

**1<sup>st</sup> YEAR**  
**1<sup>st</sup> SEMESTER**

**BSM 1813                      MATHEMATICS FOR MANAGEMENT**

**SYNOPSIS :**

Inequalities. Logic: Connectives, truth tables, arguments. Combinatorics: sample, permutations, combinations, selection. Vectors in  $R^3$ : operations on vectors. Matrices: Elementary row operations, solving linear equations, inverse matrix, Markov chain. Linear Programming: Geometric approach. Linear programming : algebraic approach. Differentiation: Techniques of derivatives, related rates, maximum and minimum problems. Integration: By substitution, finding areas. Double integration.

**REFERENCES :**

1. Sullivan, Mizrahi. (2004) *Mathematics – An Applied Approach*. Wiley International Edition.
2. Goodman, A.W., Ratti, J.S. (1979) *Finite Mathematics With Application*. Macmillan Publishing New York.
3. Tan, S.T. (1987) *Applied Finite Mathematics*, 2<sup>nd</sup> Ed. PWS-Kent Publishing, Boston.
4. Anton, H. , Rorres, C. (1992) *Elementary Linear Algebra with Applications*. 6<sup>th</sup> Ed. John Wiley & Sons, Inc. USA.
5. Barnett, Raymond (2000). *Applied Mathematics* 7<sup>th</sup> Ed. Prentice Hall , New Jersey.
6. Berkey, D.D., Blanchard, P. (1992) *Calculus* 3<sup>rd</sup> Ed. Saunders College Publishing New York.

**UMA 1132                      ISLAMIC STUDIES**

**SYNOPSIS :**

This course explains about Islamic concepts which cover aqidah, syariah and akhlak. The scope of the discussion involves the Islamic principles, iman's principles and Ihsan. Focus will also be given on the basic of Islam that emphasizes on the concept of tauhid, ibadah and akhlak. This course also clarifies about the foundation of Islam (*maqasid al syariah*), current issues and the interrelation with akhlak.

**REFERENCES:**

1. Abdul Rahman I.Doi, (1995), *Undang-undang Syariah, terjemahan*, Rohani Abdul Rahim, Kuala Lumpur m: Dewan Bahasa dan Pustaka.
2. Harun Din, (Dr.), (2001), *Manusia dan Islam*, Kuala Lumpur, Dewan Bahasa dan Pustaka.
3. Mohd. Sulaiman Haji Yasin, (1988), *Pengantar Aqidah*, Kuala Lumpur : Dewan Bahasa dan Pustaka.
4. Mustafa Hj. Daun, (1996), *Tamadun Islam*, Kuala Lumpur : Utusan Publications dan Distribution.
5. Wahbah al-Zuhaily, (Dr.), (1984), *Fiqh al-Islami wa Adillatuhu*, Damsyik : Dar al-Fikr.
6. Yusuf al-Qardawi, (1993), *Ibadah Dalam Islam*, Kuala Lumpur : Pustaka Suhaba.

**UMA 1142****MORAL STUDIES****SYNOPSIS:**

This subject explores the moral concepts, some aspects related to the morality and its importance in our daily lives, some western moral theories, moral values in great religions of the world, morality and ethics in professional careers and contemporary moral issues.

**REFERENCES:**

1. Eow Boon Hin. 2002. *Moral Education*. Longman.
2. Ahmad Khamis. 1999. *Etika Untuk Institusi Pengajian Tinggi*. Kuala Lumpur. Kumpulan Budiman.
3. Mohd Nasir Omar. 1986. *Falsafah Etika; Perbandingan Islam dan Barat*. Kuala Lumpur. JPM.
4. Hussain Othman. 2009. *Wacana Asasi Agama dan Sains*, B. Pahat. Penerbit UTHM.
5. Hussain Othman, S.M. Dawilah Al-Edrus, Berhannudin M. Salleh, Abdullah Sulaiman, 2009. *PBL Untuk Pembangunan Komuniti Lestari*, Batu Pahat, Penerbit UTHM.

**UMB 1052****EFFECTIVE COMMUNICATION****SYNOPSIS :**

This course emphasises upon task- based learning approach and focuses on developing students' delivery of speech in oral interactions and presentations. Importance is given on mastery of self-directed learning, team-work, research, oral presentations, reasoning and creativity. This course also enables students to acquire knowledge and skills necessary for conducting and participating in meetings, including writing of meeting documents. Students will be exposed to the techniques of writing good application letters and resumes. They are also expected to anticipate and deal with questions during a job interview session.

