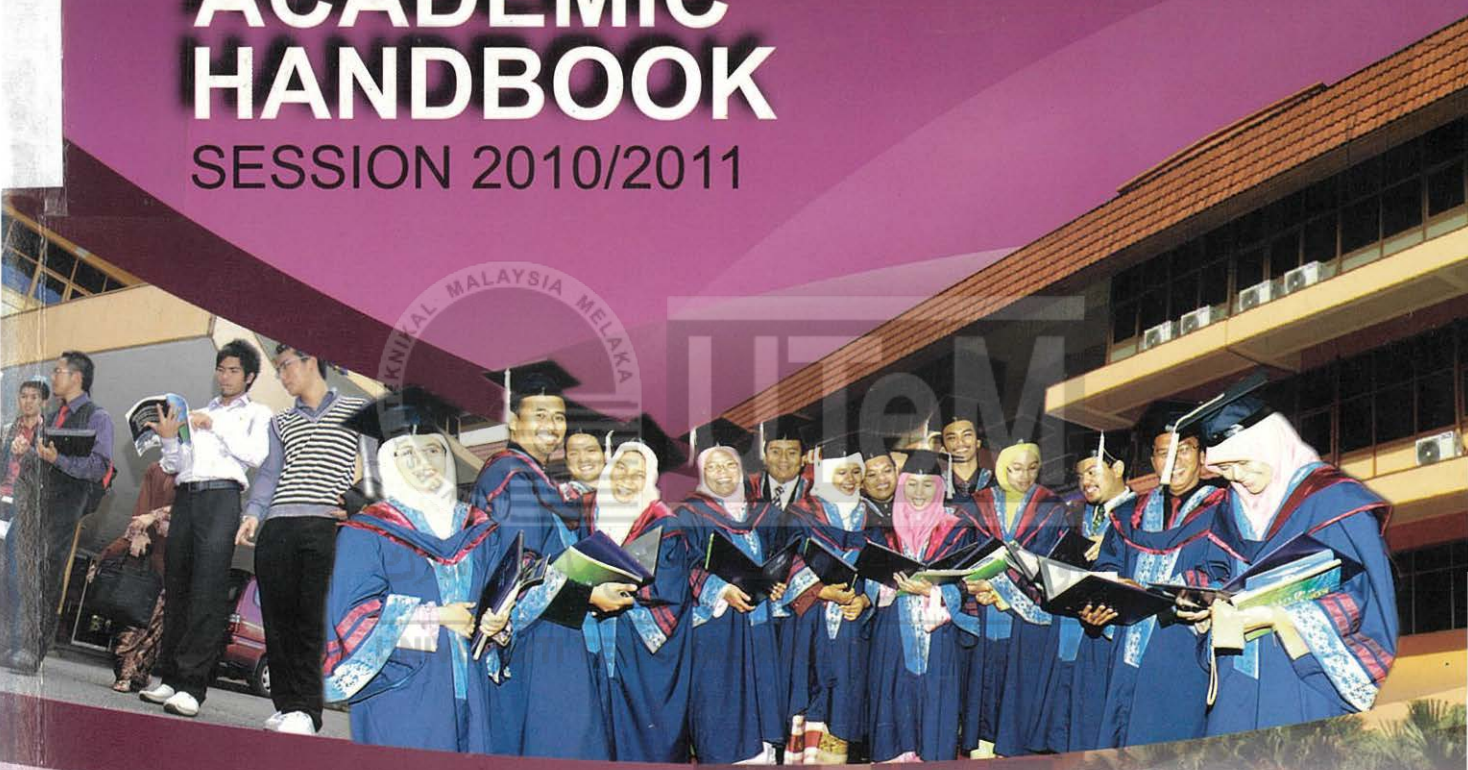
UTeM

Universiti Teknikal Malaysia Melaka

ACADEMIC HANDBOOK

SESSION 2010/2011



FPTT

FACULTY OF TECHNOLOGY MANAGEMENT & TECHNOPRENEURSHIP

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UNIVERSITI TEKNIKAL MALAYSIA MELAKA

ACADEMIC HANDBOOK SESSION 2010/2011

FACULTY OF TECHNOLOGY MANAGEMENT AND TECHNOPRENEURSHIP

content

VISION

To be one of the World's Leading Innovative and Creative Technical University

MISSION

To Produce Highly Competent and Professionals of Calibre through Quality and World Class Technical University Education Based on Teaching, Learning and Research with Smart University-Industriy PartnershipIn-line with National Aspirations

MOTTO

Excellence through Competency

OBJECTIVES

- To become a creative and innovative organization , based on an application-oriented academic education in engineering and technology
- To lead in activities realated to research and development, commercialization/innovation and consultancy based on industry requirements
- To produce competent graduates with towering personality so that they will be the preferred choice of industry
- To have competent and highly qualified staff with vast practical experience
- To play an effective role in the industrial development of the nation
- To establish smart university partnership and collaboration with industry
- To provide an environment conducive to the development of excellence
- To take a holistic approach to ICT applications in the academic and management activities of the university

PROF. DATUK DR. AHMAD YUSOFF BIN HASSAN
Vice Chancellor

DATO' PROF. DR. MOHD NOR BIN HUSAIN

Deputy Vice Chancellor
(ACADEMIC AND INTERNATIONALIZATION)

PROF. DATO' DR. MOHAMAD KADIM BIN SUAIDI
Deputy Vice Chancellor
(RESEARCH AND INNOVATION)

OBJECTIVES OF FACULTY

- To offer academic programs in management, technology and technopreneurship
- To nurture graduates who are able to be self-employed or intelligent workers
- To be a regional center of referrence in technology management and technopreneurship
- To generate national wealth creation through research and new venture capital
- To pursue dynamic participation in lifelong learning

OBJECTIVES OF PROGRAM

- To acquire management, technology and entrepreneurship knowledge
- To be able to identify, analyze problems and make appropriate decisions
- To foster the application and practice of management, technology and technopreneurship skills
- To practice the knowledge learnt professionally and ethically
- To acknowledge the needs of and practice lifelong learning
- To have the ability to communicate effectively at all levels of the organization and public
- To instill social responsilibity as an individual or as a group
- To nurture the development of effective leaders with high integrity
- To create and develop outstanding managers or entrepreneurs

Foreword from the Dean of FPTT

بسم الله الرحمن الرحيم

Assalamualaikum wbt and greetings.

I would like to take this opportunity to congratulate each and every one of you, the cohort who have been selected to experience an exceptional learning journey in the Faculty of Technology Management and Technopreneurship (FPTT), Universiti Teknikal Malaysia Melaka (UTeM) for the 2010/2011 session.

This success is the fruition of your resilience and continuous hard work along with the blessings of your family. There are those who are equally qualified but unfortunately, have not been granted the chance to be part of FPTT. You are the lucky ones.

I urge you to fully utilize this golden opportunity to search for knowledge, acquire skills and simultaneously nurture positive values and traits to best equip yourselves to become professionals hence advancing religion, race and our nation.

Apart from zealous efforts and self-discipline, key to excellence is proper planning. This academic guideline provides assistance in planning yourself for effective and efficient four-year tenure in FPTT.
This information-laden guideline details the semester system in UTeM generally and specifically in FPTT. It is to be your primary reference in times of difficulties or uncertainties with regard to the academics.

Finally, armed with high-spiritedness, perseverance and fiery ambition, along with hard work, I am positive that you will relentlessly pursue excellence. The application based learning approach practiced in FPTT would make you outstanding individuals who are competitive and responsive to the realities of your career or service.

Wassalam.

DR. MD.NOR HAYATI BIN TAHIR
Dean,
Faculty of Technology Management and Technopreneurship

Dean
Dr. Md. Nor Hayati Bin Tahir

Deputy Dean
(Research & Post-Graduate Studies)
Assoc. Prof. Ahmad Rozelan bin Yunus

Department Head
(Technology Management)
Mohd Fazli bin Mohd Sam

Department Head
(Technopreneurship)
Othman bin Aman

Department Head
(Post-Graduate Studies)
Nor Azah binti Abdul Aziz

Manager
(Business Start-Up Unit)
Nusaibah binti Mansor

Senior Assistant Registrar
Noorazilah binti Mohamed

INTRODUCTION

Universiti Teknikal Malaysia Melaka (UTeM), which was incorporated in December 2000, is the 14th Institution of Higher Learning (IHL) in Malaysia. The Faculty of Technology Management & Technopreneurship (FPTT) was established on 19th March 2009 and has since started its operations at the City Campus, in the heart of the World Heritage City of Historic Melaka.

FPTT has indeed created history for being the sixth faculty to offer programs at Bachelor Degree level in UTeM. With its establishment, the faculty integrates a technology and business approach in enhancing the knowledge and skills of human capital. The FPTT curriculum was developed to address issues and challenges in managing the force of globalization, rapid pace of technological changes, market and competition, product complexity, pressure of production cost, high cost and risk of research and development, and government regulations and market diversity.

Thus, FPTT plays a vital role in creating professionals at technology-oriented companies, employees at large firms, founders of start-ups with knowledge in the areas of technology management and technopreneurship. By diversifying the courses into both functional and practice-based, graduates will be competent with the skills in technical marketing, managing technical human resources, and leadership and communication.

A unique feature of this program is that it incorporates Internship, requiring students to undergo an industrial attachment for 18 weeks. This provides students with invaluable working experience even before they graduate. The combination of classroom lectures and real life exposure enhance the employability of these graduates.

FPTT management team is headed by a Dean, assisted by two deputy deans and three departmental heads together with an assistant registrar. The three departments are:

- Department of Technology Management
- Department of Technopreneurship
- Department of Post-graduate studies

The establishment of the Business Start-Up Unit is to manage the entrepreneurial activities of Students.

COURSES OFFERED

FPTT offers courses at Bachelor, Masters and PhD level. The Bachelor courses are:

- Technology Management (Technology Innovation) with Honours (BTMI)
- Technology Management (High Technology Marketing) with Honours (BTMM)
- Technopreneurship with Honours (BTEC)
-

COURSE DURATION

The Bachelor Degree Course will take a minimum of 4 years and a maximum of 6 years to complete.

ADMISSION REQUIREMENT FOR BACHELOR DEGREE PORGRAM

Candidates who are interested to enrol for the Bachelor Degree in FPTT must fulfill one of the following criteria:

Fulfill the General University Requirements and Specific Program Requirements

A good Pass in Diploma with minimum CGPA of 3.00 in related field from recognized institutions and approved by the Senate of the University

and

Exemption of subject credit subject to the approval of the Faculty

and

Have passed/completed a diploma level before the academic session

or

Passed the Sijil tinggi Persekolahan Malaysia (STPM) in 2009 or the previous year with a minimum Grade C (CGPA 2.00) in General Studies and two (2) of the following subjects;

i. Mathematics T / Further Mathematics T / Mathematics S
ii. Chemistry
iii. Physics
iv. Biology
v. Ecoonomy
vi. Accounts
vii. Business Studies
viii. Geography

or

Passed the KPM Matriculation / Foundation UM / Fundation UiTM in 2009 or the previous year with minimum Grade C (CGPA 2.00) in any two of the following subjects;

i. Mathematics / Engineering Mathematics
ii. Chemistry / Engineering Chemistry
iii. Physics / EngineeringPhysics
iv. Biology
v. Ecoonomy
vi. Accounts
vii. Business Studies

Candidates with any physical hadicaps that will make practical work difficult

ACADEMIC SYSTEM

The university implements its academic system by semester. It is the system normally used by all the local IHLs. The Academic Guideline provides the University's Rules and Regulations:

Table 1 : Academic Year

SEMESTER I			
Lecture	7 weeks		
Semester Break	1 week		
Lecture	7 weeks		
Revision Week	1 week		
Final Examination	2 weeks		
Total	18 weeks		
Mid-Semester Break	3 weeks		
SEMESTER II			
Lecture	7 weeks		
Semester Break	1 week		
Lecture	7 weeks		
Revision Week	1 week		
Final Examination	2 weeks		
Total	18 weeks	**OR**	
Academic Year-End Break	13 weeks	Mid-Semester Break	1 week
		SPECIAL SEMESTER	
		Lecture & Examination	8 weeks
		Final Semester Break	4 weeks
TOTAL	52 weeks	**TOTAL**	52 weeks

GRADING SYSTEM

Students' achievement shall be accessed through grading (Table 2):

Table 2: Marks, Grades and Grade point

Marks	Grades	Grade Point	Achievement
80 – 100	A	4.0	Excellent
75 – 79	A-	3.7	Excellent
70 – 74	B+	3.3	Credit
65 – 69	B	3.0	Credit
60 – 64	B-	2.7	Pass
55 – 59	C+	2.3	Pass
50 – 54	C	2.0	Pass
47 – 49	C-	1.7	Conditional Pass
44- - 46	D+	1.3	Conditional Pass
40 – 43	D	1.0	Conditional Pass
00 - 39	E	0.0	Fail

ACADEMIC STATUS

The academic status shall be determined by the examination result achieved at the end of every semester, as categorized below:

Table 3: Academic Achievement

ACADEMIC STATUS	CGPA
Good Standing *(KB)*	CGPA ≥ 2.00
Conditional Status *(KS)*	1.70 ≤ CGPA < 2.00
Fail *(KG)*	CGPA < 1.70

ACADEMIC ACHIEVEMENT

a. Students with CGPA less than 2.00 but more than 1.00, subject to the Senate approval, can;
   i. Continue his/her study in the University; or
   ii. Be suspended from his/her study for the subsequent semester, or
   iii. Be terminated from the university

b. Students with CGPA between 1.70 and 2.00, notwithstanding his/her GPA is less than 1.00, subject to the Sen ate approval, can;
   i. Be suspended from his/her study for the subsequent semester, or
   ii. Be terminated from the University

GRADE POINT AVERAGE CALCULATION (GPA)

Grade Point Average (GPA) is a grade point average earned by a student in a semester. It is calculated as follows:

Total Grade Point (TGP) = $k_1m_1 + k_2m_2 + ...knmn$

Total Calculated Credit (TCC) = $k_1 + k_2 + ...kn$

GPA = TGP / TCC
= $[k1m1 + k_2m_2 + ...knmn] / [k_1 + k_2 + ...kn]$

where : kn = credit hours for subject i, i = 1,.....n
mn = grade points earned for subject i, i = 1,.....n
n = number of subjects registered in the semester

CUMMULATIVE GRADE POINT AVERAGE CALCULATION (CGPA)

Cummulative Grade Point Average (CGPA) is the accummulated grade point average earned by a student throughout his/her semester of study. It is calculated as follows:

CGPA = [GPA1 + GPA2 + ...GPAn] / [CC1 + CC2 + ...CCn]

where : GPAn = Total grade points earned in a semester i, i = 1,.....n
CCn = Total calculated credits in semester i, i = 1,.....n
n = Total semester registered

CONFERMENT OF DEGREE

Students will be awarded with Bachelor degree subject to the following requirements:

i. Students must obtain a Good Standing (KB) or CGPA ≥ 2.00 in the final semester
ii. Pass all the subjects required by the program
iii. Have applied for degree conferment as recognized by the faculty and endorsed by the Senate
iv. Pass MUET with specified band by the University
v. Fulfill any other requirements as determined by the University

ACADEMIC ADVISORY SYSTEM

The semester system allows students to determine their academic workload, subject to their own capability. The governing terms are set by the faculty and must comply with the University's academic regulations. Students may design their own education and learning program under the guidance of their Academic Advisor.

