COURSE OFFERING (SEMESTER 2, SESSION 2023-2024)
TEACHING ENGLISH AS A SECOND LANGUAGE PROGRAMME
FACULTY OF PSYCHOLOGY & EDUCATION, UNIVERSITI MALAYSIA SABAH

NO	COURSE CODE	COURSE NAME	YEAR
1	TE10503	TEACHING WRITING SKILLS	2
2	TE30603	ICT IN ENGLISH LANGUAGE TEACHING	2
3	TE20303	MATERIALS DEVELOPMENT	2
4	TE10203	SECOND LANGUAGE ACQUISITION	1
5	TE20103	INTRODUCTION TO SEMANTICS	1
6	TE20403	ENGLISH SYNTAX AND THE STRUCTURE OF ENGLISH	1
7	TE10103	LITERATURE AND LANGUAGE LEARNING	1

Note: Semester two will begin on 18 March 2024. Please see academic calendar below for more details.

SENARAI PENAWARAN KURSUS

FAKULTI PERNIAGAAN, EKONOMI DAN PERAKAUNAN

FACULTY OF BUSINESS,ECONOMICS AND ACCOUNTANCY

SEMESTER : 2   SESI: 2023/2024

NO	COURSE CODE	COURSE NAME	CREDIT HOUR
1	BT12303	MANAGEMENT	3
2	BT11903	CORPORATE COMMUNICATION	3
3	BT10203	MICROECONOMICS	3
4	BT12003	MARKETING	3
5	BT10903	BUSINESS MATHEMATICS	3
6	BT12503	BUSINESS FINANCE	3
7	BT11703	MACROECONOMICS	3
8	BT22303	HUMAN RESOURSE MANAGEMENT	3
9	BT12203	BUSINESS ACCOUNTING	3
10	BT22003	ENTREPRENEURSHIP	3
11	BT22003	BUSINESS LAW	3
12	BT22103	BUSINESS INFORMATION SYSTEM	3
13	BT21803	MACROECONOMICS II	3
14	BT21303	ORGANIZATIONAL BEHAVIOR	3
15	BT31303	STRATEGIC MANAGEMENT	3
16	BT21403	OPERATION MANAGEMENT	3

LIST OF COURSES OFFERED FOR INBOUND MOBILITY (2ND SEMESTER INTAKE)

THE ACADEMY OF ARTS & CREATIVE TECHNOLOGY (ACT)

	UH6212001 - MUSIC				
NO.	COURSE CODE	COURSE NAME	COURSE DESCRIPTION	CREDIT HOUR	YEAR/ SEMESTER
1	CM11401	MUSIC NOTATION SOFTWARE	This course focuses on the usage of Music Notation Technology. The course cover not only the knowledge in music notation, but also the history and the development of musical notation, music notation for education, understanding the different types of musical score notation used in different settings such as in concerts, smaller ensembles, symphonic band, big orchestra and commercial jazz band.	1	1/2
2	CM13103	MALAYSIAN TRADITIONAL MUSIC II	This course give students the opportunity to play traditional instruments that are commonly found in Malaysia and one of these instruments is the gamelan. The students are taught to read numbers, a form of musical notation, to play the various gongs that are found in a Gamelan ensemble. Local repertoires would include traditional and popular tunes.	3	1/2

	UH6212002 - CREATIVE ARTS				
NO.	COURSE CODE	COURSE NAME	COURSE DESCRIPTION	CREDIT HOUR	YEAR/ SEMESTER
1	CA10603	BASIC ACTING	This course is a basic acting course that focuses on the history of the development of acting art and an introduction to an actor's self-preparation techniques. Students will be exposed theoretically and practically on the basis of existing acting theory. This exposure is to enable students to make initial preparations before they focus in the theatre module and learn in depth about specific acting techniques.	3	1/2
2	CA24002	MALAYSIAN DANCE II	This course is an extension of the Malaysian dance course. But in this course provides mastery over finer movement techniques and orderly politeness more challenging in traditional Malaysian dance. Apart from mastering the technique and internal order movement, students also need to understand and master the concept of the performance as well as the background traditional dance learned.	2	2/2
3	CA32003	NEW MEDIA WRITING	This course improves students' skills and understanding in the field of writing using new media, which is the internet such as blogs, social sites, and YouTube. This course provides an opportunity to students to explore new career opportunities in the field of creative writing.	3	3/2

