COURSE CATALOG 2024

for

Sunway University's

School of American Education

American Degree Transfer Program

American Degree Transfer Program Course Catalog 2024

The Sunway University ADTP Course Catalog contains a brief course description as well as the number of credits, hours/week and the "Cognate Area" the course is classified under. The five (5) cognate areas listed below refer to General Education or University Core categories.

Most ADTP Courses are classified under one of the Five Cognate Areas:

1. Arts and Humanities
2. Quantitative Reasoning
3. Scientific Inquiry: Science and Technology
4. Social Sciences
5. Communication Literacy

Courses in the catalog are listed in alphabetical order by course code. A table explaining the course codes is provided on page 2 of the catalog.

The Sunway Universit'sy ADTP Course Catalog is published for informational purposes and is not a contract between a student and the University. Every effort is made to provide information that is accurate at the time of publication; however, information on courses, curricula, and other matters is subject to change at any time during the period for which the Catalog is in effect.

Full course syllabi with more detailed information are available upon request.
Please contact Ms. Doreen John: doreenj@sunway.edu.my.

COURSE CODE LEGEND

CODE	COURSE
ACCT	Accounting
ADVS	Advertising
ARTD	Art and Design
BIOL	Biology
BIOT	Biotechnology
BUCM	Business Communication
BUSN	Business
CHEM	Chemistry
COMM	Communication
CSCA	Computer Science
CSCI	Computer Applications & Information Technology
CSCP	Computer Programming, Data Structures & Web Programming
CSDB	Introduction to Databases
CSNW	Computer Networking
ECON	Economics
EENG	Electrical Engineering
ENGL	English
ENGR	Engineering
ENVS	Environmental Science

FINN	Finance
HIST	History
HPEL	Health and Wellness
JRNS	Journalism
MAND	Mandarin Language
MATH	Mathematics
MGMT	Management
MKTG	Marketing
MLAB	MATLAB
MU/ MPU	Malaysian Studies
MCW & MUSC	Music
PHIL	Philosophy
PHYS	Physics
POLS	Political Science
PSYC	Psychology
RELS	Religion & Mythology
SOCY	Sociology
STAT	Statistics
THEA	Theatre
UNIL	University Life – Freshman Seminar

Sunway ADTP COURSE DESCRIPTIONS

(Courses are listed in Alphabetical Order by Course Code)

ACCT 2013	**Basic Principles in Accounting**	**3** credits
	Lecture: 3 hours/week	
	Prerequisites: None	
	Cognate Area: Quantitative Reasoning	
	ACCT 2013 Principles in Accounting introduces students to the basic principles of financial accounting. It provides an understanding and framework for establishing the importance of having a proper accounting reporting framework to identify, record and communicate the economic events of an organization to interested users.	

ACCT 2023	**Managerial Accounting**	**3** credits
	Lecture: 3 hours/week	
	Prerequisites: ACCT 2013 Basic Principles in Accounting	
	Cognate Area/Major: Quantitative Reasoning	
	ACCT 2023 introduces students to the principles of management accounting. It provides the framework and basic techniques used in determining the costs of a product or service for a company. It is also concerned with the interpretation of cost information which assists management in planning, controlling, decision-making processes and performance evaluation of a company.	

ADVS 1013	**Principles of Advertising**	**3** credits
	Lecture: 3 hours/week	
	Prerequisites: None	
	Cognate Area: Communication Literacy	
	ADVS 1013 familiarizes students with the foundation and basic principles of advertising with a focus on the theories, concepts and practices of advertising. This course will allow students to comprehend advertising campaigns and embedded marketing communication concepts to further reinforce and enhance the principles and theories of advertising. The advertising environment is also discussed and consists of consumer behavior, market segmentation and positioning and value proposition, describing the process of evaluating different advertising messages and media and illustrating an appreciation for the importance of advertising in business and society.	

ARTD 1024	**Drawing Techniques and Process**	**4** credits
	Class Hours: 4.5 hours/week for 14 weeks **Hours/Semester:** (Lecture/Seminar: 28 hrs), (Tutorial/Workshop: 12 hrs) and (Practical/Visit/Demo: 42 hrs) *(Independent Learning = 78 hours)* **Total Hours/Semester: 160 hours**	
	Prerequisites: None	
	Cognate Area/Major: Arts & Humanities	
	ARTD 1024 Drawing Techniques and processes aims to develop and extend students' technical and creative skills through drawing and their understanding of drawing media, materials and techniques. The expected outcomes are that students will be able to demonstrate basic drawing skills, produce creative work showing imaginative approaches, originality and creative and effective use of visual language. Students should also be able	

	to develop new ideas ad approaches through the use of analysis, evaluation and discussion.

ARTD 1034	**History of Art and Design**	**4** credits
	Class Hours: 4.5 hours/week for 14 weeks **Hours/Semester:** (Lecture/Seminar: 45 hrs), (Tutorial/Workshop: 35 hrs) and (Practical/Visit/Demo: 10 hrs) *(Independent Learning = 70 hours)* **Total Hours/Semester:** 160 hours	
	Prerequisites: None	
	Cognate Area/Major: Arts & Humanities	
	ARTD 1034 History of Art and Design aims to extend knowledge and understanding of the research, analysis and application of historical and contextual skills to a selected field of study in the context of Art & Design. The following are expected outcomes: • Recognize and record influential factors and their impact on creative and aesthetic evolution • Present, organize and communicate information about design movements and their impact on design and architecture • Identify the historical, cultural, social and economic factors that have influenced modern design works • Evaluate the creative, cultural, political, economic and social contexts which impact on own practice in the field of design, and • Analyze textual and visual sources of Art and apply these in the context of own design work.	

ARTD 1044	**Introduction to Computer Graphics**	**4** credits
	Class Hours: 4.5 hours/week for 14 weeks **Hours/Semester:** (Lecture/Seminar: 28 hrs), (Tutorial/Workshop: 12 hrs) and (Practical/Visit/Demo: 42 hrs) *(Independent Learning = 78 hours)* **Total Hours/Semester:** 160 hours	
	Prerequisites: None	
	Cognate Area/Major: Arts & Humanities	
	ARTD 1044 Introduction to Computer Graphics allows students to develop and demonstrate proficiency in the use of graphic design software using industry standard software and hardware to realize conceptual ideas and produce final outcomes with professional studio classes. Students will integrate peripheral image gathering techniques using a variety of software, including graphic manipulation, layout, presentation and digitizing to produce digital images and presentations. Applying graphics and imaging skills will allow students to advance their skills in computer image making and begin to use applications such as Photoshop and Illustrator to develop and realize specific projects relating to their subjects of their majors. Students will expand their knowledge of these programs gaining an advanced understanding of specific and detailed functionality, tool sets, import / export options, output conditions and advanced image manipulation. Students will also further explore how to use these programs in conjunction with each other.	

BIOL 1013	**General Biology**	**3** credits
BIOL 1021	**General Biology Lab**	1 credit

	Lecture & Lab: 5 hours/week *(Separate course number for Lab, but taken concurrently)*	
	Lecture: 3 hours/week	**Lab:** 2 hours/week
	Prerequisites: None	
	Cognate Area: Science & Technology	
	BIOL 1013 General Biology is a comprehensive study that covers the concepts and principles of biology from the structure and function of the cell to photosynthesis, energy metabolism, cell division, Mendelian genetics and the organization of the biosphere. This course includes terms and principles governing living systems, solving problems related to biology from molecules to ecosystem and genetics as well as understanding how practical applications of biological issues impact daily life and society. **BIOL 1021 Laboratory for General Biology** is a comprehensive study which involves the use of scientific methodology and instrumentation to prepare, collect, analyze and interpret data about biological principles as well as interaction of people with their environment. The lab includes developing hypotheses based on observations, and designing and carrying out experiments with appropriate controls to test hypotheses, as well as interpreting data and drawing conclusions based on the data to communicate the findings in ways appropriate to the biological sciences.	

BIOL 1033 **BIOL 1041**	**Introduction to Cell Biology** **Introduction to Cell Biology Lab**	**3** credits 1 credit
	Lecture & Lab: 5 hours/week *(Separate course number for Lab, but taken concurrently)*	
	Lecture: 3 hours/week	**Lab:** 2 hours/week
	Prerequisites: None	
	Cognate Area: Science & Technology	
	BIOL 1033 Introduction to Cell Biology is a comprehensive study which covers biochemistry, cytology, photosynthesis, energy metabolism, cell division, Mendelian genetics, DNA structure and function as well as protein synthesis. It includes explaining the cell as the basic unit of all living organism, cell structures, analyzing and interpreting processes shared by all living organisms, and applying knowledge and understanding of cell biology in daily life. **BIOL 1041 Laboratory for Cell Biology** is a comprehensive study which involves the use of scientific methodology and instrumentation to prepare, observe, analyze and interpret data about biological principles. The lab includes developing hypotheses based on observations, and designing and carrying out experiments with appropriate controls to test hypotheses, as well as interpreting data and drawing conclusions based on the data to communicate the findings in ways appropriate to biological sciences.	