**REFERENCES :**

1. Cheesebro,T, O'Connor, L. & Rios, F. (2007). *Communication skills : preparing for career success* (3rd ed.) Upper Saddle River, NJ: Pearson.
2. Davies, W.J. (2001) *Communication skills : a guide for engineering and applied science student* (2nd ed.) . London: Prentice Hall.
3. Joan van Emden, L. (2004). *Presentation skills for students*. New York: Palgrave Macmillan.
4. Richard Johnson-Sheehan (2005). *Technical Communication Today*. New York: Pearson.

**UQ\* 1\*\*1 : CO-CURRICULUM I****SYNOPSIS :****REFERENCES :**

## **BPA 1013                      ECONOMICS**

### **SYNOPSIS:**

This course includes two parts which are micro economic and macro economic. Micro economic will study each individual economic behaviour during decision making. It is cover buyer and seller behaviour also firm/industry behaviour in the market in order to identify output level, price and profit. The topics will be covered demand theory, bargain theory, market price identification, cost and output theories, also output level to achieve maksimum profit. Firm power in complete market, monopoly and monoploly competition. Macro economic will be covered income rolling flow and country income balance, fiscal policy, money and financial policy, inflation, international commerce, payment balance and foreign exchange rate.

### **REFERENCES :**

1. Vengedasalam, D dan Karunagaran (2007). "Principles of Economics" Oxford Fajar.
2. Case K. E dan Fair, R. C (2007). "Principles of Economics". Prentice Hall.

## **BPA 1022                      PRINCIPLES OF MANAGEMENT**

### **SYNOPSIS :**

This course is an introduction to the practical concepts used for organization management. The course will cover the basic mangement process of making things happen, meeting the competition, organizing people, projects and process and leading. The topics include Introduction to Management, The History of Management, Planning, Decision Making, Human Resource Management, Managing Individuals and Diverse Workforce, Motivation, Managing Team, Leadership, Managing Communication and Controlling.

### **REFERENCE :**

1. Williams, C.R., (2008). "Principles of Management". 5<sup>th</sup> ed. South-Western
2. Kinicki, A, & Williams, K.W., (2007). "Management: A Practical Introduction", 3<sup>rd</sup> ed. Irwin-McGraw Hill
3. Robbins, S.P., & Coulter M, (2007). " Management", 9<sup>th</sup> ed. Person-Prentice Hall
4. Schermerhon, J.R., (2007). "Management", 9<sup>th</sup> ed. John Wiley & Son, Inc.

## **BPD 1012                      ENGINEERING DRAWING**

### **SYNOPSIS :**

The content of this course is the introduction of basic technical and engineering drawing which incluyes introduction of engineering drawing, geometrical drawing, projection drawing, cross-sectional and surface area, civil engineering drawing and computer arded drawing (CAD).

## **REFERENCES :**

1. Mohd Fadzil Daud dan Khairul Anuar Hanafiah,(2000).Panduan Asas Lukisan Kejuruteraan,Universiti Teknologi Malaysia.
2. Khairul Anuar Hanafiah,(2000).Lukisan Kejuruteraan Berbantu Komputer,Universiti Teknologi Malaysia.
3. Bertoline,Gary (1994).AutoCAD for Engineering Graphics,2<sup>nd</sup> Edition,Mcmillan Publishing Co.,New York.
4. Kalameja,A.J.(2008).The AutoCAD 2008 Tutor For Engineering Graphics.Clifton Park, New York.
5. James D. Bethune, J.D.(2004).”Engineering Graphics with AutoCAD 2004.” New Jersey: Prentice Hall.

## **BPD 1213**

## **CONSTRUCTION PROJECT MANAGEMENT**

### **SYNOPSIS :**

This course is an introduction to Construction Project Management. The course is designed to provide student with a basic foundation of Construction Project Management. It cover topics on : Introduction to Construction Project Management, Organisational Structure in Construction Industry, Project Selection, Proposal Development, Project Planning and various scheduling technique, Resource Management, Project Costing, Project Closure and Handover and Current Issues in Construction Industry.

### **REFERENCE :**

1. Sariwati Mohd Shariff, Sodri Ariffin dan Ahmanul Mohd. Talib (2007) .”Project Management: A Practical Approach.”UPENA, UiTM Shah Alam.
2. Omar Osman (2006) “Pengurusan Pembinaan: Konsep, Strategi dan Aplikasi”.Penerbit Universiti Sains Malaysia, Pulau Pinang
3. The Chartered Institute of Building (2002). “Code of Practice for Project Management for Construction and Development.” Oxford: Blackwell.
4. Andrew A.L Tan (1996) “Project Management in Malaysia: A Comprehensive Approach for Succesful Management of Property Development Projects from Inception until Completion.” Synergy Book International, Kuala Lumpur.
5. Clements, J.P dan Gido, J (2006) “Effective Project Management”. Thomson, South Western.
6. Frederick E. Gould (2002) “Managing the Construction Process: Estimating, Scheduling and Project Control.”Pearson Education, Inc., Upper Saddle River, New Jersey.
7. Norlida Abd. Halim dan Dayang Sophia Ab. Razak (1994). “Mengurus Projek Pembinaan.” Dewan Bahasa dan Pustaka,Kuala Lumpur.
8. Federick E. Gould, Nancy E. Joyce (2000). “Construction Project Management.” New Jersey: Prentice Hall.
9. Anthony Walker (1999). “Project Management in Construction.” United Kingdom: Blackwell Science.

