PENINSULA COLLEGE

2022 - 2023

Programme Handbook
(Foundation in Science)

UPDATED: 09/22

Peninsula College Georgetown
No,1 Education Boulevard, One Auto Hub
Batu Kawan Industrial Park, 14110 Bandar
Cassia, Seberang Perai Selatan,
Pulau Pinang
Phone: 04 – 545 6000
www.peninsulacollege.edu.my

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OUR HISTORY

Peninsula College Georgetown, formerly acknowledged as ALC College, is proudly treading into its' magnificent 21st year in tertiary education.

Holding devotedly to our motto – "Your Employability…Our Priority", Peninsula has always been conscious to not limit our academicians with a strong background of subject matter, but also a significant industrial shade that assures distinctive entrepreneurial and industry expectations tutoring to students. Probably, this could be our niche of producing graduates with 100% employability record for all these years.

The year 2017 flagged the notable expansion of Peninsula Higher Education Group which includes awarding of MS ISO 9001: 2015 and welcoming of new academic partner, University of Plymouth, UK, in addition to our years long distinguished partner, University of Gloucestershire, UK.

Becoming wholly-owned by PKT Logistics Group Sdn Bhd, a prominent ownership made Peninsula being the pioneer in Southeast Asia to build state-of-art corporate campuses in Selangor and Penang, Malaysia. This enables students' learning to be colliding with the real working environment, a platform for them to enhance their academic knowledge through the hands-on exposure.

The institution is unwavering on its primary mission of providing far-reaching and holistic learning environment. The Ship Campus located in Batu Kawan, Penang, is designed with the campus-in-industry model, whereby having a physical presence in an industrial park puts us in a unique position to bridge the gap between graduate skills and industry needs via academia-industry collaboration. Our other 2 campuses, The Lighthouse Campus in Shah Alam and The City Campus in Klang are also designed to encourage learning in a real-world corporate environment.

Peninsula College Georgetown – "Your Employability…Our Priority"

VISION, MISSION & INSTITUTION PHILOSOPHY

Vision

To be a leading higher education provider of industry-relevant courses

Mission

Peninsula College is socially responsible institution of higher learning providing industry driven teaching within cutting edge campus buildings, located within a business environment. Its activities aim to inspire and enlighten businesses and communities to produce a positive impact upon individuals, industry, and society.

Institution Philosophy

To achieve organisation and individual aspirations which bring fulfilment and happiness to life

FOUNDATION IN SCIENCES STRUCTURE

Approval Code	N/0011/3/0007
Accreditation Code	PA15828
Classification	Foundation
Subject Area	-
Course Mode	Full Time
Course Duration	1 Year (3 long semesters) / (14 weeks per long semester)
Course Location	The Ship Campus
Intakes	September

PROGRAMME OVERVIEW

The primary aim and objective of this programme has been to train and provide a variety of skills to students, including analytical and critical thinking skills so as to produce graduates who can eventually be in leadership roles in major organisations in industry and commerce, in academia and in public sector. These are in line and supportive of the vision and mission of the College to not only become a centre of excellence for creativity and innovation but also to develop a knowledgeable and cultured society.

During the Foundation Programme, students able to choose different routes depending on your area of interest. This will allow you to progress onto a specific degree programme, related to this area or other relevant areas based on your foundation experience. Further, a foundation programme will provide you with the specific set of skills and knowledge necessary for university admission. This targeted preparation will make studying infinitely easier and will provide you with a unique advantage over other international students. On completion of the Foundation Programme, you will be able to make an informed decision about your interest and pursue your degree of choice.

ACADEMIC AND SUPPORT STAFF

DEPUTY CHIEF EXECUTIVE (ACADEMICS)	
Dr. Lim Hui Ling	huiling@peninsulacollege.edu.my
PROGRAMME LEADER	
Ms. Leong Shi Qi	leongshiqi@peninsulacollege.edu.my
SENIOR EXECUTIVE, SCHOOL ADMINISTRATION	
Ms. Wong Yee Yeang	wongyy@peninsulacollege.edu.my
Ms. Farahzatul Shida Binti Mohd Harith Fadzellah	farahzatul@peninsulacollege.edu.my
LECTURER	
Mr. Amir Rasyadan	amirrasyadan@peninsulacollege.edu.my
Mr. Chin Yit Kwong	chinyitkwong@peninsulacollege.edu.my
Mr. Mohd Khairi Bin Kamaruddin	khairi@peninsulacollege.edu.my
Ms. Anizah binti Abu Bakar	anizah@peninsulacollege.edu.my
Ms. Nafisah Misriya Binti Shahul Hamid	nafisahmisriya@peninsulacollege.edu.my
Mr. Heng Wen Zhuo	hengwenzhuo@peninsulacollege.edu.my
Ms. Cheah Wen Sin	cheahwensingpt@peninsulamalaysia.edu.my
Mr. Tan Choo Khuan	tanchookhuan@peninsulacollege.edu.my
Mr. Anderson Teoh Bak Aun	andersonteoh@peninsulacollege.edu.my