UH6210001 - VISUAL ARTS TECHONOLOGY					
NO.	COURSE CODE	COURSE NAME	COURSE DESCRIPTION	CREDIT HOUR	YEAR/ SEMESTER
1	CV10602	DIGITAL GRAPHIC PRODUCTION II	This course provides students with an understanding and skills in photography and image editing in graphic design through screen display. Students explore basic photography skills in terms of techniques, methods and concepts of producing graphic artwork. Students are given exposure to the publication of e-books aimed at documenting works in addition to sketches in the folio.	2	1/2
2	CV10202	VISUAL ART LITERACY II	Students are exposed to the principles of design and structures, to understand the concept of object production through organized artistic methods and processes. Mastery and understanding of the elements of art, design principles and design structures can effectively increase the potential to work ethically through the exploitation of creative and innovative media. Learning specifically to design principles through exploitation, media diversity and techniques help and improve students' abilities in the context of producing a design.	2	1/2
4	CV21202	BASIC 3D ANIMATION	This course touches on the basic concepts of model construction in 3D animation as a whole. It explains how 3D models in animation are built, types, and ways of applying mesh models, materials, lighting, texture mapping, rendering methods, cloth, hair, and special effects. This course introduces the basics of 3D model making before students produce a final project. The platform used for the production of 3D animated models is Macintosh or PC Platform, in addition to the use of open-source software: Blender, and the introduction to Maya and 3D Studio Max.	2	2/2

LIST OF COURSES OFFERED FOR EXCHANGE STUDENTS PROGRAMME (INBOUND MOBILITY)
SEMESTER 2, 2023/2024
FACULTY OF COMPUTING AND INFORMATICS

UH6481001/HC00 - COMPUTER SCIENCE (SOFTWARE ENGINEERING)					
NO.	COURSE CODE	COURSE NAME	COURSE DESCRIPTION	CREDIT HOUR	YEAR/ SEMESTER
1	KT24603	DATABASE	This course introduces the fundamentals of database, database management systems, and database systems. Topics like normalization, SQL, entity relationship diagram, database transactions, backup and security are taught to expose the students on the complexity of modelling the real-world application systems with database. Other topics covered include principles and methodologies of database design, and techniques for database application development.	3	2 / Sem 2
2	KT24403	OPERATING SYSTEM	The operating system provides a well-known, convenient, and efficient interface between user programs and the bare hardware of the computer on which they run. The operating system is responsible for allowing resources to be shared, providing common services needed by many different programs. Particular emphasis will be given to three major OS subsystems: process management (processes, threads, CPU scheduling, synchronization, and deadlock), memory management (segmentation, paging, swapping), file systems, and operating system support for distributed systems. Thus, this course will introduce to students the basic design and implementation of Operating System. Student will learn computer system structures, memory management, process synchronization, file system and CPU scheduling.	3	2 / Sem 2
3	KK24402	GRAPHICS AND VISUALISATION	Graphics and Visualisation concepts algorithms are found in a significant and increasing number of modern applications and this is a trend that is likely to continue. Today's computing graduates need a firm grasp of graphics fundamentals such as vectors, coordinates systems, modelling, cameras and rendering. This course aims to provide a firm foundation for such topics and is intended to be both immediately useful and the basis for further study.	2	2 / Sem 2
4	KK35203	UI/UX DESIGN	This course teaches the principles and practice of UI/UX design. User Interface (UI) design refers to the way the interface looks (the actual layout of its elements). User Experience (UX) design tackles how it feels to use the product (what do we do and how do we feel). Students will learn and demonstrate their understanding of the concepts of UX/UI via group projects and presentations to design, implement and evaluate system interfaces.	3	3 / Sem 2
5	KK35403	MOBILE APPS DEVELOPMENT	Mobile app development is rapidly growing. From retail, telecommunications and e-commerce to insurance, healthcare and government, organizations across industries must meet user expectations for real-time, convenient ways to conduct transactions and access information. This course is designed to show students how to create consumable web services for mobile devices, walk students through the design and development of mobile user interfaces. It uncovers what students need to get started in coding mobile webapps and provide the tools for development.	3	3 / Sem 2

UH6481002/HC05 - COMPUTER SCIENCE (NETWORK ENGINEERING)

NO.	COURSE CODE	COURSE NAME	COURSE DESCRIPTION	CREDIT HOUR	YEAR/ SEMESTER
1	KP14203	OBJECT-ORIENTED PROGRAMMING	This course is an introduction to object-oriented programming using Java. Students will learn how to write object-oriented programs by exposing them to the concepts of class, how to define their own classes, inheritance and polymorphism. Apart from that, some important features of Java will be discussed. These include control structures, event-driven programming, and file I/O.	3	1 / Sem 2
2	KT14803	NETWORK FUNDAMENTALS	To provide an integrated and comprehensive coverage of networking topics, from fundamentals to advanced applications and services, while providing opportunities for hands-on practical experience. The course teaches networking based on technology, covering networking concepts using a top-down, theoretical, and integrated approach – from network applications to the network protocols and services provided to those applications by the lower layers of the network.	3	1/Sem 2
3	KT24202	ARTIFICIAL INTELLIGENCE	This is a general introductory course to AI. This course aims to introduce the principles and fundamental techniques of artificial intelligence, and in particular, machine learning. Students will learn the fundamentals and state-of-the-art techniques and acquire practical insights into the current development of this field.	2	2 / Sem 2
4	KP24603	ENTERPRISE NETWORKS AND WIRELESS TECHNOLOGIES	This course describes the architectures and considerations related to designing, securing, operating, and troubleshooting enterprise networks. This course covers wide area network (WAN) technologies and quality of service (QoS) mechanisms used for secure remote access. Students gain skills to configure and troubleshoot enterprise networks and learn to identify and protect against cybersecurity threats.	3	2/Sem 2
5	KP34213	NETWORK PROGRAMMING	This course will provide students with a fundamental understanding of network programming through Python. It includes the overview of Python and covers the topics of TCP/IP, sockets, HTTP, and client-server architecture. You will acquire the knowledge of the basic concepts, modules, and third-party libraries that you are likely to use when communicating with remote machines using the most popular Internet communication protocols.	3	3 / Sem 2