The Importance of Academic Advisory System

The following aspects of academic counseling are extended to the students:

1. Plan their own studies and select subjects according to their own capability as students with Conditional Status (KS) in the preceding semester may not be able to cope with increased workload.
2. Help students and their groups to brainstorm and discuss their choice of subjects and handle related problems.
3. Adapt to the modular semester systems where learning is intensive and subject to continuous assessment.
4. Cope with difficult situations such as cultural shock in university learning, time management, and personal con flicts.

The Roles of the Academic Advisor

1. Assist students in understanding the semester system, and University's academic rules and regulations.
2. Guide students in preparing their study plan such as determining the academic workload.
3. Advise on the selection and registration of subjects according to their academic achievement including decision to add or drop a particular subject within the stipulated time frame.
4. Monitor students' academic performance and advice on adjustment or deferment of study plan.
5. Supervise, oversee, record and submit report on performance problems, if any.
6. Review and monitor record of subjects registered to ensure compliance with the conditions set for degree confer ment.
7. Design schedules to meet students during the first week of each semester for effective counseling.

BACHELOR OF TECHNOLOGY MANAGEMENT (TECHNOLOGY INNOVATION) WITH HONOURS (BTMI)

OVERVIEW

BTMI is a program that develops individuals who can manage R&D organization or the innovation activities of any business. Besides being an intelligent worker, the graduate will be able to seek opportunities from R&D and champion it to be a successful business.
To realize this, students will be taught subjects related to management, technology and technopreneurship with greater focus on innovation knowledge.

Strategic Innovation Management, Technology Transfer, Technology Planning and Forecasting, Intellectual Property Management and Commercialization, Quality Management, Management of Change and Project management are the core subjects for this program.

CAREER PROSPECT

Graduates of BTMI can be employed as middle managers in R&D organizations, technical business organizations, management consultant s, and etc. More importantly, they could be self- employed, starting their own businesses equipped with knowledge of opportunity seeking and to turning it into a successful venture.

BTMI CURRICULUM STRUCTURE

Semester 1

CODE	SUBJECT	CREDIT	CATEGORY
BLHW 1732	Malaysian Socio-Economic Development	2	W
BLHW 1702	Islamic and Asian Civilization (TITAS)	2	W
BLHW 1722	Philosophy of Science and Technology	2	W
BPTU 1013	Business and Organizational Management	3	P
BPTU 1023	Management of Technology	3	P
BPTP 1013	Business Mathematics	3	P
BPTP 1023	Principles of Economics	3	P
TOTAL		18	

Semester 2

CODE	SUBJECT	CREDIT	CATEGORY
BLHW 2712	Ethnic Relations	2	W
BPTU 1033	Technopreneurship	3	P
BPTP 1033	Principles of Accounting and Finance	3	P
BPTP 1043	Principles of Marketing	3	P
BPTP 1053	Business Statistics	3	P
BPTP 1063	Human Resource Management and Technology	3	P
TOTAL		17	

Semester 3

CODE	SUBJECT	CREDIT	CATEGORY
BLHW 2402	Technical Communication I	2	W
BKK ***	Co-Curriculum I	1	W
BPTP 2073	Business Laws	3	P
BPTP 2083	Information Systems Management	3	P
BPTP 2093	Operations Management	3	P
BPTP 2213	Project Management	3	K
BPTP 2223	Technology Market Intelligence	3	K
TOTAL		18	

Semester 4

CODE	SUBJECT	CREDIT	CATEGORY
	Third Language	2	W
BKK ***	Co-Curriculum II	1	W
BMCG 2323	Manufacturing Process	3	P
BMCG 2213	Fundamentals of Energy Management	3	P
BITG 2323	Database	3	P
BPTP 2233	Quality Management	3	K
BPTP 2243	Strategic Innovation Management	3	K
TOTAL		18	

Semester 5

CODE	SUBJECT	CREDIT	CATEGORY
BLHW 3402	Technical Communication II	2	W
BPTU 3043	Business Plan	3	P
BENG 3013	Electric and Electronic Practices	3	P
BMFG 3113	Introduction to Manufacturing Systems	3	P
BPTP 3253	Intellectual Property and Commercialization	3	K
BPTP 3263	Technology Forecasting and Planning	3	K
TOTAL		17	

Semester 6

CODE	SUBJECT	CREDIT	CATEGORY
BLHW 4032	Critical and Creative Thinking	2	W
BPTP 3103	Research Methods	3	P
BPTP 3273	Management of New Product Development	3	K
BPTP 3283	Technology Transfer	3	K
BPTP 3293	Change Management	3	K
	Elective 1	3	E
TOTAL		17	

Semester7

CODE	SUBJECT	CREDIT	CATEGORY
BPTU 4053	Industrial Training	3	P
BPTU 4063	Industrial Training Report	3	P
TOTAL		6	

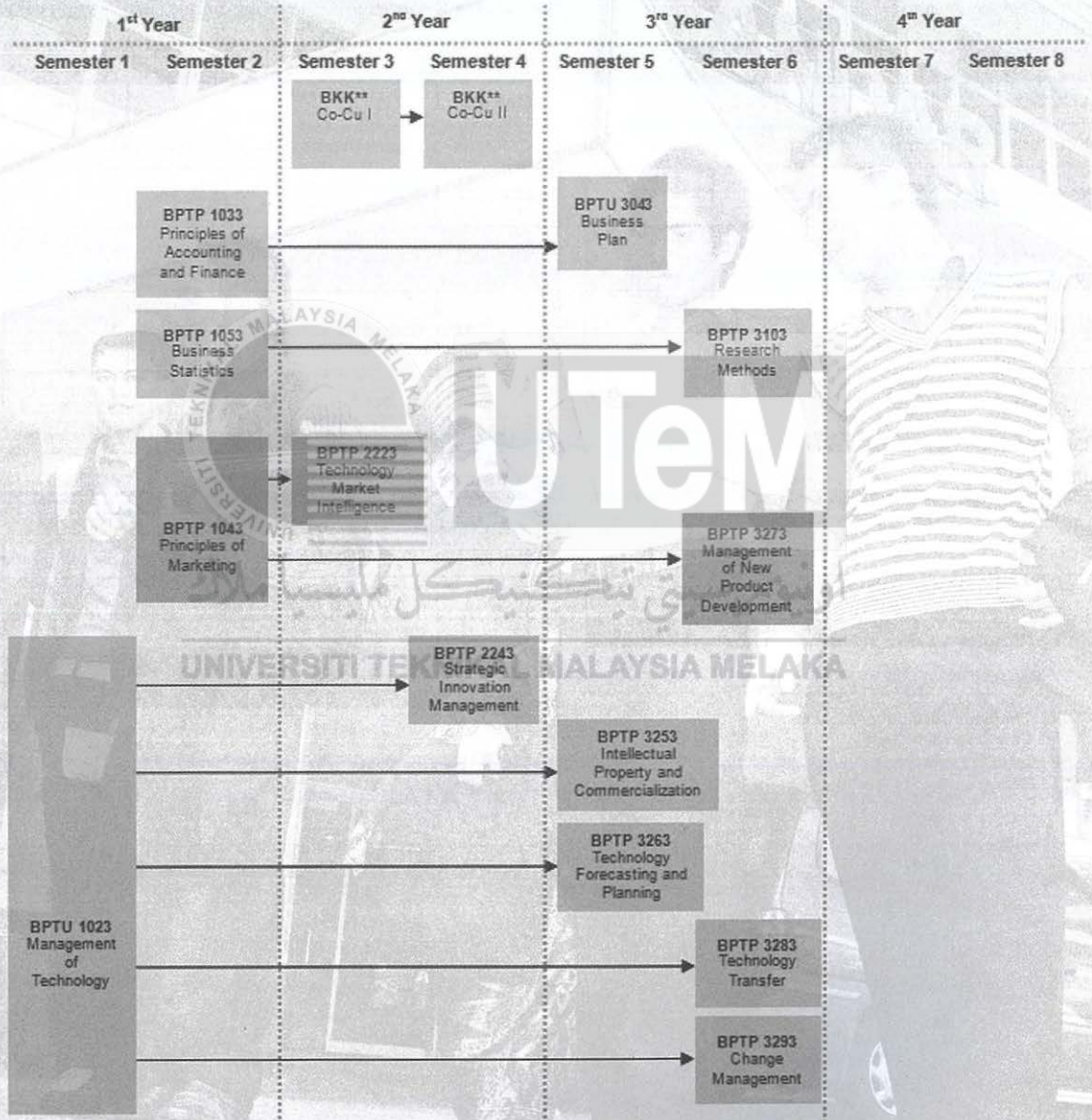
Semester 8

CODE	SUBJECT	CREDIT	CATEGORY
BPTU 4076	Undergraduate Project	6	P
	Elective 2	3	E
	Elective 3	3	E
TOTAL		12	
GRAND TOTAL		123	

Category:

W : University Compulsory Subjects
P : Core Program Subjects
K : Core Course Subjects
E : Elective

Pre-Requisite Subjects



W : University Compulsory Subjects

BLHW 1732	Socio-Economic Development
BLHW 1702	Islamic and Asian Civilization (TITAS)
BLHW 1722	Philosophy of Science and Technology
BLHW 2712	Ethnic Relations
BLHW 2402	Technical Communication I
BKK ***	Co-Curriculum I Third Language
BKK ***	Co-Curriculum II
BLHW 3402	Technical Communication II
BLHW 4032	Critical and Creative Thinking

P : Core Program Subjects

BPTU 1013	Business and Organisational Management
BPTU 1023	Management of Technology
BPTU 1033	Technopreneurship
BPTU 3043	Business Plan
BPTU 4053	Industrial Training
BPTU 4063	Industrial Training Report
BPTU 4076	Undergraduate Project
BPTP 1013	Business Mathematics
BPTP 1023	Principles of Economics
BPTP 1033	Principles of Accounting and Finance
BPTP 1043	Principles of Marketing
BPTP 1053	Business Statistics
BPTP 1063	Human Resource Management and Technology
BPTP 2073	Business Laws
BPTP 2083	Information Systems Management
BPTP 2093	Operations Management
BPTP 3103	Research Methods
BMCG 2323	Manufacturing Process
BMCG 2213	Fundamentals of Energy Management
BITG 2323	Database
BENG 3013	Electric and Electronic Practices
BMFG 3113	Introduction to Manufacturing Systems

K : Core Course Subjects

BPTP 2213	Project Management
BPTP 2223	Technology Market Intelligence
BPTP 2233	Quality Management
BPTP 2243	Strategic Innovation Management
BPTP 3253	Intellectual Property and Commercialization
BPTP 3263	Technology Forecasting and Planning
BPTP 3273	Management of New Product Development
BPTP 3283	Technology Transfer
BPTP 3293	Change Management

E : Elective

BPTT 2083	Franchise and Retail Management
BPTT 2093	Network Management and Business Growth
BPTT 3143	New Capital and Risk Management
BPTT 3163	Consultancy and Coaching for Technopreneurs
BPTP 3513	Professional Ethics
BPTP 3523	Industry Leadership
BPTT 4183	Technopreneurial Business Plan

BACHELOR OF TECHNOLOGY MANAGEMENT (HIGH TECHNOLOGY MARKETING) WITH HONOURS (BTMM)

OVERVIEW

Rapid change and increasing competitive markets require not only the flawless execution of basic marketing activities, but also critical modifications to standard marketing strategy due to the volatility in these markets. High-tech companies have an excellent reputation for innovation and product attribute superiority. However, this product orientation is no longer sufficient to keep pace with the continually evolving expectations of customers. While being technologically driven is essential, it is the customers' perceptions of superior value that ultimately lead to success in the marketing of high tech products and services.

This course provides for the creation and marketing of high tech products with the perspective and tools necessary to successfully manage the challenges and opportunities of today's turbulent marketplace. Students will gain or improve their ability to use state-of-the-art marketing tools and techniques, appropriate marketing research and competitive intelligent tools to link the needs of the customers with the drive for superior technology.

CARREER PROSPECT

Graduates may find positions in a wide range of areas. Examples are relationship managers, marketing events managers, credit risk executives, customer service managers, marketing educational and research institutions professionals, and consulting services. Graduate's skills are transferable to many career areas due to the combination of operational experience, real life exposure and classroom lectures to enhance the employability of the graduates. More importantly, they can become founders of a start-up business in technical marketing entities.

BTMM CURRICULUM STRUCTURE

Semester 1

CODE	SUBJECT	CREDIT	CATEGORY
BLHW 1732	Socio-Economic Development Malaysia	2	W
BLHW 1702	TITAS	2	W
BLHW 1722	Philosophy of Science and Technology	2	W
BPTU 1013	Business and Organizational Management	3	P
BPTU 1023	Management of Technology	3	P
BPTP 1013	Business Mathematics	3	P
BPTP 1023	Principles of Economics	3	P
	TOTAL	18	

Semester 2

CODE	SUBJECT	CREDIT	CATEGORY
BLHW 2712	Ethnic Relations	2	W
BPTU 1033	Technopreneurship	3	P
BPTP 1033	Principles of Accounting and Finance	3	P
BPTP 1043	Principles of Marketing	3	P
BPTP 1053	Business Statistics	3	P
BPTP 1063	Human Resource Management and Technology	3	P
	TOTAL	17	

Semester 3

CODE	SUBJECT	CREDIT	CATEGORY
BLHW 2402	Technical Communication I	2	W
BKK ***	Co-curriculum I	2	W
BPTP 2073	Business Laws	3	P
BPTP 2083	Information Systems Management	3	P
BPTP 2093	Operations Management	3	P
BPTP 2313	Consumer Behavior	3	K
BPTP 2323	R&D Management and Commercialization	3	K
	TOTAL	18	

Semester 4

CODE	SUBJECT	CREDIT	CATEGORY
	Third Language	2	W
BKK ***	Co-Curriculum II	2	W
BMCG 2323	Manufacturing Process	3	P
BMCG 2213	Fundamentals of Energy Management	3	P
BITG 2323	Database	3	P
BPTP 2333	Marketing and Distribution Channel	3	K
BPTP 2343	Supply Chain Management	3	K
	TOTAL	18	

Semester 5

CODE	SUBJECT	CREDIT	CATEGORY
BLHW 3402	Technical Communication II	2	W
BPTU 3043	Business Plan	3	P
BENG 3013	Electric and Electronic Practices	3	P
BMFG 3113	Introduction to Manufacturing Systems	3	P
BPTP 3353	Branding and Packaging Technology	3	K
BPTP 3363	Promotion and Advertising Technology	3	K
	TOTAL	17	