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ENTRY REQUIREMENT

Minimum Entry Qualification for Foundation Programme	
Qualifications	**Academic Requirements**
SPM or equivalent	5 credits including Physics and Mathematics / Add Mathematics (Grade C and above)
IGCSE / O-Level	5 credits including Physics and Mathematics Mathematics / Add Mathematics (Grade C and above)
UEC	3 credits including Physics and Mathematics Mathematics / Add Mathematics (Grade B and above)

PROGRAMME OBJECTIVES AND OUTCOME

The programme aims to provide:

Students with the theoretical and practical foundations for knowledge and skills acquisition in various disciplines of study in sciences or arts and prepares them for undergraduate studies at Higher Learning Institutions (HLIs) throughout Malaysia.

The programme educational objectives are:

1. to produce graduates with strong knowledge and practical skills in fundamental sciences, mathematics, information technology and engineering for undergraduate studies.
2. to use knowledge to identify and apply data to solve concrete and complex problems.
3. to equip graduates with critical, interpersonal and communication skills to relate to peers and superiors.
4. to engage graduates in continuous learning and acquire essentials skills for lifelong learning.

The programme learning outcomes are to:

1. utilise facts to describe and discuss concepts, principles, and processes in a specific field of study.
2. apply fundamental principles in the field of study to identify and solve problems.
3. conduct academic activities such as collect, analyse, organise, and process data/information to make conclusions individually or in groups.
4. communicate effectively orally and in writing.
5. utilise basic digital technology applications to seek and process data related to a specific field of study.
6. search, interpret, and use relevant information to pursue lifelong learning independently.

PROGRAMME STRUCTURE (FULL TIME)

YEAR 1			
No	**Code**	**Name of Course**	**CH**
1	FIS1113	Basic Information & Communication Technology	3
2	FIS1123	English I	3
3	FIS1134	Mathematics I	4
4	FIS1144	Physics I	4
5	FIS1154	Chemistry I	4
6	FIS1203	Basic Entrepreneurship	3
7	FIS1224	Chemistry II	4
8	FIS1234	Physics II	4
9	FIS1244	Mathematics II	4
10	FIS1103	Thinking Skills	3
11	FIS1213	English II	3
12	FIS1324	Physics III	4
13	FIS1334	Engineering Mathematics	4
14	FIS1344	Introduction to Programming	4
		TOTAL CREDIT HOURS	**51**
		GRAND TOTAL	**51**

SEMESTER DURATION:

Semester	Lecture (Week)	*'Study Week'* (Week)	Final Examination (Week)	Total (Week)
Long	12	1	1	14

Note:

1. *College implements 3 Semester per year*
2. *Total number of semesters per year = 3*
3. *Total number of weeks per year = 42*

COURSES OFFERED

1.	Basic Information and Communication Technology	**Synopsis** This course aims to prepare students with sufficient up-to-date information and communication technology knowledge and skills that are consistent with current ICT trends. It covers IT literacy, information system, social informatics and network computing.
		Course Learning Outcomes CLO 1: describe concepts and processes related to ICT effectively. CLO 2: apply suitable ICT tools to solve ICT related problems. CLO 3: solve problems using appropriate ICT tools.
2.	English I	**Synopsis** This course aims to equip learners with listening and speaking skills in English. During the course, they will develop knowledge and skills in vocabulary, pronunciation and grammar. The use of technology is encouraged throughout the course to reinforce learning and support independent study.
		Course Learning Outcomes CLO 1: Distinguish various information from a range of listening tasks. CLO 2: Analyse information from extended discussion. CLO 3: Identify information and viewpoints effectively. CLO 4: Use correct grammar and appropriate vocabulary in spoken communication.