UH6481003/HC12 - MULTIMEDIA TECHNOLOGY

NO.	COURSE CODE	COURSE NAME	COURSE DESCRIPTION	CREDIT HOUR	YEAR/ SEMESTER
1	IM22403	Technopreneurship	The course equips students with the entrepreneurship skills in technology where they will learn to create business ideas, analyze market opportunities, develop business model, prepare business plan, evaluate marketing strategy, conclude financial analysis, as well as to manage business activities and projects.	3	Sem 2 2023/2024
2	IM32503	System Analysis and Design	This course will provide students with fundamental aspects in developing Information Technology projects. They will learn basic skills, methodologies, techniques, tools and perspective essential for systems analysts to develop information systems.	3	Sem 2 2023/2024
3	IM33203	Management Information System	This course teaches students how organizations use ICT and Information Systems to achieve their objectives. In the early part of this course, the discussions focus on how organizations use Information Systems to achieve their objectives. It is then followed by a discussion on how to secure an information system. The latter parts discuss how IS can help managers to enhance decision making processes.	3	Sem 2 2023/2024
4	IT32703	Internet of Things	This course will describe the market around the Internet of Things (IoT), the technology used to build these kinds of devices, how they communicate, how they store data, and the kinds of distributed systems needed to support them. Divided into four modules, students will learn about the Iot Concepts and architecture, Iot Enabler and Solutions, Iot data and knowledge management, and IoT Reliability, Security, and Privacy.	3	Sem 2 2023/2024
5	IT22703	Cloud Computing	This course introduces the core concepts of cloud computing. Students will gain the foundational knowledge of cloud computing technologies from a business perspective as also for becoming a cloud practitioner. The topics include standards-based cloud systems and their architecture. This subject also discusses multiple cloud delivery models, the plan for migration to a cloud model, governance, and security issues in a cloud model, and managing the cloud infrastructure.	3	Sem 2 2023/2024

UH6481004/HC13 - INFORMATION TECHNOLOGY (BUSINESS COMPUTING)					
NO.	COURSE CODE	COURSE NAME	COURSE DESCRIPTION	CREDIT HOUR	YEAR/ SEMESTER
1	IE12203	Business Management	As e-commerce students, the course is outlined as an introduction to management principles in the context of business & management. It is necessary for the students to be equipped with necessary business skills and knowledge in order for them to carry out task and responsibilities in a competitive business environment in which technical skills are not sufficient to meet the challenges. This subject will mold the students with the fundamental knowledge and practice in managing e-business.	3	2023/ SEM 2
2	IT22303	Statistic	This course provides the undergraduate students with the knowledge from both descriptive and inferential statistics. This course covers the methods for describing sets of data, the theory of probability and probability distribution, performing estimation and hypothesis.	3	2023/ SEM 2
3	IT22103	Object Oriented Programming	This course introduces the fundamentals of Java Programming. In the first part, we discuss the basic concepts such as data types, syntax, flow control (sequence, selection and iteration), methods and arrays. In the second part, object-oriented programming concepts (class, object, inheritance, composition, UML class diagram, abstract class and interface class) are presented. In the last part, graphical user interface (GUI), event handling and exception are discussed.	3	2023/ SEM 2
4	IT22803	Big Data	This course provides an in-depth coverage of various topics in big data from data generation, storage, management, transfer, to analytics, with focus on the state-of-the-art technologies, tools, architectures, and systems that constitute big-data computing solutions in high-performance networks. Real-life big data applications and workflows in various domains (particularly in the sciences) are introduced as use cases to illustrate the development, deployment, and execution of a wide spectrum of emerging big-data solutions.	3	2023/ SEM 2
5	IE22803	E-Commerce Application Development	This course will provide students with a fundamental understanding as to how an HTML-compliant web site was developed, implemented, and maintained by using the Internet programming language. Students also learn two types of web programming language; client-side scripting (HTML5, CSS3, Canvas and JavaScript) and server- side scripting (PHP) with a simple connection to the SQL database (MySQL) using Apache Web Server.	3	2023/ SEM 2

UH6481005/HC14 - COMPUTER SCIENCE (DATA SCIENCE)

