levine & Catherine Stillman-Lowe (2019). The Scientific Basis of Oral Health Education. Springer Cham

GNT215 (RESTORATIVE DENTISTRY (PRE-CLINICAL))

Course Synopsis

Restorative Pre-Clinical Dentistry in Year 2 consists of a pre-clinical and a basic clinical course which includes conservative dentistry and prosthodontics. Methods of delivery consist of lectures, tutorials, and practicals.

A. Conservatives

This course provides dental knowledge aimed to equip students with the skills to solve oral health problems related to dental caries.

B. Prosthodontics

Prosthodontics is the dental specialty pertaining to the diagnosis, treatment planning, rehabilitation, maintenance of the oral function and comfort, appearance and dental health of patients. The treatments are offered to the patients with clinical conditions associated with missing or deficient teeth and/or oral and maxillofacial tissues using biocompatible substitute.

Learning Outcomes

- i) Identify problems and factors associated with dental caries, tooth loss, various dental restorative materials and procedures for denture fabrication.
- ii) Display the ability to:
 - a) Perform techniques and restoration treatment procedures and dental rehabilitation to achieve functional good and esthetics oral condition on dummy head.
 - b) Perform adequate laboratory steps for denture fabrication.

- iii) Choose appropriate armamentarium and techniques for using dental materials appropriate for restorative field.

List of Text/ Reference Books

- i) Andre Ritter, Lee Boushell, Ricardo Walter (2018). Sturdevant's Art and Science of operative dentistry (7th edition). Mosby.
- ii) Sturdevant's Art and Science of Operative Dentistry. 7th edition. Harald Heymann, Edward Swift, Andre Ritter, Chapel Hill. 2019.
- iii) Alan B. Carr and David T. Brown (2016). McCracken's Removable Partial Prosthodontics (13th edition) St. Louis: Mosby, Inc.
- iv) Ozkan, Springer. Complete denture prosthodontics treatment and problem solving, 2019. 1st edition Springer.
- v) Salvatore Scolavino, Gaetano Paolone (2021). Posterior Direct Restorations (1st Edition). Quintessence Publishing.
- vi) Gopikrishna V. (2019) Preclinical Manual of Conservative Dentistry and Endodontics (3rd edition). Elsevier India.

GNT217 (DENTAL MATERIALS)

Course Synopsis

This course is designed to provide dental students with background knowledge of dental materials science to meet the requirement of modern dentistry. The syllabus covers the most important dental materials such as metals and alloys, polymers, composites, ceramics, cements and other dental based materials. The physical, mechanical, chemical and biological properties of the materials will be discussed in relation to their applications. The course also covers the choices, procedures, designs, performance and manipulation of the dental materials. The practical sessions are mainly on the properties of dental materials (strength, hardness, biocompatibility) and dental technology such as crown sintering and maxillofacial prosthesis. Other than practical class, student will be demonstrated some materials covered in lectures.

Learning Outcomes

- i) Identify various dental materials used in dentistry.
- ii) Differentiate various dental materials used in dentistry.
- iii) Integrate data from experiments with knowledge obtained from theory.
- iv) Demonstrate methods of preparation of dental materials in clinic and laboratory according to usage of the materials.

List of Text/ Reference Books

- i) Van Noort, R. and Michele, B. Introduction to Dental Materials. 5th edition. Elsevier, 2023.
- ii) Shen, C., Rawls, H.R. and Esquivel-Upshaw, J.F. Phillips' Science of Dental Materials. 13th edition. Elsevier, 2022.

- iii) Sakaguchi, R., Ferracane, J., and Powers, J. Craig's Restorative Dental Materials. 14th edition. Elsevier, 2019.
- iv) Gladwin M, and Bagby M. Clinical Aspects of Dental Materials. 5th edition. Wolter Kluwer, 2018.

GNT218 (ORAL & MAXILLOFACIAL RADIOLOGY)

Course Synopsis

This course is introducing the basic knowledge regarding dental radiograph and radiology aimed to equip students with radiographic skills to diagnose and solve oral health problems

Learning Outcomes

- i) Explain procedures, basic techniques, requirements and effects of radiation to patients during x-ray taking, CT scan and ultrasound, in consideration of protective measures towards radiation effects, radiation act, and minimum dose.
- ii) Demonstrate the ability to take dental radiograph to determine diagnosis of oral disease.
- iii) Analyse radiographic findings based on patient clinical cases.

List of Text/ Reference Books

- i) Essentials of Dental Radiography and Radiology, 6th Edition, 2020. Eric Whaites & Nicholas Drage. Elsevier Health Sciences.
- ii) Diagnostic Imaging: Oral and Maxillofacial, 3rd Edition, 2023. Lisa J. Koenig & Dania Tamimi & Susanne E. Perschbacher & Husniye Demirturk. Elsevier Health Sciences.
- iii) Oral and Maxillofacial Radiology: A Diagnostic Approach, 2nd Edition, 2019. David MacDonald (Editor), Wiley-Blackwell.
- iv) Dental Radiography, 6th Edition, 2022. Joen Iannucci & Laura Jansen Jansen Howerton. Elsevier Health Sciences.

GNT219 (BASIC AND CLINICAL PHARMACOLOGY)

Course Synopsis

This course introduces both basic and clinical pharmacology. Teaching activities will emphasize on drugs which are commonly used in medicine and dentistry. These activities will and only involves lectures. Students are required to attend all learning activities in order to be competent and to gain optimum knowledge regarding pharmacology. Their knowledge will be assessed through course work and Professional II Examination.

Learning Outcomes

- i) Explain the usage of terminologies, basic concepts, as well as pharmacodynamic and pharmacokinetic principles in pharmacology.
- ii) Explain the pharmacology and indication of medications used in medical and dental fields.
- iii) Differentiate the various types of drugs according to their therapeutic as well as side effects on biological system.
- iv) Provide the implications for the use of certain drugs in dental field.

List of Text/ Reference Books

- i) Katzung, B. G. and Vanderah T. W. (2024), Basic and clinical pharmacology, McGraw-Hill Education, 16th edition.
- ii) Brown, M. J., Sharma, P., Mir, F. A. & Bennett, P. N. (2018). Clinical Pharmacology, Elsevier, 12th edition.
- iii) Brenner G. M. and Stevens C. W. (2022) Pharmacology. Elsevier Saunders, 6th edition.

GNT222 (GENERAL MEDICINE AND GENERAL SURGERY)

Course Synopsis

This course introduces the diseases in General Medicine and General Surgery. History taking, physical examination and formulation of diagnosis will be taught. The students also will be exposed to the need of performing basic investigation, and management of diseases. The knowledge regarding basic sciences and human biology will be applied as the students understand and deepen the patient's disease. In addition, they also will learn how to recognize cases which should be referred to respective speciality for further evaluation and treatment. Students also will be exposed on clinical procedure which commonly conducted in wad. Students will be posted in medical ward and surgical ward in Hospital Universiti Sains Malaysia.

Teaching session includes case discussion, practical, case presentation and ward round. Students should attend all learning sessions in order to gain optimal knowledge and skill. Their knowledge will be assessed through coursework which includes test, case report and case presentation.

Learning Outcomes

- i) Apply the basic pathology, pathophysiology of disease with signs and symptoms, as well as the diagnosis, investigation, and treatment of the patient.
- ii) Demonstrate the skill on history taking and physical examination on patient.
- iii) Analyse diagnosis based on clinical signs and symptoms with justification of relevant investigations and treatments.

List of Text/ Reference Books

- i) Adam Feather & David Randall & Mona Waterhouse (2020), Kumar and Clark's Clinical Medicine, 10th Edition, Saunders
- ii) Talley & O'Connor. (2018). Clinical Examination: A Systematic Guide to Physical Diagnosis. 8th. Edition. Churchill Livingstone.
- iii) Katherine M. Burnand, James A. Gossage, Matthew F. Bultitude, Steven A. Corbett (2021). Browse's Introduction to the Symptoms and Signs of Surgical Disease 6th Edition, CRC Press.
- iv) Scully C & Cawson R.A. (2016). Medical Problems in Dentistry E-Book. 1st Edition. Churchill Livingstone.

GNT200 (YEAR 2 PROFESSIONAL EXAMINATION)

Course Synopsis

This course assesses students' capability to horizontally and vertically integrate knowledge learnt from courses offered in Year 2. These include Preclinical Dentistry, Basic Medical Sciences and Clinical Medical Sciences. The course utilises self-directed learning. The assessment includes final examination. This course does not contribute to credit unit and GPA however it is a must pass course.

Learning Outcomes

- i) Explain:
 - a) preventive measures of oral diseases (plaque assessment and control, exposure to fluoride, healthy diet, and regular dental visit).
 - b) problems and factors related to dental caries, tooth loss, use of various restorative materials and denture fabrication procedures.
 - c) various dental materials used in dentistry.
 - d) armamentarium and techniques of using dental materials appropriate for the treatment type.
 - e) procedures, basic techniques, requirements, and effects of radiation to patients during x-ray taking, CT scan and ultrasound, in consideration of protective measures towards radiation effects, radiation act, and minimum dose.
- ii) Apply the basic pathology, pathophysiology of disease with signs and symptoms, as well as the diagnosis, investigation, and treatment of the patient.
- iii) Relate:
 - a) pathology and pathophysiology disease with the clinical signs and symptoms.
 - b) therapeutic effects and side effects of drugs on biological system.
 - c) effects of drugs on oral health.

COURSE SYNOPSIS FOR YEAR 3

GNT311 (PAEDIATRIC DENTISTRY I)

Course Synopsis

The Paediatric Dentistry Course I is divided into pre-clinical and clinical components. In the pre-clinical component, students are introduced to the basic theories in behavioural sciences with its applications for behaviour management strategies in paediatric dental setting. Students are also taught the pathophysiology and pathogenesis of oral diseases in paediatric patients with emphasis on the theories and practice for prevention and restorative techniques. Teaching sessions involve lectures, practical operative techniques and 'Problem Based Learning' (PBL). Student competence will be assessed through logbooks and tests. In the clinical components, students are exposed to clinical skills involving screening, diagnosis and treatment planning, control of pain, ethics and communication skills appropriate to the age group of paediatric patients. This course also exposed students to paediatric dental knowledge that can be integrated with clinical skills by using critical thinking to solve oral health problems of paediatric patients.

Learning Outcomes

- i) Explain basic theories in paediatric dentistry:
 - a) Behavioural sciences and behaviour management techniques.
 - b) Extraction.
 - c) dentition space management.
- ii) Apply knowledge about:
 - a) Early childhood caries and preventive measures.
 - b) Odontogenic infection in paediatric patients."
- iii) Differentiate restorative principles, including pulp management in deciduous and immature permanent dentition.
- iv) Perform:
 - a) Preventive technique, restorative and pulp treatment on frasnico and natural teeth.
 - b) Clinical examination, diagnosis and treatment plan.
 - c) Dental treatment procedure while practising appropriate behaviour management technique.
- v) Display effective communication with dental team, patient and parent/guardian.

List of Text/ Reference Books

- i) Cameron AC, Widmer RP (2021). Handbook of Paediatric Dentistry 5th Ed. Elsevier.
- ii) R. Welbury, M. S. Duggal, M. T. Hosey (2018). Paediatric Dentistry. 5th Ed. Oxford Publications.
- iii) Paul S. Casamassimo, H. W. F. (2019). Paediatric Dentistry: Infancy through Adolescence (6th ed.). St. Louis, Missouri, Elsevier.

- iv) Nurjehan Mohamed Ibrahim, Nor Azlina Ismail. Step By Step Guidance And Clinical Problem Solving In Paediatric Dentistry (2021). 1st Ed. Penerbit USIM.

GNT313 (DENTAL PUBLIC HEALTH II)

Course Synopsis

This course will equip students with the skills to perform caries risk assessment on patients and deliver oral health education to patients. Students are also required to perform quit smoking counselling to smoking patients. Students will also be exposed to the principles of dental ethics and jurisprudence in dental practice so that all activities are conducted professionally and ethically.

Learning Outcomes

- i) Explain:
 - a) the principles of dental ethics and jurisprudence in dental practice.
 - b) impacts of tobacco usage to oral health issues related to oral health care of individuals with special needs and geriatrics.
- ii) Apply:
 - a) caries risk assessment.
 - b) smoking cessation counselling principles.
 - c) public health approaches in prevention of oral diseases."
- iii) Propose plan for oral health education activities for prevention of caries and smoking cessation habit in patient.
- iv) Display the ability to communicate with patients in delivering oral health education for prevention of caries and smoking cessation habit in patient.