**1<sup>st</sup> YEAR**  
**2<sup>nd</sup> SEMESTER**

**BSM 1823                      STATISTICS FOR MANAGEMENT**

**SYNOPSIS :**

Probability: Simple and compound events. Sample space. Calculating probability. Conditional probability: Tree diagram. Independent events. Bayes Theorem. Random Variable: Probability density function. Expected value and variance. Probability Distribution: Binomial, Poisson and Normal distribution. Normal approximation to Binomial & Poisson distribution. Moment Generating Function: Joint distribution function. Marginal distribution. Correlation and covariance. Sampling Distribution: Sampling distribution for mean, difference two means and proportional. Estimation: Point and interval estimation. Confidence interval for population mean and variance. Hypothesis Testing: Test of mean and variance. Test of difference two means and variances. Test of data randomness. Simple Linear Regression: Graphical method, least square method. Coefficient of determination  $R^2$ .  $T$  test of slope and intercept.

**REFERENCES :**

1. Berenson, M.K. , Levine, D.M., Krehbiel, T.C. (2004) *Basic Business Statistics – Concepts and Application*, 9<sup>th</sup> ed. Prentice Hall.
2. Levin, R. I., Rubin, D. S. (1991) *Statistics for Management* 5<sup>th</sup> Ed. Prentice-Hall.
3. Cik Sri Mazzura, Nafisah, Kek, S.L. & Phang, P. (2007) *Engineering Statistics* (Module)
4. Walpole–Myers (1998) *Probability and Statistics for Engineers and Scientists*. Prentice Hall.
5. Douglas C. M., George C. R., Norma Faris Hubele. (2004) *Engineering Statistics*. John Wiley, New York.
6. Freund, J.E. (1992) *Mathematical Statistics*. 5<sup>th</sup> Ed. Prentice Hall.
7. Allan G. B. (2007) *Elementary Statistics: A Step by Step Approach*. McGraw-Hill.

**UMB 1042                      TECHNICAL WRITING**

**SYNOPSIS :**

This course introduces students to report writing skills needed at tertiary level. Students will learn basic report writing skills such as proposals, progress report and analytical report. In order to do this, they will learn how to collect data using questionnaires. The data collected will be analyzed, transferred into graphic forms and presented orally and in writing. Prior to that, students will also be trained to polish up their skills in narrative and descriptive essays using accurate grammar, vocabulary and sentence structure.

**REFERENCES:**

- 1 Finkelstein, J. (2008). *Pocket Book of technical writing*. 3<sup>rd</sup> ed. Singapore: McGraw Hill.
2. Kolin, P. C. (2006). *Successful writing at work*. Concise ed. USA: Houghton Mufflin Company.

3. Salbiah Seliman et. al. (2004). *English Communication for learners in engineering*. Malaysia: Prentice Hall.
4. Lakshmy Anantha Krishnan et. al. (2003). *Engineering your report: From start to finish*. Singapore: Prentice Hall.
5. Gerson, S. J. & Gerson, S. M. (2003). *Technical writing: Process and product*. 3<sup>rd</sup> ed. New Jersey: Prentice Hall.
6. Eisenberg, A. (1992). *Effective technical communication*. 2<sup>nd</sup> ed. New York: McGraw Hill.
7. Dorothy Cheung et. al. (1999). *Report writing for engineering students*. 2<sup>nd</sup> ed. Singapore: Prentice Hall.

**UMA 1162**

**TITAS**

**SYNOPSIS :**

The course discusses introduction to civilization, its development, interaction between civilization; the Islamic civilisation, Islam in the Malay civilisation; Indian and Chinese civilisations as well as contemporary civilisation issues and also the principles of Islam Hadhari.