3.	Mathematics I	**Synopsis** This course is designed to develop students' confidence with mathematical concepts and relationships and use of mathematics and statistical skills and techniques in a range of contexts specifically problem solving and abstract thinking. Topics covered are numbers, functions and polynomials, sequence and series, matrices, derivatives, integrals, basic statistics and probability.
		Course Learning Outcomes CLO 1: describe the fundamental concepts and principles of various mathematical methods. CLO 2: apply a range of mathematical skills as a logical and coherent subject. CLO 3: solve problems through a quantitative approach.
4.	Physics I	**Synopsis** This course is an introduction to classical mechanics for students who are comfortable with calculus. The main topics are: Vectors, Kinematics, Forces, Motion, Momentum, Energy, Angular Motion, Angular Momentum, Gravity, Planetary Motion, Moving Frames, and the Motion of Rigid Bodies. This course provides the best preparation for upper-level courses, in particular Physics II and Physics III.
		Course Learning Outcomes CLO 1: Demonstrate a thorough conceptual understanding in core areas of physics. CLO 2: Apply the relevant laws as a basis of deriving and understanding physics principles. CLO 3: Apply knowledge of linear motion, forces, energy, and circular motion to explain natural physical processes and related technological advances.

5.	Chemistry I	**Synopsis** This course is designed to provide the essential foundations of chemistry to prepare students for higher studies where chemistry or chemistry-related subjects are taught. Students will be exposed to a thorough introduction to chemistry, scientific methods and development of skills relevant to the safe practice of science. Coverage of this course includes stoichiometry, atomic structure, the periodic table, chemical bonding, chemical equilibrium, thermochemistry, acid & base and introduction to organic chemistry.
		Course Learning Outcomes CLO 1: describe the concepts of physical and inorganic chemistry theories related to definitions, laws/principles, chemical bonding and reactions. CLO 2: solve problems with analytical and critical thinking by applying chemistry facts and principles. CLO 3: apply some techniques used in chemistry experiments.
6.	Basic Entrepreneurship	**Synopsis** This course covers the fundamentals of important discussions on the nature and characteristics of entrepreneurship. The module contents cover the topics to be discussed are related to the planning, management and organization of business activities. The nature of entrepreneurship and its relation to intelligence and business activity management success will also be studied. At the end of this course, the students will be to identify business opportunity, prepare comprehensive business plan and set up growth strategic for business venture.
		Course Learning Outcomes CLO 1: Explain the concepts, characteristics, and process of entrepreneurship. CLO 2: Apply the entrepreneurial theories in strategy making and business problem-solving. CLO 3: Prepare an effective business plan for potential fund providers.

7.	Chemistry II	**Synopsis** This course is designed to develop a broader and deeper understanding of concepts, process and principles in chemistry related to other disciplines. Coverage of this course includes electrochemistry, reaction kinetics and organic chemistry which covers hydrocarbon & halogenalkanes, alcohol, phenols, carbonyl compounds, carboxylic acid, acyl chloride, esters & esterification process, nitrogen compounds and synthetic polymers.
		Course Learning Outcomes CLO 1: describe the concept of scientific phenomena, definitions, laws, and conventions in organic chemistry. CLO 2: solve problems with analytical and critical thinking by applying knowledge, principle and skills in organic chemistry. CLO 3: use experimental skills to carry out investigations.
8.	Physics II	**Synopsis** This course is designed to enable students to learn the basic concepts and principles of elementary physics. The topics include mechanics, gravitation, statics, states of matter, fluids, simple harmonic motion, waves, wave optics and sound.
		Course Learning Outcomes CLO 1: explain the basic concepts in physics in mechanics, gravitation, statics, states of matter, fluids, simple harmonic motion, waves, wave optics and sound. CLO 2: use basic principles of physics to solve physics problems in mechanics, gravitation, statics, states of matter, fluids, simple harmonic motion, waves, wave optics and sound. CLO 3: apply basic principles of physics in laboratory works in mechanics, gravitation, statics, states of matter, fluids, simple harmonic motion, waves, wave optics and sound.

9.	Mathematics II	**Synopsis** This course is designed to develop students' confidence with mathematical concepts and relationships and use of mathematics and statistical skills and techniques in a range of contexts specifically problem solving and abstract thinking. The topics covered are series, polynomials, algebra, logarithm and exponents, trigonometry, and discrete and continuous distributions.
		Course Learning Outcomes CLO 1: describe the fundamental concepts and principles of various mathematical methods. CLO 2: apply a range of mathematical skills as a logical and coherent subject. CLO 3: solve problems through a quantitative approach.
10.	Thinking Skills	**Synopsis** Critical thinking is the process by which we develop and support our beliefs and evaluate the strength of arguments made by others in real-life situations. It involves actively and skilfully conceiving, applying, analysing, and evaluating information gathered from observation, experience, reflection, reasoning or communication as a guide to belief and action. This course encourages students to reflect on the processes of thinking, as well as developing and practising thinking skills.
		Course Learning Outcomes CLO 1: explain the concept of critical and creative thinking. CLO 2: demonstrate the attributes of being critical, creative and innovative in learning and life. CLO 3: create better decisions through critical thinking and creative problem solving.