BIOL 1053 **BIOL 1061**	**Evolution, Diversity and Ecology** **Evolution, Diversity and Ecology Lab**	**3** credits 1 credit
	Lecture & Lab: 5 hours/week *(Separate course number for Lab, but taken concurrently)*	
	Lecture: 3 hours/week	**Lab:** 2 hours/week
	Prerequisites: Introduction to Cell Biology (BIOL 1033) with Lab (BIOL 1041)	
	Cognate Area: Science & Technology	
	BIOL 1053 Evolution, Diversity and Ecology is a comprehensive study which covers a broad range of topics including ecology, evolution and biological diversity which includes plants, animals, prokaryotes, fungi and protists. This course will examine a number of different life forms from simple to increasing levels of complexity. Students will be introduced to emerging fields of conservation biology and basic priorities of conservation needed to	

	preserve the Earth's biodiversity. Explaining the scientific evidence of evolutionary science, solving problems related to population genetics and evolutionary relationships as well as applying biological and environmental knowledge in their daily lives are included. **BIOL 1061 Laboratory for Evolution, Diversity and Ecology** is a comprehensive study that involves the use of scientific methodology and instrumentation to prepare, observe, analyze and interpret data related to biological principles including the analysis of hypotheses based on observations, and designing and carrying out experiments with appropriate controls to test hypotheses.

BIOT 1043 **BIOT 1051**	**Introduction to Biotechnology** **Introduction to Biotechnology Lab**	**3** credits 1 credit
	Lecture & Lab: 5 hours/week *(Separate course number for Lab, but taken concurrently)*	
	Lecture: 3 hours/week	**Lab:** 2 hours/week
	Prerequisites: Introduction to cell Biology (BIOL 1033)with Lab (BIOL 1041)	
	Cognate Area: Science & Technology	
	BIOL 1043 is a comprehensive course which provides a basic foundation for understanding biotechnology. This course exposes students to modern concepts and techniques in the field of biotechnology and the applications of recombinant DNA technology to animals, plants and microbial organisms. The foundations of modern biotechnology, positive and negative aspects of the ethical implications of biotechnology and common methods and applications of biotechnology are included. **BIOL 1051 Laboratory for Biotechonology** is a comprehensive study of the importance of laboratory skills and techniques in the field of biotechnology. Students will learn about sterilization and sample preparation especially involving bacteria, identify Gram positive and Gram negative, and extract and separate DNA through electrophoresis.	

BUCM 3013	**Business Communications**	**3** credits
	Lecture: 3 hours/week	
	Prerequisites: BUSN 1013 Introduction to Business and COMM 1023 Introduction to Human Communications	
	Cognate Area: Behavioral & Social Sciences	
	BUCM 3013 Business Communications is designed to give students a comprehensive view of communication, its scope and importance in business. It also highlights the role of communication in establishing favorable interpersonal relationships outside the firm environment, as well as effective internal communications. Various types of business communication media are applied in this course, and awareness of the importance of succinct written expression in modern business communication is emphasized.	

BUSN 1013	**Introduction to Business**	**3** credits
	Lecture: 3 hours/week	
	Prerequisites: None	
	Cognate Area: Behavioral & Social Sciences	
	BUSN 1013 introduces students to the fundamental concepts of Business. This is a basic course for the study of business in a global economy. In this course students will examine a variety of issues about business in society. Major areas to be covered include the study of business trends, business ownership, management, human resource management and	

	marketing. Students will produce and present a business plan for setting up a small business in this course.

BUSN 2013	**Introduction to Global Business**	**3** credits
	Lecture: 3 hours/week	
	Prerequisites: None	
	Cognate Area: Behavioral & Social Sciences	
	BUSN 2013 introduces students to the various functional areas of International Business such as trade, finance, law, management, marketing, etc. It also examines the importance of culture and its impact on human behavior, and brings home to students the importance of understanding cultural differences for the successful pursuit of a career in International Business. The course also introduces students to career opportunities in the field of international business.	

CHEM 1013	**Chemistry and Society**	**3** credits
CHEM 1021	**Chemistry and Society Lab**	**1** credit
	Lecture & Lab: 5 hours/week *(Separate course number for Lab, but taken concurrently)*	
	Lecture: 3 hours/week	**Lab:** 2 hours/week
	Prerequisites: None	
	Cognate Area: Science & Technology	
	CHEM 1013 Chemistry and Society emphasizes practical applications of chemistry to find ways to solve problems related to energy sources (fossil fuels, nuclear energy and solar energy), food (carbohydrates, oil and vitamins), medication, clothing and chemistry of the environment (earth, air and water). Students should take CHEM 1021 (Chemistry and Society laboratory) concurrently with this course to obtain credit. Credit does not apply for a major or minor in chemistry. Students should pass both CHEM 1013 and CHEM 1021 in order to obtain a credit for general education. **CHEM 1021 (Laboratory for Chemistry and Society)** introduces students to the importance and appreciation of laboratory skills and techniques to perform simple chemical testing related to the environment, food and household chemicals. Students will perform chemical tests related to air pollution, water pollution, food, soap and lotion.	

CHEM 1033	**General Chemistry I**	**3** credits
CHEM 1041	**Chemistry I Lab**	**1** credit
	Lecture & Lab: 5 hours/week *(Separate course number for Lab, but taken concurrently)*	
	Lecture: 3 hours/week	**Lab:** 2 hours/week
	Prerequisites: None	
	Cognate Area: Science & Technology	
	CHEM 1033 General Chemistry I introduces students to the theory and fundamental principles of chemistry. Topics that will be covered include stoichiometry, atomic structure, behavior of gases, thermochemistry, electron configuration and periodicity, chemical bonding and molecular geometry, and colligative properties of solutions. **CHEM 1041 (Laboratory for General Chemistry I)** introduces students to the importance and appreciation of laboratory skills and techniques in performing experiments. Experiments will: • illustrate chemical changes and reactions, making matches and solutions • explain various types of gravimetric and volumetric analysis	

	• determine heat transfer and energy content in food • perform colorimetric analysis for iron in food samples.

CHEM 1053	**General Chemistry II**	**3** credits
CHEM 1061	**Chemistry Lab**	**1** credit
	Lecture & Lab: 5 hours/week *(Separate course number for Lab, but taken concurrently)*	
	Lecture: 3 hours/week	**Lab:** 2 hours/week
	Prerequisites: General Chemistry I & General Chemistry I Lab (CHEM 1033 & 1021)	
	Cognate Area: Science & Technology	
	CHEM 1053 General Chemistry II is a continuation of CHEM 1033 General Chemistry l. The theories and fundamental principles of chemistry are emphasized in this course. Topics that are covered include chemical kinetics, chemical equilibrium, electrochemistry, acid–base reaction, thermodynamic and nuclear chemistry. This is followed by an in-depth coverage of inorganic chemistry of transition elements and its complexes. In the area of organic chemistry, a brief introduction of aliphatic and aromatic hydrocarbons, oxygen- and nitrogen- containing functional group organic compound is included. Laboratory work is required, demonstrating some of the principles covered in the lectures. **CHEM 1061 (Laboratory for General Chemistry II)** emphasizes to students the importance of laboratory skills and techniques to perform experiments related to topics covered in the lecture. Both qualitative and quantitative methods of analyses and techniques are incorporated into this laboratory. Laboratory topics include rate and order of reactions, factors affecting reaction rate, electrochemistry and equilibrium, acid-base titrations, syntheses of hydrated crystal salts and characteristics of organic functional groups, etc.	