Semester 6

CODE	SUBJECT	CREDIT	CATEGORY
BLHW 4032	Critical and Creative Thinking	2	W
BPTP 3103	Research Methods	3	P
BPTP 3373	International Marketing	3	K
BPTP 3383	High Technology Marketing Strategy	3	K
BPTP 3393	High Technology Marketing Research	3	K
	Elective I	3	E
	TOTAL	17	

Semester7

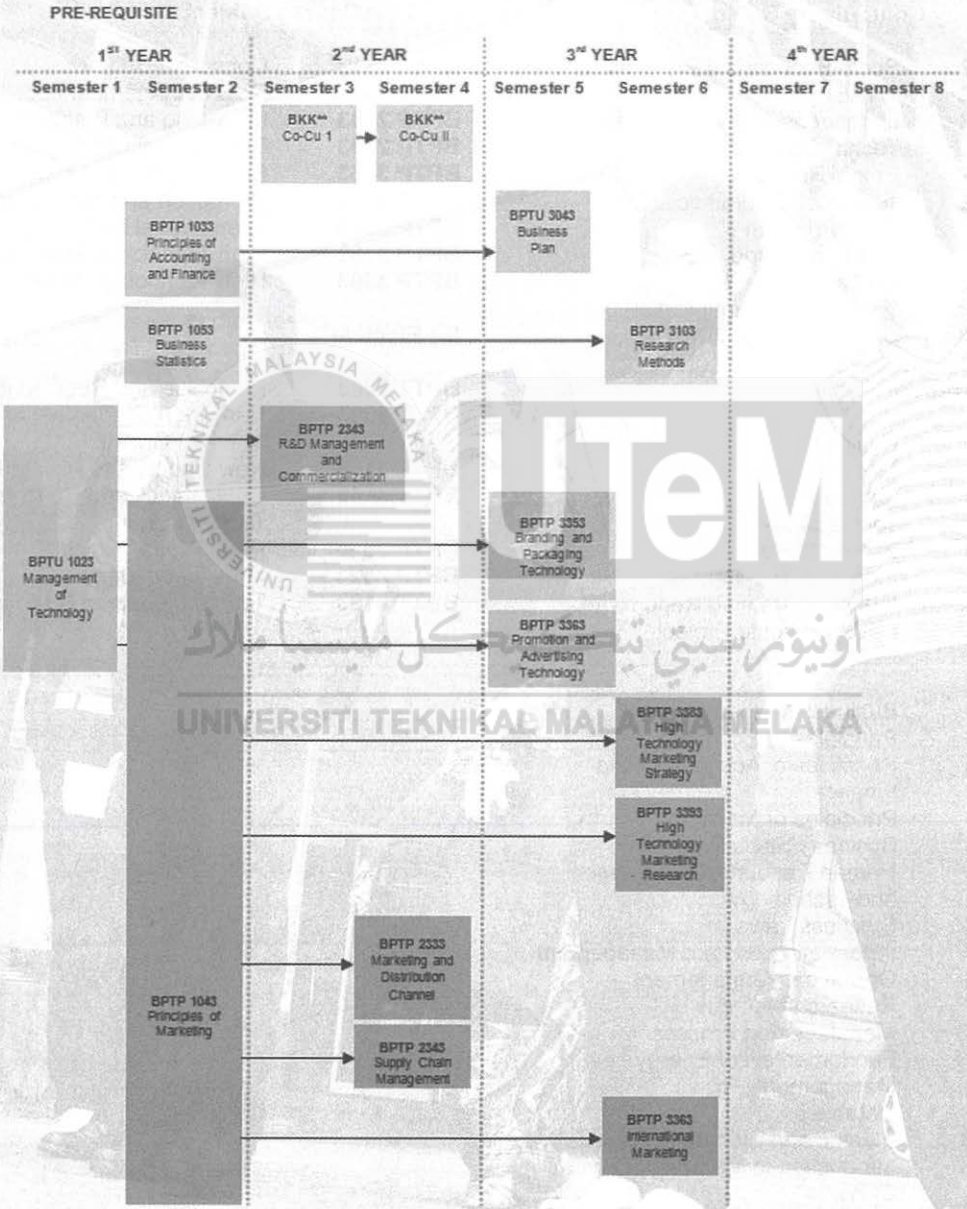
CODE	SUBJECT	CREDIT	CATEGORY
BPTU 4053	Industrial Training	3	P
BPTU 4063	Industrial Training Report	3	P
	TOTAL	6	

Semester 8

CODE	SUBJECT	CREDIT	CATEGORY
BPTU 4076	Undergraduate Project	6	P
	Elective II	3	E
	Elective III	3	E
	TOTAL	12	
	GRAND TOTAL	123	

Category:

W : University Compulsory Subjects
P : Program Core Subjects
K : Core Course Subjects
E : Elective



W : University Compulsory Subjects

BLHW 1732	Socio-Economic Development
BLHW 1702	TITAS
BLHW 1722	Philosophy of Science and Technology
BLHW 2712	Ethnic Relations
BLHW 2402	Technical Communication I
BKK ***	Co-Curriculum I Third Language
BKK ***	Co-Curriculum II
BLHW 3402	Technical Communication II
BLHW 4032	Critical and Creative Thinking

P : Core Program Subjects

BPTU 1013	Business and Organisational Management
BPTU 1023	Management of Technology
BPTU 1033	Technopreneurship
BPTU 3043	Business Plan
BPTU 4053	Industrial Training
BPTU 4063	Industrial Training Report
BPTU 4076	Undergraduate Project

BPTP 1013	Business Mathematics
BPTP 1023	Principles of Economics
BPTP 1033	Principles of Accounting and Finance
BPTP 1043	Principles of Marketing
BPTP 1053	Business Statistics
BPTP 1063	Human Resource Management and Technology
BPTP 2073	Business Laws
BPTP 2083	Indormation System Management
BPTP 2093	Operations Management
BPTP 3103	Research Methods
BMCG 2323	Manufacturing Process
BMCG 2213	Fundamentals of Energy Management
BITG 2323	Database
BENG 3113	Electric and Electronic Practices
BMFG 3113	Intoduction to Manufacturing Systems

K : Core Course Subjects

BPTP 2313	Consumer Behavior
BPTP 2323	R&D Management and Commercialisation
BPTP 2333	Marketing and Distribution Channel
BPTP 2343	Supply Chain Management
BPTP 3353	Branding and Packaging Technology
BPTP 3363	Promotion and Advertising Technology
BPTP 3373	International Marketing
BPTP 3383	High Technology Marketing Strategy
BPTP 3393	High Technology Marketing Research

E : Elective

BPTT 2083	Franchise and Retail Management
BPTT 2093	Network Management and Business Growth
BPTT 3143	New Capital and Risk Management
BPTT 3163	Consultancy and Coaching for Technopreneurs
BPTP 3513	Professional Ethics
BPTP 3523	Industry Leadership
BPTT 4183	Technopreneurial Business Plan

BACHELOR OF TECHNOPRENEURSHIP WITH HONOURS (BTEC)

OVERVIEW

The course discusses issues and concepts such as framing of ventures in terms of people, opportunities, contexts and deals. Students will be equipped with management, technology and technopreneurship knowledge. The uniqueness of this program lies within the 24 subjects offered which totally focus on developing the students to be real technopreneurs.

Beside the knowledge subjects, BTEC students will also participate in two business plan subjects; one which is related to general business venture and another specializing in the technology-based business venture. This will help students to start up business while still pursuing their degree or upon graduation. The BTEC students will also be provided assistance in seeking business partners and venture capital to turn their business ideas into reality. Occasionally business matching events will be organized to support the above intentions.

CAREER PROSPECT

The career prospect for these graduates may be categorized into two areas. They could be successful persons who start a business especially in technology-based entity. They could also be an intelligent worker in any entrepreneurship supporting industries such as financial institutions, consultancy and advisory bodies, education, training providers, etc.

BTEC CURRICULUM STRUCTURE

Semester 1

CODE	SUBJECT	CREDIT	CATEGORY
BLHW 1732	Socio-Economic Development in Malaysia	2	W
BLHW 1702	TITAS	2	W
BLHW 1722	Philosophy of Science and Technology	2	W
BPTU 1013	Business and Organizational Management	3	P
BPTU 1023	Management of Technology	3	P
BPTT 1013	Mathematics for Managers	3	P
BPTT 1023	Fundamentals of Managerial Economics	3	P
	TOTAL	18	

Semester 2

CODE	SUBJECT	CREDIT	CATEGORY
BLHW 2712	Ethnic Relations	2	W
BPTU 1033	Technopreneurship	3	P
BPTT 1033	Business Accounting and Finance	3	P
BPTT 1043	Technopreneurial Marketing	3	P
BPTT 1053	Probability and Statistics for Technopreneurs	3	P
BPTT 1063	Human Resource Management	3	P
	TOTAL	17	

Semester 3

CODE	SUBJECT	CREDIT	CATEGORY
BLHW 2402	Technical Communication I	2	W
BKK ***	Co-Curriculum I	2	W
BPTT 2073	Legal Aspects of Technopreneurship	3	P
BPTT 2083	Franchise and Retail Management	3	P
BMFG 2133	Industrial Design	3	P
BMFG 2113	Manufacturing System	3	P
BITG 2113	E-Commerce and Web Design	3	P
	TOTAL	18	

Semester 4

CODE	SUBJECT	CREDIT	CATEGORY
	Third Language	2	W
BKK ***	Co-Curriculum II	2	W
BENG 2243	Micro- Controller	3	P
BEKG 2453	Instrumentation and Measurement	3	P
BPTT 2093	Network Management and Business Growth	3	P
BPTT 2103	International Business Management	3	P
BPTT 2113	Brand Management	3	P
	TOTAL	18	

Semester 5

CODE	SUBJECT	CREDIT	CATEGORY
BLHW 3402	Technical Communication II	2	W
BPTU 3043	Business Plan	3	P
BPTT 3123	Business Research Methods	3	P
BPTT 3133	Technology Transfer in Business	3	P
BPTT 3143	New Capital and Risk Management	3	P
BPTT 3153	New Product Development and Commercialization	3	P
	TOTAL	17	

Semester 6

CODE	SUBJECT	CREDIT	CATEGORY
BLHW 4032	Critical and Creative Thinking	2	W
BPTT 3163	Consultancy and Coaching for Technopreneurship	3	P
BPTT 3173	Introduction to Advanced Technology	3	P
	Elective I	3	E
	Elective II	3	E
	Elective III	3	E
	TOTAL	17	

Semester7

CODE	SUBJECT	CREDIT	CATEGORY
BPTU 4053	Industrial Training	3	P
BPTU 4063	Industrial Training Report	3	P
	TOTAL	6	

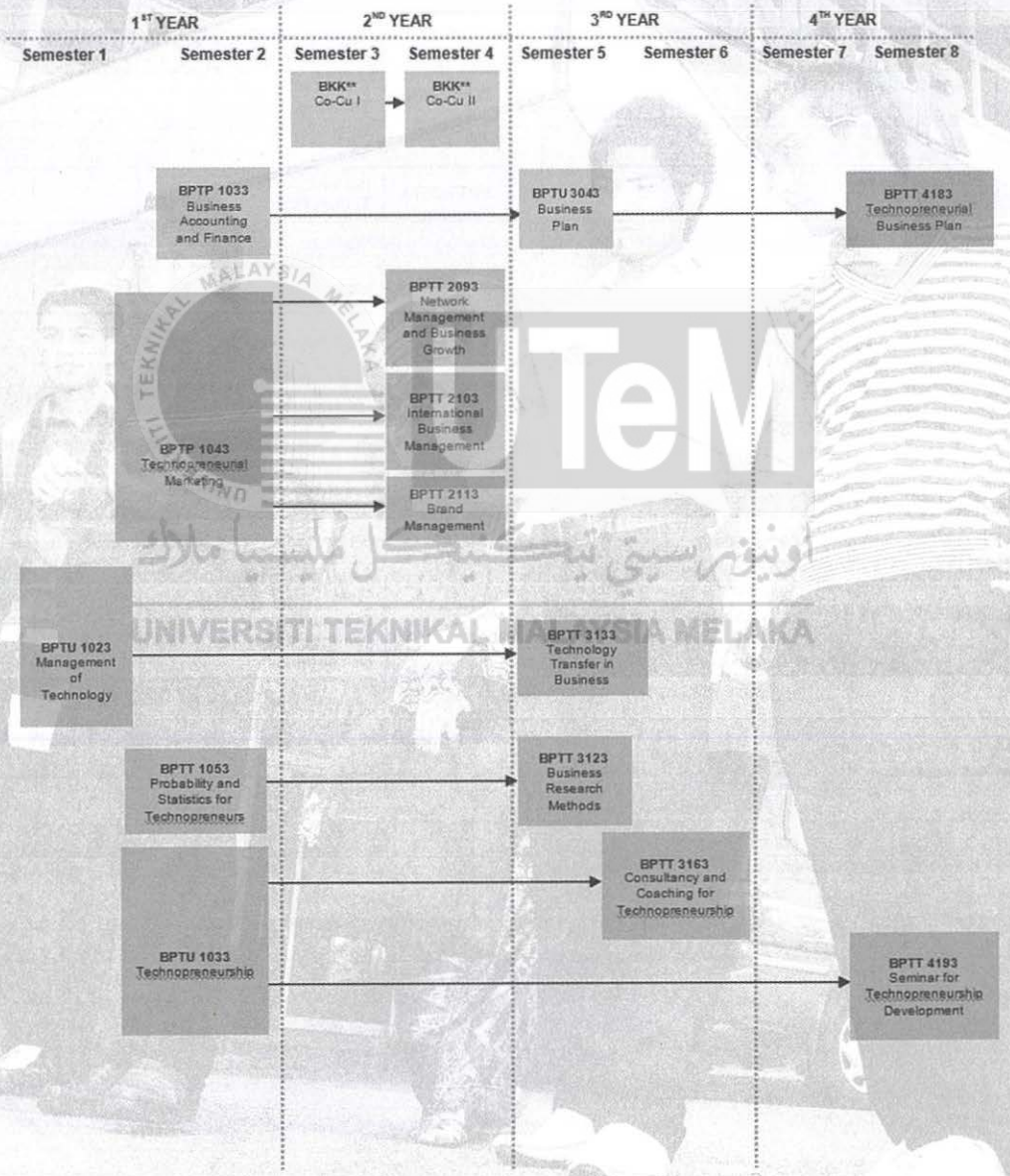
Semester 8

CODE	SUBJECT	CREDIT	CATEGORY
BPTU 4076	Undergraduate Project	6	P
BPTT 4183	Technopreneurial Business Plan	3	P
BPTT 4193	Seminar for Technopreneurship Development	3	P
	TOTAL	12	
	GRAND TOTAL	123	

Category:

W : University Compulsory Subjects
P : Program Core Subjects
E : Elective

PRE-REQUISITE



W : University Compulsory Subjects

BLHW 1732	Socio-Economic Development
BLHW 1702	Islamic and Asian Civilization (TITAS)
BLHW 1722	Philosophy of Science and Technology
BLHW 2712	Ethnic Relations
BLHW 2402	Technical Communication I
BKK ***	Co-Curriculum I Third Language
BKK ***	Co-Curriculum II
BLHW 3402	Technical Communication II
BLHW 4032	Critical and Creative Thinking