**REFERENCES :**

1. Ahmad Hakimi Khairuddin dan Faridah Che Husain. 2006, Isu-isu Kontemporari Dalam Tamadun Islam dan Tamadun Melayu, dalam *Tamadun Islam dan Tamadun Melayu*. Siri Teks Pengajian Tinggi. Kuala Lumpur: Penerbit Universiti Malaya
2. Ibnu Khaldun, Muqaddimah Ibnu Khaldun.
3. Huntington, S. *The Clash of Civilizations and the Remaking of the World Order*.
4. Mahyuddin Hj. Yahaya, 1998 *Tamadun Islam*, Shah Alam: Penerbit Fajar Bakti Sdn. Bhd.
5. Bei Ye. 2001. *Zhongguo Wenming Lun – Zhongguo Gudai Wenming De Benzhi Yu Yuanli* (Bicara Tamadun Cina – Teori dan Asas Tamadun Kuno Cina), Penerbit: Zhongguo Shehui Kexue Chubanshe Beijing.
6. Iddaikkadar. N.M. 1979. *Latar Belakang Kebudayaan Hindu*. Kuala Lumpur: Dewan Bahasa dan Pustaka.
7. Azhar Hj. Mad Aros. 2001, *Tamadun Islam dan Tamadun Asia*, Kuala Lumpur: Penerbit Universiti Malaya.
8. Ismail Hussein, Wan Hashim Wan Teh, Ghazali Shafie 1997, *Tamadun Melayu Menyongsong abad ke-21*, Bangi: Penerbit UKM.
9. Sarkar, H.B. 1970. *Some Contribution of India to the Ancient Civilization of Indonesia and Malaysia*. Calcutta: Punthi Pustaka.
10. Wan Abdullah Hj Ismail Mahmood (ed.), 1999, *Tamadun Islam & Tamadun Alam Melayu Serta Sumbangannya Kepada Dunia*, Unit Tamadun Islam, Pusat Pendidikan Islam, UiTM Shah Alam. Nasr, S.H. *A Young Muslim's Guide to the Modern World*.

## **UMB 1011 ENGLISH FOR ACADEMIC PURPOSES**

### **SYNOPSIS :**

English for Academic Purposes focuses on fulfilling students' academic requirements such as the acquisition of reading, writing, speaking and listening skills in English. The course also provides opportunities for students to acquire note taking and study skills. Students will be reinforced on aspects of English language oral and written skills that are most relevant to them in their academic work. By the end of the course, students should be able to use English in a wide range of academic activities.

### **REFERENCES:**

1. n.a (2004). *Koleksi Kertas Soalan MUET Oktober 2003*. Kuala Lumpur : Pearson Malaysia.
2. Ng. K. S. et al. (2000). *Study Skills for the Malaysian University English Test*. Kuala Lumpur : Federal Publication.
3. Pfeiffer, W.S. (2000) *Technical Writing: A Practical Approach*. New Jersey. Prentice Hall.
4. Teoh, S. A. & Zainab Mohd. Noor (2000). *Test-Taking Strategies for MUET*. Kuala Lumpur : Penerbit Fajar Bakti.
5. Walker, E. (2004) *Grammar Practice*. Kuala Lumpur. Pearson Education Malaysia.  
Zuraidah Mohd. Don et al. (2000). *Excel in MUET (2<sup>nd</sup> edition)*. Kuala Lumpur : Penerbit Fajar Bakti.

## **UQ\* 1\*\*1 : CO-CURRICULUR II**

### **SYNOPSIS :**

### **REFERENCES :**

## **BPA 1042 HUMAN RESOURCE MANAGEMENT**

### **SYNOPSIS :**

This course covers the needs to be competent in organizational management including: strategic role in human resource management, employee selection and recruitment, employee training and development, compensation system and policy, employee relations and safety, and global issues on human resource management.

### **REFERENCES :**

1. Dessler, G.(2003). "Human Resource Management". 9<sup>th</sup>. Edition, International Inc., Prentice Hall.
2. Nankervis, A., Compton, R. and Baird, M. (2008). "Human Resource Management: Strategies and Processes". 6<sup>th</sup>. Edition, Thomson.
3. Rue, W. L. and Byars, L. L. (2000). "Human Resource Management". 6<sup>th</sup>. Edition, Irwin, McGraw Hill.

4. Decenzo, D. A. and Robins, S. P. (1999). "Human Resource Management". 6<sup>th</sup>. Edition, New York, John Wiley & Sons, Inc.
5. Cascio, W. F. (1998). "Managing Human Resource: Productivity, Quality of Life, Profits". 5<sup>th</sup>. Edition, Irwin, McGraw Hill.
6. Holden, L. and Beardwell, I. (2001). "Human Resource Management". 3<sup>rd</sup>. Edition, Pearson, Prentice Hall.

**BPA 1052                      PRINCIPLES OF MARKETING**

**SYNOPSIS :**

This course expose the students to the basic marketing concepts, the activities of marketing includes market environment analysis, strategy and marketing mix, marketing channels, customer relationships management, 4 P's management, ethics and marketing social responsibilities and it also marketing scenario in Asia and multi-nationals.