List of Texts/ Reference Books

- i) Alison Chapman & Simon H. Felton (2021). Basic Guide to Oral Health Education and Promotion. John Wiley & Sons Ltd.
- ii) Nor Azlida Mohd Nor & Norintan Ab-Murat (eds) (2021). Preventive Dentistry Handbook. UM Press, Kuala Lumpur.
- iii) Malaysian Dental Council (2022): Code of professional conduct. MDC. Web;<https://mdc.moh.gov.my/uploads/CodeofProfessionalConduct2022.pdf>.
- iv) Malaysian Dental Council (2023): Dental Act 2018 and Dental Regulations 2021– ACT 804. MDC publishers Sdn Bhd.
- v) Ministry of Health (2022): Clinical Practice Guidelines on Treatment Of Tobacco Use Disorder. Tobacco Control Unit & FCTC Secretariat, Malaysian Ministry of Health.

GNT315 (CONSERVATIVE DENTISTRY I)

Course Synopsis

Clinical Conservative Dentistry course in Year 3 is a clinical course involving operative dentistry and endodontic. This course will also expose the students to methods of obtaining patients' information to be recorded in the dental records to equip them with integrated dental knowledge and clinical skills to solve oral health problems that require restorative and endodontic treatments. Methods of delivery consist of lectures, seminars, workshop and practicals.

This course provides dental knowledge aimed to equip students with the skills to solve oral health problems related to dental caries, tooth wear and pulpal diseases.

Learning Outcomes

- i) Analyze problems and factors of oral diseases related to dental caries, toothwear and pulpal disease.
- ii) Perform:
 - a) Clinical examination, necessary investigations, restorative and endodontic procedures on permanent dentition to ensure restoration of oral function and aesthetics.
 - b) Pre-clinical steps of endodontic treatment on extracted tooth satisfactorily."
- iii) Demonstrate critical thinking in managing oral diseases related to dental hard tissue.

List of Texts/ Reference Books

Conservative:

- i) Graham J. Mount, Wyatt R.Hume, Hien C. Ngo, Mark S. Wolff (2016). Preservation and restoration of tooth structure. 3rd edition, John Wiley & Sons.
- ii) AndreRitter, Lee Boushell, RicardoWalter (2018). Sturdevant's Art and Science of operative dentistry (7th edition). Mosby.
- iii) Manual of Operative Dentistry, PPSG, USM.

Endodontic:

- i) Cohen's pathways of the pulp. 12th edition. K. Hargreaves, Louis H. Berman. 2020.
- ii) Endodontics: Principles and Practice, 6th edition. Mahmoud Torabinejad, Ashraf Fouad, Shahrokh Shabahang. 2020.
- iii) Endodontic Advances and Evidence-Based Clinical Guidelines. Editors: Hany M. A. Ahmed, Paul M. H. Dummer, John Wiley & Sons Ltd, 2022.
- iv) Manual of Endodontic Module, PPSG, USM.

DCP:

- i) Guidelines for infection control in dental healthcare settings. Malaysian Dental Council, 2017. (E.book)
- ii) Guidelines for Oral healthcare practitioners infected with blood borne viruses, Malaysian Dental Council, 2014.
- iii) Manual ICDAS PPSG, USM.

GNT316 (PROSTHODONTICS I)**Course Synopsis**

Prosthodontics is the dental specialty pertaining to the diagnosis, treatment planning, rehabilitation, maintenance of the oral function and comfort, appearance, and health of patients with clinical conditions associated with missing or deficient teeth and/or oral and maxillofacial tissues using biocompatible substitute.

Learning Outcomes

- i) Develop steps in oral rehabilitation treatment so that teeth can function well and satisfy aesthetic standards in clinical dental practice.
- ii) Perform steps in oral rehabilitation treatment with professionalism according to standards in clinical dental practice.
- iii) Analyse tooth loss problem and/or tissue in preparation of oral rehabilitation plan with critical thinking.

List of Texts/ Reference Books

- i) George A. Zarb, Charles L. Bolender, Steven E. Eckert and Aaron H. Fenton (2013). Prosthodontic Treatment for Edentulous Patients: Complete Dentures and Implant-Supported Prosthesis (13th edition) St. Louis: Mosby, Inc.
- ii) Alan B. Carr and David T. Brown. (2016). McCracken's Removable Partial Prosthodontics (13th edition) St. Louis: Mosby, Inc.
- iii) Rosenstiel, Stephen F. (2023). Contemporary fixed prosthodontics (6th ed.). St. Louis: Mosby, Inc. (ebook).
- iv) Shillingberg, Hebert T. (2012). Fundamentals of fixed prosthodontics (4th ed.). Chicago: Quintessence.

GNT317 (PERIODONTICS I)**Course Synopsis**

This course exposes students for the first time to the preclinical and clinical session in periodontics. Through series of lectures and small group discussions, students are exposed to types of periodontal diseases, as well as methods of clinical examination,

preventions and treatments. Students will be going through series of preclinical training on the methods of examination and treatment of periodontal disease. After the completion of preclinical training, students are allowed to carry out examination, diagnosis, as well as making a plan for prevention and treatment of periodontal patients under close supervision of periodontal lecturer.

Learning Outcomes

- i) Explain the methods of examination, prevention and treatment of patients according to the type of periodontal disease.
- ii) Display the ability to perform pre-clinical scaling and examination, diagnosis, and treatment of periodontal patients.
- iii) Analyse periodontal disease clinical cases.

List of Texts/ Reference Books

- i) Newman MG, Klokkevold PR, Elangovan S, Kapila Y, Carranza FA, Takei H (2023). Newman and Carranza's Clinical Periodontology and Implantology, 14th Edition, Saunders Elsevier.
- ii) Nield-Gehrig, JS, Sroda R, and Saccuzzo D (2019). Fundamentals of Periodontal Instrumentation & Advanced Root Instrumentation. Enhanced 8th ed, Wolters Kluwer.
- iii) Lindhe J, Lang NP, Karring T (2021). Clinical periodontology and implant dentistry. 7th ed. Oxford: Blackwell Munksgaard.

Additional References

- i) Trombelli L (2020). Simplified Regenerative Procedures for Intraosseous Defects. Quintessence Publishing Co, Inc.
- ii) Manual Periodontics, School of Dental Sciences, USM (2023).

GNT318 (ANALYSE PERIODONTAL DISEASE CLINICAL CASES)

Course Synopsis

Oral maxillofacial surgery and radiology I course deals mainly with the basic diagnostic and treatment approaches of pathological lesions within and around the mouth, maxillofacial trauma and corrections of abnormalities. The aim is to ensure that the student has a thorough knowledge of the materials and techniques of local analgesia and is competent in exodontia and its complications. It is also expected that the student be able to diagnose various disorders with the aids of appropriate radiographic imaging (if required) and initiate proper referrals. Students will be assessed through course work that will be recorded through a logbook. In addition, evaluation will be made during case presentation and case report.

Learning Outcomes

- i) Relate information obtained from history taking, clinical and radiological examination in determining diagnosis and treatment plan of patient.
- ii) Perform:
 - a) Local anaesthesia injection in the mouth.
 - b) Extraction of erupted teeth and simple root removal.
- iii) Apply skills and clinical information in line with evidence-based approach in handling and discussing treatment plan of patient.

List of Texts/ Reference Books

- i) Contemporary Oral and Maxillofacial Surgery, 7th Edition, 2019. James R Hupp, Myron R. Tucker, Edward Ellis (III.). Elsevier Health Sciences.
- ii) Fundamentals of Oral and Maxillofacial Surgery, 2020. Divya Mehrotra. Elsevier.
- iii) Oral and Maxillofacial Surgery for the Clinician, 2021. Krishnamurthy Bonanthaya, Elavenil Panneerselvam, Suvy Manuel, Vinay V. Kumar, Anshul Rai. Springer.
- iv) Management of Complications in Oral and Maxillofacial Surgery, 2nd Edition, 2022. Antonia Kolokythas, Michael Miloro. Wiley.

GNT319 (ORAL & MAXILLOFACIAL PATHOLOGY AND ORAL MEDICINE I)

Course Synopsis

The oral pathology lecture and seminar series introduces students to the classification, aetiology, pathogenesis, clinical presentation and histopathological features of various disorders affecting the orofacial region including the manifestation of systemic diseases. Students are expected to discuss the differential diagnosis based on the clinical features, its correlation with the histopathology and management of such cases. The tutorial session includes discussion of case-based scenarios and viewing of virtual histopathology slides. Summative assessment will be in the form of case presentation in groups and written test, while formative assessment will be based on seminar presentation and quiz.

Learning Outcomes

- i) Describe the classification, aetiology, pathogenesis, clinical and histopathological features of orofacial lesion and manifestation of systemic diseases.
- ii) Report the clinical and histopathological features of orofacial lesions.
- iii) Apply critical reasoning skill in justification of provisional / differential diagnoses made during case-based scenarios.

List of Texts/ Reference Books

- i) Regezi, Joseph. A (2016) Oral Pathology: Clinical Pathology Correlations, 7th edition Elsevier Saunders, Missouri.
- ii) Odell, EW (2024). Cawson's Essentials of Oral Pathology and Oral Medicine (10th ed.). Elsevier.
- iii) Challacombe SJ, Carey B, Setterfield J (2023). Scully's Oral and Maxillofacial Medicine: The Basis of Diagnosis and Treatment: The Basis of Diagnosis and Treatment (4th ed.).

Additional References

- i) Okeson JP (2019) Management of Temporomandibular Disorders and Occlusion 8th Ed.: Mosby.
- ii) Wright EF, Klasser GD (2019) Manual of Temporomandibular Disorders 4th ed. Wiley-Blackwell.
- iii) Burket's Oral Medicine (2021) 13th Ed. Wiley-Blackwell.
- iv) SRPrabhu (2020) MCQs, SAQs, EMQs and OSCEs for Oral Pathology and Oral Medicine: An Exam-Focused Approach Series: Dentistry and Oral Sciences Nova Science Publishers, Inc.

GNT300 (YEAR 3 PROFESSIONAL EXAMINATION)

Course Synopsis

This course assesses students' capability to horizontally and vertically integrate knowledge learnt from Preclinical Dentistry courses offered in Year 2 and Clinical Dentistry courses offered in Year 3. The learning process uses heutagogy and peeragogy methods. The assessment includes final examination. This course does not contribute to credit unit and GPA however it is a must pass course.

Learning Outcomes

- i) Explain the classification, aetiology, pathogenesis, clinical characteristics, histopathology and clinical manifestations of oral diseases.
- ii) Apply critical thinking in managing oral diseases.
- iii) Analyse information obtained from patient history, clinical examination and radiological findings in determining the diagnosis, treatment plan and preventive measures.

COURSE SYNOPSIS FOR YEAR 4

GNT411 (PAEDIATRIC DENTISTRY II)

Course Synopsis

On top of continuing the clinical skills obtained during the 3rd year, the students will learn about new topics in paediatric dentistry, general anaesthesia and conscious sedation, dental traumatology, children with special healthcare needs and dental anomalies.

The student should be able to display good clinical skills and apply appropriate behaviour management techniques while treating paediatric patients. Other than that, students should display ethical values and professionalism in practicing dentistry within the confines of the laws by Malaysian Dental Council and other regulatory bodies.

Learning Outcomes

- i) Explain causes, factors, classification, importance, usage and oral management for:
 - a) Sedation and general anaesthesia in paediatric dentistry.
 - b) Children with special needs.
 - c) Dental anomalies in paediatric dentistry.
 - d) Dental traumatology.
- ii) Manage dental treatment for paediatric patients with appropriate behaviour management technique.
- iii) Analyse dental problems in paediatric patients for use in planning relevant treatment.

List of Text/ Reference Books

- i) Paediatric Dentistry, 5th Edition, 2018. Richard Welbury, Monty S. Duggal, Marie Thérèse Hosey. Oxford University Press.
- ii) Handbook of Pediatric Dentistry: Handbook of Pediatric Dentistry E-Book, 2021. Angus C. Cameron, Richard P. Widmer Netherlands: Elsevier Health Sciences.
- iii) Handbook of Clinical Techniques in Pediatric Dentistry, 2021. Jane A. Soxman United Kingdom: Wiley.
- iv) Miller, C., Rhodus, N. L., Treister, N. S., Stoopler, E. T., Kerr, A. R. 2023. Little and Falace's Dental Management of the Medically Compromised Patient - E-Book. United States: Elsevier Health Sciences.

GNT412 (ORTHODONTICS)

Course Synopsis

This course exposes students to the basic knowledge and theory in orthodontics to equip them with the skills to perform oral examination to come up with malocclusion diagnosis and identify the orthodontics treatment needs. Students will also be trained in technical skills of dental wire bending and be exposed to management of removable appliance to equip students with the skills in managing tooth eruption disorder and disharmonious jaws effectively and critical thinking besides the ability to refer appropriate cases to orthodontists.