P : Core Program Subjects

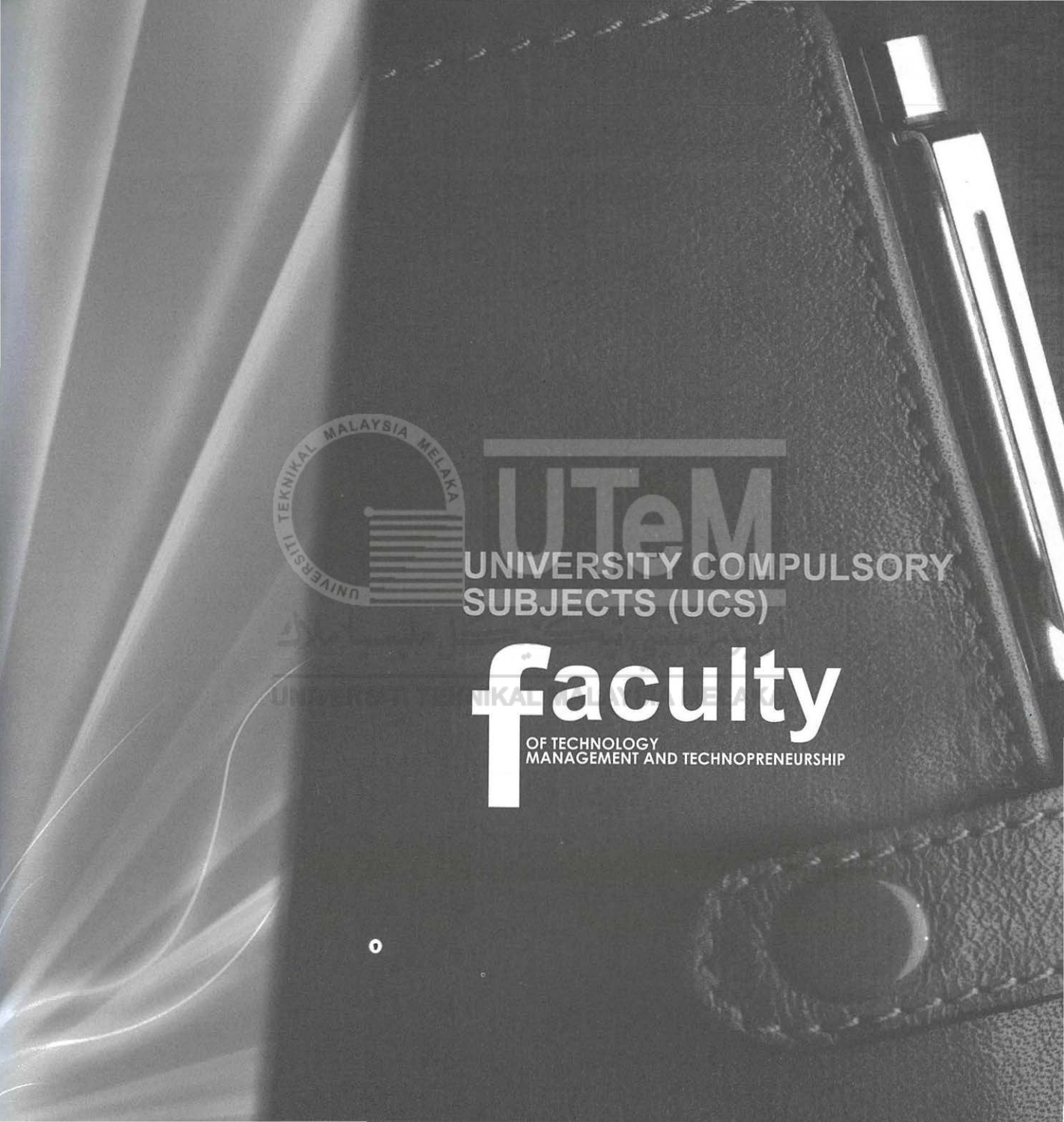
BPTU 1013	Business and Organisational Management
BPTU 1023	Management of Technology
BPTU 1033	Technopreneurship
BPTU 3043	Business Plan
BPTU 4053	Industrial Training
BPTU 4063	Industrial Training Report
BPTU 4076	Undergraduate Project
BPTT 1013	Mathematics for Managers
BPTT 1023	Fundamentals of Managerial Economics
BPTT 1033	Business Accounting and Finance
BPTT 1043	Technopreneurial Marketing
BPTT 1053	Probability and Statistics for Technopreneurs
BPTT 1063	Human Resource Management
BPTT 2073	Legal Aspects of Technopreneruship
BPTT 2083	Franchise and Retail Management
BPTT 2093	Network Management and Business Growth
BPTT 2103	International Business Management
BPTT 2113	Brand Management
BPTT 3123	Business Research Methods
BPTT 3133	Technology Transfer in Business
BPTT 3143	New Capital and Risk Management
BPTT 3153	New Product Development and Commercialisation
BPTT 3163	Consultancy and Coaching for Technopreneurship
BPTP 3173	Introduction to Advanced Technology
BPTP 4183	Business Plan for Technopreneurship
BPTT 4193	Seminar for Technopreneurship Development
BMFG2133	Industrial Design
BMFG 2113	Manufacturing Systems
BITG 2113	E-Commerce and Web Design
BENG 2243	Micro- Controller Technology
BEKG 2453	Instrumentation and Measurement

E : Elective

BPTP 2243	Innovation Strategic Management
BPTP 3263	Technology Forecasting and Planning
BPTP 3293	Change Management
BPTP 3363	Promotion and Advertising Technology
BPTP 3383	High Technology Marketing Strategy
BPTP 3513	Professional Ethics
BPTP 3523	Industrial Leadership

SUBJECT OUTLINE

University Compulsory Subjects (UCS)
Core Programs (CP)
Core Courses (CC)
Elective Subjects (ES)


UNIVERSITY COMPULSORY
SUBJECTS (UCS)
faculty
OF TECHNOLOGY
MANAGEMENT AND TECHNOPRENEURSHIP

University Compulsory Subjects

BLHW 1732	MALAYSIAN SOCIO-ECONOMIC DEVELOPMENT
BLHW 1702	ISLAMIC AND ASIAN CIVILIZATION (TITAS)
BLHW 1722	PHILOSOPHY OF SCIENCE AND TECHNOLOGY
BLHW 2712	ETHNIC RELATIONS
BLHW 2402	TECHNICAL COMMUNICATION I
BKK ***	CO-CURRICULUM I
	THIRD LANGUAGE
BKK ***	CO-CURRICULUM II
BLHW 3402	TECHNICAL COMMUNICATION II
BLHW 4032	CRITICAL AND CREATIVE THINKING


UTeM
CORE PROGRAM (CP)
faculty
OF TECHNOLOGY
MANAGEMENT AND TECHNOPRENEURSHIP

BPTU 1013: BUSINESS AND ORGANIZATIONAL MANAGEMENT

LEARNING OUTCOMES

Upon completion of the subject, students should be able to:

- Recognize the importance and apply the roles of business and organizational mana1gement in strengthening industry competitiveness
- Illustrate the governing factors and impact of business and organizational management in improving firm's performance
- Provide feedback and apply various management tools and methods encompassing planning, leading, organizing, and control functions

SYNOPSIS

The core components of the subject focusses on awareness and development of strategies in managing business growth, resource allocation and technology commercialization. Also included are analysis on issues relating to competitve operations, with emphasis on technology leadership to attain global competitive advantage. Other topics include production operations management, strategic decisions encompassing competitive advantage, location, layout, supply networks and supply chain management, inventory management, etc.

Students are also taught with the necesasary skills and knowledge to manage business operations effectively and efficiently.

REFERENCES

1. Rue, Leslie, Byars and Lloyd (2009). *Management.* New York, McGraw-Hill
2. Jonatahn, R.T. (2004). Organization Theory and *Public Management.* (1st Edition), New Jersey, Wadsworth Publishing.
3. Nahmias, S. And Clara, S. (2001). *Production and Operations Analysis.* New York, McGraw-Hill.

LEARNING OUTCOMES

Upon completion of the subject, students should be able to:

- Recognize the importance and apply the roles of management of technology in organizations
- Explain the importance of continuous technology development in organizations
- Evaluate and recommend solutions to various issues pertaining to management of technology

SYNOPSIS

This course discusses the fundamentals of management of technology in organizations and its role in enhancing organizational performance. Topics include the role of technologoy management, its importance, development and evaluation of technology management encompassing wealth creation, competitive advantage, technology advancement, technology application, technology life-cycle, R&D in technology , resource management, and technology planning.

Students will acquire the necessary competencies in managing various technologies in organizations in response to change, hence contributing to both organizational and national economic development.

REFERENCES

1. Hashem, S. and Tarek, K., (2006), *New Direction in Technology Management*, 2nd Edition, Elsevier Science.

2. Hans, J. T., (2005), *Management of Technology : Managing Effectively in Technology-Intensive Organizations*, 1st Edition, Wiley.

3. Tarek, K., Maximilian, V.Z., George, H., and Louis, A. L, (2003), *Management of Technology*, 1st Edition, Pergamon.

1BPTU 1033 TECHNOPRENEURSHIP

LEARNING OUTCOMES

Upon completion of the subject, students should be able to:

- Illustrate the importance of technology and entrepreneurship including recognizing business opportunities for new venture creation.
- Practice appropriate traits and apply technopreneurship roles in pursuit of a technopreneurial career
- Evaluate and decide on the appropriate technology modifications relevant to business operations.

SYNOPSIS

The course will facilitate students with the key technopreneurship motivation and skills. It is aimed to inculcate technopreneurial behaviors and competencies, incorporating theories and practices for new venture creation. Other topics include familiarizing students with the concepts, issues and techniques of venture creation and technopreneurship. It will also assist them in understanding issues concerning marketing and strategic management, risks and uncertainties, business sustainability and explore growth opportunities by going international. Necessary tools to generate cash flow statements and elements in developing business plan will also be provided.

Simulations, case studies, industrial visits, and practicum will enhance students' skills and knowledge in recognizing opportunities, and realizing their business ideas, hence creating new ventures

REFERENCES

1. Daniel Mankani (2004). *Technopreneurship,* Singapore ,Prentice Hall
2. Thomas W. Zimmere & Norman M. Scarborough (2004). *Essentials of Entrepreneurship & Small Business Management,* 4th Edition, Prentice Hall
3. Marc J. Dollinger (2003). *Entrepreneurship: Strategies and Resources,* 3rd Edition, Prentice Hall

BPTU 3043: BUSINESS PLAN

LEARNING OUTCOMES

Upon completion of the subject, students should be able to:

- Identify, analyse, and realize business ideas and opportunities for succesful new venture creation.
- Develop mechanisms in realizing business ideas into business reality
- Organize, summarize the effectiveness and usefulness of a BP and develop appropriate solutions to business problems.

SYNOPSIS

This subject discusses business idea generation and various aspects of realising the ideas into real business. It also discusses successful critical factors such as market knowkedge, a good management team, managing resources, the location and infrastructure to elevate performance.

Students will be taught the necessary skills and knowledge in preparing an effective business plan to potential investors.

Simulations and case studies will enhance students' knowledge and skills in recognizing, and exploiting business opportunities, hence capable of realizing their business ideas and its value proposition in solving a market/customer needs.

REFERENCES

1. McKeever, M.P (2004). *How To Write A Business Plan* New York, Delta Printing Solution.
2. Tooch, D. (2004). *Building A Business Plan.* New York, Prentice-Hall.
3. Strauss, S.D. (2003). *The Business Start-up Kit.* USA, Dearborn Trade Publishing.

BPTP 1013: BUSINESS MATHEMATICS

LEARNING OUTCOMES:

Upon completion of the subject, students should be able to:

- Recognize the roles and functions of business mathematics and apply them in business pracitices
- Respond by making use of various mathematical models in management and decision-making .
- Provide feedback and effectively apply the models to solve business problems

SYNOPSIS

This course discusses the fundamentals of business mathematics. It encompasses topics such as interest rates, bank discounts, deeds, maturity value, trade discounts, cash and interest rates at discounts. Other topics include business mathematics in retailing, costs, increase and decrease, hire purchase, payment and actual interest rates determinants. Students will also learn about arithmetics series and geometry, annuity, current value and accumulated value, straight- line method in depreciation, sliding- balance method and value-added method.

Through simulations and case studies, students will be able to apply appropriate mathematical models to solve routine business problems.

REFERENCES

1. Miller, C.D, Salzman, S.A. and Clendenen, G. (2008). Business Mathematics. (11th Edition). *New York,* Pearson.

2. Sterling, M.J. (2008). Business Maths for Dummies. (1st Edition). *New York, John Wiley.*

3. Biehler, T. (2007). The Mathematics of Money. (1st Edition). *New Jersey, McGraw Hill.*

BPTP 1023: PRINCIPLES OF ECONOMICS

LEARNING OUTCOMES:

Upon completion of the subject, studenst should be able to:

- Identify the roles and recognize the importance of economic issues and theories impacting organizational competitiveness.
- Explain the importance of microeconomics and macroeconomics factors including government policies to increase orgaizational performance
- Evaluate and propose methods of application relevant for both economic and social development and the nation's productivity enhancement

SYNOPSIS

The core components of this subject is the application of economic concepts in managing business transactions by optimising scarce resources.

The subject discusses issues within the microeconomics and macroeconomics perspective. It provides understanding of how economists model various economic situations to end users and firms, market coordination,and marketing functions effectively and efficiently. The focus is on the concepts of supply and demand, market concentration, quantitative demand and supply analysis, industrial environment, process and production flows and production function game theory in oligopolistic economy. The subject enriches students knowledge on the impact of economy on businesses and increase understanding of government economic policies, the country's annual budget through the development of productive human capital.

REFERENCES

1. O'Sullivan, A., Sheriffrin, S.M., Lian, L.K. dan Seevaratnam, V., (2007), *Principles Of Economics,* Singapore, Prentice Hall.

2. Gorgang, W.G. and Einolf K.W., (2007), *Management Economics: An Acclerated Approach*, New Delhi, Prentice Hall.

3. Nellis, J.G. and Parker, D. (2006), *Principles Of Business Economics,* (2nd Edition), New Jersey, McGraw Hill.

BPTP 1033: PRINCIPLES OF ACCOUNTING AND FINANCE

LEARNING OUTCOMES

Upon completion of the subject, students should be able to:

Recognize the roles and importance of basic concepts of accounting and finance in an organization.
Create an effective mechanism in response to accounting and finance information for strategic business management.
Evaluate and apply the various application methods of accounting and finance in helping effective decision making.

SYNOPSIS

The course will discuss financial planning and controlling by using accounting information. Among the topics covered are accounts for raw materials, labour, overhead, activity-based costing, job order cost, relevant costs for decision making, budgeting and budgetary control, accounting information for determining price and evaluating firm performance. Students will gain knowledge and skills in managing financial resources in the organization and can (to be deleted) apply techniques and methods in financial decision making that will contribute to the effective formulation of organization's strategy.