CHEM 2013	**Organic Chemistry I**	**3** credits
CHEM 2021	**Organic Chemistry I Lab**	**1** credit
	Lecture & Lab: 5 hours/week *(Separate course number for Lab, but taken concurrently)*	
	Lecture: 3 hours/week	**Lab:** 2 hours/week
	Prerequisites: General Chemistry II & General Chemistry II Lab (CHEM 1053 & 1061)	
	Cognate Area: Science & Technology	
	CHEM 2013 Organic Chemistry I is comprised of a detailed survey of alkanes, alkenes, alkynes, alkyl halides, alcohols, ethers, and the aromatic hydrocarbons. The course emphasizes structures, properties, bonding and its relation to molecular structure, stereochemistry, mechanisms of reactions, and syntheses of these classes of organic compounds. In addition, the principles underlying ultraviolet-visible and infrared spectroscopy are covered, as well their use in determining the structural features of organic compounds. Laboratory work is required, demonstrating some of the principles covered in the lectures. **CHEM 2021 (Laboratory for Organic Chemistry I)** introduces the students to several basic organic chemistry techniques as well as demonstrating some of the key organic reactions covered in the lectures. Qualitative and quantitative techniques and methods of analysis are used. Labs include chemical reactions for alkanes and alkenes and differentiating between S_N1 and S_N2 reactions.	

COMM 1013	**Public Speaking and Presentation Skills**	**3** credits
	Lecture: 3 hours/week	

	Prerequisites: None
	Cognate Area: Communication Literacy
	COMM 1013 introduces students to underlying oral communication skills and techniques, including the fundamentals and principles of public speaking preparation and presentation. This subject will focus on presenting public speeches in business, professional and public settings. Practice in preparing, presenting and evaluating speeches as well as other forms of oral presentations such as informative, persuasive, and speeches for special occasions or ceremonies, etc. Distinguishing different types of public speaking, preparing effective and meaningful content, the value of suitable visual aids and the application of skills to deliver speeches and presentations are also included.

COMM 1023	**Introduction to Human Communication**	**3** credits
	Lecture: 3 hours/week	
	Prerequisites: None	
	Cognate Area: Communication Literacy	
	COMM 1023 Human Communication is an introductory course designed to provide students with a foundational understanding of human relationships through introducing concepts and skills relevant to creating and sustaining interpersonal relationships. Various topics will be covered from theoretical, practical, and experiential perspectives. Emphasis will be placed on the students' ability to articulate their understanding of the material in verbal, written, and small group contexts. Ultimately, this course is designed to facilitate the integration of complex theoretical aspects of interpersonal communication in practical ways, while stimulating students' ability to think critically through such issues.	

COMM 1043	**Communication and Social Engagement**	**3** credits
	Lecture: 3 hours/week	
	Prerequisites: None	
	Cognate Area: Communication Literacy	
	COMM 1043 Communication and Social Engagement is an introductory course to equip students with fundamental skills and practical applications in communication, with a particular emphasis on pivotal engagement to address and negotiate challenges that arise in the context of community and social frameworks. The course includes basic concepts and theories from a wide array of communication contexts with a focus on developing and improving communication skills for effective community engagement, understanding terminology common to the discipline of communication, creating and delivering informative and persuasive presentations, and applying communication concepts and theories to community engagement activities.	

COMM 2013	**Introduction to Communication Theory**	**3** credits
	Lecture: 3 hours/week	
	Prerequisites: None	
	Cognate Area: Communication Literacy	
	COMM 2013 Communication Theory introduces students to the basics of communication activities as well as the history and development of the field of communication. It also introduces students to a broad range of communication theories that will explain the various phenomena of communication, focusing on areas of interpersonal, group, organization, intercultural and mass communication.	

COMM 2023	**Communication Research Methodology**	**3** credits
	Lecture: 3 hours/week	
	Prerequisites: COMM 2013 Introduction to Communication Theory ENGL 2014 Introduction to Critical and Creative Writing is a pre-requisite or co-requisite.	
	Cognate Area: Communication Literacy	
	COMM 2023 Communication Research Methodology is designed to introduce students to the basics of quantitative and qualitative communication research methods. Students will also be taught the basics of performing communication research as well as reading and evaluating the communication research of others.	

COMM 2033	**Mass Media and Society**	**3** credits
	Lecture: 3 hours/week	
	Prerequisites: None	
	Cognate Area: Communication Literacy	
	COMM 2033 Mass Media and Society will help students attain an understanding of how mass media and its technologies are impacting society. It also exposes students to a comprehensive and current range of mass media and related issues associated with social development. The course also includes the background and development of mass media technologies as well as the operation of the industry including the legal and ethical environments in which these technologies operate. The following main sectors of the media and telecommunication fields are included: printing, broadcasting, cable, and the internet.	

COMM 2043	**Intercultural Communication**	**3** credits
	Lecture: 3 hours/week	
	Prerequisites: None	
	Cognate Area: Communication Literacy	
	COMM 2043 Intercultural Communication is an introductory course to equip students to examine key theories and practical applications as well as culturally coded communicative behaviors, such as values and beliefs, perceptions and practices, attitudes, and verbal and nonverbal behaviors. The course will also enable students to identify and understand differences in communication patterns among individuals from diverse cultural backgrounds providing an opportunity to enhance their own cultural competence in communication through practical application of intercultural communication principles and concepts.	

COMM 2053	**Organizational Communication**	**3** credits
	Lecture: 3 hours/week	
	Prerequisites: COMM 1043 Communication and Social Engagement	
	Cognate Area: Communication Literacy	
	COMM 1053 Organizational Communication provides an introduction to contemporary theories and principles allied to the study of organizations to endow effective communication practices in the context of work environment dynamics. Topics include impetus roles of organizational communication pertinent to the evolving social context. Application of theories and concepts to understand organizational processes and	

	experiences, analysing communication problems and potential solutions within organizations are included in this course.

COMM 2063	**Public Relations**	**3** credits
	Lecture: 3 hours/week	
	Prerequisites: None	
	Cognate Area: Communication Literacy	
	COMM 1033 Public Relations focuses primarily on understanding the nature and role of public relations, activities of public relations professionals, the major influences that affect organizational behavior, the ethics of public relations and professional development of public relations professionals. This course is an overview of the functions, practices and growing application of public relations in private industry and the public sector. Emphasis is placed on planning, writing, and management functions, working with the media and developing effective public relations strategies.	

COMM 3013	**Web Design and Development**	**3** credits
	Lecture with Lab: 3 hours/week	
	Prerequisites: CSCI 1013 Introduction to Computer Applications or the ability to demonstrate knowledge in the area of internet architecture, text processor and spreadsheet.	
	Cognate Area: Communication Literacy	
	CSCI 1013 Web Design introduces students to the fundamental approaches, tools and principles in Web design and development. The students will learn to apply the knowledge and skills acquired to design and develop a website.	

COMM 3023	**Persuasion and Social Influence**	**3** credits
	Lecture with Lab: 3 hours/week	
	Prerequisites: COMM 2013 Introduction to Communication Theory	
	Cognate Area: Communication Literacy	
	CSCI 1013 Persuasion and Social Influence are pervasive and powerful mechanisms for behavior change. In this course students will learn why and under what conditions an individual's thoughts and actions can be influenced by those around them as well as conditions that facilitate or impede the persuasive effects of communication. The primary goal of this course is to examine major theoretical perspectives and empirical evidence about what makes messages persuasive. The second goal is to have students employ the tools of influence from day one of the course wherein they will learn techniques for persuasive speaking, writing and designing. Finally, the course will culminate in an application of these techniques relating to a wide variety of real-life communication contexts, situations and settings.	

COMM 3033	**Communication Ethics**	**3** credits
	Lecture with Lab: 3 hours/week	
	Prerequisites: None	
	Cognate Area: Communication Literacy	
	COMM 3033 Communication Ethics primarily explores the nature of "ethics," and its plurality of perspectives in a global and postmodern world. It studies various approaches to ethical decision-making from a communication perspective, and considers their implications for our everyday lives. Professional codes of ethics and the concepts of	

	values, boundaries, morals, and confidentiality within human services professions such as in health care, education, social work, mental health, law enforcement, and criminal justice will be explored. The course also highlights the importance of creative thinking, and of dialogue and open discussion of ideas. Emphasis is placed on critical thinking and innovative ways by playing with unexpected options, by questioning received ideas and by listening with an open and unprejudiced attitude. The course will also peruse through the gamut of ethical issues and problem solving in communications.

CSCA 2014	**Computer Organization and Architecture**	**4** credits
	Lecture with Lab: 4 hours/week	
	Prerequisites: None	
	Cognate Area: Science & Technology	
	CSCA 2014 Computer Organization and Architecture aids in the understanding of computer organization, and the concept of the digital computer. It includes the study of the various functional units of digital computers comprising the Central Processing Unit, memory and input/output organization, the assembler, arithmetic and logic that forms the basis of a digital computer system's problem-solving capabilities. Supporting and extending this knowledge are the various processor characteristics, functions and operations, as well as the various architectures that exist in industrial applications today.	