NO.	COURSE CODE	COURSE NAME	COURSE DESCRIPTION	CREDIT HOUR	YEAR/ SEMESTER
1	KT14203	COMPUTER ARCHITECTURE AND ORGANIZATION	This course is outlined to To enable student to explore the architecture of computer systems and technology behind the computer design.	3	1 / Sem 2
2	KT14403	DISCRETE STRUCTURE	This course covers logic, set theory, combinatorics, graph theory, discrete probability, and their applications in computer science. It provides students with a solid foundation in essential concepts and techniques used in the analysis and design of algorithms and data structures. Students will learn about propositional and predicate logic, set theory, counting techniques, graph theory, and probability. Overall, this course is essential for students to understand and analyze algorithms and data structures in computer science and mathematics.	3	1 / Sem 2
3	KD14403	FUNDAMENTAL OF DATA SCIENCE	This course covers managing the data science process itself. The data scientist must have the ability to measure and track their own project. This course also applies many of the most powerful statistical and machine learning techniques used in data science projects. It also involves a series of explicitly worked exercises in using the programming language R to perform actual data science work. Students will be preparing presentations for the various stakeholders: management, users, deployment team, and so on. Students must be able to explain the work in concrete terms to mixed audiences with words in their common usage, not in whatever technical definition is insisted on in a given field.	3	1 / Sem 2
4	KD34203	DATA VISUALIZATION	The aim of the course is to expose students to the basic concepts and techniques in data analysis and also in coding and building a visualization tool for data analysis. At the end of the course, students should be able to evaluate the relationship between variables, describe several methods that 'tour' the data looking for interesting structure (holes, outliers, clusters, etc.), develop and implement a program to visualize the output of the data analysis.	3	3/sem 2
5	KD34403	MACHINE LEARNING FOR DATA SCIENCE	This is an introductory course in machine learning (ML) that covers the basic theory, algorithms, and applications in Machine Learning. This course balances theory and practice and covers the mathematical as well as the heuristic aspects. The course will give the student the basic ideas and intuition behind modern machine learning methods as well as a bit more formal understanding of how, why, and when they work.	3	3/sem 2

LIST OF COURSES OFFERED FOR EXCHANGE STUDENTS PROGRAMME
(PHYSICAL INBOUND MOBILITY)
FACULTY OF MEDICINE AND HEALTH SCIENCES

DIPLOMA IN NURSING					
NO.	COURSE CODE	COURSE NAME	COURSE DESCRIPTION	CREDIT HOUR	YEAR/ SEM
1	MN20603	Gerontology Nursing	This module will provide students with basic knowledge on the psychological, physiological and sociological changes of aging, the types of health care and community-based facilities for senior citizens.	3	2/2
2	MN21002	Psychology and Counseling	This module enables learners to acquire and apply knowledge and skills in psychology and counselling. Learners will learn how to apply behavioural science theory to understand individual, family and community health behaviours to promote health for risky behaviour change.	2	2/2
3	MN21202	Nursing Informatics	This course trains students with the basic Information Technology (IT) concepts needed for joining nursing course. This course will benefit students who wishes to arm themselves with substantive computer knowledge and skills. This course covers introduction to computers and its architecture, application and software, introduction to multimedia and its application, introduction to internet, healthcare information system, computer in nursing education and research, computer in nursing practice and admin, and electronic communications.	2	2/2
4	MN10404	Medical Surgical Nursing I (Perioperative, Palliative, Ciommunicable Diesease And Altered Health Pattern)	This course provides students with a comprehensive understanding of perioperative nursing care, palliative care, communicable diseases, and altered health patterns. It emphasizes the knowledge and skills necessary to deliver safe and effective nursing care to patients undergoing surgical procedures, those requiring palliative support, and those with communicable diseases or altered health patterns. The course combines theoretical instruction, and hands-on practice in clinical skills labs to develop students' competency in assessing patients accurately and performing nursing care procedures safely.	4	1/2
5	MN11202	Pharmacology In Nursing	The Pharmacology in Nursing course provides students with a comprehensive understanding of the principles and safe administration of drugs. It covers various systems of drug classification and naming, drug regulation, important terminology, and the fundamental principles to ensure the safe administration of medications. Through this course, students will gain knowledge in drug dosage calculation, understanding the international system of units, and become familiar with pharmacological terminology and drug classification.	2	1/2

NO.	COURSE CODE	COURSE NAME	COURSE DESCRIPTION	CREDIT HOUR	YEAR/ SEMESTER
BACHELOR OF NURSING					
1	MJ10803	Introduction to Theory and Philosophy of Nursing	This course will provide students with an understanding of selected concepts and theories related to professional nursing practice. Historical, legal, cultural, economic, and social factors that influence nursing and health care delivery are analysed. Various philosophical perspectives on professional nursing practice will be discussed. Nursing theories are addressed as frameworks for practice. Strategies are discussed for analysing and managing ethical dilemmas in nursing and health care.	3	1/2
2	MJ11004	Fundamental of Nursing	This course will prepare the student with the knowledge of nursing skills on basic nursing procedure. Student are exposed to critical thinking skills and problem solving skills while performing the procedures. Students will also be exposed with the process of critical thinking development during performing the basic nursing care, and the opportunity to develop Nursing Care plans within a nursing process framework. The students will be placed in the Clinical Skills lab to acquire basic nursing skills competency.	4	1/2
3	MJ20202	Epidemiology	In this course, the students are exposed to study the causes, risk factors, environmental hazards, epidemiological triads, preventive measures and epidemic situation of health related diseases in specific population settings such as schools, cities, states, countries and global. Students will have the opportunity to explore the control and implement epidemic measures to stop the spread of the diseases.	2	2/2