REFERENCES

1. Wegandt J.J., Kieso D.E. and Kimmel P.D., (2009). *Accounting Principle*, (9th Edition), New Jersey, John Wiley. **(Main Text Book)**

2. Brigham E.F. and Houston J.F., (2006) *Fundamentals of Financial Management.* (11th Edition), New Jersey, South Weatern College Publishing.

3. Kimmel P.D., Weygandt J.J. and Kieso D.E., (2009). *Accounting: Tools for Business Decision Making,* (3rd Edition), John Wiley & Sons, Inc.

4. Jane Lazar, Huang Ching Choo,(2008). *Financial Reporting Standards for Malaysia*, (2nd Edition). McGraw Hill Education, Kuala Lumpur.

BPTP 1043: PRINCIPLES OF MARKETING

LEARNING OUTCOMES

Upon completion of the subject, students should be able to:

- Identify and analyse the implications of marketing concepts, marketing management roles and functions, and the importance of marketing management in strengthening industry competitiveness
- Explain the importance of developing a business plan, and incorporate marketing issues and opportunities to improve organizational performance.
- Evaluate and apply the various marketing management approaches including presenting a sound and comprehensive marketing report.

SYNOPSIS

This subject focuses on various strategic issues of marketing, including marketing mix, marketing elements, marketing management functions and their implications on business and organizational performance.

This subject will enhance the students' knowledge on the fundamentals of marketing, ability in preparing a business plan by incorporating the various marketing issues including marketing strategies, marketing analysis, marketing negotiations, and marketing mix. This course provides training as competent marketers.

Simulations, case-study analysis and presentations will enable students to formulate and present a sound and comprehensive marketing report on products and services to be marketed.

REFERENCES

1. Jobber, D., (2007). *Principles and Practice of Marketing.* New York, Pearson Prentice Hall.

2. Kotler, P., and Armstrong, G.M., (2004). *Principles of Marketing.* New York, Pearson Prentice Hall

3. Brassington, F. and Petittitt, S., (2003). *Principles of Marketing.* New York, Pearson Prentice Hall.

BPTP 1053: BUSINESS STATISTICS

LEARNING OUTCOMES

Upon completion of the subject, students should be able to:

- Apply the principles and concepts of statistical theory in analyzing data to produce useful business information.
- Develop the skills in formulating mechanisms for effective decision- making.
- Evaluate and propose a system for collecting, processing and producing information in order to make accurate and precise business decision.

SYNOPSIS

This subject is related to the application of applied statistics used for problem solving in conducting any business operation. The topics include data classification, graphic presentation, central tendency measurement, frequency of spread distribution measurement, probability distribution, sampling distribution, estimation, hypothesis testing, chi-square distribution, variance analysis, regression analysis, correlation analysis, time series analysis, non-parametric test forecasting, decision theory and quality control. Knowledge acquired will arm students with the competencies in statistics for analyzing and solving daily business problems.

REFERENCES

1. Beri, G.C. (2005). *Business Statistics.* (2nd Edition). New Jersey, McGraw Hill.

2. Bowerman, B. and O'Connell, R. (2004). *Essentials of Business Statistics.* (1st Edition). New Jersey, McGraw Hill.

3. Siegel, A.F. (2003). *Practical Business Statistics.* (5th Edition). New Jersey, McGraw Hill.

BPTP 1063: HUMAN RESOURCE MANAGEMENT AND TECHNOLOGY

LEARNING OUTCOMES:

Upon completion of the subject; students should be able to:

- Recognize the importance and apply the roles of human resource management and technology.
- Explain the elements of managing technical employees and technology-related issues and be able to respond accordingly.
- Evaluate and propose human resource management strategies to attain competitive advantage.

SYNOPSIS

This course discusses the development of competitive edge through effective human resource management and technology. Aspects of human resource management include human resource planning, training and development, performance appraisal, compensation, career management and safety of workers. The technology management perspective would comprise strategic management of technology, competition and technology, business strategies, strategies in technology, competitive technology strategy and technology development strategies.

This subject focuses on human resource from the technology viewpoint. Simulation, business games and presentation sessions directly related to human resource management and technology will be assimilated to enhance students' understanding of the course.

REFERENCES

1. Dessler, G. (2003). *Human Resource Management.* (10th Ed). New York, Pearson, Prentice Hall.

2. Ralph, K. (2003). T*he Human Side of Managing Technological Innovation. A Collection of Readings,* (2nd Ed). Oxford, Oxford University Press.

3. OSHA (1992) Employment Act 1955, IR Act 1969, and Trade Union Act, 1959.

BPTP 2073: BUSINESS LAWS

LEARNING OUTCOMES

Upon completion of the subject, students should be able to:

Recognize the relevant legislations governing business policies and practices in Malaysia and the importance of complying with the legal requirements in conducting businesses
Illustrate and apply relevant laws, governing the incorporation of companies, corporation and enterprise, mortgage, hire purchase, taxation, properties' safety and security
Respond by giving feedback and implement various applications and methods under various laws professionally and with integrity

SYNOPSIS

This subject provides students with knowledge of various businesses laws: Company's Act, Law of Tort, EFF Act, Socso Act, Income Tax Act, Hire Purchase Act, Consumer Protection Act which regulate business operations in Malaysia. It also provides exposure on responsibilities of business owners, mandated by laws. Knowledge on legal aspects and specific situations will be applied such as professional accountability and consumer protection. Other topics include hire purchase and related business laws rules and regulations on the safety and security of properties. This course also discusses critical aspects of business problems such as, formation of contract, negotiable instruments, credit, property's safety and security, mergers and acquisition, business insolvency

REFERENCES

1. Baskaran, R.P (2007). Handbook for Employers and Employees in the Private Sector (19th Edition). Hexa Print Enterprise Sdn. Bhd., Kedah.

2. Henry, R.C. (2006). *Business Law.* (6th Edition). New York, Prentice Hall.

3. Company Act,1965. ILBS, Kuala Lumpur

BPTP 2083: INFORMATION SYSTEMS MANAGEMENT

LEARNING OUTCOMES

Upon completion of the subject, students should be able to:

- Apply the principles and concepts of IS in preparing and providing solutions on related management issues
- Provide response by applying basic skills in information technology (IT)
- Evaluate and recommend specific IS to upgrade organizational efficiencies and effectiveness

SYNOPSIS

Information Systems (IS) literacy is an important asset in organizations which constantly changes. This subject teaches students is not just about the tools and computer software but also covers (to be deleted) encompassing the applications of IS relating to in organizational operations, decision-making and strategy formulation. It also provides students with the understanding and, applications of IS as a management tool and an effective tool in decision making.

REFERENCES

1. O'Brien, J. A. and Marakas, G. M. (2008). *Management Information Systems.* (8th Edition). USA, McGraw Hill.

2. Laudon, K.C. and Laudon, J.P. (2006). *Management Information Systems: Managing the Digital Firm.* (9th Edition). USA, Prentice Hall.

3. Haag, S., Cummings, M. and McCubbrey, D.J. (2004). *Management Information Systems for the Information Age.* (4th Edition). USA, McGraw Hill.

BPTP 2093: OPERATIONS MANAGEMENT

LEARNING OUTCOMES

Upon completion of the subject, students should be able to:

- Determine and analyse the principles and scientific concepts of data analysis to collect information for activity planning
- Provide feedback and develop mechanisms based on skills learnt and knowledge acquired for effective decision-making
- Evaluate and propose an effective operational systems utilizing all available resources

SYNOPSIS

To achieve effective and efficient operations, specific methods should be developed and implemented. The focus will be on the strategic implementation of the best operations systems, operations time management, and improved operations through continuous planning. Topics discussed include operational planning, capacity management, resource allocation, JIT, lean manufacturing and queuing systems.

Students will be exposed to the roles and functions of operations management through case study on manufacturing industries. The subject integrates various aspects such as machine layout, technology used, product and machine design, job allocation into products and service delivery. Students should be able to apply operational practices and models as the basis for decision making.

REFERENCES

1. Stevenson, W. J. (2007). *Operations Management.* (9th Edition). New York, McGraw Hill.

2. Kumar, S. A. and Suresh, N. (2006). *Production and Operations Management.* New York, New Age Publishers.

3. Soh, K.L., Zailani, S.H Noorliza Karia, N., Abdullah, M.S. and Ishak Haji Ismail. (2003). *Asas Pengurusan Operasi,* (Edisi Kedua). Kuala Lumpur, Prentice Hall.

BPTP 3103: RESEARCH METHODS

LEARNING OUTCOMES

Upon completion of the subject, students should be able to:

- Interpret the relationships between skills and knowledge and implement evaluation process on quantitative and qualitative research
- Develop mechanisms, determine and analyse problems and prepare research report
- Organise and conclude relevant research proposals and make recommendations

SYNOPSIS

This subject provides students with the skills and knowledge on designing and applying research in business. Students will be able to develop conceptual framework in solving research problems based on review of literature, and develop the appropriate research instruments to solve selected industrial problems, either quantitatively or by applying the qualitative methods

REFERENCES

1. Sekaran, U. (2007), *Business Research Method.* New York, John Wiley & Son.

2. Saunders, M.N.K. Lewis, P and Thornbill, A. (2003), *Research Methods for Business Students.* (3rd Edition). New York, Pearson Prentice Hall.

3. Ghauri, P. and Ghonhaug, K. (2002), *Research Methods for Business Students.* (2nd Edition). New York, Pearson Prentice Hall.

BMCG 2323: MANUFACTURING PROCESS

LEARNING OUTCOMES

Upon completion of the subject, students should be able to:

- Determine the relationship between energy manufacturing process and manufacturing assembly and apply them in manufacturing activities
- Provide feedback on engineering processes by applying relevant manufacturing techniques
- Differentiate and evaluate various manufacturing technology proposals for purposes of continuous improvement

SYNOPSIS

This subject assists students in understanding the basic manufacturing activities such as process design, choice of raw materials, manufacturing processes, manufacturing assembly, etc. Students will be provided with the knowledge on process affiliation and equipments such as welding and mechanical assembly. Students will also learn about metal process design and provided with the basic exposure on technology overview.

REFERENCES

1. May, G.S. and Spanos,C.J. (2006). *Fundamentals of Semiconductor Manufacturing and Process Control.* New York, Wiley-Interscience.

2. Advani, S.G. and Sozer, E.M. (2002). *Process Modeling in Composites Manufacturing.* Colorado, CRC Press.

3. Kalpakjian S., Schmid S.R. (2001). *Manufacturing Engineering and Technology.* (4th Edition), New York, Prentice Hall.

BMCG 2213: FUNDAMENTALS OF ENERGY MANAGEMENT

LEARNING OUTCOMES

Upon completion of the subject, students should be able to:

- Apply the fundamentals and determine the relationship between the various principles and processes of energy management
- Respond by giving feedbacks on energy sources and usage
- Differentiate and evaluate various energy management proposals for effective implementation

SYNOPSIS

This subject will provide exposure to students on the importance of energy management in reducing or eliminating health and environmental hazards. Besides, students will learn to determine and develop strategies in sourcing for new energies for future consumption. This subject discusses sources of new energy, determine the trends in energy consumption, and identify the critical problems relating to policy development and implementation.

REFERENCES

1. Barney L. C. (2003). *Energy Management*. USA, Routledge.

2. Turner, W. C. (2003). *Energy Management HandBook*. USA, Marcel Dekker Inc.

3. John. Z. (2001) *Macmillan Encyclopedia of Energy*. New York, Macmillan Reference.

BITG 2323: DATABASE

LEARNING OUTCOMES

Upon completion of the subject, students should be able to:

- Determine the relationship between data base and data modeling and apply the principles and concepts of database in data development
- Provide response on the various computer programming languages
- Evaluate and propose relevant operations systems based on technique development and database design

SYNOPSIS

This subject provides students with exposure on database concepts and file management systems. Students should be able to understand the aspects of data modeling, file management and database systems in information systems. Students will also be provided with the necessary skills to design, develop and implement database applications. This subject also focuses on the practical aspects of development, maintenance and queries on relational database. Topics include introduction to database systems, database architecture and database models, relational database model, entity- relationship, normalization, algebra-relationship, structured query language, transaction control and security.

REFERENCES

1. Wilton, P. (2005). *Beginning SQL.*Hoboken. USA, John Wiley & Sons Inc.

2. Connolly, T., Begg, C. and Strachan A. (2002). *Database Systems : A Practical Approach to Design, Implementation, and Management.* USA, Addison-Wesley.

3. Serban, A. M. (2000).*Implementing Relational Database Systems: Implications for Administrative Cultures and Information Resource Management.* USA, Idea Group Inc.

BENG 3013: ELECTRIC AND ELECTRONIC PRACTICES

LEARNING OUTCOMES

Upon completion of the subject, students should be able to:

- Determine the relationships between electric and electronic basic process and apply the principles and concepts of electric and electronic practices for implementation
- Respond by giving feedback on relevant electric and electronic fields.
- Differentiate and evaluate the various L.V technical installation methods and carry simple tests

SYNOPSIS

This subject introduces students to the basic principles, applications and knowledge relating to electric and electronic practices. Students will be exposed to the relevant electric and electronic fields such as electrical machines, energy systems, electronic power, control and automation, signals process and telecommunications, electronics and computer engineering.

Other topics include electric and electronic circuits including international standards management system, elements in electric circuit and the application of Ohm law and Kirchoff law. Students will also learn about the methods of circuit resistance and alternating circuit. Students will discuss numbering systems, digital IC technology and logical system networks, applications of multi meter and oscilloscope.

REFERENCES

1. Staff, BSI. (2007). *Code of Practice for Installation of Electrical and Electronic Equipment.* London, IEEE.

2. Fink, D. G.; Beaty, H. Wayne (2006). *Standard Handbook for Electrical Engineers.* USA, McGraw Hill.

3. Hickey, Robert B. (2003). *Electrical Engineer's Portable Handbook*. USA, McGraw Hill.

BMFG 3113: INTRODUCTION TO MANUFACTURING SYSTEMS

LEARNING OUTCOMES

Upon completion of the subject, students should be able to:

Determine the various basic designs in manufacturing systems and apply the principles and concepts in manufacturing
Response by giving feedback on manufacturing systems encompassing manufacturing process, analysis and manufacturing systems design
Differentiate and evaluate various proposals and creative manufacturing projects to meet current industry requirements

SYNOPSIS

This subject provides students with exposure on the techniques of manufacturing industry including the applications of various machineries. It also provides students with extensive knowledge in mechanical engineering and manufacturing specialisation.

Specific modules comprise of manufacturing systems, practical manufacturing workshop, material technology, computer-assisted manufacturing design, quality control, industrial and robotic automation, manufacturing economy and manufacturing control. Students will also undergo practical training where they will learn about manufacturing process.

REFERENCES

1. Mikell, P. G. (2001). F*undamentals of Modern Manufacturing: Materials, Processes, and Systems.* (2nd Edition). New York, John Wiley.
2. Andrew, P. S. and James, E. A. (2000). I*ntroduction to Systems Engineering.* New York, John Wiley Interscience.
3. Nadim, M. (2000). *An Introduction to Microelectromechanical Systems Engineering.* Carlifornia, Artech House Publishers.