Learning Outcomes

- i) Explain theories related to:
 - a) basic principles of facial jaw growth, occlusion and tooth movement and tissues during orthodontic treatment.
 - b) Basic principles and biomechanical of removable appliance, fixed appliance, functional appliance and accessory appliance.
 - c) all malocclusion classification, aetiology, diagnosis and treatment plan.
 - d) Multi-disciplinary orthodontic treatment including involvement of intervention treatment, dental surgery, facial surgery, restoration, prosthesis dan cleft lip and palate.
 - e) risks, benefits, requirements and stability of orthodontic treatment.
- ii) Perform examination and treatment to orthodontic patients needing treatment using removable appliance and functional appliance, and wire bending, producing, and fitting the required appliance during treatment.
- iii) Analyse malocclusion problems and treatment needs for each malocclusion case by producing appropriate treatment plan while taking into consideration concept of holistic treatment and scientific approach.

List of Text/ Reference Books

- i) An Introduction to Orthodontics Simon J. Littlewood, Laura Mitchell, 2019 5th Edition. Oxford Univ Press.
- ii) Handbook of Orthodontics, Martyn Cobourne, Andrew DiBiase, 2024 3rd Edition, Elsevier.
- iii) Retention and Relapse in Orthodontics. Abhishek Sinha, Sanjay Kumar Singh and Alok Kumar, 2021 AkiNik Publications.

Additional References

- i) Wire bending: Imperative for Orthodontic Practice. 2014 Alam MK and Norma AR. USM Press (ISBN 978-967-12682-3-0).
- ii) Removable orthodontics Appliances. ISAACSON MUIR and REED, 2008. 3rd Edition. Wright.

GNT415 (CONSERVATIVE DENTISTRY II)

Course Synopsis

Conservative dentistry II is a clinical block covering the field of operative dentistry, aesthetics, endodontics and multidisciplinary cases. It aims to equip dental students with a sense of knowledge, skill and integrity in providing treatment related to the dental hard tissues and the pulp.

Learning Outcomes

- i) Analyse diagnosis and treatment plan based on aetiology and pathogenesis of oral diseases related to dental hard tissues and pulp.
- ii) Perform clinical examination, investigation and relevant treatment to dental hard tissues condition and pulp diseases to restore function and aesthetics.
- iii) Perform caries management independently to restore function and aesthetics according to dental clinical standards.

List of Text/ Reference Books

Conservative Dentistry

- i) Concise Conservative Dentistry and Endodontics-E Book.Gupta R, Hegde J, Prakash V, Srirekha A. Elsevier Health Sciences; 2019 May 30.
- ii) Principles and practice of esthetic dentistry: Essentials of esthetic dentistry. Millar BJ. Health Sciences; 2015 Jan 6.
- iii) Sturdevant's art & science of operative dentistry.Ritter AV. Elsevier Health Sciences; 2018.
- iv) Textbook of operative dentistry.Garg N, Garg A. Boydell & Brewer Ltd; 2019.
- v) Modern operative dentistry: Principles for clinical practice. Torres CR, Nature; 2019 Dec 14.
- vi) Textbook of conservative and restorative dentistry.Sikri A, Sikri J. Journal of Conservative Dentistry: JCD. 2020 Jan;23(1):111.

Endodontic

- i) Cohen's Pathways of the Pulp: South Asia Edition E-Book. Hargreaves KM. Elsevier Health Sciences; 2020 Dec 24.
- ii) Ingle's endodontics.Rotstein I, Ingle JI. PMPH USA; 2019 Jun 1.
- iii) Endodontics e-book: Principles and practice. Torabinejad M, Fouad AF, Shabahang S. Health Sciences; 2020 Jun 25.

GNT416 (PROSTHODONTICS II)

Course Synopsis

Prosthodontics is the dental specialty pertaining to the diagnosis, treatment planning, rehabilitation, maintenance of the oral function and comfort, appearance and health of patients with clinical conditions associated with missing or deficient teeth and/or oral and maxillofacial tissues using biocompatible substitute. It will cover removable and fixed prosthodontics and achieved through clinical, seminar, debate and lecture.

Learning Outcomes

- i) Develop steps in oral rehabilitation treatment so that teeth can function well and satisfy aesthetic standards in clinical dental practice.
- ii) Perform steps in oral rehabilitation treatment with professionalism according to standards in clinical dental practice.
- iii) Analyse tooth loss problem and/or tissue in preparation of oral rehabilitation plan with critical thinking.

List of Text/ Reference Books

- i) George A. Zarb, Charles L. Bolender, Steven E. Eckert and Aaron H. Fenton (2013). Prosthodontic Treatment for Edentulous Patients: Complete Dentures and Implant-Supported Prosthesis (13th ed.). St. Louis: Mosby, Inc.
- ii) Alan B. Carr and David T. Brown (2016). McCracken's Removable Partial Prosthodontics (13th ed.). St. Louis: Mosby, Inc.
- iii) Rosenstiel, Stephen F. (2023). Contemporary fixed prosthodontics (6th ed.). St. Louis: Mosby, Inc. (ebook).
- iv) Shillingberg, Hebert T. (2012). Fundamentals of fixed prosthodontics (4th ed.). Chicago: Quintessence.

GNT417 (PERIODONTICS II)

Course Synopsis

This course introduces basic concept and skills in the treatment of periodontal diseases. Learning sessions include lectures, seminars, assignment, case presentation and clinical practices. This course will emphasize on treatment of moderate chronic periodontitis as well as other periodontal diseases. The knowledge and skills gathered from the previous phase (I and II) will be applied in this course. Student's competencies will be assessed through clinical logbook, case presentation and test.

Learning Outcomes

- i) Analyse the types of periodontal disease, as well as methods of examination, prevention and treatment of patients with ability to solve problems.

- ii) Perform examination and determine diagnosis, prognosis, treatment on the periodontal patients.
- iii) Analyse literature related to periodontics cases and factors influencing severity of periodontal disease with critical thinking.

List of Text/ Reference Books

- i) Newman, M. G., Faced, D., Klokkevold, P. R., Dds, M. S., Elangovan, S., Dmsc, B. D., & Kapila, Y. (2023). Newman and Carranza's Clinical Periodontology and Implantology E-Book. Elsevier Health Sciences.
- ii) Lang, N. P., Berglundh, T., Giannobile, W. V., & Sanz, M. (Eds.). (2021). Lindhe's clinical periodontology and implant dentistry. John Wiley & Sons.
- iii) Eaton, K. A., & Ower, P. (Eds.). (2022). Practical Periodontics-E-Book. Elsevier Health Sciences.
- iv) Caton, J. G., Armitage, G., Berglundh, T., Chapple, I. L., Jepsen, S., Kornman, K. S., ... & Tonetti, M. S. (2018). A new classification scheme for periodontal and peri-implant diseases and conditions—Introduction and key changes from the 1999 classification. *Journal of Periodontology*, 89, S1-S8.

GNT418 (ORAL & MAXILLOFACIAL SURGERY AND RADIOLOGY II)

Course Synopsis

Oral maxillofacial surgery and radiology III course deals mainly with the surgical approach to the treatment of pathological lesions within and around the mouth, maxillofacial trauma and corrections of abnormalities. The aim is to ensure that the student has a thorough knowledge of the materials and techniques of local analgesia and is competent in exodontia and minor oral surgery. It is also expected that the student be able to diagnose various disorders with the aids of further investigations including an appropriate radiographic imaging (if required) and initiate proper referrals. Students will be assessed through course work that will be recorded through a logbook. In addition, evaluation will be made during the test.

Learning Outcomes

- i) Perform:
 - a) Extraction of erupted teeth and simple root removal.
 - b) oral pathology diagnosis, oral anomalies and premalignant lesion and advise patients about prevention using scientific knowledge for patient benefit.
 - c) aseptic treatment and pain control.
- ii) Analyse treatment need, diagnosis and patient treatment plan in trauma condition, minor surgery, acute pain condition or acute infection resulting from dental tissues using clinical examination and relevant radiological image.
- iii) Manage patient treatment ethically and professionally.

List of Text/ Reference Books

- i) Essentials of Dental Radiography and Radiology, 6th Edition, 2020. Eric Whaites & Nicholas Drage. Elsevier Health Sciences.
- ii) Diagnostic Imaging: Oral and Maxillofacial, 3rd Edition, 2023. Lisa J. Koenig & Dania Tamimi & Susanne E. Perschbacher & Husniye Demirturk. Elsevier Health Sciences.
- iii) Oral and Maxillofacial Surgery for the Clinician, 2021, Krishnamurthy Bonanthaya, Elavenil Panneerselvam, Suvy Manuel, Vinay V. Kumar, Anshul Rai. Springer.
- iv) Textbook of Oral & Maxillofacial Surgery. 2018. 3rd Edition. S.M Balaji. Elsevier India.
- v) Oral Pathology Clinical Pathologic Correlations, 7th Edition 2016; Joseph Regezi Hames Sciubba Richard Jordan.
- vi) Scully's Medical Problems in Dentistry 7th Edition 2014; Crispian Scully Churchill Livingstone.

Additional References

- i) Atlas of Operative Oral and Maxillofacial Surgery. 2023. 2nd Edition. Christopher J. Haggerty, Wiley.
- ii) The Dentist Guide to Atraumatic Extractions, 2023, 1st Edition, William E. Mason, Quintessence Publishing.

GNT419 (ORAL MAXILLOFACIAL PATHOLOGY AND ORAL MEDICINE II)

Course Synopsis

This course involves clinical application in diagnosis and management of oral mucosal lesions, related systemic conditions and orofacial pain. Learning sessions involving work-based assessment which include seminars, case-based discussion, clinical observation and case presentation by the student. Summative assessment via written test will be conducted at the end of the course while formative assessment will be based on the quiz at mid semester to pre-evaluate performance.

Learning Outcomes

- i) Distinguish the clinico-pathological features of oral mucosal lesions, oral manifestation of systemic conditions and orofacial pain.
- ii) Appraise critical reasoning skill in the formulation of appropriate diagnosis and treatment planning.
- iii) Identify the limitations of clinical skills and refer accordingly to relevant specialities.

List of Text/ Reference Books

- i) Regezi, Joseph. A (2016) Oral Pathology: Clinical Pathology Correlations, 7th edition Elsevier Saunders, Missouri.
- ii) Odell, EW (2024). Cawson's Essentials of Oral Pathology and Oral Medicine (10th ed.). Elsevier.
- iii) Challacombe SJ, Carey B, Setterfield J (2023). Scully's Oral and Maxillofacial Medicine: The Basis of Diagnosis and Treatment: The Basis of Diagnosis and Treatment (4th ed.).

Additional references

- i) Okeson JP (2019) Management of Temporomandibular Disorders and Occlusion 8th Ed.: Mosby.
- ii) Wright EF, Klasser GD (2019) Manual of Temporomandibular Disorders 4th ed. Wiley-Blackwell.
- iii) Burket's Oral Medicine (2021) 13th Ed. Wiley-Blackwell.
- iv) SRPrabhu (2020) MCQs, SAQs, EMQs and OSCEs for Oral Pathology and Oral Medicine: An Exam-Focused Approach Series: Dentistry and Oral Sciences Nova Science Publishers, Inc.

GNT400 (PROFESSIONAL QUALIFYING EXAMINATION PART I)

Course Synopsis

This course assesses students' capability to horizontally and vertically integrate knowledge learnt from Basic Dental Sciences courses offered in Year 1, Preclinical Dentistry and Basic and Clinical Medical Sciences courses offered in Year 2 and Clinical Dentistry courses offered in Year 3 and Year 4. The learning process utilises heutagogy and peeragogy and problem solving. The assessment includes final examination. The final examination is the Professional Qualifying Examination Part I as mandated by the Malaysian Dental Council. This course does not contribute to credit unit and GPA however it is a must pass course.

Learning Outcomes

- i) Analyse scientific knowledge to support safe, effective and efficient dental care.
- ii) Explain the ethical values and professionalism in dental practice.
- iii) Relate the scientific information and current techniques in dental practice.
- iv) Explain the entrepreneurial concepts and principles in managing dental practice.

COURSE SYNOPSIS FOR YEAR 5

GNT510 (RESEARCH PROJECT)

Course Synopsis

This course is a research project that needs to be completed within a stipulated time. Throughout the course, students will understand and carry out research activities from reviewing literature, developing methodology, data collection, data analysis leading to discussing and concluding research findings. The research topic for each student depends on the discussion with their appointed supervisor which covers areas from basic sciences, clinical sciences and public health. Students need to prepare a written research proposal and present the proposal before they can commence their research works. At the end of the course, students are assessed from report of their research findings in a manuscript form, and in either an oral or a poster presentation conducted in a mini conference. In addition, students are encouraged to submit manuscript for publication, and present their research findings in other conferences.

Learning Outcomes

- i) Prepare a research proposal supported by scientific arguments and evidence.
- ii) Display the ability to solve ethics-related issues during research activities.
- iii) Display critical thinking in research-related problem solving and decision making to write a final report of good quality.
- iv) Use appropriate statistical software to analyse and report research finding.
- v) Display the ability to present research output at scientific conference.