11.	English II	**Synopsis** This course aims to equip learners with reading and writing skills in English. During the course, students will develop knowledge in vocabulary, grammar, and writing. The use of technology is encouraged throughout the course to reinforce the learning and to support independent study.
		Course Learning Outcomes CLO 1: evaluate information from a range of reading tasks. CLO 2: write the thesis statement, topic sentence, supporting details, and main ideas in reading and writing tasks. CLO 3: identify different types of essays using appropriate writing conventions. CLO 4: use complex, accurate, fluent language and appropriate lexical items in written communication.
12.	Physics III	**Synopsis** This course is designed to enable students to study the extension of basic concepts and principles of physics. This course covers topics such as modern physics, electrostatics, electricity, magnetism, electromagnetism, heat and thermodynamics.
		Course Learning Outcomes CLO 1: explain the basic concepts in physics in the topics of modern physics, electrostatics, electricity, magnetism, electromagnetism, heat and thermodynamics. CLO 2: use the basic principles of physics to solve physics problems in modern physics, electrostatics, electricity, magnetism, electromagnetism, heat and thermodynamics. CLO 3: apply the basic principles of physics in laboratory works in modern physics, electrostatics, electricity, magnetism, electromagnetism, heat and thermodynamics.

13.	Engineering Mathematics	**Synopsis** This course will enable students to study the basic concepts of calculus. Topics include functions, limits, derivatives and integrals of polynomial, rational, radical, exponential and logarithmic functions with a strong emphasis on engineering application.
		Course Learning Outcomes CLO 1: find the limit of a function and identify the existence of a limit. CLO 2: find integrals using the various integral methods. CLO 3: apply appropriate techniques to solve differentiation problems.
14.	Introduction to Programming	**Synopsis** This course is designed to develop students' skill in problem solving through designing and developing computer programs. Topics covered are problem-solving techniques, introduction to structured programming, basic algorithms for searching and sorting, and the modular programming approach.
		Course Learning Outcomes CLO 1: apply the computational thinking approach in solving problems. CLO 2: design solutions using pseudo codes and flowcharts. CLO 3: develop computer programs using a structured and modular approach.

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Examination System

Below is the standard institutional grading scheme:

GRADING SCALE				DESCRIPTION	
Grade	**Grade Point**	**Mark Scale**	**Description**		
A	4.00	80% – 100%	Distinction	EX	Exemption from unit approved on basis of other equivalent studies
A-	3.67	75% – 79%	Distinction		
B+	3.33	70% – 74%	Credit	CT	Credit Transfer from unit approved on basis of other equivalent studies
B	3.00	65% – 69%	Credit	W	Withdrawn
B-	2.67	60% – 64%	Credit	DNA	Did not attend
C+	2.33	55% – 59%	Credit	ANN	Result annulled due to misconduct
C	2.00	50% – 54%	Credit	DA	Deferred Assessment
C-	1.67	45% – 49%	Fail	TBA	To Be Attempted
D+	1.33	40% – 44%	Fail	**ACADEMIC STANDING**	
D	1.00	35% – 39%	Fail	Distinction	3.67 – 4.00
E	0.67	25% – 34%	Fail	Credit	2.00 – 3.66
F	0.00	0 – 24%	Fail	Probation	GPA Below 2.00
				Suspension	No improvement after probation

The passing mark for each module is 50%. In general, you have to pass all the courses prescribed by the programme of study before being considered for graduation; any failures must be re-attempted until a Pass is obtained. Please refer to Clause 1.5 in Student Handbook.

The duration of study with the College may vary from time to time depending on the availability of the courses being offered, thus the College shall not be held liable for any unforeseeable extension of time for programme completion.

External Moderator

Industry professionals and academics will act as external moderators. They will examine the exam papers and answers scripts to ensure the achievement of high quality and academic excellence.

Programme route

The programme is offered at a foundation level and is designed to train students to progress to an undergraduate programme. A study of foundational knowledge, skill, competence, leadership, creativity, innovative and research capability are related to the needs of the students' future workplace with the emerging demands in industry.

Students could further their studies to various bachelor's degrees including business, accounting, logistics, and others at the same college or at other colleges or universities.

Dress Code

Student is required to adhere to the following requirements when entering campus.

- Wear student identification name tag upon entering the campus.
- Must be decently dressed and conduct themselves properly at all times.

Students are required to read the Student Handbook for more information.

This Programme Handbook should be read together with the Student Handbook.