BPTT 1013: MATHEMATICS FOR MANAGERS

LEARNING OUTCOMES

Upon completion of the subject, students should be able to:

- Apply the roles and functions of business mathematics and recognize its importance in business
- Respond by developing various mathematical models in managing and decision-making .
- Provide feedback and develop mathematical models and effectively apply the models to solve business problems

SYNOPSIS

This course discusses the fundamentals of business mathematics. It encompasses topics such as interest rates, bank discounts, deeds, maturity value, trade discounts, cash and interest rates at discounts. Other topics include business mathematics in retailing, costs, incline and decrease, hire purchase, payment and actual interest rates determination. Students will also learn about arithmetics series and geometry, annuity, current value and accumulated value, straight- line method in depreciation, sliding- balance method and value-added method.

Through simulations and case studies, students will be able to apply appropriate mathematical methods to solve routine or daily business problems.

REFERENCES

1. Miller, C.D, Salzman, S.A. and Clendenen, G. (2008). Business Mathematics. (11th Edition).*New York, Pearson.*
2. Sterling, M.J. (2008). Business Math for Dummies. (1st Edition). New York, John Wiley.
3. Biehler, T. (2007). The Mathematics of Money. (1st Edition). New Jersey, McGraw Hill.

BPTT 1023: FUNDAMENTALS OF MANAGERIAL ECONOMICS

LEARNING OUTCOME

Upon completion of the subject, students should be able to:

- Differentiate and analyze the importance of economic principles to identify business problems.
- Explain the importance of economic factors for decision making to succeed in market interaction.
- Differentiate and evaluate the applications of various economic methodologies to elevate market share

SYNOPSIS

Students will be exposed to basic economic principles such as scarcity, pricing and production theories, and allocation theory. Discussions will be based on demand-supply model, flexibility and consumer behavior, supply and demand curves and organizational behavior. Various structured market forms the premise for discussion in issues pertaining to the production theory under the allocation theory. The allocation theory will discuss pricing determination i.e.labor and capital.

REFERENCE

1. Lipsey, R.G., Ragan, C.T.S. and Stoner P.A., (2008), *Economics,* Boston, Pearson.

2. Forgang, W.G. and Einolf K.W., (2007), *Management Economics: An Acclerated Approach,* New Delhi, Prentice Hall.

3. O'Sullivan, A., Sheriffrin, S.M., Lian, L.K. dan Seevaratnam, V., (2007), *Principles Of Economics,* Singapore, Prentice Hall.

BPTT 1033: BUSINESS ACCOUNTING AND FINANCE

LEARNING OUTCOMES

Upon completion of the subject, students should be able to:

- Analyze and distinguish the importance of accounting and finance in business
- Create mechanisms for analyzing and interpreting financial statements
- Evaluate business performance and able to make decision on business investments.

SYNOPSIS

The course discusses techniques and methods to analyze, interpret and use of financial information in planning and monitoring organizational operations. Among the topics covered are accounts for raw materials, labour, overhead, activity-based costing, job order costing relevant costs for decision making, budgeting and budgetary control, accounting information for price setting process and evaluation of firm's performance. It also covers procedures and standards of financial management, analysis and evaluation of financial statements, evaluation of company's performance, financial planning, financial controlling, and capital management, net present value of money, risk and cost of capital. Students will gain knowledge and skills in managing financial resources and apply techniques and methods in financial decision that will contribute to organization's strategy.

REFERENCES

1. Wegandt J.J., Kieso D.E. and Kimmel P.D., (2009). *Accounting: Tools for Business Decision Making,* (3rd Edition), John Wiley & Sons, Inc.

2. Needles Jr., B.E. Power, m. And Crosson S.V., (2007).*Principles of Accounting,* (10th Edition), New York, Houghton Mifflinl

3. Wegandt J.J., Kieso D.E. and Kimmel P.D., (2009). *Accounting Principle,* (9th Edition), New Jersey, John Wiley.

4. Brigham E.F. and Houston J.F., (2006) *Fundamentals of Financial Management.* (11th Edition), New Jersey, South Weatern College Publishing.

BPTT 1043:TECHNOPRENEURIAL MARKETING

LEARNING OUTCOMES

Upon completion of the subject, students should be able to:

- Analyse and compare the various technology-based marketing management activities and their roles in strengthening industry competitiveness.
- Explain the importance of integrating technology into strategic marketing to create new business opportunities
- Evaluate and apply various marketing methods including presenting a marketing report

SYNOPSIS

This subject focuses on various strategic issues of marketing, including marketing mix, marketing elements, marketing management functions and their implications on business and organizational performance. This subject will enhance the students' knowledge on the fundamentals of marketing, develop skills in preparing a business plan by incorporating the various marketing issues including marketing strategies, marketing analysis, marketing negotiations, and marketing mix. This course provides training as competent marketers.

Simulations, case-study analysis and presentations will enable students to formulate and present a sound and comprehensive marketing report on products and services to be marketed. Students should be able to produce marketing information to market their products and services.

REFERENCES

1. Kotler, P., (2003), *A Framework for Marketing Management.* (2nd Edition). New York, Prentice Hall.

2. Boyd, Walker, Mullins, and Larreche, (2002), *Marketing Management: A Strategic Decision-Making Approach*. (4th Edition). New Jersey, McGraw Hill.

3. McGrath, M., (2000), *Product Strategy for High Technology Companires: Accelerating Your Business to Web Speed.* (2nd Edition). New Jersey, McGraw Hill.

BPTT 1053: PROBABILITY AND STATISTICS FOR TECHNOPRENEURS

LEARNING OUTCOMES

Upon completion of the subject, students should be able to:

- Apply the principles and concepts of statistical theory in analyzing data to produce useful business information.
- Develop the skills in formulating mechanisms for effective decision- making.
- Evaluate and propose a system for collecting, processing and producing information in order to make accurate and precise business decision

SYNOPSIS

This subject is related to the applications of applied statistics used for problem solving in conducting any business operations. The topics include data classification, graphic presentation, central tendency measurement, frequency of spread distribution measurement, probability distribution, sampling distribution, estimation, hypothesis testing, chi-square distribution, variance analysis, regression analysis, correlation analysis, time series analysis, non-parametric test forecasting, decision theory and quality control. Knowledge acquired will arm students with the competencies in statistics for analyzing and solving daily business problems.

REFERENCES

1. Mendenhall, W., Beaver, R.J. and Beaver, B.M., (2005). *Introduction to Probability and Statistics.* New Jersey, Brook/Cole.

2. DeGroot, M.H. and Schervish, M.J., (2002). *Probability and Statistics.* New York, Addison Wesley.

3. Spiegel, M.R., Schiller, J.J. and Srinivasan, M.L.V., (2002). *Probability and Statistics.* New Jersey, McGraw Hill Professional.

BPTT 1063: HUMAN RESOURCE MANAGEMENT

LEARNING OUTCOMES:

Upon completion of the subject, students should be able to:

- Recognize the importance and apply the roles of human resource management as the best mechanism to be utilised by managers in and enhancing workers' competency
- Appreciate the importance of the relations of man and technology
- Evaluate and propose a system to execute the multi-methods to human resource management

SYNOPSIS

This course develops a practical and theoretical insight into current practices and contemporary development in human resource management to develop competitive edge through effective technology and human resource management.

Students will be able to identify and understand key HRM issues, including the recruitment and selection of staff, training and development, and the manner in which their work performance can be assessed and rewarded, discipline problems and termination. It encompasses topics such as strategic management, talent management, planning and leadership development will be based on technology development and employees.

Students will be developed into intelligent employees who are not only able to understand and manage human resource but also have the ability to connect human and technology.

REFERENCES

1. Armstrong, M. (2006), *A Handbook of Human Resource Management Practice,* 10th Edition, London: Kogan Page.
2. Foot, M. & Hook, C. (2005) *Introducing Human Resource Management*, Essex: Prentice-Hall.
3. Anantaraman, V. (1997) *Malaysian Industrial Relations: Law and Practice*. UPM Press.

BPTT 2073: LEGAL ASPECTS OF TECHNOPRENEURSHIP

LEARNING OUTCOMES

Upon completion of the subject, students should be able to:

- Recognize legally-mandated provisions of business laws in Malaysia relating to technology-based businesses
- Discuss the importance of laws and regulations in protecting copyright, commercialisation and consumerism.
- Provide feedback on the implementation of legal compliance in technology-based organisations.

SYNOPSIS

This subject provides an introduction to business laws relating to technology, including legal provisions governing commercialisation process and copyright protection as well as professional obligations and consumer protection. Other issues discussed are hire purchase, mortgage, negotiable instruments taxation and related business laws such as insolvency, law of contract, law of tort , laws governing properties and securities in Malaysia.

Emphasis will also be on critical aspects related to business problems which will be addressed through various topics such as property laws, credit, safety and bankruptcy issues.

REFERENCES

1. Henry, R.C. (2006). *Business Law.* (6th Edition). New York, Prentice Hall.
2. Emerson, R. W. (2003). *Business Law.* (4th Edition). Colorada, Barron's Educational Series.
3. International Business Publication (2001). *Malaysia Business Law Handbook World Economic and Trade Unions Business Library.* (3rd Edition). Sydney, International Business Publication.

BPTT 2083: FRANCHISE AND RETAIL MANAGEMENT

LEARNING OUTCOMES

Upon completion of the subject, students should be able to:

- Analyse issues and procedures in franchise and retail business operations.
- Provide feedback on the start-up process of business establishment
- Compare and evaluate franchise and retail viability with other types of business, and able to comprehend problems.

SYNOPSIS

This subject focuses on various aspects of franchising and retailing, understanding of concepts, strategies and trends involving retail and franchise operations in Malaysia.

Students will be trained to become competent franchise operators or retail managers and capable of solving unpredictable business problems. Students will be assigned to analyse case studies.

Knowledge and skills acquired will enable students to develop their own career or create new ventures through franchise licensing or in retail business

REFERENCES

1. Erwin, J. K. (2007). *How to Buy a Franchise or Franchise Your Own Business.* Houston, Entrepreneur Press.
2. Levy, M. and Weitz, B.A (2006). *Retailing Management.* New Jersey, McGraw Hill.
3. Mendelsohn, M. (2005). *The Guide to Franchising.* New Jersey, Thomson Learning.

BPTT 2093: NETWORK MANAGEMENT AND BUSINESS GROWTH

LEARNING OUTCOMES

Upon completion of the subject, students should be able to:

- Analyse and compare effective supply chain issues in developing strategic business development
- Establish successful business development mechanisms
- Evaluate and manage business development through technology applications

SYNOPSIS

This subject focuses on the theoretical aspects of finance, human resource, managing marketing operations in supply chains and the management of contemporary business issues and its development. It's also discusses intra and inter-firms coordination in programmes such as e-cooperation, swift response, co-inventory management and strategic partnership. Other topics include franchising and retailing, merger and acquisition, global development and business success.

REFERENCES

1. Steven S. Little, (2005). *The 7 Irrefutable Rules of Small Business Growth.* New Jersey, John Wiley and Sons.
2. Burt, D.N. and Dobler, D.W.(2003). *World Clas Supply Management.* (7th Edition). New York, McGraw Hill.
3. Charles Grantham, Judith Carr (2002). Consumer Evolution: *Nine Effective Strategies for Driving Business Growth.* New Jersey, John Wiley and Sons.

BPTT 2103 : INTERNATIONAL BUSINESS MANAGEMENT

LEARNING OUTCOMES

Upon completion of the subject, students should be able to:

- Discuss topics relating to management implications and the concepts of international business
- Analyse issues and challenges in international market
- Evaluate and differentiate cultural, political and legal issues with regards to international business

SYNOPSIS

International business involves business transactions between several parties and nations. The establishment of trade affiliations such as NAFTA, WTO and AFTA results in the rise of international business .This subject will expose students to various issues pertaining to international business environment, strategies in exploring the international markets and elements of global management.

REFERENCES

1. Hill, C. W. (2006). *International Business.* (6th Edition). McGraw Hill.
2. Hoekman M. (2007).*The World Trade Organization: Law, Economics and Policy.* (1st Edition). California, Routledge.
3. Kotabe M. & Helsen K. (2000). *Global Marketing Management.* New Jersey, John Wiley & Sons Inc.

BPTT 2113: BRAND MANAGEMENT

LEARNING OUTCOMES

Upon completion of the subject, students should be able to:

- Analyse issues and procedures in executing product brand management.
- Develop mechanisms in the applications of technology in brand management
- Evaluate the effects of brand management technology on product commercialisation.

SYNOPSIS

This subject discusses the concepts, strategies and trends related to brand management of products.

Topics discussed include definition of brand management technology, setting platform for brand management technology, brand evaluation through technology, administering new brand and re-branding via technology, designing and implementing management strategies via technology. Students will acquire skills and knowledge in using current technologies to add value to product brand management.

REFERENCES

1. Post, R. S. and Post, P.N. (2008). *Global Brand Integrity Management.* New York, McGraw Hill.
2. Keller, K. (2007). *Strategic Brand Management* (3rd Edition). New York, Prentice Hall.
3. Stiff, D. (2006). *Sell the Brand First: How to Sell Your Brand and Create Lasting Customer Loyalty.* New York, McGraw Hill.

BPTT 3123: BUSINESS RESEARCH METHODS

LEARNING OUTCOMES

Upon completion of the subject, students should be able to:

- Interpret the relationships between skills and knowledge and implement evaluation process on quantitative and qualitative research
- Develop mechanisms, determine and analyse problems and prepare research report
- Organise and conclude relevant research proposals and make recommendations

SYNOPSIS

This subject provides students with the skills and knowledge in designing and applying research in business. Students will be able to develop conceptual framework in solving research problems based on review of literature, and develop the appropriate research instruments to solve selected industrial problems, either quantitatively or by applying the qualitative methods

REFERENCES

1. Sekaran, U. (2007), *Business Research Method.* New York, John Wiley & Son.
2. Saunders, M.N.K Lewis, P. and Thornbill, A. (2003). *Research Methods for Business Students.* (3rd Edition). New York, Pearson Prentice Hall.
3. Ghauri, P. and Ghonhaug, K. (2002), *Research Methods for Business Students.* (2nd Edition). New York, Pearson Prentice Hall.

BPTT 3133: TECHNOLOGY TRANSFER IN BUSINESS

LEARNING OUTCOMES

Upon completion of the subject, students should be able to:

- Elaborate, integrate and synthesise the process of technology transfer into business practices and operations
- Create a mechanism by developing software, hardware to solve problems on technology transfer.
- Organise, modify and decide on appropriate technology and technology adoption in industry.

SYNOPSIS

This subject discusses various aspects of technology transfer, technology transfer principles and transfer channels with the focus on the support systems provided by the government.

Critical issues that will be discussed include technology transfer, types of technology and advanced technology innovation. Students will be trained as intelligent employees and be sensitive to changes in technology transfer.

Case studies will help students understand and apply principles and transfer channels.