List of Text/ Reference Books

- i) C George Thomas (2022). Research Methodology and Scientific Writing. Springer (2nd edition).
- ii) Bora Pajo (2022). Introduction to research methods: A hands-on approach. Sage Publishing. Second Edition.
- iii) Adrian Wallwork (2022). Writing an Academic Paper in English: Intermediate Level (English for Academic Research) Springer 1st ed.

GNT513 (GENERAL DENTAL PRACTICE)

Course Synopsis

This course includes clinical practice in the clinic by providing management and treatment to patients following the holistic patient care approaches (self-directed learning). It also includes seminars which concentrate to multidisciplinary issues, lecture and case presentation (peer-based learning). Assessment is through continuous assessment and final examination.

Learning Outcomes

- i) Analyse scientific knowledge to support oral health care of patients that is safe, effective and efficient.
- ii) Perform clinical examination and relevant investigations to come up with diagnosis.
- iii) Manage patient ethically and professionally.
- iv) Prepare a competitive business proposal taking into consideration the required human and financial resources.

List of Text/ Reference Books

- i) Marcus Ward (2019). Dental Caries Assessment and Clinical Management (1st edition), Hayle Medical.
- ii) Herald Eufinger, Alexander Kubler, Henning Schliephake (2023). Oral and maxillofacial surgery (1st Edition). Springer Berlin, Heidelberg.
- iii) Saj Jivraj (2018). Graftless Solutions for the edentulous patients (1st edition). Springer.
- iv) Serpil Djemal (2021). Dental Trauma. A practical guide to diagnosis and management (1st Edition). Jaypee.
- v) Andre Ritter, Lee Boushell, Ricardo Walter (2019). Sturdevant's Art and Science of operative dentistry (7th edition). Mosby.
- vi) Martin R. Fulford, Nikolai R. Stankiewicz (2020). Infection control in primary dental care (1st edition). Springer Cham.

GNT514 (COMMUNITY ENGAGEMENT)

Course Synopsis

This course exposes students to epidemiology, health promotion, health determinants, changing trends of diseases and health services available in Malaysia. This course also trains the students to run oral health promotion activities in the community. Specifically, the students will carry out oral health education activities through talks, exhibitions, and oral hygiene care demonstrations to the identified target groups. Besides, several seminars session will discuss current topics related to oral health care and services such as fluoride issues, privatization, and inequalities in oral health status. During the community engagement activities, this course emphasizes the students to practice teamwork, ethics and professionalism, also, having a sense of responsibilities towards their colleagues (leadership).

Learning Outcomes

- i) Analyse:
 - a) epidemiology of common public health and oral diseases.
 - b) factors determining health.
 - c) issues related with oral health care and services.

- d) concepts of prevention and control of oral diseases at individual and community level.
- e) principles in health promotion and health education.
- ii) Develop oral health education materials appropriate for target group.
- iii) Study:
 - a) disease distribution and factors determining health of family and community.
 - b) intervention program appropriate to the needs of the community taking into account available financial resources.
 - c) outcome of intervention program conducted in community.
- iv) Display the ability to communicate effectively during delivery of oral health education.
- v) Display teamwork attitudes during the conduct of community project.
- vi) Display leadership skills in conducting community project.

List of Text/ Reference Books

- i) Randall, R. C., Girvan, J. T. & McKenzie, J. F. (2018). Principles and foundations of health promotion and education. 7th ed. San Francisco: Pearson.
- ii) Chapman, A. & Felton, S.H. (2021). Basic Guide to Oral Health Education and Promotion. John Wiley & Sons Ltd.
- iii) Mohd Nor, N. A & Ab-Murat, N. (2021). Preventive Dentistry Handbook. UM Press, Kuala Lumpur.

GNT515 (PROFESSIONAL DEVELOPMENT)

Course Synopsis

This course equips students with the skills to establish personal brand to increase employability upon graduation. Course content include curriculum vitae writing, video production and editing, digital photography, website development and public speaking.

Learning outcomes

- i) Prepare a brief and concise professional curriculum vitae.
- ii) Display teamwork attitudes in producing professional video that is short, concise and creative.
- iii) Display leadership skills in producing professional video that is short, concise and creative.
- iv) Prepare a personal webpage appropriate with self-branding.
- v) Display the ability to perform public speaking confidently.

GNT524 (RESEARCH METHODOLOGY AND BIostatISTICS)

Course Synopsis

This course includes concepts in Biostatistics such as research designs, sample size determination, sampling methods, research tools, techniques in data collection, introduction to statistical and descriptive statistics, inference statistics, numerical data analysis and categorical data analysis. Students are trained on biostatistics (basic concepts on methodology) to gauge and to compare causative and contributing factors in the community. Students are also exposed to knowledge and skills in research methodologies, including research types, data analysis, statistical software usage and presentation of comprehensive study results

Learning Outcomes

- i) Explain:
 - a) basic concepts in biostatistics.
 - b) Understanding towards biostatistical problems."
- ii) Display the ability to use numeracy skills in analysing:
 - a) biostatistics problems using computer software (SPSS).
 - b) Epidemiological data using statistical methods."
- iii) Display the ability to analyse data using appropriate research methods using software.

List of Text/ Reference Books

- i) Wan Muhamad Amir W Ahmad, Mohamad Shafiq Mohd Ibrahim, Nurfadhlina Abdul Halim, Nor Azlida Aleng@Mohamad. (2019). Statistical Analysis Using SPSS Version 24. Pulau Pinang, Malaysia : Penerbit USM.
- ii) Wan Muhamad Amir W Ahmad, Mohamad Shafiq Mohd Ibrahim, Nasar Um Min Allah, Muhammad Azeem Yaqoob. (2019). Categorical Data Analysis Using SPSS for Periodontology. Pulau Pinang, Malaysia : Penerbit USM.
- iii) Wan Muhamad Amir W Ahmad, Norsamsu Arni Samsudin, Munirah Mohd Adnan & Adam Husein.(2019). Sample size Calculations (Study design Based) using PS software and Sampling Selection. Pulau Pinang, Malaysia : Penerbit USM.
- iv) Wan Muhamad Amir W Ahmad, Mohamad Shafiq Mohd Ibrahim, Adam Husein, Mohd Fadli Khamis.(2018). Sample Size Calculation Made Easy Using G*Power. Pulau Pinang, Malaysia : Penerbit USM.
- v) Wan Muhamad Amir W Ahmad, Mohamad Shafiq Mohd Ibrahim, Mohamad Arif Awang Nawi, Rabi'atul 'Adawiyah Abdul Rohim.(2020). Pemodelan Regresi inear dan Tak Linear, Aplikasi Secara Perisian SPSS. Pulau Pinang, Malaysia: Penerbit USM.
- vi) Wan Muhamad Amir W Ahmad, Nor Azlida Aleng@ Mohamad, Nik Rozainah Nik Abdul Ghani. (2019). Advanced Data Analysis in Applied Sciences. Pulau Pinang, Malaysia: Penerbit USM.

- vii) Indranil Saha, Bobby Paul. (2023). Essentials of Biostatistics and Research Methodology. 4th Edition. Academic Publishers.

Additional References

- i) Bhattacharya, P. K. (2021). Research Methodology in the Health Sciences: A Quick Reference Guide. United Kingdom: McGraw-Hill Education.
- ii) Shields, M. (2019). Research Methodology and Statistical Methods. United Kingdom: EDTECH.
- iii) Polgar, S., Thomas, S. A. (2019). Introduction to Research in the Health Sciences - E-Book. United Kingdom: Elsevier Health Sciences.

GNT500 (PROFESSIONAL QUALIFYING EXAMINATION PART II & III)

Course synopsis

This course assesses students' capability to horizontally and vertically integrate knowledge learnt from courses in Basic Dental Sciences, Preclinical Dentistry, Basic Medical Sciences and Clinical Medical Sciences and Clinical Dentistry offered in Year 1, 2, 3, 4 and 5. The learning process uses heutagogy and peeragogy methods.

Learning Outcomes

- i) Perform dental clinical treatment independently.
- ii) Demonstrate clinical skills to practice dentistry independently.
- iii) Demonstrate teamwork skills in managing oral health care for individuals and community.
- iv) Demonstrate ethical values and professionalism in practicing dentistry.
- v) Demonstrate effective communication with other dental and health professionals, patients and community.

1.8 Examination Prerequisites, Grading System, Discipline and Academic Advisory System

Examination Prerequisites

- i) Achieved an overall attendance percentage (each course) of at least 70%.
- ii) Have not been found guilty of committing any disciplinary offence.

Grading System

The School of Dental Sciences uses the Cumulative Grade Point Average (CGPA) grading system, USM. The passing grade is Grade B- and it is applicable for DDS core courses only.

GRADE	GRADE POINT	GRADE STATUS
A	4.00	PASS
A-	3.67	
B+	3.33	
B	3.00	
B-	2.67	
C+	2.33	FAIL
C	2.00	
C-	1.67	
D+	1.33	
D	1.00	
D-	0.67	
F	0.00	

(252th Senate Meeting - July 2018)

Discipline

Students are subjected to the Universities and College Universities Act (1971) or also known as *Akta Universiti dan Kolej Universiti* (AUKU).

Academic Advisory System

The main objective of the Academic Advisory System is to maintain student's well-being, promote their self-esteem as well as inculcate maturity. Each student will be assigned to an academic mentor/advisor who acts as a facilitator and mediator to guide the students through their undergraduate years. This system will enable lecturers to help and guide students effectively.

Objectives:

- i) To assist students in adapting to university life.
- ii) To assist students in their personal matters, as well as in academic and professional development.
- iii) To promote student/staff interaction.

Terms of Reference for the mentor/advisor:

- i) Make themselves available to students.
- ii) Meet with students after each term/exam to discuss academic performance.
- iii) Promote a good rapport with their students.
- iv) Act as a facilitator and/or resource person.
- v) Maintain records of meetings with students. These records will be placed in students own personal file in the academic office.
- vi) Ethically bound to confidentiality.

To ensure smooth implementation of Academic Advisory System, the Deputy Dean (Academic, Career and International) will regularly monitor the reports.

1.9 Graduation Requirements

- i) Register and complete (pass) the minimum requirement of 15 credits for MPU courses and 254 credits for all DDS Core courses.
- ii) Pass competency preclinical and clinical tests; and meet the minimal and expected clinical experiences stipulated by the professional body.

(264th Senate Meeting -23 July 2020)

2.0 ACADEMIC SYSTEM AND GENERAL INFORMATION

2.1 Course Registration Activity

Registration of courses is an important activity during the period of study at the university. It is the first step for the students to sit for the examination at the end of each semester. Signing up for the right courses each semester will help to facilitate the graduation process based on the stipulated duration of study.

2.1.1 Course Registration Secretariat for the Bachelor's Degree and Diploma Programmes

Student Data and Records Unit
Academic Management Division
Registry
Level 1, Chancellory Building

Tel. No. : 04-653 2925/2924
E-Mail : sdrp@usm.my
Website : <http://bpa.usm.my/index.php>

2.1.2 Course Registration Platform

1. E-Registration

E-Registration is a platform for online course registration. The registration is done directly through <https://campusonline.usm.my>. Course registration for both semesters begins after the release of the official examination results of each semester.

The online registration for Long Vacation Semester (KSCP) begins officially after the release of the 2nd semester examination result.

The date of the E-Registration will be announced to the students via CampusOnline during the revision week of every semester and details of the activity will be displayed in the USM's official website.

All courses are allowed to be registered through E-Registration, except for co-curriculum courses. The registration of co-curriculum courses is managed by the Director of the Centre for Co-Curriculum Programme at the Main Campus or the Coordinator of the Co-Curriculum Programme at the Engineering Campus and the Coordinator of the Co-Curriculum Programme at the Health Campus.

Students are required to preregister their co-curriculum courses before the actual E-Registration activity. They are allowed to follow the respective course once the preregistration is approved. The list of the co-curriculum courses taken will be included in their course registration data.

Access to *E-Daftar* System

- a. *E-Daftar* System can be accessed through the Campus Online portal (<https://campusonline.usm.my>).
- b. Students need to use their USM Identity to access the profile website that contains the *E-Daftar* menu.
- c. Students can print the course registration confirmation slip upon completion of the registration process or after updating the course registration list (add/ drop) within the *E-Daftar* period.

2. Course Registration Activity at the School

Registration activities conducted at the Schools/Centres are applicable to students who are academically active and under Probation (P1/P2) status. Students who encounter difficulties in registering their courses during the E-Registration period are allowed to register the courses at their respective school/centre during the official period of course registration.

The official period for registration is as follows:

Period	Description	Notes
1 st week to 3 rd week	Course registration at the School/Centre level	No penalty is imposed.
4 th to 6 th week	Course registration at the Student Records Unit	For each late registration, students will be assessed a fine of RM50 unless a fine exemption is granted.
Week 7 onward	Course registration at the Examination and Graduation Unit level	

2.1.3 Course Registration General Information

1. Information that students can access related to the registration activity:
 - a. The website of the respective School, for the updated information of the courses offered or course registration procedure.
 - b. List of the courses to be registered and number of units (unit value) for each course (refer to Students Handbook for Study Programme).