LIST OF COURSES OFFERED FOR EXCHANGE STUDENTS PROGRAMME
(INBOUND MOBILITY)
SEMESTER 2-2023/2024 (MAC 2024)

FACULTY OF SCIENCE AND NATURAL RESOURCES

UH6545001 - BIOTECHNOLOGY					
NO.	COURSE CODE	COURSE NAME	COURSE DESCRIPTION	CREDIT HOUR	YEAR/ SEMESTER
1	SY12403	Biochemistry	Understanding the basics of biochemical principles pertaining carbohydrates, amino acids, lipids and nucleic acids. These disciplines of science also give insights into the mechanisms of growth, development, metabolism, enzyme activity and operon. Biochemical laboratory principles and practical will be conducted in order to understand the role of biological molecules in cellular metabolism.	3	2/2
2	SY12603	Microbiology	This course is designed to provide basic knowledge in the study of microbiology and practical experience of basic techniques in microbiology. Microbial techniques are important in biotechnology fields because microorganisms are the basic model in understanding higher organism.They are the key to the biological revolution and model for genetic manipulation. Microbiology is also considered important in biotechnology fields because microorganisms are important in their effect on the health and well-being of all living creatures, including humans, and they are the key to the biological revolution in genetic engineering. In addition, they are vital to environmental science, food production, and the marine environment.	3	2/2
3	SY12803	Genetik Molecule	Molecular genetics is an important component of biotechnology. The course will facilitate the understanding of principle and processes involved in DNA replication, genome structure and organization in prokaryotes and eukaryotes, RNA transcription and Protein translation. Laboratory modules will engender the development of professional skills required in the modern biotechnology industry. Guided presentation modules ensure the effective reinforcement of knowledge and facilitate the communication of ideas, both of which are pre-requisites to professionalism.	3	2/2
4	SY22403	Prinsipal Plant Sel dan Tisu Culture	The basic concepts of plasticity and totipotency will be explained. The principles covering topics such as media composition, laboratory setup, aseptic technique and various techniques in plant tissue cultures will be discussed. Application of plant cell and tissue cultures technology in clonal propagation (micropropagation) and production of secondary metabolites will be explained.	3	2/2
5	SY23002	Genetic Engineering	This course is a major component in the discipline of biotechnology. It is designed to address the intricacies of gene manipulation in plants, animals, humans and microbes. This course will provide essential information in the	3	2/2

NO.			area of modern biotechnology including the principles of gene manipulation, library construction, gene expression and its regulation. Students possessing knowledge in genetic engineering are highly sought after by the biotechnology industry.		
6	SY32203	Bioproses Industri	This course aims to complement the knowledge and concepts presented in SY32103 (Biochemical Engineering). In this course, the student is introduced to the more important topics about the fermentation process and apparatus design. It focuses on the downstream processing aspects of biotechnology and will allow students to be aware of how products and processes are commercialized. The central theme of this course is to provide students with the knowledge and understanding of the technology, processes, regulatory requirements and commercial issues involved in the production and commercialization of biotechnology products. Topics to be discussed include microbial growth techniques, isolation, presentation, media characteristics, sterilization, large-scale cell culture, fermentation, downstream processing of products including separation and purification technology, process design, standard operating procedures, compliance and regulatory requirements and the commercialization considerations in the design of a downstream process are extensively taught. The course also will allow the students to understand the relationship between other units of operations and the fermentation process. Applications of fermentation technology were covered at the end of the syllabus.	3	2/2

UH6545002 - INDUSTRIAL CHEMISTRY					
NO.	COURSE CODE	COURSE NAME	COURSE DESCRIPTION	CREDIT HOUR	YEAR/ SEMESTER
1	SK22602	Catalyst And Catalysis	This course covers introduction to the catalyst and its classification, catalyst preparation, characterization techniques, catalytic reaction and catalyst deactivation. The application of catalysts in the petrochemical industry, fine chemical and organic synthesis will be highlighted. Current application in energy-conversion technologies, greenhouse gas pollution control and water treatment also will be discussed.	2	2/2
2	SK23402	Residue and pesticide analysis	This course discusses the types of pesticides and their toxicity, mode of action of pesticides, movement and changes of pesticide residues in the environment and their effects on life especially humans. Sample preparation will be discussed in detail where new techniques will be incorporated. Pesticide residue analysis methods will be discussed using modern equipment such as GC/MS, GC/FID/ECD/NPD, HPLC etc.	2	2/2
3	SK34803	Nanotechnology	This course focuses on the definition, history,	3	3/2