**REFERENCES :**

1. Armstrong ,G. and Kotler,P., Da Silva, G. (2006). "Marketing: An Introduction: An Asian Perspective", 1st ed. Pearson-Prentice Hall.
2. Kotler, P., Armstrong, G.Ang,S.H,Leong,S.M.,Tan, C.T. and Tse, D.K., (2005). "Principles of Marketing : An Asian Perspective". 1st Ed. Pearson-Prentice Hall
3. Kurtz, D.L., Boone, L.E. (2006). "Principles of Marketing", 12<sup>th</sup> ed, Thompson South-Western
4. Kerin, A.K., (2005). "Marketing: An Introduction" 7<sup>th</sup> ed. Pearson-Prentice Hall

**BPD 1313                      CONSTRUCTION TECHNOLOGY I**

**SYNOPSIS :**

This course contents include introduction construction industry, building construction principles, site preparation, construction materials, building construction, building foundation, brickwork binding, door and window, finishing, concrete and concrete casting

**REFERENCES :**

1. Tan Boon Tong.(2000). "Teknologi Binaan Bangunan." Kuala Lumpur: DBP.
2. Mat Lazim Zakaria (2001). "Bahan Dan Binaan." Kuala Lumpur: DBP.
3. Francis, D.C.and Adams,C.(2008). "Building Construction Illustrated."USA:Wiley, John & Sons.
4. Chudley,R. dan Greeno,R.(2005). "Construction Technology".4<sup>th</sup> edition.Prentice Hall: New York.
5. Fleming,E.(2005). "Construction Technology: An Illustrated Introduction".Oxford: Blackwell Publishing.



**BPD 1352**

**ARCHITECTURAL DESIGN**

**SYNOPSIS :**

This course contents the Introduction to Architecture, Fundamental of Design, Architectural Drafting Conventions and Introduction to Computer-Aided Drafting and Design (CAD).

**REFERENCES :**

1. Hepler, D.E, Wallach, P.R and Hepler. D.J.,(1998). "Architecture Drafting and Design". 7<sup>th</sup> ed. Glencoe/ McGraw Hill.
2. Hepler, D.E and Wallach, P.R.,(1998). "Architecture Drafting and Design. Student Workbook". McGraw Hill.

**2<sup>nd</sup> YEAR 2**  
**1<sup>st</sup> SEMESTER**

**UMS 1122                      ETHNIC RELATIONSHIP**

**SYNOPSIS:**

This subject focus on the conceptual and practical of the ethnic relation in Malaysia's community. The discussions will comprise the concepts of ethnic relation and the history of plural society construction. The matter of constitution as the core of the societal life will also be covered. Discussions will also look at the relation ship between the development and the ethnicity in the aspect of economy, politics and social based on the approach of top-down and bottom-up by the government and the society.

**REFERENCES :**

1. Shamsul Amri Baharuddin (2007). "Modul Hubungan Etnik." Shah Alam: Universiti Teknologi MARA.
2. Zaid Ahmad, Ho Hui Ling, Sarjit Sing Gill, Ahmad Tarmizi Talib, Ku Halim Ku Arifin, Lee Yok Fee, Nazri Muslim dan Ruslan Zainuddin (2006). "Hubungan Etnik di Malaysia." Shah Alam : Oxford Fajar Sdn. Bhd.
3. John Rex (1985). "Hubungan Ras Dalam Teori Sosiologi." Kuala Lumpur : Dewan Bahasa dan Pustaka.
4. Lembaga Penyelidikan Undang-undang (2003). "Perlembagaan Persekutuan: (hingga 15hb Ogos 2003)." Petaling Jaya: International Law Book Services.
5. Nazaruddin Mohd Jali, Ma'rof Redzuan, Asnarulkhadi Abu Samah dan Ismail Mohd Rashid (2005). "Pengajian Malaysia." Petaling Jaya: Prentice Hall.
6. Ruslan Zainudin, Mohd Mahadee Ismail dan Zaini Othman (2005). "Kenegaraan Malaysia." Shah Alam: Fajar Bakti.
7. Ting Chew Peh (1980). "Konsep Asas Sosiologi." Kuala Lumpur : Dewan Bahasa dan Pustaka.

**UMC 1022 : CREATIVITY AND INNOVATION**

**SYNOPSIS :**

This course focuses on developing a creative person who will eventually think strategically, creatively and critically. The knowledge and skills acquired throughout the course will later be applied by the students in solving problems and making decisions in the future. In this course, students will be exposed to various creativity and problem solving techniques. Some of the skills to be covered throughout the course are problem solving, techniques in creativity and techniques in innovation. Students will also be participating in exhibition and competition.

**REFERENCES:**

1. Bernacki, E. 2002. Wow! That's a Great Idea!. Singapore : Prentice Hall.
2. De Bono, E. (2003). Serious Creativity 1 : Lateral Thinking Tools, Techniques and Application. Singapore : Allscript Books.
3. De Bono, E. (2003). Serious Creativity 2 : Lateral Thinking Tools, Techniques and Application. Singapore : Allscript Books.