Academic Status	PNG	Minimum Units	Maximum Units
Active	2.00 & Above	9	20
P1	1.99 & Below	9	12
P2		9	10

- c. Students with arrears are not allowed to register any courses. You may only register courses after paying off your arrears.
2. Type of course codes during registration:

T = Core courses E = Elective/ Open Elective courses U = University courses	}	Grade and number of units obtained from these courses are considered for graduation
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Two (2) other course codes are:

Y = audit courses Z = prerequisite courses	}	Grade and number of units obtained are not considered for graduation
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3. Academic Advisor's advice and approval are necessary.
4. Students are not allowed to register or repeat any course with grade 'C' and above.
5. Medical, Dentistry and Pharmacy students are not allowed to register or resit any course with grade 'B-' and above.

2.1.4 Information/Document Given to All Students through Campus Online Portal (<https://campusonline.usm.my>)

1. The information of the Academic Advisor.
2. Academic information such as academic status, GPA value, CGPA value and year of study.
3. Cangred and Course Registration Form.
4. List of courses offered by all Schools/Centres.
5. Teaching and Learning Timetable for all Schools/Centres/Units from the three campuses.
6. List of pre-registered courses which have been added into the students' course registration record (if any).
7. Reminders about the University course registration policies/general requisites.

2.1.5 Registration of Language and Co-Curricular Courses

1. Registration of Language courses through *E-Daftar* is allowed.
 - a. However, if any problem arises, registration for language courses can still be carried out/updated during the official period of OCR at the office of the School of Languages, Literacies and Translation.
 - b. All approval/registration/dropping/adding of language courses is under the responsibility and administration of the School of Languages, Literacies and Translation.
 - c. Any problems related to the registration of language courses can be referred to the School of Languages, Literacies and Translation. The contact details are as follows:

General Office	: 04-653 4542	} For Main Campus students
Malay Language Programme Chairperson	: 04-653 4214	
English Language Programme Chairperson	: 04-653 3153	
Foreign Language Programme Chairperson	: 04-653 3150	
Engineering Campus Programme Chairperson	: 04-599 5400/5430	
	: 04-599 5402/5407	
Health Campus Programme Chairperson	: 09-767 1262	

2. Registration of **co-curricular courses through *E-Daftar*** is not allowed.
 - a. Registration for co-curricular courses is either done through pre-registration before the semester begins or during the first/second week of the semester. Co-curricular courses will be included in the students' course registration account prior to the *E-Daftar* activity if their pre-registration application is successful.
 - b. All approval/registration/dropping/adding of co-curricular courses is under the responsibility and administration of:
Director of the Centre for Co-Curricular Programme, Main Campus (04-653 5242/5248)

Deputy Director of the Centre for Co-Curricular Programme, Engineering Campus (04-599 5097/5094)

Deputy Director of the Centre for Co-Curricular Programme, Health Campus (09-767 2371/6625)
3. **Dropping of Language and Co-Curricular courses, if necessary, must be made within the first week.** After the first week, a fine of RM50.00 will be imposed for each course.

2.1.6 Registration of 'Audit' Courses (Y code)

Registration for the 'Audit' course (Y code) **is not allowed on the *E-Daftar***. It can be done during the official period of OCR at the School or Centre involved.

Students who are interested must complete the course registration form which can be printed from the Campus Online Portal or obtained directly from the School. Approval from the lecturers of the courses and the Dean/ Deputy Dean (Academic) of the respective school is required.

Registration of 'Audit' courses (Y code) is not included in the calculation of the total registered workload units. Grades obtained from 'Audit' courses are not considered in the calculation of CGPA and total units for graduation.

2.1.7 Registration of Prerequisite Courses (Z code)

Registration of Prerequisite courses (Z code) is included in the total registered workload (units). Grades obtained from the Prerequisite courses are not considered in the calculation of CGPA and units for graduation.

2.1.8 Late Course Registration and Late Course Addition

Late course registration and addition are only allowed during the first and up to the third week with approval from the Dean. Application to add a course after the third week will not be considered, except for special cases approved by the University. A RM50.00 fine will be imposed on students if reasons given for late registration are not accepted by the University or School.

2.1.9 Dropping of Courses

Dropping of courses is allowed until the **end of the sixth week**.

For this purpose, students must meet the requirements set by the University as follows:

1. Students who intend to drop any course are required to fill in the dropping of course form. The form needs to be signed by the lecturer of the course involved and the Dean/Deputy Dean (Academic, Career International Affairs) of the School. The form has to be submitted to the general office of the School/Centre which offers that particular course.
2. Students who wish to drop language courses must obtain the signature and stamp of the Dean/Deputy Dean (Academic, Career and International Affairs) of the School of Languages, Literacies and Translation.
3. Students who wish to drop the Co-Curricular courses must obtain the approval of the Director/Coordinator of the Co-Curricular Programme.
4. The option to drop courses must not be misused. Lecturers have the right not to approve the course that the student wishes to drop if the student is not serious, such as poor attendance record at lectures, tutorials and practical, as well as poor performance in coursework. The student will be barred from sitting for the examination and will be given grade 'X' and is not allowed to

repeat the course during the *Courses during the Long Vacation* (KSCP) period.

2.1.10 Course Registration Confirmation Slip

The course registration confirmation slip printed/obtained after course registration should be checked carefully to ensure there are no errors, especially the code type of the registered courses.

Any data errors for course registration must be corrected immediately whether during the period of *E-Daftar* (for students with active status only) or during the registration period at the Schools.

2.1.11 Revising and Updating Data/Information/ of Students' Personal and Academic Records

Students may check their personal and academic information through the Campus Online portal.

Students are advised to regularly check the information displayed on this website.

1. Students may update their correspondence address, telephone number and personal email through the Campus Online portal.
2. Students must notify the Student Data and Records Unit of any application to update personal data, such as the **spelling of names, identification card number, passport number and address (permanent address and correspondence address)**.
3. The office of the Student Data and Records Unit must be notified of any application for correction of academic data such as information on major, minor, MUET result and the course code (besides data on the examination results).

2.1.12 Academic Advisor

Each School will appoint an Academic Advisor for every student. Academic Advisors will advise their students under their responsibility on academic matters.

2.2 Interpretation of Unit/Credit/Course

2.2.1 Unit

Each course is given a value, which is called a **UNIT**. The unit is determined by the scope of its syllabus and the workload for the students. In general, a unit is defined as follows:

Type of Course	Definition of Unit
Theory	1 unit is equivalent to 1 contact hour per week for 13 – 14 weeks in one semester
Practical/Laboratory/ Language Proficiency	1 unit is equivalent to 1.5 contact hours per week for 13 – 14 hours in one semester
Industrial Training/ Teaching Practice	1 unit is equivalent to 2 weeks of training

Based on the requirements of Malaysian Qualifications Framework (MQF):

One unit is equivalent to 40 hours of student learning time

[1 unit = 40 hours of Student Learning Time (SLT)]

2.2.2 Accumulated Credit Unit

Units registered and passed are known as credits. To graduate, students must accumulate the total number of credits stipulated for the programme concerned.

2.3 Examination System

Examinations are held at the end of every semester. Students have to sit for the examination of the courses they have registered for except for courses with 100% coursework. Students are required to settle all due fees and fulfil the standing requirements for lectures/tutorials/practical and other requirements before being allowed to sit for the examination of the courses they have registered for.

Course evaluation will be based on the two components of coursework and final examinations. Coursework evaluation includes tests, essays, projects, assignments and participation in tutorials. The examination can be held face to face or online.

2.3.1 Duration of Examination

Evaluated Courses	Examination Duration
2 units	1 hour for coursework of more than 40%
2 units	2 hours for coursework of 40% and below
3 units or more	2 hours for coursework of more than 40%
3 units or more	3 hours for coursework of 40% and below

2.3.2 Barring from Examination

Students will be barred from sitting for the final examination if they do not fulfil at least 70% of the course requirements, such as absence from lectures and tutorials, and have not completed/fulfilled the required components of coursework. A grade 'X' would be awarded for a course for which a student is barred. Students will not be allowed to repeat the course during the *Courses During the Long Vacation (KSCP)* period.

2.3.3 Examination Special Needs

Students with Disabilities (OKU) who require special needs while sitting for exams can inform the School to get special permission to sit for exams in the Quarantine Room at the Examination Operations Office.

If a student falls ill during the exam, the student is only allowed to continue the exam in the exam hall or quarantine room or Pusat Sejahtera (subject to the approval of the Pusat Sejahtera Director).

Students who fall ill on the day of the exam and do not attend the exam must submit a medical certificate (from a government hospital/clinic or panel clinic/USM clinic) to the exam secretariat via email exam@usm.my within 48 hours after the end of the examination.

2.3.4 Grade Point Average System

Students' academic achievement for registered courses will be graded as follows:

Alphabet ic Grade	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	F
Grade Points	4.0	3.6	3.3	3.0	2.6	2.3	2.0	1.6	1.3	1.0	0.6	0
	0	7	3	0	7	3	0	7	3	0	7	0

Students who obtained a grade 'C-' and below for a particular course would be given a chance to improve their grades by repeating the course during the KSCP (see below) or normal semester. Students who obtained a grade 'C' and above for a particular course are not allowed to repeat the course whether during KSCP or normal semester.

The achievement of students in any semester is based on Grade Point Average (GPA) achieved from all the registered courses in a particular semester. GPA is the indicator to determine the academic performance of students in any semester.

CGPA is the Cumulative Grade Point Average accumulated by a student from one semester to another during the years of study.

The formula to compute GPA and CGPA is as follows:

$$\text{Grade Point Average} = \frac{\sum_{i=1}^n U_i M_i}{\sum_{i=1}^n U_i}$$

where:

- n = Number of courses taken
- U_i = Course units for course i
- M_i = Grade point for course i

Example of calculation for GPA and CGPA:

	Course	Unit	Grade Point (GP)	Grade (G)	Total GP
Semester I	ABC XX1	4	3.00	B	12.00
	ABC XX2	4	2.33	C+	9.32
	BCD XX3	3	1.67	C-	5.01
	CDE XX4	4	2.00	C	8.00
	EFG XX5	3	1.33	D+	3.99
	EFG XX6	2	2.67	B-	5.34
		20			43.66

$$\text{GPA} = \frac{43.66}{20} = 2.18$$

	Course	Unit	Grade Point (GP)	Grade (G)	Total GP
Semester II	ABC XX7	3	1.00	D	3.00
	ABB XX8	4	2.33	C+	9.32
	BBC XX9	4	2.00	C	8.00
	BCB X10	4	2.67	B-	10.68
	XYZ XX1	3	3.33	B+	9.99
		18			40.99

$$\text{GPA} = \frac{40.99}{18} = 2.28$$

$$\text{CGPA} = \frac{\text{Total Accumulated GP}}{\text{Total Accumulated Unit}} = \frac{43.66 + 40.99}{20 + 18} = \frac{84.65}{38} = 2.23$$

From the above examples, the CGPA is calculated as the total grade point accumulated for all the registered courses and divided by the total number of the registered units.

2.3.5 Courses During the Long Vacation (*Kursus Semasa Cuti Panjang*) (KSCP)

KSCP is offered to students who have taken a course earlier and obtained a grade of 'C-', 'D+', 'D', 'D-', 'F' and 'DK' only. Students who obtained a grade 'X' or 'F*' are not allowed to take the course during KSCP.

The purpose of KSCP is to:

1. Give an opportunity to students who are facing time constraints for graduation.
2. Assist students who need to accumulate a few more credits for graduation.
3. Assist probationary students to enhance their academic status.
4. Assist students who need to repeat a prerequisite course, which is not offered in the following semester.

However, this opportunity is only given to students who are taking courses that they have attempted before and achieved a grade as stipulated above, provided that the course is being offered. Priority is

given to final year students. Usually, formal lectures are not held, and teaching is via tutorials.

The duration of KSCP is 3 weeks, i.e. 2 weeks of tutorial and 1 week of examination, all held during the long vacation. The KSCP schedule is available on the University's Academic Calendar.

The Implementation of KSCP

1. Students are allowed to register for a maximum of 3 courses and the total number of units registered must not exceed 10.
2. Marks/grades for coursework are taken from the highest marks/the best grades obtained in a particular course in the normal semester before KSCP. The final overall grade is determined as follows:

**Final Grade = The best coursework marks or grade +
Marks or grade for KSCP examination**

3. GPA calculation involves the **LATEST** grades (obtained in KSCP) and also involves courses taken in the second semester and those repeated in KSCP. If the GPA during KSCP as calculated above is 2.00 or better, the academic status will be active, even though the academic status for the second semester was probation status. However, if the GPA for KSCP (as calculated above) is 1.99 or below, the academic status will remain as probation status for the second semester.
4. Graduating students (those who have fulfilled the graduation requirements) in the second semester are not allowed to register for KSCP.