REFERENCES

1. Heshmati A. & Sohn Y.B & Kim Y. R. (2007). *Commercialization and Transfer of Technology: Major Country Case Studies* New York, Nova Publishers.
2. Libecap G. D. (2005). *University Entrepreneurship and Technology Transfer: Process, Design, and Intellectual Property.* New York, Emerald Group Publishing.
3. Sheehan S. (2000). *Technology Commercialization: Technology Transfer for Business.* New Jersey, Drug & Market Developing Publications.

BPTT 3143: NEW CAPITAL AND RISK MANAGEMENT

LEARNING OUTCOMES

Upon completion of the subject, students should be able to:

- Compare the issues and challenges with the procedures of new capital and risk management and analyse business environment
- Create mechanisms to solve various issues and problems associated with new capital and risk management
- Organise by incorporating effective financial budgets in the management new business

SYNOPSIS

This course discusses the roles of managing new capital and risk in business. Topics include cultural development, risk management framework, etc. Students will able to understand the relationship between risk management and corporate environment and develop their own models in managing risks.

This subject focuses on capital investment in new business. It is assimilated to enhance students' understanding of the course from the theory and empirical perspectives to develop new business.

REFERENCES

1. Futter, D. and Vaughn, I. J., (2004). *Venture Capital 2004: Venture Creation, Management & Financing in the New "Post-Bubble" Market.* New York, Springer Science & Business.

2. Mulcahy, R. , (2003). *Risk Management: Tricks of the Trade for Project Managers.* New Delhi, RMC Publication.

3. Holmes, A., (2002). *Risk Management*. New Jersey, John Wiley & Sons.)

BPTT 3153: NEW PRODUCT DEVELOPMENT AND COMERCIALIZATION

LEARNING OUTCOMES

Upon completion of the subject, students should be able to:

- Analyze and compare the importance of new product commercialisation to satisfy the customers' needs and increase market share
- Develop mechanisms in product commercialisation to meet current demands
- Analyze and defferentiate the impact of new product commercialization process.

SYNOPSIS

New product development is crucial in determining the success and enhancing the profits of industry. This subject will help students understand the commercialization process and the marketing of new products in both the public and private sectors.

This subject will expose students to product commercialization process beginning from the new innovation of product concepts to the product marketing process. Students will also learn about new product development planning based on product life cycle, and identify appropriate strategies based on technology life cycles. The combination of these life cycles will strenghten the contents of new product development.

REFERENCES

1. McDonald, M. (2002). *Marketing Plan.* (5th Edition). Sydney, Butterworth-Heinemann.

2. Ulrich, K.T. and Eppinger, S.D. (2000). *Product Design and Development.* (2nd Edition). New York, McGraw Hill Higher Education.

3. Urban, G.L. and Hauser, J.R. (1993). *Design and Marketing of New Products.* (2nd Edition). New Jersey, Prentice Hall.

BPTT 3163: CONSULTANCY AND COACHING FOR TECHNOPRENEURS

LEARNING OUTCOMES

Upon completion of the subject, students should be able to:

- Identify and analyse the appropriate models required for technopreneurship consultancy and coaching
- Create mechanisms to secure business projects through effective negotiations
- Organize, modify and summarize technical consultancy and coaching skills for effective supervision

SYNOPSIS

This subject will provide exposures to students on effective industry consultations and coaching services, business models used, techniques, approaches, marketing mechanisms and critical issues in technology projects. It involves formulating strategic action plans and train students as consultants and coach and effective negotiators.

REFERENCES

1. Bovee, C.L. & Thill, J.V., (2005). *Business Communication Today.* New York, Prentice Hall.
2. Blok, P. and Flawless Consulting., (2000). *A guide To Getting Your Expertise Use.* (2nd Edition). Florida, Jossey Bass/Pfeiffer.
3. Pederson, P. and Others of Price Waterhouse., (2000). *Better Change: Best Practices for Tranforming your Organisation*. New York, Irwin Professional Publishing.

BPTT 3173: INTRODUCTION TO ADVANCED TECHNOLOGY

LEARNING OUTCOMES

Upon completion of the subject, students should be able to:

- To recognize the importance of basic concepts in nanotechnology, biotechnology, advanced materials and advanced manufacturing systems.
- Apply mechanisms to exemplify components in advanced technology.
- Derive appropriate solutions in the development of innovative, original and up-to-date ideas in advanced technology.

SYNOPSIS

This subject provide students with the knowledge and skills in controlling at the atomic and molecular level, potentials of nanotechnology for product upgrading and manufacturing techniques for nano materials and nanotechnology products. The focus is also on issues relating to advanced materials, biotechnology and advanced manufacturing systems for students to identify the opportunity and applications of advanced manufacturing in the areas of carbon nanotube,nanoparticles/ nanopowder and nanocoatings

REFERENCES

1. Ahmed, W. & Jackson, M. J. (2007). *Emerging Nanotechnologies for Manufacturing.* New York, Elsevier.
2. Krar, S. & Gill, Arthur. (2008). *Exploring Advanced Manufacturing Technologies.* New York, Industrial Press.
3. Atkinson, W. I. (2003). *Nanocosm: Nanotechnology and the Big Changes Coming from the Inconceivably Small.* New York, AMACOM Div American Management Assn.

BPTT 4183: TECHNOPRENEURIAL BUSINESS PLAN

LEARNING OUTCOMES

Upon completion of the subject, students should be able to:

- Execute data collection process and evaluate product/service commercial viability for the creation of technology-based business
- Realize viable ideas into successful business and create mechanisms to ensure venture's sustainability
- Organize and modify solutions for effective problem-solving

SYNOPSIS

Business Plan for Technopreneurs discusses the processes of business start-ups with emphasis on economic aspects, financial, management, technology architecture, and customer value proposition (CVC). This subject is an extension of the basic business plan where the focus will be on the formation and creation of high- technology business.

- Identify, analyse, and realize business ideas and opportunities for succesful new venture creation.
- Develop mechanisms in realizing business ideas into business reality
- Organize, summarize the effectiveness and usefulness of a BP and develop appropriate solutions to business problems.

REFERENCE

1. Steve Mariotti (2006). Entrepreneurship: *Starting and Operating a Small Business.* New York, Prentice Hall Inc.

2. Thomas W. Zimmerer, Norman M. Scarborough (2005). *Essentials of Entrepreneurship and Small Business Management.* New York, Prentice Hall Inc.

3. Rhonda Abrams, Eugene K. (2000). *The Successful Business Plan: Secrets and Strategies.* New Jersey, Running 'R' Media.

BPTT 4193: SEMINAR IN TECHNOPRENEURSHIP DEVELOPMENT

LEARNING OUTCOMES

Upon completion of the subject, students should be able to:

- Illustrate the procedures, processes and methods in managing technopreneurship conference
- Develop event management skills and acquire experience in administering conference proceedings
- Acquire the skills in preparing and presenting seminar or conference papers.

SYNOPSIS

Both interactive and dynamic conferences permit students to meet renowed industry experts and establish business networks. Conference topics range from creativity and innovation to technology management.

REFERENCES

1. Kuratko, D. F. and Hodgetts, R. M. (2004). *Entrepreneurship : Theory, Process and Practice.* New Jersey, Thomson South Western.

2. Mair, J., Robinson, J. and Hockets, K. (2002). *Social Entrepreneurship.* New York, Prentice Hall.

3. Kao, J. (1989). *Entrepreneurship, Creativity and Organization :* Text Cases and Readings. New York, Prentice Hall.

BMFG 2133 : INDUSTRIAL DESIGN

LEARNING OUTCOMES

Upon completion of the subject, students should be able to:

- Determine the relationship between aesthetic values in industries with basic designs and prototype.
- Write and present mini projects leading to product commercialization
- Evaluate and compare aesthetic and ergonomic values of creative designs subdivisions.

SYNOPSIS

This subject is a subset of creative designs with emphasis on aesthetic and ergonomics values of a product. It focuses more on product manufacturing with regards to basic industrial designs, industrial graphics, packaging technology, communication designs and the relationship between product or machinery with human interaction.

REFERENCES

1. Abdul Jalil, Mohamad Kasim, 1999, *Pengenalan kepada Rekabentuk Kejuruteraan*. Skudai, Penerbit UTM.

2. Ulrich, K., and Eppinger, S. (1999). *Product Design and* Development. New York, Prentice Hall.

3. Jensen, C, and Heysel,J.D, (1996). *Engineering Drawing And Design* (5th Edition). New York, Glencoe and McGraw

BMFG 2113 : MANUFACTURING SYSTEMS

LEARNING OUTCOMES

Upon completion of the subject, students should be able to:

- Recognize the correlations between the latest manufacturing systems of personnel management with equipment to enhance productivity
- Provide feedback relating to manufacturing system
- Evaluate and differentiate the various components in order to identify the sources and levels of project risks and to control the risk

SYNOPSIS

This subject discusses topics related to computer integration, planning and manufacturing processes, materials requirement planning, Just in Time (JIT), swift and agile manufacturing, automation and manufacturing systems,inventory control, concurrent engineering and manufacturing data base management.

REFERENCES

1. Groover, M.P., (2002), *Fundamentals of Modern Manufacturing, Materials, Processes and Systems* (2nd Edition). New York, Prentice Hall Inc.

2. Martinich, J., (1997). *Production and Operations Management: An Applied Approach*. New Jersey, John Wiley and Sons.

3. Oswald,P.F.,and Munoz, J.,(1997), *Manufacturing Processes and Systems*. (9th Edition). New Jersey, John Wiley and Sons

BITG 2113 :E-COMMERCE AND WEB DESIGN

LEARNING OUTCOMES

Upon completion of the subject, students should be able to:

- Implement web programming using current web technology
- Develop mechanisms in designing the infrastructure for on-line businesses
- Evaluate and organise the usage of information for the purpose of electronic marketing

SYNOPSIS

This subject discusses contemporary issues on imperative strategic technology usage. General explanation on internet and World Wide Web followed by the introduction to the recent web technology and web services.This course emphasises on interactive and dynamic web applications using language scripting such as HTML, XHTML, DHTML, JavaScripts, Active Server Page (ASP) and Extensive Markup Language (XML). This subject provides knowledge on how electronic technology can be used in structuring a business and constructing the new millenium business models.

REFERENCES

1. Kleindl, B.A. (2003). *Strategic Electronic Marketing: Managing E-Business.* (2nd Edition). Ohio. Thomson South.

2. Deitel, D. & Neito,(2002). *Internet & World Wide Web: How to Program.* New York, Prentice Hall.

3. Strauss, J. and Frost, R. (2000). *E-Marketing.* (2nd Edition). USA, Prentice Hall.

BENG 2243 :MICRO-CONTROLLER TECHNOLOGY

LEARNING OUTCOMES

Upon completion of the subject, students should be able to:

- Determine the relationship between technology, microcontroller operations with software programming
- Perform and control mechatronics apparatus such DC motor, step motor and detectors
- Evaluate various control procedures with mechatronic applications.

SYNOPSIS

This course introduces the basic concepts of microcontroller and the difference between microcontroller and microprosessors. Topics include microcontroller memory map, collector and programming language and software, overlapping, sub-routine, posess and reset, tools, programming concept, programming applications with motor DC tools, step motors, and detectors. Students will be able to perform microcontroller application switch mechatronic. Students will undergo practical session with LED controls, 7 segments, DC motors, step motors, detectors and the intergration of several components, and tools assignment and presentation.

REFERENCES

1. Todd, D.M. (2001). *Embedded Microcontroller.* New York, Prentice Hall.

2. Iovine, J. (2000). PIC *Microcontroller Project Book.* USA, McGraw Hill.

3. Peatman, J. B. (1998). *Design with PIC Microcontrollers* (8th Edition). New York, Prentice Hall.

BEKG 2453 : INSTRUMENTATION AND MEASUREMENT

LEARNING OUTCOMES

Upon completion of the subject, students should be able to:

- Determine the relationship between the various quantity and electrical units with the usage of equipments and standards
- Design ampere meters and AT voltage meters using PMMC techniques and full and partial AU wave filter
- Test the functions of the transducer detectors within instrumentation applications

SYNOPSIS

This subject discusses the standard measurement and measurement determinants, units and dimensions, measurements and errors, PMMC, A.U, current voltage meter designs, analog and digital meters, measurement using osciloscope and A.U, and A.T gauge, transducer and detector, interfacing and detector, Adc and DAC, drives and developing interface software.

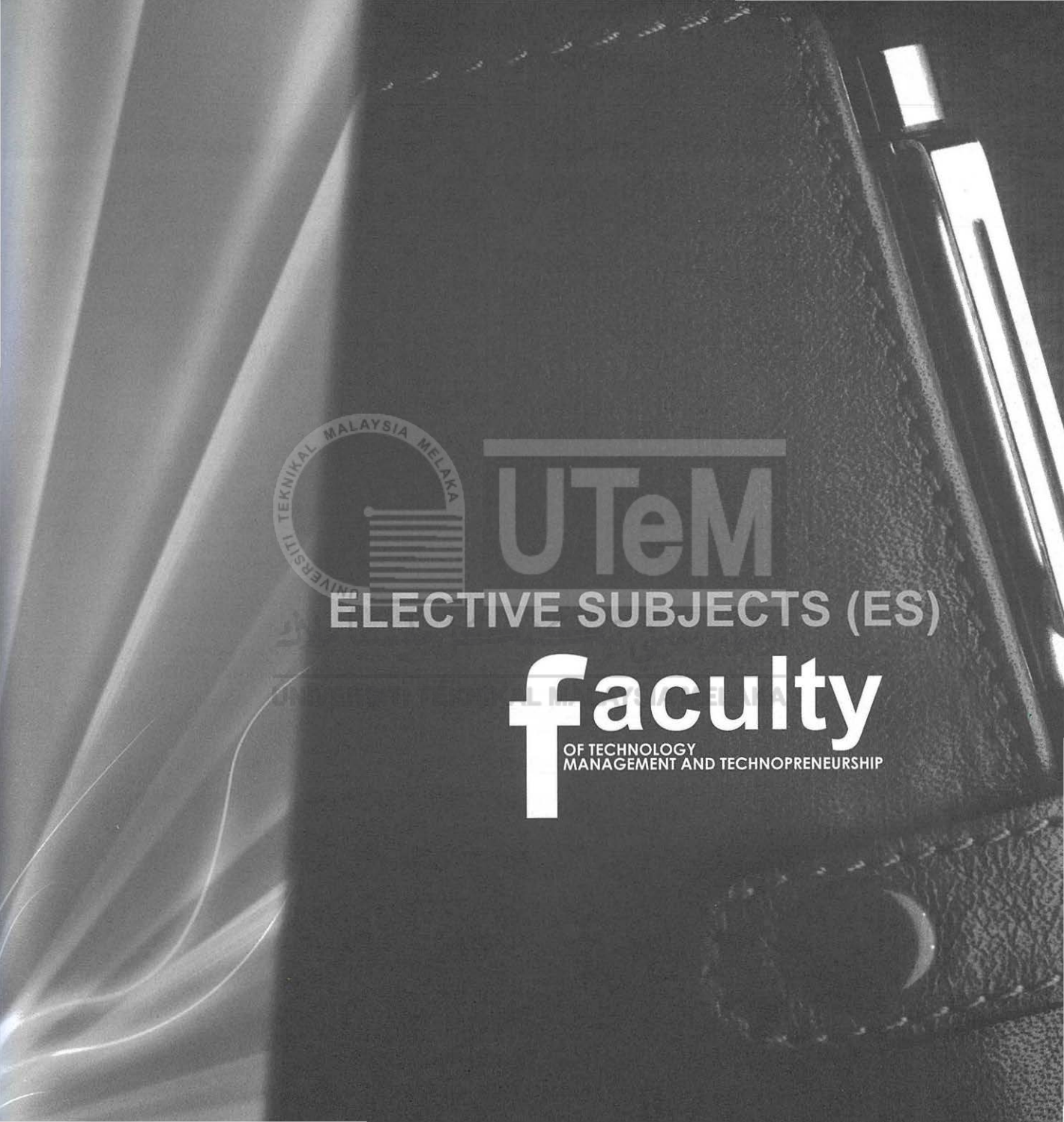
Experiments on sensor devices and transducer using digital instrumentation making use of analog and digital equipment will be conducted in the lab.