NO.	COURSE CODE	COURSE NAME	COURSE DESCRIPTION	CREDIT HOUR	YEAR/ SEMESTER
			scope, impact and challenges in the field of nanotechnology that is being rapidly explored and developed. Discussions will cover various nanotechnology production techniques and studies on basic nanomaterials, nano-structures. Processes used in nano-construction include nano-tubes, nano-rods, colloids, patches, joints, wires and films. Comparisons and differences of "top down" and "bottom up" techniques will be discussed. Characterization techniques will be discussed in detail with emphasis on the fields of spectrocopy, radiation scattering, scanning electron microscopes, electron emitting microscopes and X-rays.		
4	SK33203	Natural Products Chemistry and Drug Discoveries	This course discusses the isolation of compounds from natural sources, their chemical and spectroscopic properties as well as their biogenesis and biosynthesis. The process of drug discovery from natural products that is closely related to the pharmaceutical industry is also emphasized. It includes fatty and oleochemical compounds, carbohydrates, chitin, amino acids and proteins, terpenoids and steroids, aromatic compounds, flavonoids and alkaloids. Drug findings from various sources will also be discussed.	3	3/2
5	SK34403	Biofuel Technology	Basic concepts in understanding biofuel / bioenergy systems; renewable raw materials, their production, availability and properties for biofuel / bioenergy production; types of fuels and energy derived from biomass; the thermochemical conversion of biomass into heat, power and fuel; biochemical conversion of biomass into fuel; environmental aspects of biofuel production; economics and biofuel life cycle analysis; adding value to biofuel waste; basic techno-economic analysis of biofuel production.	3	3/2
6	SK34003	Advanced Inorganic Materials	This course focuses on understanding the concept of Cradle to Grave and sustainability in the procurement, manufacturing and use of advanced materials in industrial processes and products. Emphasis is given to Material Resources, Productivity and Environmental costs for selected high value commercial products.	3	3/2

UH6461001 - MATHEMATICS WITH ECONOMICS					
NO.	COURSE CODE	COURSE NAME	COURSE DESCRIPTION	CREDIT HOUR	YEAR/ SEMESTER
1	ST00802	Data Analysis with Statistical Package	A clear understanding of the concepts and practical of statistical programming package will help students to become more familiar with the nature of analyzing data in statistics.	2	1/2
2	SM14203	Mathematics II	This course contains topics such as vectors in 2D and 3D spaces, sequences and series, infinite series, power series, polar coordinate system and coordinate geometry.	3	1/2

3	SM24203	Linear Algebra	A clear understanding of the concepts of linear algebra will allow students to become more familiar with the nature of definition and proof in mathematics. A first course in linear algebra also serves as an introduction to the development of logical structure, deductive reasoning, and mathematics as a language.	3	1/2
4	SJ14403	Macroeconomics	To give a basic understanding on the system of overall economy. Macroeconomics is the study of the economy as a whole. This course is a further study from microeconomics course, of which the students studied on the economic behavior of individual consumers, firms, and industries. In this macroeconomics course, the students will study in a broader context of the economy such as the characteristics of aggregate economic variables, and how various fiscal, monetary policies and international trade policies affect the economy.	3	1/2
5	SJ24402	Financial Management	This course is an introduction course in the field of finance. It covers the main idea in finance that starts with a general background, conceptual framework and techniques to assist in managing financial decision. The main focuses are towards fundamental principal, exercises and financial management procedures.	2	2/2

UUH6461002 - MATHEMATICS COMPUTER GRAPHICS					
NO.	COURSE CODE	COURSE NAME	COURSE DESCRIPTION	CREDIT HOUR	YEAR/ SEMESTER
1	SV10203	Aljabar Linear Berangka	In this course, the students will learn the basic concepts on vectors, matrices, continues with systems of equations with some method in order to solve the matrices of the systems. Finally, the discussion leads to the idea of adequacy of solutions and the eigenvalues and eigenvectors.	3	1/2
2	SV10403	Pengaturcaraan Komputer	This course provides students with a basic understanding of programming development practices starting from designing algorithm based on the fundamental concept of programming logic. Concepts covered will include the application of algorithms and logic to the design and development of procedural programs to address the problem-solving procedure required in computer programming field. This course will cover procedural programming concepts including data types, controls structures, iterations, functional decomposition, arrays and input validation.	3	1/2
3	SV10603	Matematik Diskret	The purpose of this course is to teach students how to think mathematically by learning a particular set of mathematical facts and how to apply them. To achieve these goals, some important fields are covered such as logic and proofs, basic structures, algorithms, number theory, counting, discrete probability, relation, graph theory and Boolean algebra.	3	1/2