CSCI 1013	**Introduction to Computer Applications**	**3** credits
	Lecture with Lab: 3 hours/week	
	Prerequisites: None	
	Cognate Area: Science & Technology	
	CSCI 1013 Introduction to Computer Applications focuses on the basic end-user computing skills needed by individuals to increase their productivity in the business workplace. The subject contains two parts which are: (1) computer literacy and (2) applications. It develops students' skills through the use of computer applications. **Literacy:** history of computing, structure of computers, computer ethics, cyber law and computer crimes. **Applications:** Windows operating systems, word processing, spreadsheets, database management, presentation software, e-mail and web.	

CSCI 2014	**Information Technology for Business**	**4** credits
	Lecture with Lab: 4 hours/week	
	Prerequisites: None	
	Cognate Area: Science & Technology	
	CSCI 2014 Information Technology for Business introduces the fundamental concepts of computer technology and the applications in business information technology. The students are exposed to various applications that can help improve business processes. Current issues involving information technology will also be discussed.	

CSCP 1014	**Programming I**	**4** credits
	Lecture with Lab: 4 hours/week	
	Prerequisites: MATH 1024 Pre-calculus	
	Cognate Area: Science & Technology	
	CSCP 1014 Programming I introduces the students to computer programming using an object-oriented programming technique. It is the most widely employed technique for	

	developing robust, reusable software. The emphasis is on principles of programming and object-oriented design. Extensive practice skills are used in designing, implementing, and debugging small programs using Java.

CSCP 2014	**Programming II**	**4** credits
	Lecture with Lab: 4 hours/week	
	Prerequisites: None	
	Cognate Area: Science & Technology	
	CSCP 2014 Programming II is the continuation of Programming 1. The emphasis is on the principles of programming and object-oriented design. Students are trained to solve problems using object-oriented programming techniques, which are the most widely used for developing robust, reusable software. Other aspects covered in this course are data structures, searching, sorting, algorithm efficiency and complexity. Data storage is also covered. Extensive practice of skills is used in designing, implementing, and debugging programs.	

CSCP 2024	**Data Structures**	**4** credits
	Lecture with Lab: 4 hours/week	
	Prerequisites: CSCP 2013 Programming II and MATH 1053 Discrete Mathematical Structures	
	Cognate Area: Science & Technology	
	CSCP 2024 Data Structures explores deeply into data structures with the implementation of object-oriented programing. The subject covers the various data structures and algorithms. Examples of data structures discussed are list, queues, stacks, trees, graphs, maps, and heap. Algorithms for the various data structures, in terms of searching, sorting and recursion would also be given emphasis. For each of the data structures covered, students will also be exposed to the applications and implementation of the data structures in real life applications.	

CSCP 2034	**Web Programming**	**4** credits
	Lecture with Lab: 4 hours/week	
	Prerequisites: None	
	Cognate Area: Science & Technology	
	CSCP 2034 Web Programming introduces students to the fundamentals of Web development which includes Web design principles and usability issues relevant to the core of Web technologies. Students will be exposed to the techniques of Web design, the different types of Web site layouts, Web site design themes and the architecture that is deployed.	

CSDB 2014	**Introduction to Databases**	**4** credits
	Lecture with Lab: 4 hours/week	
	Prerequisites: CSCP 1014 Programming I	
	Cognate Area: Science & Technology	
	CSDB 2014 Introduction to Databases introduces students to database and database management system (DBMS), process modelling, drawing the Entity-Relationship (ER) modelling; construct the Structured Query Language (SQL) and database normalization.	

CSNW 2014	**Computer Networking**	**4** credits
	Lecture with Lab: 4 hours/week	
	Prerequisites: None	
	Cognate Area: Science & Technology	
	CSNW 2014 Computer Networking introduces students to Data communications, network architectures, communication protocols, data link control, medium access control. Students will also learn about the local area networks, metropolitan area networks and wide area networks.	

ECON 2013	**Microeconomics**	**3** credits
	Lecture: 3 hours/week	
	Prerequisites: None	
	Cognate Area: Behavioral & Social Sciences	
	ECON 2013 Microeconomics provides students with a greater understanding of basic microeconomic theories on scarcity and opportunity cost, supply and demand for goods and services, elasticity of demand and supply, consumer behaviour, production and costs and market structures. The course also emphasizes how these theories affect businesses: firms, consumers and markets within an economy as well as individuals in everyday situations. Also included are critically evaluating and justifying the use of microeconomic theories in the decision-making process of companies, markets and consumers.	

ECON 2023	**Macroeconomics**	**3** credits
	Lecture: 3 hours/week	
	Prerequisites:	
	Cognate Area: Behavioral & Social Sciences	
	ECON 2023 Macroeconomics focuses on macroeconomic principles related to growth and instability, national income accounting and equilibrium, government policies, injections and leakages, financial institutions, international trade, balance of payment and exchange rates. Practical aspects of domestic and international oriented issues as well as evaluation and justification for the use of macroeconomic theories in the decision-making process of governments and the performance of an economy are also discussed.	

ECON 3013	**International Economics**	**3** credits
	Lecture: 3 hours/week	
	Prerequisites: ECON 2013 Microeconomics and ECON 2023 Macroeconomics	
	Cognate Area: Behavioral & Social Sciences	
	ECON 3013 International Economics examines the bases of trading among nations with emphasis on resources, foreign exchange, balance of payments, investments, tariffs, import quotas, export controls, nationalism, free trade, protectionism, and the institutions aiding in world trade.	

EENG 2014	**Circuit Analysis**	**4** credits
	Lecture with Lab: 4 hours/week	
	Prerequisites: MATH 1044 Calculus II and	

	PHYS 2034 Physics II with Physics II Lab PHYS 2041
	Cognate Area: Science & Technology
	EENG 2014 Circuit Analysis will cover linear circuits containing basic elements (independent and dependent sources, resistors, inductors, capacitors, and operational amplifiers). In addition to a variety of analytical techniques, numerical methods to solve the circuit equations will also be covered. Laboratory experiments intended to complement the theoretical material will be conducted.

ENGL 1014	**Fundamentals of College Writing**	**4** credits
	Lecture: 4 hours/week	
	Prerequisites: None **Exemption from this course may be given based on:** Sunway University English Placement Test. Scores on the Sunway English Test closely corresponds to IELTS scores for reading and writing. • 6.5 and above - Exemption given from English 1014 • 6.0 - English 1014 is not required to take as a prerequisite to ENGL 2014 • Below 6.0 - Strongly encouraged to take English 1014 • Below - Students need to enter the Intensive English Program (IEP) at Sunway University or get a higher writing score before being eligible to enrol in this course.	
	Cognate Area: Communication Literacy	
	ENGL 1014 Fundamentals of College Writing introduces students to the basic skills of writing that will be beneficial in further education and the working world. Through several structured and unstructured writing exercises and critical thinking techniques, the student engages in the task of using writing for self-expression as well as for communication.	

ENGL 1023	**Film Appreciation**	**3** credits
	Lecture: 3 hours/week	
	Prerequisites: None	
	Cognate Area: Arts & Humanities	
	ENGL 1023 Film Appreciation introduces students to a working knowledge of film vocabulary within the context of film genres and techniques. This course will allow students to begin exploring the field by watching, discussing and analyzing films.	

ENGL 2014	**Introduction to Critical and Creative Writing**	**4** credits
	Lecture: 4 hours/week	
	Prerequisites: ENGL 1014 Fundamentals of College Writing with a grade of C or better, or appropriate scores attained on either TOEFL (iBT: 80+) or IELTS (6.0+), or Sunway University Placement Test equivalent to the IELTS scores previously listed above.	
	Cognate Area: Communication Literacy	
	ENGL 2014 Introduction to Critical and Creative Writing introduces students to many genres of writing and encourages students to clarify their own beliefs and values as well as voice their opinions. Each student will encounter deep analysis and discussion in this course. This course incorporates elements of literature as seen in short stories and poetry.	

	In addition to literature, students will embark on many different writing genres including transitive, literary, analytical, and personal. Students will learn how to write literary essays such as persuasive and argumentative essays. Objectives for students include composing clearly constructed and coherent essays using a variety of rhetorical approaches and writing a research paper using APA formatting.

ENGR 2013	**Basic Statics for Engineering**	**3** credits
	Lecture with Lab: 3 hours/week	
	Prerequisites: MATH 1044 Calculus II	
	Cognate Area: Science & Technology	
	ENGR 2013 Basic Statics for Engineering introduces forces and moments acting on structural bodies under static loads. Free-body diagrams, shear and moment diagrams, centroids, moment of inertia, and friction are included. Theories of particles and rigid bodies are applied in practical experiments and theories of statics are analyzed in real life situations.	