2.3.6 Academic Status

Active Status: Any student who achieves a GPA of 2.00 and above for any examination in a semester will be recognised as ACTIVE and be allowed to pursue his/her studies for the following semester.

Probation Status: A probation status is given to any student who achieves a GPA of 1.99 and below. A student who is under probation status for three consecutive semesters (P1, P2, FO) will not be allowed to pursue his/her studies at the university. On the other hand, if the CGPA is 2.00 and above, the student concerned will be allowed to pursue his/her studies and will remain at P2 for academic status.

2.3.7 Penalty for not attending the examination

Students who do not attend the examination for any of the courses they have registered for must provide Medical Certificates to the Principal Assistant Registrar, Examination and Graduation Unit, Academic Management Division by email exam@usm.my within 48 hours (for full-time students) and 7 days (for Distance Learning Education programme students) after the examination being held. The reasons provided will be considered by the Examination Board of the School/Centre and endorsed by the University Examination Board as below:

1. Students will be granted a DK grade (with permission) for accepted reasons by the University Examination Board. DK grade will be granted to the students who submit Medical Certificates (from hospital/government clinic or panel clinic/USM clinic) or submit any reason that can be accepted by the University Examination Board. DK grade will be exempted from the GPA/CGPA calculations of the student.
2. Candidates who fail to sit for the examination without any reason will be granted an F* grade.

2.3.8 Termination of Candidature

Without any prejudice to the above regulations, **the University Examination Council has the absolute right to terminate any student's studies if he/she does not fulfil the accumulated minimum credits.**

The University Examination Council has the right to terminate any student's studies due to certain reasons (a student who has not registered for the courses, has not attended the examination without valid reasons), as well as medical reasons can be disqualified from pursuing his/her studies.

2.3.9 Examination Results

Full results (with grade) will be announced by the University through the Campus Online portal (campusonline.usm.my) after the School Examination Council meeting which is one month after the final examination.

Students can print the official semester results document through the Campus Online portal (campusonline.usm.my) on the same day of the results announcement.

Examination results for students with outstanding debts will be withheld until the student clears the outstanding debts.

2.3.10 Re-checking of Examination Result

Students can apply for the rechecking of their examination result for the course(s) taken during the semester. The application form can be obtained from BPA official website. The appeal form must be submitted along with a copy of the official receipt / e-payment statement amounting to RM25.00 for each examination paper. The appeal period is two (2) weeks after the official result is announced.

The rechecking process is only to ensure that all answers in the scripts have been marked and consistently graded and the calculation of marks awarded are correct. The answer script of the course will not be reevaluated.

The school will confirm any changes in the students' examination results. If there are any changes in the grades, students may request a refund of RM25.00. The Examination and Graduation Unit will make amendments to the results of the course and students can check their updated status in the respective Campus Online portals.

2.4 Unit Exemption

2.4.1 Unit Exemption

Unit exemption is defined as the total number of units given to students who are pursuing their studies in USM that are exempted from the graduation requirements. Students only need to accumulate the remaining units for graduation purposes. Only passes or course grades accumulated or acquired in USM will be included in the calculation of the Cumulative Grade Point Average (CGPA) for graduation purposes.

2.4.2 Regulations and Implementation of Unit Exemption

1. Diploma holders from recognised Public and Private Institutions of Higher Learning:
 - a. Unit exemption may only be granted for courses taken at diploma level including courses under the General Studies Component (MPU) such as Philosophy and Current Issues and Appreciation of Ethics and Civilisations.

However, unit exemptions are not permitted for Language courses under the U1 Group of the General Studies Component (MPU).

- b. Courses for unit exemption may be combined (in two or more combinations) in order to obtain exemption of one course at degree level. However, if the School would like to approve only one course at the diploma level for unit exemption of one course at degree level, the course at diploma level must be equivalent to the degree course and have the same number of or more units.
- c. Courses taken during employment (in-service) for diploma holders cannot be considered for unit exemption.
- d. The minimum achievement at the diploma level that can be considered for unit exemption is a minimum grade 'C' or 2.0 or equivalent.
- e. The total number of semesters exempted should not exceed two semesters.
- f. **To obtain exemption unit for industrial training**, a student must have continuous work experience for at least two years in the area. If a student has undergone industrial training during the period of diploma-level study, the student must have work experience for at least one year.

The students are also required to produce a report on the level and type of work performed. Industrial training unit exemption cannot be considered for semester exemption as the industrial training is carried out during the long vacation in USM.

2. USM Supervised IPTS (Private Institutions of Higher Learning) /External Diploma Graduates:

- a. Students from USM supervised IPTS/External Diploma graduates are given unit exemption as stipulated by the specific programme of study. **Normally, unit exemption in this category is given as a block according to the agreement** between USM (through the School that offers the programme) with the IPTS.

- b. **Students from recognised local or foreign IPTA** (Public Institutions of Higher Learning)/IPTs who are studying at the Bachelor's Degree level may apply to study in this university and if successful, may be considered for unit exemption, subject to the following conditions:

- [1] Courses taken in the previous IPT are equivalent (at least 80% of the course must be the same) to the courses offered in USM.
- [2] Students taking courses at the Advanced Diploma level in IPT that are recognised to be equivalent to the Bachelor's Degree course in USM may be considered for unit exemption as in Section 2.5.
- [3] The total maximum unit exemption allowed should not exceed 30% of the total unit requirement for graduation.

2.4.3 Total Number of Exempted Semesters

Semester exemption is based on the total units exempted as below:

Total Units Exempted	Total Semesters Exempted
8 and below	None
9 – 32	1
33 to 1/3 of the total units for graduation	2

2.4.4 Application Procedure for Unit Exemption

Any student who would like to apply for unit exemption is required to complete the Unit Exemption Application Form which can be obtained from the Examination and Graduation Section or the respective Schools.

The form must be approved by the Dean of the School prior to submission to the Examination and Graduation Section for consideration and approval.

2.5 Credit Transfer

Credit transfer is defined as the recognition of the total number of credits obtained by USM students taking courses in other IPTAs (Public Institution of Higher Learning) within the period of study at USM and is combined with credits obtained at USM to fulfil the unit requirements for his/her programme of study. The transferred examination results or grades obtained in courses taken at other IPTAs will be taken into consideration in the Cumulative Grade Point Average (CGPA) calculation.

1. Category of Students Who Can Be Considered for Credit Transfer

USM full-time Bachelor Degree level students who would like to attend specific Bachelor Degree level courses at other IPTAs.

USM full-time diploma level students who would like to attend specific diploma level courses at other IPTAs.

2. Specific Conditions

a. Basic and Core Courses

Credit transfer can only be considered for credits obtained from other courses in other IPTAs that are equivalent (at least 80% of the content is the same) with the courses offered by the programme.

Courses that can be transferred are only courses that have the same number of units or more. For equivalent courses but with less number of units, credit transfers can be approved by combining a few courses. Credits transferred are the same as the course units offered in USM. The average grade of the combined courses will be taken into account in the CGPA calculation.

b. Elective or Option Courses

Students may take any appropriate courses in other IPTAs subject to permission from the School as well as the approval of the IPTAs.

The transferred credits are credits obtained from courses at other IPTAs. No course equivalence condition is required.

c. Minor Courses

For credit transfer of minor courses, the School should adhere to either condition (i) or (ii), and take into account the programme requirement.

3. General Conditions

- a. The total maximum units transferred should not exceed one-third of the total number of units for the programme.
- b. Credit transfer from other IPTAs can be considered only once for each IPTA.
- c. The examination results obtained by a student who has taken courses at other IPTAs will be taken into account for graduation purposes. Grades obtained for each course will be combined with the grades obtained at USM for CGPA calculation.
- d. Students who have applied and are approved for credit transfer are not allowed to cancel the approval after the examination result is obtained.
- e. Students are required to register for courses at other IPTAs with not less than the total minimum units as well as not exceeding the maximum units as stipulated in their programme of study. However, for specific cases (e.g. students on an extended semester and only require a few units for graduation), the Dean may allow such students to register less than the minimum units and the semester will not be considered for the residential requirement. In this case, the CGPA calculation will be similar to that requirement of the KSCP.
- f. USM students attending courses at other IPTAs who fail any course will be allowed to re-sit the examinations of the courses if there is such a provision in that IPTA.
- g. If the method of calculation of examination marks in the other IPTAs is not the same as in USM, grade conversions will be carried out according to the existing scales.
- h. USM students who have registered for courses at other IPTAs but have decided to return to study in USM must adhere to the existing course registration conditions of USM.

2.5.1 Application Procedure for Attending Courses/Credit Transfer

USM students who would like to apply to attend courses/credit transfer at other IPTAs should apply using the Credit Transfer Application Form.

The application form should be submitted for the Dean's approval for the programme of study at least three months before the application is submitted to other IPTAs for consideration.

2.6 Academic Integrity

“Integrity without knowledge is weak and useless. Knowledge without integrity is dangerous and dreadful.” - Samuel Johnson

Academic honesty is important because it is the main pillar in ensuring that manners and ethics with regards to higher education integrity are preserved.

Universiti Sains Malaysia encourages its students to respect and ensure that any matter relating to academic integrity are well-preserved. Universiti Sains Malaysia always encourages its students to ensure that manners, ethics and integrity would be essential in academics while focusing on their studies in Universiti Sains Malaysia.

The following are practices or acts that are considered as conducts of lack of integrity in academics:

1. Cheating

Cheating in the academic context includes copying during examination, usage of information without authorization or in a dishonest manner. There are numerous ways and methods of cheating which include among others:

- a. Copying answers from others during tests or exams.
- b. Any suspicious action that can be described as cheating or an attempt to cheat in an exam.
- c. Using unauthorized materials or devices without authorization such as hand-written notes or any smart electronic device during test or exam.
- d. Asking or allowing another student to take a test or exam on behalf and vice-versa.
- e. Sharing answers in assignments or projects.
- f. Purposely tampering with the marks/grade given in any course work, and then re-submit it for remarking/regrading.
- g. Give the command, to force, persuade, deceive or threaten others to conduct research, writing, programming or any task for a student's personal gain.

- h. Submitting any identical or similar work in more than one course without consulting or prior permission from the lecturers concerned.

2. Plagiarism

The reputation of an academic institution depends on the ability to achieve and sustain academic excellence through the exercise of academic integrity. Academic integrity is based on honesty, trust, fairness, respect, and responsibility, which form the basis of academic work.

One aspect of the loss of academic integrity is due to plagiarism, which is the act of presenting published and unpublished ideas, writings, works or inventions of others in written or other medium, as one's own original intellectual endeavours without any clear acknowledgement of or reference to the author of the source.

POLICY ON PLAGIARISM OF UNIVERSITI SAINS MALAYSIA

University Sains Malaysia Policy on Plagiarism describes the University's strong commitment to uphold academic integrity in relation to plagiarism. It will come into effect when there is an infringement of academic conduct relating to plagiarism.

This policy acts as a guideline to educate and prevent plagiarism and can be used as the guideline if the University's staff and students violate any rules and regulations of the University.

The policy applies to all students, former students, staff and former staff which include fellows, post-doctorates, visiting scholars, as well as academic, non-academic, research, contract and temporary staff who study, serve or have served, or have graduated from the University.

Plagiarism is defined as the act of presenting, quoting, copying, paraphrasing or passing off of ideas, images, processes, works, data, own words or those of other people or sources without proper acknowledgement, reference or quotation of the original source(s). The acts of plagiarism include, but are not limited to, the following:

- a. Quoting verbatim (word-for-word replication of) works of other people.
- b. Paraphrasing another person's work by changing some of the words, or the order of the words, without due acknowledgement of the source(s).

- c. Submitting another person's work in whole or part as one's own.
- d. Auto-plagiarising or self-plagiarising (one's own work or previous work) that has already been submitted for assessment or for any other academic award and pass it as a new creation without citing the original content.
- e. Insufficient or misleading referencing of the source(s) that would enable the reader to check whether any particular work has indeed been cited accurately and/or fairly and thus to identify the original writer's particular contribution in the work submitted.

The University will take action on every report and offence relating to plagiarism and if the student is found guilty, the student can be charged by the university according to the Students Disciplinary Rules.

3. Fabrication

Fabrication refers to a process of invention, adaptation or copying with the intention of cheating. This is an act of deceiving other people. Fabrication is somewhat related to matters which have been 'created' or altered.