UH6422001 - ENVIRONMENTAL SCIENCE

NO.	COURSE CODE	COURSE NAME	COURSE DESCRIPTION	CREDIT HOUR	YEAR/ SEMESTER
1.	SS11203	Environmental Ecology & Microbiology	This course will discuss in detail aspects of ecology and environmental microbiology with strong emphasis on aspects related to the environment. Topic such as aquatic ecology (e.g. river ecology; marine ecology), microbial ecology; soil and water microbiology; role of environmentally-related microorganisms (ERM) in the ecosystem and in pollution control/treatment will be covered. Fieldtrips and laboratory practicals will be carried out to enhance student's understanding on these topics.	3	1/2
2.	SS21203	Water Quality Analysis	This course discusses aspects of theory and practical pertaining to methods of water analysis. The water analysis covers physical, chemical and biological parameters, and emphases are made on the sampling method, sample treatment and preservation, techniques and analytical equipment.The aspects of data analysis, quality control and data interpretation are discussed. Students will be doing a mini project towards the end of the semester as training in the application of the knowledge gained earlier.	3	2/2

UH6624001 - AQUACULTURE

NO.	COURSE CODE	COURSE NAME	COURSE DESCRIPTION	CREDIT HOUR	YEAR/ SEMESTER
1	SQ11203	Water quality management	This course provides an understanding of water quality that helps make aquaculture more environment-friendly and productive. Factors that affect water quality are explained. Water management and disposal methods are given emphasis. Topics of discussion include effects of pollution on aquaculture – problems associated with survival, growth and reproduction of cultured animals and public health problems.	3	1/2
2	SQ21203	Broodstock management and seed production	The aims of the course are to provide the essential principles of broodstock management and seed production of various important fish species and other species in aquaculture. This subject will encompass aspects from sourcing broodstock to egg collection, larval rearing to transportation of the seed to grow-out farms.	3	2/2
3	SQ21603	Immunology of aquaculture animals	This course will provide students to develop knowledge among students about the fish's immune system, its interaction with fish pathogens and responses to stimulation and vaccines. This knowledge is developed through lectures, individual or group work, written assignment submissions and through laboratory courses. Course provides an overview of the immune system in fish with emphasis on aquaculture species. The student will learn about the different organs, cells and molecules and how these work and collaborate, and how cells and functions are regulated and	3	2/2

			stimulated. The students are especially to develop knowledge about vaccines and immune stimulants for aquatic organisms with emphasis on the immune prophylaxis for aquaculture species.		

UH6443003 - MARINE SCIENCE

NO.	COURSE CODE	COURSE NAME	COURSE DESCRIPTION	CREDIT HOUR	YEAR/ SEMESTER
1.	SL23603	Meteorology and Climate Change	Meteorology is the study of the atmosphere's motion and other phenomena to aid in forecasting weather and explaining the processes involved. It presents information about the science of the atmosphere and its effects on the surface of the Earth and on life in general. The course outlines include the history, structure and dynamics of the atmosphere including fronts and frontal weather; observational methods; storms; temporal changes in climate. By the end of this course, students should have a good knowledge about weather and climate that will broaden their scope of knowledge in the geosciences. An accu- rate appreciation of weather signs and prognostics, the ability to read and understand meteorological instruments and the understanding of weather reports and charts are necessary knowledge in marine science and fisheries activities.	3	2/2
2.	SL24003	Coral Reef Ecology	This course will discuss aspects related to the ecology of coral reefs. Emphasis is placed on coral community structure, classification and distribution worldwide, and more specifically in Malaysia. Factors affecting and threatening the ecology of corals reefs will also be discussed. Students will also be exposed to the importance of conservation as well as aspects of management and rehabilitation of coral reefs.	3	2/2
3.	SL32103	Marine organic Chemistry	This course will cover topics in marine organic chemistry encompassing the various chemical states, processes and changes that occur in seawater and sediment. Carbon, oxygen, nitrogen, sulfur and phosphorus cycles will be correlated with natural processes in the marine ecosystem. Besides, production, degradation and diagenesis of organic matter will be explained. Other aspects such as chemistry of sediments, origin of petroleum and chemistry of marine natural products will also be discussed.	3	3/2

LIST OF COURSES OFFERED FOR EXCHANGE STUDENTS PROGRAMME (INBOUND MOBILITY)