ENGR 2023	**Dynamics for Engineers**	**3** credits
	Lecture with Lab: 3 hours/week	
	Prerequisites: PHYS 2014 Physics I with PHYS 2021 Physics I Lab MATH 1044 Calculus II ENGR 2013 Basic Statics for Engineering,	
	Cognate Area: Science & Technology	
	ENGR 2023 Dynamics for Engineers introduces Kinematics and kinetics of particles and rigid bodies in force and acceleration, work and energy, impulse and momentum. Theories are applied in practical experiments, and the theories of Dynamics are analyzed in real life situations.	

ENGR 2033	**Fundamentals of Thermodynamics**	**3** credits
	Lecture with Lab: 3 hours/week	
	Prerequisites: MATH 1044 Calculus II and PHYS 2014 Physics with PHYS 2021 Physics 1 Lab	
	Cognate Area: Science & Technology	
	ENGR 2033 introduces fundamental laws of classical thermodynamics including ideal and non-ideal processes. Applications are studied in relationship to the traditional thermodynamic cycles and to alternate energy systems such as solar and wind energy. Theories of thermodynamics are applied for particles and rigid bodies in practical experiments and in real life situations.	

ENGR 2043	**Introduction to Material Science**	**3** credits
	Lecture with Lab: 3 hours/week	
	Prerequisites: CHEM 1033 General Chemistry I with CHEM 1041 General Chemistry I Lab MATH 1034 Calculus I and PHYS 2014 Physics I with PHYS 2021 Physics I Lab	
	Cognate Area: Science & Technology	

	ENGR 2043 Introduction to Material Science provides students with a basic understanding of the various materials used in engineering applications. Lecture topics cover the basics of material science and engineering, the structure and property relationships for polymers, metals, and ceramics, and the fundamentals of corrosion engineering. This course highlights the significance of materials science and engineering in modern society, and contextualizes the selection of engineering materials on the basis of their characteristics and end use applications.

ENGR 2053	**Mechanics of Materials**	**3** credits
	Lecture with Lab: 3 hours/week	**Lab/Studio:** With Lecture
	Prerequisites: Basic Statics for Engineering (ENGR 2013)	
	Cognate Area: Science & Technology	
	ENGR 2053 Mechanics of Materials provides students with an understanding of compression, tension, shear, torsion, and bending in structural members including stress distribution, deflection, buckling, and fatigue on engineering materials. Design and selection of simple machine members and a knowledge of design codes and standards are applied. Theories of Mechanics of Materials are applied and analyzed in real life situations and practical experiments are conducted.	

ENGR 2064	**Digital Logic**	**4** credits
	Lecture with Lab: 4 hours/week	
	Prerequisites: CSCP 1014 Programming 1	
	Cognate Area: Science & Technology	
	ENGR 2064 Digital Logic provides the students with a basic understanding of digital devices, the mechanism of the devices and how they can be designed to perform useful functions. This basic understanding forms the foundation necessary for the more advanced hardware and software design courses in our curriculum. Students will learn about digital design through a combination of lectures, homework, and a hands-on laboratory. The laboratory is an integral part of the course that shows how the theory of digital design learned in lectures is applied in practice to construct real digital systems.	

ENVS 1014	**Introduction to Environmental Studies**	**4** credits
	Lecture: 4 hours/week	
	Prerequisites: None	
	Cognate Area: Science & Technology	
	ENVS 1014 Introduction to Environmental Studies is a comprehensive study to introduce students to the characteristics of the biosphere and the environmental issues that we face today. Topics that will be covered include ecosystem function and biodiversity, nutrient cycling, the impact of agriculture practices, solid waste disposal, uses of pesticides, nuclear energy, air pollution and global climate change.	

FINN 3013	**Business Finance**	**3** credits
	Lecture: 3 hours/week	
	Prerequisites: ACCT 2013 Basic Principles in Accounting and STAT 2013 Introduction to Statistics	
	Cognate Area: Quantitative Reasoning	

	FINN 3013 Business Finance provides students with a basis for understanding the financial management function of business enterprises. Financial principles and techniques essential for planning and controlling profitability of companies, liquidating assets, planning capital structure, determining capital costs and utilizing financial instruments for raising capital and relating them to a companies' overall performance are covered in this course.

HIST 1023	**U.S. History to 1877**	**3** credits
	Lecture: 3 hours/week	
	Prerequisites: None	
	Cognate Area: Arts and Humanities	
	HIST 1023 U.S. History to 1877 provides a broad overview of U.S. history, from the earliest settlements to the Reconstruction. Major themes examined are colonial societies, the struggle for independence, the adoption of the Constitution, the early national period, the Civil War and Reconstruction. Topics covered include exploration, colonization, Native American responses, the rise of slavery, the American Revolution, slave life and culture, the Civil War, Emancipation and Reconstruction.	

HIST 1033	**U.S. History since 1877**	**3** credits
	Lecture: 3 hours/week	
	Prerequisites: None	
	Cognate Area: Arts and Humanities	
	HIST 1033 U.S. History since 1877 familiarizes students with the major questions of modern U.S. history from post-Reconstruction to the present. The course aims to introduce students to multiple approaches and interpretations in many sub-fields of American history. Some of the topics include: Reconstruction; industrialization, urbanization and immigration; American Imperialism, Progressivism; 1920 cultural conflicts; the Great Depression and the New Deal; World War II at home and abroad; the Cold War; Civil Rights; Vietnam; and recent developments.	

HIST 3013	**Intellectual History of the Modern West**	**3** credits
	Lecture: 3 hours/week	
	Prerequisites: None	
	Cognate Area: Arts and Humanities	
	HIST 3013 Intellectual History of the Modern West helps students understand and analyze the formative ideas that have shaped the Western intellectual tradition from the ancient Greeks through the Middle Ages and time of Renaissance, Reformation, Scientific Revolution up to the age of Enlightenment. The main traditions of epistemological, moral, political, and theological inquiry in Western thought will be analyzed and their historical and cultural significance discussed.	

HPEL 1013	**Health and Wellness**	**3** credits
	Lecture & Gym: 4 hours/week *(Separate course number for Lab, but taken together)*	
	Lecture: 2 hours/week	**Studio/Gym:** 2 hours Physical Exercise/week (Yoga)
	Prerequisites: None	
	Cognate Area: Behavioral & Social Sciences	

	HPEL 1013 Health and Wellness will focus on personal health from a holistic perspective. In-depth attention will be given to the relationship between the body, mind, spirit, environment and community as well as to the interaction between these dimensions and the resulting impact on health and well-being. Particular focus will be given to research on physical and mental health benefits. There is also a physical activity or physical education component to this class. This course is team-taught by Biology, Psychology and Sports Psychology lecturers.

INTN 2016	**Internship**	**6** credits
	Internship Work: *(Employer and Student Decision)*	
	Meetings: Internship Briefing, Resume Writing, Internship Application, Internship Practical, Reflective Journal, Supervisor's Report and Final Presentation (Total 490 hours)	
	Prerequisites: Completed at least 4 semesters of study in the ADTP prior to the internship.	
	Cognate Area: Related to Major	
	INTN 2016 allows students to experience the actual working environment. Experiential learning will be part of the education that the student may not acquire within the class environment. Internship is intended to complement the body of knowledge covered in the program. Students will have the opportunity to apply the knowledge acquired through the course of study in actual situations in the 400 hours of work. Having completed the internship, they should be able to reconcile and bridge the gap between learning and application. This course will also provide an experience of the professional field the student is pursuing.	

JRNS 1013	**Introduction to Journalism**	**3** credits
	Lecture: 3 hours/week	
	Prerequisites: None	
	Cognate Area: Communication Literacy	
	JRNS 1013 Introduction to Journalism is designed to introduce the basic skills of journalism to communication students, encouraging and stimulating their minds to think appropriately about information, its relative value and reliability as well as ethical dimensions of decisions made by journalists. This course includes the basics of news-writing as well as writing styles and skills for different types of news, media and audiences.	

MAND 1014	**Mandarin Language Level 1**	**4** credits
	Lecture: 4 hours/week	
	Prerequisites: None. This is a beginning level course.	
	Cognate Area/Major: Arts & Humanities or Communication Literacy	
	MAND 1014 Mandarin Level 1 introduces students to the basics of the Mandarin language. Students who complete this course will be able to identify Chinese characters, understand the basic concepts of the language structure (Pronounce the four tones of Pin-Yin), (Recognize and read 100-200 characters without Pin-Yin assistance), converse and communicate in Mandarin for basic context, and know the basic structure of the Chinese characters and be able to write a short essay of 200-300 characters.	