Invention or task outcome or academic work without acknowledgement, alteration, falsification or misleading use of data, information or citation in any academic work constitutes fabrication. Fabricated information neither represents the student's own effort nor the truth concerning a particular investigation or study and thus violates the principle of truth in knowledge. Some examples are:

- a. Creating or exchanging data or results, or using someone else's results, in an experiment, assignment or research.
- b. Citing sources that are not actually used or referred to.
- c. Listing with intent, incorrect or fictitious references.
- d. Forging signatures of authorization in any academic record or other university documents.
- e. Developing a set of false data.

4. Collusion

Collusion refers to the cooperation in committing or to commit or to do work with negative intentions. Some examples of collusion include:

- a. Paying, bribing or allowing someone else to do an assignment, test/exam, project or research for you.
 - b. Doing or assisting others in an assignment, test/exam, project or research for something in return.
 - c. Permitting your work to be submitted as the work of others.
 - d. Providing material, information or sources to others knowing that such aids could be used in any dishonest act.
5. Other violations relating to academic integrity
- a. Late to lecture, tutorial, class or other forms of teaching modes relating to their courses.
 - b. Sending or submitting late any assignment relating to their courses.
 - c. Hire someone else to do the assignment or thesis.
 - d. Carrying out business by providing service to write assignment or thesis of the students.
 - e. Any other violations that USM deemed as violating academic integrity.

2.6.1 Consequences of Violating Academic Integrity

Students are responsible in protecting and upholding academic integrity in USM.

If in any specific event a student or students would encounter any incident that denotes academic dishonesty, the student(s) need to submit a report to the relevant lecturer. The lecturer is then responsible to investigate and substantiate the violation and report the matter to the Dean of the School.

- 1. If any violation of academic integrity is considered as not of a serious nature, the Dean of the School may take administrative action on the students.
- 2. However, if the violation is deemed serious by the School, this matter shall be brought to the attention of the Secretariat of University Student Disciplinary Committee (Academic Cases) at Legal Office, Level 2, Building E42, Chancellory II, Universiti Sains Malaysia for further disciplinary action as specified in the disciplinary procedures

3. If a student is caught copying or cheating during examination, the Investigation Committee of *Copying/Cheating in Examination* will pursue the matter according to the University's procedures. If the investigation found that there is a case, the student(s) will be brought to the Student's Disciplinary Committee of the University. In this matter, the rule on conduct during the examination shall be applied.
4. Any student who has been found guilty in the Student's Disciplinary Committee (Academic Cases) may be graded as fail or grade "F" in the said subject tried.
5. Rule 48 in the Kaedah-Kaedah Universiti Sains Malaysia (Discipline of Students) 1999 provides that a student who commits a disciplinary offence and is found guilty of the offence shall be liable to any one or any appropriate combination of two or more of the following punishments as follows:
 - a. a warning;
 - b. a fine not exceeding Ringgit Malaysia Two Hundred (RM200.00);
 - c. exclusion from any specific part or parts of the University for a specified period;
 - d. suspension from being a student of the University for a specified period;
 - e. expulsion from the University.

2.7 USM Mentor Programme

The Mentor Programme acts as a support aid that involves staff undergoing special training as consultants and guides to the USM community who would like to share their feelings and any psychosocial issues that could affect their social activities. This programme helps individuals to manage psychosocial issues in a more effective manner, which will eventually improve their well-being in order to achieve a better quality of life.

Objectives

1. To serve as a co-operation and mutual assistance mechanism for dealing with stress, psychosocial problems and many more in order to ensure the well-being of the USM community.

2. To inculcate the spirit of unity and the concept of helping one another by appointing a well-trained mentor as a social agent who promotes a caring society for USM.
3. To produce more volunteers to assist those who need help.
4. To prevent damage in any psychosocial aspect before they reach a critical stage.

2.8 Student Exchange Programme

2.8.1 Study Abroad Scheme

The student exchange programme is an opportunity for USM students to study for one or two semesters abroad at any USM partner institutions. Ideally, students are encouraged to participate in the exchange programme within their third to fifth semester (3 year degree programme) and within the third to seventh semester (4 year degree programme).

USM students who wish to follow the SBLN programme must discuss their academic plans with the Dean or Deputy Dean of their respective Schools and also with the International Mobility & Collaboration Centre (IMCC) (to ensure that credits obtained from the external higher education institution can be transferred as part of the credit accumulation for graduation).

Any student who follows the SBLN programme and violates any disciplinary act in the external higher education institution, can be penalised in accordance with the University (Discipline of Students) Rules if the matter is referred to USM.

For further information, please visit www.imcc.usm.my or contact the International Mobility and Collaboration Centre (IMCC) at +604 – 653 2777/2774.

2.8.2 Student Exchange Programme in Local Higher Education Institutions (RPIPT)

This is a programme that allows students of Higher Learning Institutions to do an exchange programme for a semester among the higher institutions themselves. Students can choose any relevant courses and apply for credit transfers.

USM students who want to participate in RPPIPT have to discuss their academic plans with the Dean or Deputy Dean of their respective Schools and the Division of Academic and International (to ensure that credits obtained from the higher education institution in Malaysia can be transferred as part of the credit accumulation for graduation).

Any student who participates in RPPIPT and violates any of the institution's disciplinary rules can be penalised according to the University (Discipline of Students) Rules if the matter is referred to USM.

For further information, please contact the Academic & International Division at +604 – 653 3126.

2.9 Ownership of Students' Dissertation/Research Project/Thesis and University's Intellectual Property

The copyright of a dissertation/research project/thesis belongs to the student. However, as a condition for the conferment of a degree, the student gives this right unconditionally, directly but not exclusively, and free of royalties to the university to use the contents of the work/thesis for teaching, research and promotion purposes. In addition, the student gives non-exclusive rights to the University to keep, use, reproduce, display and distribute copies of the original thesis with the rights to publish for future research and the archives.

2.10 Teaching Assessment

Starting from Semester 1, Academic Session 2015/2016, USM has implemented the Teaching Assessment System as a medium for students to evaluate the teaching of their courses.

Every student is **REQUIRED** to complete the assessment form for both the course and the lecturer. The teaching assessment system will be open from Week 7 of each semester until the last day of the revision week and can be accessed through the **eLearning Portal**. Students who fail to complete this evaluation will have their examination results for that semester withheld.

3.0 UNIVERSITY COURSE REQUIREMENTS

3.1 Summary of University Course Requirements

Students are required to take 15-22 credits for the following University courses/options for University needs:

UNIVERSITY COURSE REQUIREMENTS		CREDIT TOTAL		
		Local Students	International Students	
General Studies (MPU)				
U1	<u>Local Students</u> <ul style="list-style-type: none"> ▪ HFF225 (Philosophy and Current Issues) (2 credits) ▪ HFE224 (Appreciation of Ethics and Civilisations) (2 credits) ▪ LKM400 (Malay Language IV) (2 credits) 		6	
	<u>International Students of Science and Technology</u> <ul style="list-style-type: none"> ▪ HFF225 (Philosophy and Current Issues) (2 credits) ▪ Malay Language course (2 credits) 			
	<u>International Students of Arts</u> <i>(program with Malay Language as the medium of instruction)</i> <ul style="list-style-type: none"> ▪ HFF225 (Philosophy and Current Issues) (2 credits) ▪ LKM100 (Malay Language I) (Z) ▪ LKM200 (Malay Language II) (U) (2 credits) 	<u>International Students of Arts</u> <i>(program with English Language as the medium of instruction)</i> <ul style="list-style-type: none"> ▪ HFF225 (Philosophy and Current Issues) (2 credits) ▪ LKM100 (Malay Language I) (U) (2 credits) 	4	
U2 (Local students) AND U3 (International students)	<u>Local Students</u> <ul style="list-style-type: none"> ▪ WUS101 (Core Entrepreneurship) (2 credits) ▪ English Language Courses (4 credits) <u>International Students</u> <ul style="list-style-type: none"> ▪ SEA205E (Malaysian Studies) (4 credits) ▪ English Language Courses (4 credits) 		6	8
U4	<u>Local Students</u> WAR122 (Integrity and Anti-Corruption Course) / Co-Curricular Courses*	<u>International Students</u> Co-Curricular Courses*	2	2
Options	Students can/have to choose any of the following: <ul style="list-style-type: none"> ▪ Co-curricular courses ▪ Skill courses/Foreign Language Courses/ Other courses offered by other schools 		1-8	1-8
CREDIT TOTAL			15-22	15-22

* Students from the School of Educational Studies are required to register for one (1) of the Co-Curricular Packaged Course (Uniformed Body) throughout their period of study to fulfill the programme requirements.

* Students from the School of Dental Sciences are required to register for three (3) credits of courses in the U4 group. Further information can be obtained from the Academic Office, School of Dental Sciences.

3.2 General Studies Components (MPU) (14 credits)

General studies is one of the strategies and initiatives planned for the purpose of Shift 1, which is Holistic, Entrepreneurial and Balanced Graduates. Malaysia Education Blueprint 2015-2025 (Higher Education) or PPPM (PT) outlines 10 shifts to achieve the aspirations of the nation's higher education system and student aspirations.

General studies are divided into four groups as follows:

1. U1: appreciation of philosophy, values and history;
2. U2: the mastery of soft skills;
3. U3: expansion of the knowledge of Malaysia and its history; and
4. U4: practical community management skills such as community service and co-curriculum.

A. U1 Group

Local Students

All Malaysian students are required to take and pass the following courses. In order to graduate, the minimum passing grade required is Grade C.

(i) **HFF225 (Philosophy and Current Issues) (2 credits)**

The course synopsis is as follows:

This course covers the relation between philosophy and the National Education Philosophy and Rukun Negara. Philosophy is used as a tool to refine the culture of thought in life through the art and methods of thinking as well as through our understanding of the concept of the human person. Key topics in philosophy, namely epistemology, metaphysics, and ethics, are discussed in the context of current issues. Emphasis is given to philosophy as the basis for intercultural dialogue and fostering common values. At the end of this course, students will be able to see the disciplines of knowledge as a comprehensive and integrated body of knowledge.

(ii) **HFE224 (Appreciation of Ethics and Civilisations) (2 credits)**

The course synopsis is as follows:

This course prepares students to appreciate the ethics and civilisation that existed in the multiple ethnic society in Malaysia to strengthen their critical and analytical thinking in handling a more challenging life. The content of this course focuses on appreciating ethics and civilisation according to the Malaysian mould. Students will be exposed to the dynamics of the concept of ethics and

civilisation that gave strength to the formation of a Malaysian nation based on the timeline of its historical evolution from the precolonial to the postcolonial era. Understanding the formation of the ethical and civilisation is discussed to increase their civil ethical appreciation towards strengthening the concept of national and Malaysian nation. Civilisation in the Malaysian mould needs to be analysed and debated in academic activity with reference to the Federal Constitution as the base for integration and a vehicle for ethics and civilisation. The development of national unity is too much influenced by globalisation and the development of information technology and complex communication. Therefore, the appreciation of ethics and civilisation has given rise to socially responsible behaviour and moved at the level of individual, community, society and nation. Therefore, the change that is happening in the society and direct economic development has brought new challenges to the strengthening of ethics and civilisation in Malaysia. Finally, High Impact Educational Practices is carried out during teaching and learning to learn the course in-depth.

(iii) LKM400/2 (Malay Language IV)

In order to graduate, the minimum passing grade required is Grade C. Entry requirements for Malay Language are as follows:

No	Qualification	Grade	Entry Level	Type	Credit	Status
1	(a) SPM/MCE/SC (or equivalent qualification)	1 - 6	LKM400	U	2	Graduation Requirement
	(b) STPM/HSC (or equivalent qualification)	P/S				

Note:

To obtain credits for **Malay Language** courses, a minimum of grade C is required. Students may seek advice from the School of Languages, Literacies and Translation if they have a different Bahasa Malaysia qualification from the above.

International Students

All international students are required to take and pass the following courses. In order to graduate, the minimum passing grade required is Grade C.

(i) **HFF225 (Philosophy and Current Issues) (2 credits)**

The course synopsis is as follows:

This course covers the relation between philosophy and the National Education Philosophy and Rukun Negara. Philosophy is used as a tool to refine the culture of thought in life through the art and methods of thinking as well as through our understanding of the concept of the human person. Key topics in philosophy, namely epistemology, metaphysics, and ethics, are discussed in the context of current issues. Emphasis is given to philosophy as the basis for intercultural dialogue and fostering common values. At the end of this course, students will be able to see the disciplines of knowledge as a comprehensive and integrated body of knowledge.