FACULTY OF FOOD SCIENCE AND NUTRITION

UH6541002-FOOD SCIENCE AND NUTRITION					
NO.	COURSE CODE	COURSE NAME	COURSE DESCRIPTION	CREDIT HOUR	YEAR/ SEMESTER
1	NT10102	Fundamentals of Food Science and Nutrition	This dynamic course offers a comprehensive introduction to the fascinating world of food science and nutrition, tailored for mobility students. Dive into the exploration of food components, including both macro and micronutrients, and understand their pivotal roles in diets. Experience the exciting intersection of food science and culinary arts as the functionality of these components when used as ingredients. Gain critical insights into food microbiology, focusing on food safety - a vital skill in today's global food industry. The course covers the innovative techniques of food processing and preservation, equipped with knowledge essential for modern food practices. Lastly, delve into the world of nutrition, understanding how food choices impact health and wellness. This course is not just an educational journey; it's a gateway to understanding the science behind what we eat and how it affects our bodies.	2	1/1
2	NP20202	Molecular Nutrition	This introductory course offers a unique blend of advanced genetic concepts and practical nutritional applications. Delve into the fascinating world of gene-nutrient interactions and explore how they impact health and disease, with a special focus on Inborn Errors of Metabolisms (IEMs). This course is richly integrated with pioneering scientific research, providing students with exclusive insights into the latest findings. It's an exceptional opportunity for mobility students to gain a competitive edge in the evolving landscape of nutrition science.	2	2/2
3	NP30502	Nutritional Evaluation of Food Processing	This course discovers the fascinating world of food science, tailored for mobility students seeking a deeper understanding of how food processing impacts nutritional value. Engage with a blend of traditional and cutting-edge processing techniques, uncovering how they transform the macro and micronutrient profiles of foods. This course offers a unique opportunity to explore the intersection of food technology and nutrition, making it an ideal choice for students eager to delve into the evolving landscape of food science.	2	3/1
4	NP30302	Food Security	This interdisciplinary course will provide an introduction and overview of world food security, including social, political, environmental, and economic reasons for malnutrition and food accessibility. The course will cover the definition of food security, the indicators used to measure food security, how it links to nutrition and health as well as to livelihoods, what it is affected by, the consequences of food insecurity, and measures that are taken to mitigate these causes and consequences.	2	3/1

UH6541001-FOOD SERVICE

NO.	COURSE CODE	COURSE NAME	COURSE DESCRIPTION	CREDIT HOUR	YEAR/ SEMESTER
1	**NF30502**	**Foodservice Accounting**	The main emphasis of this course is to provide students with financial and management accounting concepts, techniques and tools. This course introduces accounting principles and methods to record transactions using a double entry system. It also introduces the methods to prepare financial statements and the components of financial statements. Some of the topics discussed in this course focus on the roles and responsibilities of management in an organisation. Students will also be exposed to how to provide, interpret and evaluate management accounting information in the decision-making process. Development of managerial decision-making skills is stressed through the coverage of the following topics: cost behaviour, cost-volume-profit analysis, profit planning and budgeting, standard costs and variance analysis, and relevant costs.	2	2/2
2	**NT11402**	**Fundamentals of Marketing**	This course aims to provide exposure to the core concepts of marketing as an important function in business to students. This course introduces the marketing concepts and elements of the marketing mix in one practical framework to achieve an understanding of the importance of marketing strategy in fulfilling customer needs for a business organization to maintain its position in a competitive environment. This course also focuses on the introduction of marketing, consumer behavior and the marketing mix, especially on retailing, wholesaling, promotion and marketing ethics.	**2**	**1/2**
3	**NF10102**	**Fundamentals of Food Service**	This course is regarding basic principles of food service management. The course covers knowledge regarding the history of food service and how it may shape the future of food service, current trends, and other related aspects in managing a food service operation such as procurement, menu planning and food safety.	**2**	**1/1**

UH6541004-FOOD TECHNOLOGY AND BIO PROCESSING

NO.	COURSE CODE	COURSE NAME	COURSE DESCRIPTION	CREDIT HOUR	YEAR/ SEMESTER
1	**NB20502**	**Food Enzymology**	The historical uses of enzymes to make beer, wine, cheese, and bread are fine examples of the industrial exploitation on its catalytic function and selectivity. This course covers the basic and applied aspects of enzymology important to food systems. The basic aspects of the course include the basic enzyme properties, factors that affect enzyme activity and methods of measuring enzymatic activities. In the other hand, the applied aspects focusing on the enzymes used by the food industry and methods or controlling endogenous enzyme activities.	2	2/1

2	**NB40802**	**Meat Science and Technology**	This course stresses the importance of both the theoretical and practical aspects of meat products processing. Students will be acquainted with the composition and structure of meat, post-harvest chemical changes in meat, determination of quality of the meat and factors affecting it, equipment, technology and ingredients used in meat products. Factors which affect the carcass quality during processing will also be discussed. Issues like animal handling from an international perspective, slaughter, and management of processing wastes will also be scrutinized.	**2**	**3/2**
3	**NE40402**	**Bakery and Confectionary Technology**	This course aims to introduce students to the bakery and confectionary technology been used in the food industry today. This involves knowledge of science and technology in bakery / confectionary process, the ingredients, popular produce product, manufacturing methods, the use of machinery and equipment, quality control, packaging, hygiene and sanitation and nutritional aspects. Students are given the opportunity to produce bakery and confectionary products during laboratory practice.	**2**	**3/2**
4	**NE41402**	**Marine and Aquaculture**	This course applies food science and technology to the handling, processing, storage of marine and aquaculture products. This course covers the sources and characteristics of raw material, quality changing during handling, preservation and processing and their quality characteristics (physical, microbiological and chemical). Knowledge acquired from this course will increase the students' capability to determine suitable methods of technologies involved in the production of various types of marine and aquaculture products.	**2**	**3/2**