MATH 1013	**Finite Mathematics**	**3** credits
	Lecture: 3 hours/week	

	Prerequisites: None
	Cognate Area: Quantitative Reasoning
	MATH 1013 Finite Mathematics is primarily designed for students who are non-science majors in the American Degree Transfer Program. It is an introductory level course covering mathematical concepts needed by students majoring in business, communication, psychology and humanities. The topics include systems of linear equations and solutions using matrices, matrix algebra, linear programming (graphical and simplex method), mathematics of finance, sets and counting, and probability.

MATH 1024	**Precalculus**	**4** credits
	Lecture: 4 hours/week	
	Prerequisites: None	
	Cognate Area: Quantitative Reasoning	
	MATH 1024 Precalculus introduces students to an in-depth study of functions and a review of the foundation of algebraic, geometric, and trigonometric fundamentals. It prepares students for Calculus with an emphasis on functions. Trigonometry is essential not only in Calculus but also in modelling the real world scientific and technical problems, where one needs to study the relationship between variables. This course covers both graphical and computational aspects of these relationships.	

MATH 1034	**Calculus I**	**4** credits
	Lecture: 4 hours/week	
	Prerequisites: MATH 1024 Precalculus with a grade of C or better, or a Pass on Sunway University's ADTP Math Placement Test.	
	Cognate Area: Quantitative Reasoning	
	MATH 1034 Calculus I introduces students to the concept of limit of functions with one variable that relate to the fundamental theorem of differential and integral calculus. Students will be required to solve various problems by applying the differentiations and integrations techniques.	

MATH 1044	**Calculus II**	**4** credits
	Lecture: 4 hours/week	
	Prerequisites: MATH 1034 Calculus I	
	Cognate Area: Quantitative Reasoning	
	MATH 1044 Calculus II introduces students to the procedures of differentiation and integration that have been studied in Calculus I. It extends to inverse trigonometric functions and hyperbolic functions. Topics such as Integration Techniques, Solving Separable Differential Equations, Solving Application Problems and Infinite Series are also covered.	

MATH 1053	**Discrete Mathematical Structures**	**3** credits
	Lecture: 3 hours/week	
	Prerequisites: MATH 1034 Calculus I	
	Cognate Area: Quantitative Reasoning	
	MATH 1053 Discrete Mathematical Structures is an introductory level subject for preparing students with the knowledge of applications of discrete mathematics. It covers	

	set theory, mathematical proofs, counting (combination and permutation), relations and functions, recurrence and iteration, tree and graph theory.

MATH 2014	**Calculus III**	**4** credits
	Lecture: 4 hours/week	
	Prerequisites: MATH 1044 Calculus II	
	Cognate Area: Quantitative Reasoning	
	MATH 2014 Calculus III introduces students to analytic geometry and vector-valued functions in $\mathbb{R}3$, which include Functions of Several Variables, Partial Differentiation, Multiple Integrals, and Vector Calculus.	

MATH 3014	**Differential Equations**	**4** credits
	Lecture: 4 hours/week	
	Prerequisites: MATH 2014 Calculus III	
	Cognate Area: Quantitative Reasoning	
	MATH 3014 Differential equations arise in many areas of science and engineering whenever a relationship involving some continuously changing quantities and their rates of change is known or formed. This subject is designed for students to identify several methods to solve differential equations with different types of first-order; with higher order; or linear systems of differential equations as well. This course introduces the Laplace transform methods, numerical method, and the power series for solving the differential equations. In addition, the students will Calculus III also learn to find the Fourier series.	

MATH 3024	**Linear Algebra**	**4** credits
	Lecture: 4 hours/week	
	Prerequisites: MATH 2014 Calculus III	
	Cognate Area: Quantitative Reasoning	
	MATH 3024 Linear Algebra introduces students to systems of linear equations, matrices, vector spaces, linear independence, spanning sets, bases, rank, eigenvalues, eigenvectors, orthogonality, linear transformations, and the Gram-Schmidt process. It includes applications, as well as proving theories. Students also learn to use a Graphing Calculator for solving problems of linear algebra.	

MGMT 2013	**Organizational Behavior**	**3** credits
	Lecture: 3 hours/week	
	Prerequisites: BUSN 1013 Introduction to Business	
	Cognate Area: Behavioral & Social Sciences	
	MGMT 2013 introduces students to the fundamental concepts of Organizational Behavior. This is a basic course for the study of business organizations in a global economy. Major areas to be covered include the study of the functions of a manager, the individual and group dynamics of organizations, teamwork, communication, leadership, power and politics, organizational structure and organizational culture.	

MGMT 2023	**Human Resource Management**	**3** credits
	Lecture: 3 hours/week	
	Prerequisites: MGMT 2013 Organizational Behavior	

	Cognate Area: Behavioral & Social Sciences
	MGMT 2023 introduces students to fundamental concepts of Human Resource Management and prepares them to be future managers with a business understanding of the importance of having human resource management skills. Recent changes in organizational, economic and environmental forces have made such skills important for managers to successfully attract, manage, retain and grow talent in their organizations.

MGMT 3013	**Business Process Management**	**3** credits
	Lecture: 3 hours/week	
	Prerequisites: STAT 2013 Introduction to Statistics MGMT Organizational Behavior MKTG 2013 Principles of Marketing CSCI 2013 Information Technology for Business	
	Cognate Area: Behavioral & Social Sciences	
	MGMT 3013 introduces students to fundamental concepts of business processes. Business processes determine tasks, jobs and responsibilities, thus shaping the work of every employee in the organization. Processes integrate systems, data and resources of an organization, determining the ability of the organization to adapt to new circumstances and legislation. Processes influence revenue potential as well as shape the cost profile of the organization, and have a direct impact on the attractiveness of products and services as perceived by the market. Business Process Management (BPM) is a boundary spanning field that allows business managers, information technology specialists and industrial engineers to work together and have a joint understanding of the inner working of a business.	

MKTG 2013	**Principles of Marketing**	**3** credits
	Lecture: 3 hours/week	
	Prerequisites: None	
	Cognate Area: Behavioral & Social Sciences	
	MKTG 2013 introduces students to the fundamental concepts of marketing. It is a basic course for the study of marketing in the Asian context. The subject will examine a variety of issues about marketing, consumer behavior, marketing research and marketing channels. Major areas to be covered include the study of the creation of marketing and corporate strategies, scanning and identifying the global and local markets, developing and managing new products and services, retailing marketing, marketing services, and advertising and public relations.	

MLAB 1014	**Introduction to MATLAB**	**4** credits
	Lecture with Lab: 4 hours/week	
	Prerequisites: MATH 1044 Calculus II	
	Cognate Area: Science & Technology	
	MLAB 1014 introduces students to programming using MATLAB. This subject is designed to develop the confidence and competence of students in using MATLAB as a tool in solving engineering or mathematical problems.	

MPU 3193	**Philosophy and Current Issues**	**3** credits
	Lecture: 3 hours/week	

	Prerequisites: None
	Cognate Area: Communication Literacy *(Developed by the Malaysian Ministry of Education)*
	MPU 3193 introduces students to current issues using the Malaysian National Education Philosophy and National Pillars of Malaysia. Current issues are described using ideas of philosophical thought from a Malaysian and Islamic viewpoint; and then analysed from comparative philosophical perspectives for intercultural discussion. The following seven topics are included: Introduction to Philosophy, Philosophy in life, Logic, Psychology and Sociology, Metaphysics, Epistemology, Ideology and Decolonization.

MPU 3203	**Appreciation of Ethics and Civilizations**	**3** credits
	Lecture: 3 hours/week	
	Prerequisites: None	
	Cognate Area: Communication Literacy *(Developed by the Malaysian Ministry of Education)*	
	MPU 3203 Appreciation of Ethics and Civilization contains nine (9) sections with a goal of Evaluating contemporary issues related to economic, political, social, cultural and environmental aspects from both ethical and civilization perspectives. The nine sections are as follows: Section 1: Introduction to the Concepts of Ethics and Civilization Section 2: Concepts of Ethics and Civilization Section 3: Ethics and Civilization in a Diverse Society in Malaysia Section 4: Building Malaysian National Unity Section 5: Strengthening Plural Civilizations in Malaysia Section 6: The Constitution as a Site of Integration and a Vehicle of Ethics and Civilization Section 7: Information and Communication Technology Drives National Unity in Malaysia Section 8: The Role of Ethics and Civilization in Driving Social Responsibility Section 9: The Challenges of Sustainability of Ethics and Civilization in Malaysia.	