REFERENCES

1. Bell, D.A. (1994). *Electronic Instrumentation and Measurements.* New York, Prentice Hall.

2. Kalsi, H.S. (1995). Electronic Instrumentation. New Delhi, Tata McGraw Hill.

Gupta, J.B. (1997). *A Course in Electronic and Electrical Measurements in SI Unit for Degree and Diploma Students.* New Delhi, SSMB.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BPTT 2083 : FRANCHISE AND RETAIL MANAGEMENT

LEARNING OUTCOMES

Upon completion of the subject, students should be able to:

- Analyse issues and procedures in franchise and retail business operations.
- Provide feedback on the start-up process of business establishment
- Compare and contrast, and evaluate franchise and retail viability with other types of business, and able to comprehend problems

SYNOPSIS

This subject focuses on various aspects of franchising and retailing, understanding of concepts, strategies and trends involving tretails and franchise operations in Malaysia.

Students will be trained to become competent franchise operators or retail managers and capable of solving unpredictable business problems. Students will be assigned to analyse case studies.

Knowledge and skills acquired will enable students to develop their own career or create new ventures through franchise licensing or in retail business

REFERENCES

1. Erwin, J. K. (2007). *How to Buy a Franchise or Franchise Your Own Business*. Houston, Entrepreneur Press.
2. Levy, M. and Weitz, B.A (2006). *Retailing Management.* New Jersey, McGraw Hill.
3. Mendelsohn, M. (2005). *The Guide to Franchising*. New Jersey, Thomson Learning

BPTT 2093 : NETWORK MANAGEMENT AND BUSINESS GROWTH

LEARNING OUTCOMES

Upon completion of the subject, students should be able to:

- Compare and analyse supply chain issues and develop strategic business networks and growth
- Establish sound and effective business development strategies
- Evaluate business growth and manage business networks through technology applications

SYNOPSIS

This subject focuses on understanding the theoretical aspects of finance, human resource, managing marketing operations in supply chains and the management of contemporary business issues and development. Its focus is on understanding intra and inter-firms coordination in programs such as e-cooperation, swift response, co-inventory management and strategic partnerships. Topics discussed include franchising, merger, global development and business success.

REFERENCES

1. Steven S. Little, (2005). *The 7 Irrefutable Rules of Small Business Growth*. New Jersey, John Wiley and Sons.
2. Burt, D.N. and Dobler, D.W.(2003). *World Clas Supply Management.* (7th Edition). New York, McGraw Hill.
3. Charles Grantham, Judith Carr (2002). Consumer Evolution: *Nine Effective Strategies for Driving Business Growth.* New Jersey, John Wiley and Sons.

BPTT 3143: NEW CAPITAL AND RISK MANAGEMENT

LEARNING OUTCOMES

Upon completion of the subject, students should be able to:

- Compare the issues and challenges with the procedures of new capital and risk management and analyse business environment
- Create mechanisms to solve various issues and problems associated with new capital and risk management
- Organise by incorporating effective financial budgets in the management new business

SYNOPSIS

This course discusses the roles of managing new capital and risk in business. Topics include cultural development, risk management frameworks,etc. Students will able to understand the relationship between risk management and corporate environment and develop their own models in managing risks.

This subject focuses on investment capital in new business. It is assimilated to enhance students' understanding of the course from the theory and empirical perspectives to develop new business.

Students will be trained to become competent business analysts.

REFERENCES

1. Futter, D. and Vaughn, I. J., (2004). Venture Capital 2004: *Venture Creation, Management & Financing in the New "Post-Bubble" Market.* New York, Springer Science & Business.

2. Mulcahy, R. , (2003). *Risk Management: Tricks of the Trade for Project Managers.* New Delhi, RMC Publication.

3. Holmes, A., (2002). *Risk Management.* New Jersey, John Wiley & Sons.)

BPTT 3163: CONSULTANCY AND COACHING FOR TECHNOPRENEURS

LEARNING OUTCOMES

Upon completion of the subject, students should be able to:

- Identify and analyse the appropriate models required for technopreneurship consultancy and coaching
- Create mechanisms to secure business projects through effective negations
- Organize, modify and summarize technical consultancy and coaching skills for effective supervision

SYNOPSIS

This subject will provide exposures to students on effective industry consultations and coaching services, business models used, techniques, approaches, marketing mechanisms and critical issues in technology projects. It involves formulating strategic action plans and train students as consultants and coach and effective negotiators.

REFERENCES

1. Bovee, C.L. & Thill, J.V., (2005). *Business Communication Today*. New York, Prentice Hall.

2. Blok, P. and Flawless Consulting., (2000). *A guide To Getting Your Expertise Use.* (2nd Edition). Florida, Jossey Bass/Pfeiffer.

3. Pederson, P. and Others of Price Waterhouse., (2000). *Better Change: Best Practices for Tranforming your Organisation.* New York, Irwin Professional Publishing.

BPTP 3513: PROFESSIONAL ETHICS

LEARNING OUTCOMES

Upon completion of the subject, students should be able to:

- Recognise the governing theories of individual's morale and the life of professionals and and conduct analysis of oneself
- Explain and provide response on the history of ideal professional development beginning from pre-era modernization to post-modernization
- Organize and relate with various approaches of professional ethics

SYNOPSIS

This subject focusses on the approaches of professional ethics and features.

Topics include approaches to ethics, the basics of excellence, Functionalist dan Conflict theories, the ideal professionals, individual and corporate morale, transparency and the newly accustomed structure and personality.

Students will acquire the necessary knowledge and skills in professional ethics and apply them during employment, hence creating highly competent individuals and human capital with high integrity.

REFERENCES

1. Leonard, J. B. (2006). *Business and Professional Ethics for Directors, Executives, and Accountants.* New York, South-Western College Pub.

2. David, E. C. (2003). *Ethics for Professionals in a Multicultural World.* New York, Pearson Prentice.

3. Richard, D. P. (2000). *The Ethics of Professional Practice.* New York, Allyn & Bacon.

BPTP 3523: INDUSTRY LEADERSHIP

LEARNING OUTCOMES

Upon completion of the subject, students should be able to:

- Recognise the governing theories of industry leadership and their importance and synthesise them in business practices
- Explain and provide response on the history of ideal professional development beginning from pre-era modernization to post-modernization
- Organize and modify industry leadership styles necessary for organization development

SYNOPSIS

This subject focuses on the conceptual theories, strategies and leadership elements in organizations.

Topics include leadership traits and traits, leadership and motivation, leadership in manangement, leadership and decicion-makers,values and work cultures, work groups, managing problem employees and supervising organizational behaviours.

REFERENCES

1. Pierce, J. And Newstrom, J. (2008). *Leaders and the Leadership Process.* New Jersey, McGraw Hill.

2. Manning, G. And Curtis, K. (2004). *The Art of Leadership.* New Jersey, McGraw-Hill.

3. Russell, E. P. (2003). *Ultimate Leadership: Winning Execution Strategies for Your Situation*. New York, Pearson.

BPTT 4183: TECHNOPRENEURIAL BUSINESS PLAN

LEARNING OUTCOMES

Upon completion of the subject, students should be able to:

- Execute data collection process and evaluate product/ service commercial viability for the creation of technology-based business
- Realize viable ideas into successful business and create mechanisms to ensure venture's sustainability
- Organize and modify solutions for effective problem-solving

SYNOPSIS

Business Plan for Technopreneurs discusses the processes of business start-ups with emphasis on economic aspects, financial, management, technology architecture, and customer value proposition (CVC). This subject is an extension of the basic business plan where the focus will be on the formation and creation of high-technology business .

REFERENCES

1. Steve Mariotti (2006). Entrepreneurship: *Starting and Operating a Small Business.* New York, Prentice Hall Inc.

2. Thomas W. Zimmerer, Norman M. Scarborough (2005). *Essentials of Entrepreneurship and Small Business Management.* New York, Prentice Hall Inc.

3. Rhonda Abrams, Eugene K. (2000). *The Successful Business Plan: Secrets and Strategies.* New Jersey, Running 'R' Media.

BPTP 2243: INNOVATION STRATEGIC MANAGEMENT

LEARNING OUTCOMES

Upon completion of the subject, students should be able to:

- Synthesise the proses by integrate and elaborate knowledge and skill related to innovation and management.
- Create a mechanisme to develop continuous knowledge and skill to generate and enhance wealth creation.
- Organise the changes and make the decision to the problem and strategy related to innovation processes and property right.

SYNOPSIS

This subject will discuss on important methods in implementing research and innovation management.

Topics that will discuss are developing research and innvation processes, technology and innovation strategic management and innovation management.

Students are able to acquire knowledge about innovation processes and management and also related to several important stategy regarding innovation. Furthermore discusion on intellectual property right will be delivered to enhance student knowledge. Several case study will be introduce to apply the innovation management principles.

REFERENCES

1. Motoki Korenaga, (2004). *Strategic Management of Technology and Innovation.* Tokyo, Amazon.

2. Lewis M. Branscomb (Editor). James H. Keller (Editor), (2000). *Investing in Innovation: Creating a Research and Innovation Policy,* Tokyo, Amazon.

3. Robert A. Burgelman, (2000). *Strategic Management of Technology and Innovation,* Tokyo, Amazon.

BPTP 3263: TECHNOLOGY FORECASTING AND PLANNING

LEARNING OUTCOMES

Upon completion of the subject, students should be able to:

- Elaborate on knowledge learnt and skills acquired in technology forcasting and synthesise the process with the management technology environment
- Generate skills and knowledge and create mechanisms for future applications of appropriate technology
- Organise, modify changes and determine determine forecasting proposals and technology application to attain competitive and sustain business performance.

SYNOPSIS

This subject will provide students with the knowledge on appropriate techniques in technology planning and forecasting. The focus will be on the methods and techniques used for technology planning and forecasting.

Emphasis will be given on companies' research findings applying the technology.It will also teach students on technology forecasting principles such as forecasting techniques, factors impacting that forecasting performance of high technology industries.

This subject trains students to become practising forecasters and technology-based decision makers.

REFERENCES

1. Babcock, D.L. and Morse, L.C. (2002). *Managing Engineering and Technology.* New York, Prentice Hall.

2. Narayanan, V.K. (2001). *Managing Technology and Innovation for Competitive Advantage.* USA, Prentice-Hall.

3. Porter, A.L., Roper, A.T. and Mason, T.W. (1991). *Forecasting and Management of Technology.* New Jersey, John Wiley & Sons.

BPTP 3293: CHANGE MANAGEMENT

LEARNING OUTCOMES

Upon completion of the subject, students should be able to:

- Integrate the knowledge related to software, hardware and brainware usage and synthesize them technology changes and technology organization.
- Apply knowledge and skills by creating a mechanisms for change management
- Organise, modify and decide on technology changes in highly-demanded global markets.

SYNOPSIS

This subject discusses change management. Topics include micro and macro perspectives where the focus is on transfer channels and national policies and the importance of the government support systems in technology transfer.

Important issues that will be discussed include change, creativity and innovation and the need for industries to adopt drastic technology changes.

Students wil be trained as intelligent employees and be sensitive to changes in organization. Relationship between innovation changes and technology are parallel, hence require drastic changes in technology.

REFERENCES

1. Cameron, E. and Green, M. (2004). Making Sense of Change Management. New York, Kogan Page.

2. Lister, E. J. (2001). *Successful Change Management.* New York, Lister Management Inc.

3. Mohammed Saad. (2001). *Development Through Technology Transfer.* New York, Intellect Books.

BPTP 3363: PROMOTION AND ADVERTISING TECHNOLOGY

LEARNING OUTCOMES

Upon completion of the subject, students should be able to:

- Implement and synthesize the principles and practices of products/services promotion and advertisement by incorporating them with technology
- Determine the relevant high-tech applications in advertisement and promotion strategy and develop mechanisms for effective implementation
- Organise or modify methods and propose relevant techniques by using high-tech applications in advertising and promoting products/service

SYNOPSIS

This subject focuses on integrating technology in the advertisement and promotion of products/ services. It provides an insight on the difference between technology-based products and non-technology based products and how they influence the marketing strategies. Students will be required to prepare and present a marketing project based on advertising and promotion aspects to increase the sales of high-tech products/services

REFERENCES

1. Hooley, G., Saunders, J., Piercy, N.F. and Nicoulaud, B. (2008), *Marketing Strategy and Competitive Positioning.* (4th Edition). New York, Prentice Hall.
2. Mohr, J., Sengupta, S. and Slater, S., (2004). *Marketing of High-Technology Products and Innovations.* New York, Prentice Hall.
3. Sowter, C.V. (2000). *Marketing High Technology Services.* New York, Gower Publishing Limited.

BPTP 3383: HIGH TECHNOLOGY MARKETING STRATEGY

LEARNING OUTCOMES

Upon completion of the subject, students should be able to:

- Implement and synthesise high-tech marketing by incorporating research into the process
- Develop marketing research mechanisms on high-tech products marketing to optimize organisational performance
- Organise, formulate or modify the marketing plans for high-tech products

SYNOPSIS

High-tech industry plays an important role in country's economic development. Marketing is categorized as high-tech innovation, swift technology changes and lower products life cycle. To sustain competitive advantage, firms need to embark on marketing strategy that meets the demand of the environment and technology changes. Due to these unpredictable demands and technology changes, managers in high-tech marketing need to understand the needs and wants of customers. By understanding the unique features in marketing, networking, customers, relevant technologies and critical standards, marketers will be ensured of success.

REFERENCES

1. Cravens, D.W., & Piercy, N. (2005). *Strategic Marketing.* New Jersey, Irwin and McGraw Hill.
2. Kerin, R. A., & Peterson R. A., (2003). *Strategic Marketing Problems: Cases and Comment,* New York, Pearson Education.
3. Gilligan C. (1997). *Strategic Marketing Management.* Butterworths, Sydney, Heinemann.


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