4. Ceserani, J. & Greatwood, P. 1995. Innovation and Creativity. London : Kogan Page.
5. Ceserani, J. & Greatwood, P. 2001. Innovation and Creativity. New Delhi : Creast Publishing House.
6. Clegg, B. & Birch, P. 2002. Crash Course in Creativity. London : Kogan Page.
7. De Bono, E. 1998. Edward De Bono Supermind Pack: Expand Your Thinking Power with Strategic & Mental Exercise. DK Publishing Incorporated.
8. Lumsdaine, E., Lumsdaine, M. & Shelnut, J. W. 1999. Creative Problem Solving and Engineering Design. USA: McGraw-Hill.
9. Tanner, D. 1997. Total Creativity. APTT Publications.

## **BSF 2812**

## **FOUNDATION OF SCIENCE ENGINEERING**

### **SYNOPSIS :**

Physical Quantity and Units System: Measurement, Base Quantity, Derived Quantity, International Unit System (SI), cgs and British Units, Unit Conversion, Prefix, Significant Figures in Addition, Subtraction, Multiplication and Division Operations, Scientific Notation. Vector: Introduction to Vector, Vector Addition, Resultant of Vector, Resolving Vector, Vector Component, Component Method for Adding Vector. Force: Newton's First and Second Law, Net Force, Frictional Force, Triangle of Forces and Polygon, Moment and Coupling of Forces, Gravitational Centre and Centroid, Equilibrium of Rigid Body, Free-Body Diagram, Action and Reaction of Forces. Work, Energy and Power: Definition of Work, Work – Energy Principle, Principal of Conservation Energy, Output Power of Machines and Efficiency of Machines. Fluid Statics: Density, Archimedes and Bouyancy Principle, Pressure, Atmospheric Pressure, Pressure in Fluids. Elasticity: Hooke's Law, Stress and Strain, Elastic Modulus, Young Modulus, Bulk Modulus, Shear Modulus, Poisson's Ratio. Thermal Expansion of Matter: Linear Expansion, Area Expansion, Volume Expansion, Liquid Expansion, Absolute and Apparent Expansion, Gas Expansion – Charles, Boyle's and Pressure Law, Ideal Gas Law. Heat: Heat Capacity, Specific Heat and Latent Heat, Heat Transfer: Conduction. Waves: Definition of Wave, Types and Characteristics of Wave, Wave Phenomenon, Wave Equations, Wave Intensity.

### **REFERENCES :**

1. Giambattista, A., Richardson, B. M., Richardson, R. C. (2007). College Physics 2<sup>nd</sup> Ed. New York: Mc Graw Hill.
2. Bueche, F. J., Hecht, E., Hademenos, G. J. (2000). College Physics: based on Schaum's Outline of college physics. New York: McGraw-Hill.
3. Sears, F.W., Zeamansky, M.W. and Young, H.D. (1991). College Physics, 7<sup>th</sup> Ed., Addison Wesley.
4. Jerry, D. and Buffa, J. A. (1997). College Physics. 3<sup>rd</sup> Ed, Prentice Hall,
5. Serway, R. A., Faughn, J. S., Moses, C. J. (2003). College Physics. 6<sup>th</sup> Ed. USA: Pacific Grove, CA: Thomson Learning.

**BPA 2073****MANAGEMENT INFORMATION SYSTEM****SYNOPSIS :**

This course can develop students skills and knowledges in basic concept of computer components and computer application software. Main focus of this course to develop students competent of various computer application applied in business management, which are skill of worksheet applied, graphic presentation, database, word processing and desktop publishing.

**REFERENCES :**

1. Laudon, K.C. and Laudon, J.P. (2007). "Essentials of Management Information Systems" the Eight Editions. Pearson International Edition, New Jersey.
2. Kroenke, D.M. (2007). "Using MIS". Pearson International Edition, New Jersey.
3. Turban, McLean, and Wetherbe (2004). "Information Technology for Management". John Wiley & Sons, Inc.
4. Effy, O. (2002). "Management Information Systems". 3<sup>rd</sup> edition. Course technology, Thomson Learning.

**BPA 2083****TECHNOLOGY MANAGEMENT****SYNOPSIS :**

The topics covered include: a review of technology management, history of technology management, development of technological capabilities, critical factors in managing technology, management of technology: the new paradigms, technology life cycles, technology management and innovation, business strategy and technology strategy, competitiveness and the design of organisation.