MPU 3213	**Malay Communication Level 2**	**3** credits
	Lecture: 3 hours/week	
	Prerequisites: None	
	Cognate Area: Communication Literacy (Developed by the Malaysian Ministry of Education for International students)	
	MPU 3213 is a language course which will enable students to converse in the Malay language in various situations, both formally and informally. Accordingly, students will be exposed to various interactive situations to enhance their skills in Malay Communication, in particular, oral and listening skills. This course will also strengthen the students' skills in grammar and vocabulary so that they will be more confident in Malay communication.	

MU4 2612	**Community Service**	**2** credits
	Lecture: 2 hours/week	
	Prerequisites: None	
	Cognate Area: Behavioral & Social Sciences (Developed by the Malaysian Ministry of Education for any student)	

	MU4 2612 will enhance students' appreciation towards community service. The goals of this course are to develop an appreciation of social and civic responsibility, examine personal strength and weakness in working in group, demonstrate leadership skills and demonstrate oral and written communication skills.

MCW 1004	**Music Cultures of the World**	**4** credits
	Lecture: 3 hours/week	
	Prerequisites: None	
	Cognate Area: Arts & Humanities	
	WCM 1004 Music Cultures of the World introduces students to the classical, folk and popular music of selected communities in Asia, Africa, America and Europe. Elements of the musical system or style, such as scale, melody, meter, rhythm, timbre, form, texture and the musical concepts of different cultures are compared. The music is linked to the social contexts, other aspects of culture and historical changes in the selected regions and countries. Aural analysis will be emphasized. This subject introduces students to the creative power of people in the selected regions, listen to and understand music and musical instruments they are not familiar with and to use them in their own compositions.	

MUSC 1033	**American Popular Music**	**3** credits
	Lecture: 3 hours/week	
	Prerequisites: None	
	Cognate Area: Arts & Humanities	
	MUSC 1033 American Popular Music introduces students to popular music throughout the history of the United States of America, with emphasis on Tin Pan Alley, jazz, country music, rock and other recent styles. It covers the composers, lyricists, performers and other persons whose work as well as their creativity, have contributed to the vast body of popular music today. Students will be required to either sing or play a musical instrument for this class.	

PHIL 1013	**Introduction to Philosophy**	**3** credits
	Lecture: 3 hours/week	
	Prerequisites: None	
	Cognate Area: Arts & Humanities	
	PHIL 1013 Introduction to Philosophy is a 'big-picture' course, which endeavours to give a sense of the broad intellectual terrain surrounding such fundamental issues as religion, science, morality, political justice, and the nature of the cosmos, the nature of the individual and humanity's place in the universe. The aim is to help students to find their bearings in the many debates about these subjects that surround us. Among the particular matters covered will be religion and the existence of God, the nature of the mind or soul, intelligence, personal identity, free will and determinism, problems in scientific reasoning, moral relativism, human rights, feminism, civil disobedience, gender and sexuality, theories of ethics and justice, the nature of science, and the meaning of life.	

PHYS 1014 **PHYS 1021**	**College Physics I** **College Physics I Laboratory**	**4** credits **1** credit
	Lecture & Lab: 6 hours/week	

	(College Physics I Lecture and Lab must be taken concurrently)	
	Lecture: 4 hours/week	**Lab:** 2 hours/week
	Prerequisites: None.	
	Cognate Area: Science & Technology	
	PHYS 1014 College Physics I is the first part of introductory physics, and will cover mechanics and heat. The concepts and principles of mechanics and thermodynamics form the foundation of, and have widespread applications in engineering and many other sciences. Besides gaining an understanding of these principles, an important objective of the course is to acquire skill in problem solving. Concepts such as force, motion, work, energy, impulse, momentum, conservation of energy and momentum, heat and thermodynamics are discussed. The concepts, laws and principles of physics will be applied to problems that involve mechanical phenomena and heat. **PHYS 1021** is a laboratory course taken concurrently with PHYS 1014 in where related experiments are performed. In the lab, students will gain experience as a science researcher dealing with physics problems related to basic mechanics and heat.	

PHYS 1034 **PHYS 1041**	**College Physics II** **College Physics II Laboratory**	**4** credits **1** credit
	Lecture & Lab: 6 hours/week *(College Physics II Lecture and Lab must be taken concurrently)*	
	Lecture: 4 hours/week	**Lab:** 2 hours/week
	Prerequisites: PHYS 1014 College Physics I and PHYS 1021 College Physics I Lab	
	Cognate Area: Science & Technology	
	PHYS 1034 College Physics II is the second part of a series of introductory College Physics courses. It covers electricity and magnetism, optics and modern physics. These branches of physics have widespread applications in engineering and everyday life. Besides gaining an understanding of the concepts and principles of electromagnetism and quantum physics, another important objective of this course is to develop problem-solving skills. **PHYS 1041** is taken concurrently with PHYS 1034 where related experiments are performed. In the lab, students will gain experience as a science researcher dealing with physics problems.	

PHYS 2014 **PHYS 2021**	**Physics I** (*Calculus-based Physics)* **Physics I Laboratory**	**4** credits **1** credit
	Lecture & Lab: 6 hours/week *(Physics I Lecture and Lab must be taken concurrently)*	
	Lecture: 4 hours/week	**Lab:** 2 hours/week
	Prerequisites: MATH 1034 Calculus I MATH 1044 Calculus II must be taken concurrently	
	Cognate Area: Science & Technology	
	PHYS 2014 Physics I covers fundamental topics in classical Physics. This course deals with the fundamentals of Newton's laws and covers thermodynamics, oscillations, and mechanical waves. The concepts, laws and principles of physics will be applied to problems that involve mechanical phenomena and heat.	

	PHYS 2021 is a laboratory course taken concurrently with PHYS 2014. The course consists of experiments related to the topics in PHYS 2014. During a two-hour lab each week, students will gain experience as a science researcher dealing with physics problems especially related to mechanics and heat.

PHYS 2034 **PHYS 2041**	**Physics II** (*Calculus-based Physics)* **Physics II Laboratory**	**4** credits
	Lecture & Lab: 6 hours/week *(PHYS 2041 Physics II Lecture and Lab must be taken concurrently)*	
	Lecture: 4 hours/week	**Lab:** 2 hours/week
	Prerequisites: MATH 1044 Calculus II. PHYS 2014 Physics I and PHYS 2021 Physics I Lab	
	Cognate Area: Science & Technology	
	PHYS 2034 Physics II is the second part of Physics 1 and will cover electricity, magnetism and optics. These branches of physics have widespread applications in engineering and everyday life. Besides gaining an understanding of the concepts and principles of electromagnetism, an important objective of the course is to develop problem-solving skills. **PHYS 2041** is a laboratory course taken concurrently with PHYS 2034. The course consists of experiments related to the topics in PHYS 2034. During a two-hour lab each week, students will gain experience as a science researcher dealing with physics problems especially related to electricity and light.	

POLS 2014	**International Relations**	**4** credits
	Lecture: 4 hours/week	
	Prerequisites: None	
	Cognate Area: Behavioral & Social Sciences	
	POLS 2014 includes the study of international relations theories, trade and finance, international law, foreign policy, human rights, the EU and other international organizations. The course will also discuss human rights, the relationships between North and South or the rich countries versus the poor countries, and the impact of technology and environmental damages in our world today.	

POLS 2023	**American Government and Politics**	**3** credits
	Lecture: 3 hours/week	
	Prerequisites: None	
	Cognate Area: Behavioral & Social Sciences	
	POLS 2023 American Government and Politics surveys contemporary American politics, foundations of the US government, the US constitution, institutions and the system of governance. The course looks at crucial contemporary policy issues; the Electoral College; US Presidential Elections; Civil Rights and Civil Liberties; debates over Presidential and Congressional powers; the Bureaucracy; and the role and functions of the American Judicial System.	

POLS 3013	**Pacific Asia Today**	**3** credits
	Lecture: 3 hours/week	

	Prerequisites: None
	Cognate Area: Behavioral & Social Sciences
	POLS 3013 Pacific Asia Today focuses on the study of the Asia-Pacific region, principally Northeast and Southeast Asian countries, paying particular attention to the development of their political systems, strategies of economic growth, the impact of changes in the role of population structure, ethnicity and power on these societies, and their ability to deal with issues of foreign powers, regional cooperation, and crises. The themes running through this course are progress and tradition, collisions between East and West, democracy, authority and power, the United States in Pacific Asia, the rise of China, economic development and interdependence. This is a writing intensive course in which students will carry out guided research on select topics and present findings in the form of academic papers in a mini-conference organized within the university.