(ii) **Malay Language Course (2 credits)**

All international students are required to take and pass the Malay Language course. In order to graduate, the minimum passing grade required is Grade C. Malay Language course requirements by academic programme are as follows:

- a) International students pursuing a Bachelor's Degree in Arts (program with Malay Language as the medium of instruction) are required to take the following courses:

Code	Type	Credit
LKM100	Z	2
LKM200	U	2

- b) International students pursuing a Bachelor's Degree in Arts (program with English Language as the medium of instruction) are required to take the following course:

Code	Type	Credit
LKM100	U	2

- c) International students pursuing Bachelor's Degrees in Science and Technology are required to take the following course:

Code	Type	Credit
LKM100	U	2

B. U2 or U3 Group

Local Students

WUS101 (Core Entrepreneurship) (2 credits)

All students are required to take and pass the WUS101/2 (Core Entrepreneurship) course. In order to graduate, the minimum passing grade required is Grade C. The following is the synopsis of the course:

This course provides basic exposure to students on entrepreneurship and business fields, with emphasis on the implementation of the learning aspects while experiencing the process of executing business projects on campus. The main learning outcome is the assimilation of culture and entrepreneurship work ethics in their everyday life. This initiative is made to open the minds and arouse the spirit of entrepreneurship among target groups that possess the potential to become successful entrepreneurs.

For more information, please refer to the Centre for Co-Curricular Programme website.

International Students

SEA205E (Malaysian Studies) (4 credits)

All international students are required to take and pass the SEA205E/4 (Malaysian Studies) course. In order to graduate, the minimum passing grade required is Grade C. The following is the synopsis of the course:

This course discusses Malaysia from the perspectives of history, politics, social, culture and economics. It looks at the relations between the country's history and its politics, the formation of a plural society that has since become its important characteristics, as well as issues related to development in Malaysia. Students will also be exposed to contemporary issues in Malaysia such as the marginalized groups, popular culture, issues related to health and wellbeing, as well as looking at Malaysia from the global context.

Local and International Students

All Bachelor's degree students must take four (4) units from the English Language courses to fulfil the University requirement for graduation.

- (i) Entry Requirements for English Language Courses (for students with MUET)

The following table shows the entry requirements for the English language courses offered by the School of Languages, Literacies and Translation.

No.	MUET qualification / Pre-requisite course	Band / Grade	English Language Course	Course Type
1.	MUET or;	2.0 / 2.5	LSP101 (2 credits)	Pre-requisite/ Type Z
	Discretion of the Dean of SoLLaT			
2.	MUET or;	3.0 / 3.5	LSP201 (2 credits)	Compulsory/ Type U
	LSP101 or;	A – C		
	Discretion of the Dean of SoLLaT			
3.	MUET or;	4.0 / 4.5	LSP301 (2 credits)	Compulsory/ Type U
	LSP201 or;	A – C		
	Discretion of the Dean of SoLLaT			
4.	MUET or;	5.0 & above	LHP410/411/412/458/459 (2 credits)	Compulsory/Option/ Type U
	LSP301 or;	A - C		
	Discretion of the Dean of SoLLaT			

(ii) Entry Requirements for English Language Courses (for students with IELTS, TOEFL, PTE or Linguaskill)

The following table shows the entry requirements for the English language courses offered by the School of Languages, Literacies and Translation.

No.	IELTS	TOEFL iBT (Internet Based Test)	PTE (Pearson Test of English)	Linguaskill	English Language Course	Course Type
1.	5.0 & below	45 & below	50 & below	159 & below	LSP101 (2 credits)	Pre-requisite / Type Z
2.	5.5 & 6.0	46 – 78	51 – 59	160 – 175	LSP201 (2 credits)	Compulsory/ Type U
3.	6.5 & 7.0	79 – 109	60 – 79	176 – 179	LSP301 (2 credits)	Compulsory/ Type U
4.	7.5 & above	110 & above	80 & above	180 & above	LHP Series	Compulsory/ Option/ Type U

Note:

- Students are required to refer to the list of English language courses required by their respective schools.
- Students may seek advice from the School of Languages, Literacies and Translation if they have a different English language qualification from the above.

- In order to obtain units in English Language courses, students have to pass with a minimum grade 'C'.
- Students with Bands 5 & above in MUET must accumulate the 4 credits of English from the courses in the advanced level (LHP410/411/412/458/459).
- Students with Bands 2.0/2.5 in MUET may re-sit MUET to improve their score to Band 3.0 OR take the LSP101 course and pass with a minimum grade C before they can register for the LSP201 course.

(iii) English Language Course

English courses offered as university courses are as follows:

No.	Code/Unit	Course Title
1.	LSP101/2	Progressive English
2.	LSP201/2	General English I
3.	LSP301/2	General English II
4.	LHP410/2	Effective Reading
5.	LHP411/2	Effective Writing
6.	LHP412/2	Effective Oral Presentation
7.	LHP458/2	English for Translation (offered in Semester 2 only)
8.	LHP459/2	English for Interpretation (offered in Semester 1 only)

C. U4 Group

i. Integrity and Anti-Corruption Course (WAR122)

Local students are required to register the Integrity and Anti-Corruption Course during their studies to complete the minimum requirement of two (2) credits in the MPU4 structure as a graduation requirement. The minimum passing grade required is Grade C.

ii. Co-Curricular Packaged Course (Uniformed Body)

Students from the School of Educational Studies are required to register for one (1) of the Co-Curricular Packaged Course (Uniformed Body) throughout their period of study to fulfill the programme requirements. Students who register for the Co-curricular Courses (Uniformed Body)

under PALAPES, SUKSIS, or SISPA must complete the entire course package. The minimum passing grade required is Grade C.

3.3 Options (1 – 8 credits)

A. Co-curricular course

Students can choose Co-Curricular Courses as an Option to complete the total number of University Course credits according to the requirements of their respective schools.

Co-curriculum courses are grouped by Core and are available in packages and without packages. Students are required to complete all phases of the course package if they register for the Co-Curricular Packaged Course. The minimum passing grade required is Grade C.

The details of the list of Co-Curricular Courses offered are as follows:

(i) Core of Volunteerism (6 - 10 credits)

All courses offered under this core are the uniformed courses offered in the following packages:

PALAPES Army	PALAPES Navy	PALAPES Air Force	SUKSIS (Students' Police Volunteers)
WTD103/3	WTL103/3	WTU103/3	WPD101/2
WTD203/3	WTL203/3	WTU203/3	WPD201/2
WTD304/4	WTL304/4	WTU304/4	WPD301/2

SISPA (Siswa Siswi Pertahanan Awam Malaysia)	St John Ambulance	Red Crescent Emergency Aid Team
WPA103/2	WJA102/2	WBM102/2
WPA203/2	WJA202/2	WBM202/2
WPA303/2	WJA302/2	WBM302/2

For more information, please refer to the Centre for Co-Curricular Programme website.

(ii) Core of Sports (1 - 3 credits)

The courses offered are as follows:

Packaged Courses (3 Credits, 3 Semesters) (Students are required to complete all levels)	
Karate	Taekwondo
WSC108/1	WSC115/1
WSC208/1	WSC215/1

WSC308/1	WSC315/1
Non Packaged Courses (1 Credit)	
WSC105/1 – Volley Ball	WSC124/1 - Sepak Takraw
WSC110/1 - Archery	WSC 125/1- Futsal
WSC111/1 - Table Tennis	WSC 126/1 - Netball
WSC112/1 - Swimming	WSC127/1 - Event Management 1
WSC113/1 - Aerobics	WSC227/1 - Event Management 2
WSC114/1 - Squash	WSC128/1 - Petanque
WSC116/1 - Tennis	WSC130/1 - Orienteering
WSC119/1 - Badminton	WSC131/1 - Woodball

For more information, please refer to the Centre for Co-Curricular Programme website.

(iii) Core of Culture (1 – 6 credits)

The courses offered are as follows:

Packaged Courses (6 Credits, 3 Academic Sessions) (Students are required to complete all levels)	
Jazz Band	Seni Silat Cekak Malaysia
WCC108/2	WCC123/2
WCC208/2	WCC223/2
WCC308/2	WCC323/2
Non-Packaged Courses (1 Credit)	
WCC105/1 - Gamelan	WCC116/1 - Traditional Dance
WCC107/1 - Guitar	WCC117/1 - Modern Theatre
WCC109/1 - Choir	WCC118/1 - Malay Shadow Play
WCC115/1 - Modern Dance	WCC124/1 - Musical Kompang

For more information, please refer to the Centre for Co-Curricular Programme website.

(iv) Core of Innovation and Initiative (1 - 2 credits)

The courses offered are as follows:

Non-Packaged Courses (1 Credit)	
WCC103/1 - Painting	WCC128/1 - Embroidery and Beads Sequin Art
WCC110/1 - Handcrafting	WCC130/1 - Digital SLR Photography Art
WCC120/1 - Canting Batik	WCC 131/1 - Editing Digital Photography Art

WCC121/1 - Calligraphic Art	WCC132/1 - The Art of Ceramic
WCC122/1 - Culinary Arts	WCC133/1 - Decoupage Arts
WCC125/1 - Traditional of Kite Art	
Non-Packaged Courses (2 Credits)	
WLF103 - Climate Change Resilience	WMU102/2 - Makers@USM Level 1
WLF104 - Digital Financial Literacy	WMU112/2 – Artificial Intelligence Literacy
WLF105 - Grit in You	WMU122/2 - Data Science Literacy

For more information, please refer to the Centre for Co-Curricular Programme website.

(v) Core of Community Service (4 credits)

The courses offered are as follows:

Packaged Courses (4 Credits) (Students are required to complete all levels)	
WKM102/2 - Community Service 1	WKM202/2 - Community Service 2
Non-Packaged Courses (2 Credits)	
WSK102/2 - Volunteerism Science	

For more information, please refer to the Centre for Co-Curricular Programme website.

(vi) Core of Public Speaking (2 credits)

The courses offered are as follows:

Non-Packaged Courses (2 Credits)	
WEC102/2 - Public Speaking in Malay Language	
WEC103E/2 - Public Speaking in English Language	

For more information, please refer to the Centre for Co-Curricular Programme website.

(vii) Core of Sustainability (2 credits)

The courses offered are as follows:

Non-Packaged Courses (2 Credits)	
WSU101/2 - Sustainability of Issues, Challenges and Prospects	

For more information, please refer to the Centre for Co-Curricular Programme website.

B. Skill / Foreign Language Courses / Courses offered by other schools

Students can choose the following courses as an option:

(i) WSU 101 (Sustainability: Issues, Challenges & Prospects) (2 credits)

The following is the synopsis of the course:

This course introduces and exposes the concept of sustainable development to students. The course aims to ensure future generation capabilities to meet their needs in the future are not affected, especially in the era of challenging globalization and the rapid development of information technology at present. Sustainable development models and case studies are also discussed.

The minimum passing grade required is Grade C. For more information, please refer to the Centre for Co-Curricular Programme website.

(ii) HTV201 (Thinking Techniques) (2 credits)

The following is the synopsis of the course:

This course introduces students to various creative thinking such as styles and thinking tools that can broaden their understanding of creativity and improve problem-solving skills. Students are trained to select and apply the best techniques to solve specific problems. So this course helps students to learn to think effectively in order to make the most effective decisions in both their studies and daily life.

(iii) SHE101 (Ethnic Relations) (2 credits)

The following is the synopsis of the course:

This course is an introduction to ethnic relations in Malaysia. This course is designed with 3 main objectives: (1) to introduce students to the basic concepts and the practices of social accord in Malaysia, (2) to reinforce basic understanding of challenges and problems in a multi-ethnic society, and (3) to provide an understanding and awareness in managing the complexity of ethnic relations in Malaysia. At the end of this course, it is hoped that students will be able to identify and apply the skills to issues associated with ethnic relations in Malaysia.

(iv) Other options/skill courses as recommended or required by the respective schools (if any)

(v) English language course

The following courses may be taken as a university course to fulfil the compulsory English language requirements (or for students with MUET Band 5+) or as a skill/option course:

No	Code/Kredit	Course Title
1.	LHP410/2	Effective Reading
2.	LHP411/2	Effective Writing
3.	LHP412/2	Effective Oral Presentation
4.	LHP458/2	English for Translation (offered in Semester 2 only)
5.	LHP459/2	English for Interpretation (offered in Semester 1 only)

(vi) Foreign Language Courses

The foreign language courses offered by the School of Languages, Literacies and Translation can be taken by students as option or compulsory courses to fulfil the number of units required for graduation. Students are not allowed to register for more than one foreign language course per semester. They must complete at least two levels of a foreign language course before they are allowed to register for another foreign language course. However, students are not required to complete all four levels of one particular foreign language course. The foreign language courses offered are as follows:

Arabic	Chinese	Japanese	German	Spanish
LAA100/2	LAC100/2	LAJ100/2	LAG100/2	LAE100/2
LAA200/2	LAC200/2	LAJ200/2	LAG200/2	LAE200/2
LAA300/2	LAC300/2	LAJ300/2	LAG300/2	LAE300/2
LAA400/2	LAC400/2	LAJ400/2	LAG400/2	LAE400/2

French	Thai	Tamil	Korean
LAP100/2	LAS100/2	LAT100/2	LAK100/2
LAP200/2	LAS200/2	LAT200/2	LAK200/2
LAP300/2	LAS300/2	LAT300/2	LAK300/2
LAP400/2	LAS400/2		