**REFERENCES :**

1. Tarek Khalil. 2000. Management of Technology : The Key to Competitiveness and Wealth Creation. Mc Graw Hill.
2. Norma Harrison and Danny Samson. 2002. Technology Management: Text and International Cases.Mc Graw Hill.
3. Margaret A. White and Garry D. Bruton. 2007. The Management of Technology and Innovation: A Strategic Approach. Thomson.
4. Gerard H. Gaynor. 1996. Handbook of Technology management. Mc Graw Hill.

**BPD 2052****SOIL MECHANICS****SYNOPSIS :**

Soil mechanics; soil classification, compaction, permeability, consolidation and settlement, shear strength, lateral earth pressure, bearing capacity, pile foundation and soil investigation.

**REFERENCES :**

1. Cheng Liu and Evett, J.B.(2002)."Soils and Foundation". Prentice Hall

2. Cernica, John,N.(1995). "Soils Mechanics".New York;John Wiley & Sons.
3. Muniram Budhu (2006). "Soil Mechanics and Foundations".2<sup>nd</sup> ed.John Wiley & Sons
4. Whitlow,R.(1995). "Basic Soil Mechanics".Longman
5. Braja M.Dras(2002). "Principles of Geotechnical Engineering".

**BPD 2223**

## **CONSTRUCTION TECHNOLOGY II**

### **SYNOPSIS :**

This course contents include introduction to floor construction, construction of wall and brickwall, arch, roof, ceiling, staircase, building services, heavy construction plant, heavy construction system and road construction.

### **REFERENCES :**

1. Tan Boon Tong.(2000). "Teknologi Binaan Bangunan." Kuala Lumpur: DBP.
2. Chudley,R. dan Greeno,R.(2005). "Construction Technology".4<sup>th</sup> edition.Prentice Hall:New York.
3. Chudley,R. dan Greeno,R.(2006). "Advanced Construction Technology".4<sup>th</sup> edition. London; Mc Graw-Hill.
4. Francis, D. C. and Adams,C.(2008). "Building Construction Illustrated."USA: Wiley, John & Sons.Fleming,E.(2005). "Construction Technology: An Illustrated Introduction".Oxford: Blackwell Publishing.

**2<sup>nd</sup> YEAR**  
**2<sup>nd</sup> SEMESTER**

**UMS 1113 NATIONHOOD AND CURRENT DEVELOPMENT OF MALAYSIA**

**SYNOPSIS :**

This course will provide students a fundamental concept, process of formation and development in Malaysia. The topics covered include the concept of state, Malacca Kingdom, implication of imperialism and colonisation, spirit of patriotism and nationalism, independence and formation of Malaysia. Besides, students will also be exposed to the constitutional of Malaysia, Malaysian Government System, Economic and Social Development Policy as a main policy in national development. At the end of the course students will be able to appreciate their roles and responsibilities as good citizens to the country.

**REFERENCES :**

1. Ahmad Esa dan Khairul Azman Mohd Suhaimy (2000). "Ikhtisar Sejarah Pembangunan Sosio Politik dan Ekonomi Malaysia." Johor Bahru: Muapakat Jaya Percetakan Sdn. Bhd.
2. Andaya, B.W. and Andaya, L.Y. (1982). "A History of Malaysia." London: Macmillan.
3. Aziz Deraman (1992). "Tamadun Melayu dan Pembinaan Bangsa Malaysia." Kuala Lumpur: Arena Ilmu Sdn. Bhd.
4. Chew Hock Thye (1979). "Masalah Perpaduan Nasional." Kuala Lumpur.
5. Francis Loh Kok Wah dan Khoo Boo Teik (2002). "Democracy in Malaysia." Cornwall:Curzon Press.
6. Ismail Ibrahim (2001). "Jihad Membasmi Kemiskinan." Kuala Lumpur: Institut Kefahaman Islam Malaysia.
7. Jurij Jalaludin (1991). "Wawasan 2020: Aspek Politik dan Sosial." Kuala Lumpur: Arena Ilmu Sdn. Bhd.
8. Mardiana Nordin dan Hasnah Hussiin (2000). "Pengajian Malaysia." Shah Alam: Penerbit Fajar Bakti Sdn. Bhd.
9. Lembaga Penyelidikan Undang-undang (2003). "Perlembagaan Persekutuan: (hingga 15hb Ogos 2003)." Petaling Jaya: International Law Book Services.
10. Siti Fatimah Abd. Rahman (1993). "Ke Arah Negara Maju Berdasarkan Sistem Nilai." Kuala Lumpur: Institut Kefahaman Islam Malaysia (IKIM).

**BPA 2102 ENTREPRENEUSHIP**

**SYNOPSIS :**

This course includes introduction to entrepreneur and entrepreneurship, mould, procedures and business support facilities, small and medium business management, business planning construction, company operation management with collaboration and handing over company, franchise business study in Malaysia and issues in entrepreneurship.