POLS 3024	**American Foreign Policy**	**4** credits
	Lecture: 4 hours/week	
	Prerequisites: None	
	Cognate Area: Behavioral & Social Sciences	
	POLS 3024 American Foreign Policyintroduces students to the foreign policy of the United States with particular attention to the period since 1945 and an emphasis on post-Cold War topics. Key concepts such as the national interest and identity, and major schools of thought on US foreign policy will be covered. This subject will enable students to develop their understanding of processes, policies and issues in US foreign policy-making.	

PSYC 1013	**Introduction to Psychology**	**3** credits
	Lecture: 3 hours/week	
	Prerequisites: None	
	Cognate Area: Behavioral & Social Sciences	
	PSYC 1013 Introduction to Psychology introduces students to basic concepts and theories of psychology as well as to research methods and the contributions of current psychology to the understanding of behavioral sciences. Topics included in the course are neuroscience and behavior, sensation and perception, consciousness, learning, memory, development across the life span, motivation, stress and health, personality, psychological disorder and social psychology.	

PSYC 1023	**Developmental Psychology**	**3** credits
	Lecture: 3 hours/week	**Lab/Studio:** 0 hours/week
	Prerequisites: Introduction to Psychology (PSYC 1013)	
	Cognate Area: Behavioral & Social Sciences	
	PSYC 1023 provides a general introduction to developmental psychology. This course will expose students to current research, theories concerning children's hereditary influences, personality, social, cognitive, emotional, and physical development from conception through childhood to early adolescence. This course also studies the environmental factors that affect the development of a child up to adolescence.	

PSYC 2013	**Abnormal Psychology**	**3** credits
	Lecture: 3 hours/week	**Lab/Studio:** 0 hours/week
	Prerequisites: Introduction to Psychology (PSYC 1013)	

	Cognate Area: Behavioral & Social Sciences
	PSYC 2013 Abnormal Psychology introduces paradigms of abnormal psychology and the history of abnormal psychology from behavioral, biological, cognitive, cognitive-behavioral, and sociocultural aspects. This course also provides an overview of types, symptoms, etiology and treatment of abnormal behavior. Topics included in the course are an historical overview, paradigms of abnormal psychology, assessment of psychopathology, types and treatment of abnormal behaviors and life-span developmental disorders.

PSYC 2023	**Social Psychology**	**3** credits
	Lecture: 3 hours/week	**Lab/Studio:** 0 hours/week
	Prerequisites: Introduction to Psychology (PSYC 1013)	
	Cognate Area: Behavioral & Social Sciences	
	PSYC 2023 introduces students to basic social psychology concepts, theories, and research methods in social psychology. Topics included in the course are social perception, social cognition, social identity, social influence, attitudes, prejudice, interpersonal attraction, prosocial behavior, and aggression.	

PSYC 2033	**Introduction to Research Methods in Psychology**	**3** credits
	Lecture: 3 hours/week	**Lab/Studio:** 0 hours/week
	Prerequisites: Introduction to Statistics (STAT 2013), Introduction to Psychology (PSYC 1013) and Introduction to Creative and Critical Writing (ENGL 2014)	
	Cognate Area: Behavioral & Social Sciences	
	PSYC 3023 Introduction to Research Methods in Psychology introduces basic research techniques used in the field of psychology. The course provides a platform to study psychology using scientific techniques. The following topics are covered: formulation of research questions, a literature review, ethics in research, measurement concepts, research methods (descriptive, experimental and applied research), analysis and interpretation of results and report writing.	

RELS 1013	**Survey of World Religions**	**3** credits
	Lecture: 3 hours/week	
	Prerequisites: None	
	Cognate Area: Arts & Humanities	
	RELS 1013 Survey of World Religions introduces students to prominent World Religions: Hinduism, Buddhism, Taoism, Confucianism, Judaism, Christianity and Islam. Minor religions such as Jainism, Sikhism, Shinto, Bahai' and Zoroastrianism are also discussed. Each tradition is explored in terms of historical development (key figures, events, evolution, etc.) and fundamental worldview (divine reality, human nature, the problem and solution for human beings, ethical teachings, life beyond death, mystical approaches, etc.). Through the course, students develop knowledge and appreciation of each religion as well as religiosity and spirituality in general. Contemporary issues, such as religion in modern life and religious pluralism will also be explored.	

RELS 3014	**World Mythology**	**4** credits
	Lecture: 4 hours/week	
	Prerequisites: None	

	Cognate Area: Arts & Humanities
	RELS 3014 World Mythology provides students with the opportunity to study and compare a selection of myths and mythological systems from throughout the world and history, and to consider a variety of academic and contemporary discourses about myth, its nature, forms, functions, and value.

SOCY 1013	**Principles of Sociology**	**3** credits
	Lecture: 3 hours/week	
	Prerequisites: None	
	Cognate Area: Behavioral & Social Sciences	
	SOCY 1013 Principles of Sociology introduces students to some basic concepts and theories in order to understand our society and ourselves. It enables us to see how behavior is largely shaped by the group or organization to which we belong and the society in which we live. Topics included in the course are culture, socialization, social structure, groups, deviance, stratification, social institution and social change.	

STAT 2014	**Introduction to Statistics with SPSS Lab**	**4** credits
	Lecture & Lab: 5 hours/week	**Lab:** 0 hours/week
	Lecture: 3 hours/week	**Lab:** 2 hours/week
	Prerequisites: Finite Math (MATH 1013) or Precalculus (MATH 1024)	
	Cognate Area: Quantitative Reasoning	
	STAT 2014 Introduction to Statistics is an introductory level course that covers basic statistical methods which are essential for students specializing in fields of Biomedical Science, Aviation, Psychology and Business. This course covers descriptive statistics, basic probability, random variables; discrete and continuous probability distributions; estimation and hypothesis testing, single factor ANOVA, Chi-Square analysis, Regression and Correlation analysis. Students are also briefly exposed to statistical software (SPSS).	

STAT 2024	**Statistics for Engineering with SPSS Lab**	**4** credits
	Lecture & Lab: 5 hours/week	
	Lecture: 3 hours/week	**Lab:** 2 hours/week
	Prerequisites: Calculus I (Math 1034)	
	Cognate Area: Quantitative Reasoning	
	STAT 2024 Statistics for Engineering provides an introductory course in applied statistics covering practical statistical methods and emphasizing applications in engineering. Topics include data collection, descriptive statistics, measures of central tendency and dispersion, probability and probability distributions, hypothesis testing, analysis of variance and simple linear regression. Students will obtain experience using the SPSS statistical package.	

STAT 2034	**Probability and Statistics**	**4** credits
	Lecture: 4 hours/week	
	Prerequisites: Calculus I (MATH 1034)	
	Cognate Area: Quantitative Reasoning	
	STAT 2034 Probability and Statistics provides an introduction to concepts of probability and mathematical statistics emphasizes the probabilistic foundations required to understand probability models and statistical methods for students majoring in Actuarial Science. This subject covers probability axioms; independence; conditional probability,	

	random variables; specific discrete and continuous probability distributions; multivariate random variables; moments, and moments generating functions and central limit theorem. This course lays the essential mathematical statistics preparation required for undergraduate-level courses in Statistics and is vital for Actuarial Science students.

THEA 1013	**Introduction to Theatre**	**3** credits
	Lecture: 3 hours/week	
	Prerequisites: None	
	Cognate Area: Arts & Humanities	
	THEA 1013 Introduction to Theatre is a theatre appreciation course which provides students with an overview of the basic features of theatre. This course will allow students to begin exploration of the field by watching, discussing and thinking critically about theatre.	

UNIL 1011	**University Life – Freshman Seminar**	**1** credit
	Lecture: 1.5-2 hours/week	
	Prerequisites: None	
	Cognate Area: Arts & Humanities	
	UNIL 1011 University Life – Freshman Seminar helps students to transition from secondary school to their new role and place in the university. The course provides a platform for the students to acquire independent learning skills, and engage in teamwork activities, and university life opportunities and challenges. Issues related to plagiarism, research skills, student support systems are also included. Information and assignments related to preparation to transfer for degree completion, planning their study program and career information will also be addressed. Students will have the opportunity to identify factors that lead to academic success, become more self-aware and interact socially for group planning and projects as well.	