## **REFERENCES :**

1. MEDEC (2001). Keusahawanan; MEDEC , UITM
2. RobertD.H. (2002); Entrepreneurship; Prentice Hall, USA.
3. Lavern S. U. (1999); Small Business Entrepreneurship; Prentice Hall , New Jersey, USA
4. Noraini Ibrahim (2000) Industri Francais dan Pembangunan, Penerbit UM.

## **BPD 2032                      CONSTRUCTION LAW**

### **SYNOPSIS :**

This course contents the Introduction to aspects of law and land law, Contract, criteria of various contract, scope and responsibility, implication of contract clauses, Alternative Dispute Resolution, Garnishment proceedings, building control, relevant safety and industrial laws and acts.

### **REFERENCES :**

1. Nor Ainah Abdullah (2004). "Pengenalan Kepada Kontrak Binaan." Shah Alam: UPENA UiTM.
2. H. Abdul Aziz dan A.A. Abdul Rashid (2001). "Undang-undang Pembinaan: Bon-bon Gerenti dalam Kontrak Pembinaan." Pulau Pinang: Penerbit USM.
3. H. Abdul Aziz dan A.A. Abdul Rashid (2001). "Aspek Undang-undang Tort Dalam Projek Pembinaan." Pulau Pinang: Penerbit USM.
4. Robinson, N.M. et al (1999). "Construction Law in Singapore and Malaysia." 2nd.ed. Singapore: Butterworths..
5. Lim, C.F. (2004). "The Malaysia PWD Form of Construction Contract." Selangor: Sweet & Maxwell Asia.
6. Austen, A.D. dan Neal, R.H. (1984). "Managing Construction Projects: A Guide To Process and Procedures." New York, McGraw-Hill Inc.
7. Palmer, W.J., Maloney J.M. dan Heffron J.L.III (1996). "Construction Insurance, Bonding and Risk Management." New York, McGraw-Hill Inc.

## **BPD 2043                      STRUCTURAL ANALYSIS**

### **SYNOPSIS :**

This course contents introduction to force and moment, structural behaviour, support, load, frame structure, shear force diagram and bending moment diagram, flexural stress and slope and deflection.

### **REFERENCES :**

1. Hibbeler,R.C.(2006). "Structural analysis".6th ed.New Jersey;Prentice Hall.
2. Aslam Kassimali (2004). "Structural Analysis (With CD-Rom)." 3td ed.Thomson Engineering
3. West, H. and Geschwinder, L.(2001). "Fundamentals of structural analysis." 2nd ed.USA:John Wiley & Sons Ltd
4. Yusof Ahmad (2001). "Mekanik Bahan & Struktur". UTM
5. Chajes, A(1990). "Structural Analysis". New Jersey, Prentice Hall.

**BPD 2023****CONSTRUCTION LAND SURVEY****SYNOPSIS :**

This course discussed on topics related to surveying needs in construction works. The topics include Introduction to Surveying, Principles of Surveying, Surveying Instruments, Payment of Survey, Coordinate System, Distance Measurement, Angle Measurement, Height Survey, Construction Application and Introduction to Geographic Information System (GIS).

**REFERENCES :**

1. Kavanagh, B.F dan Glenn Bird, S.J (2006) "Surveying: Principle and Applications" 7<sup>th</sup> Edition, Prentice Hall, USA.
2. Kavanagh, B.F dan Glenn Bird, S.J (2007) "Surveying with Construction Application" 6<sup>th</sup> Edition, Prentice Hall, USA.
3. H. Moffit dan John D. Bossler (2001) "Surveying" Francis, 10<sup>th</sup> Edition, Addison Wesley.
4. Paul R. Wolf dan Charles D. Ghilani (2002) "Elementary Surveying: An Introduction to Geomatics" 10<sup>th</sup> Edition, Prentice Hall, USA.
5. Masiri Kaamin dan Abd. Shukor Sarif (2006) "Kejuruteraan Geomatik1" Monograf; Batu Pahat: Fakulti Kejuruteraan Awam & Alam Sekitar, KUiTTHO.

**BPD 2163****CONSTRUCTION EQUIPMENTS****SYNOPSIS :**

This course content covers topics related to selection of construction equipments, equipment economy, basic components, Tractors, Dozers and Rippers: Scrappers for earth movement, Loaders and Haulers, Graders and aggregate production equipment, concrete and asphalt equipment.

**REFERENCES :**

1. Peurifoy R dan Schexnayder C. (2002). "Construction Planning, Equipment and Methods". 6<sup>th</sup> edition. New York : McGraw-Hill.
2. John Farnworth (2001). "A World-Wide Guide To Massey Ferguson Industrial And Construction Equipment". Tokyo: Japonica Press.
3. Smith,R.C, dan Andres,K.C.(1986). "Principles And Practices Of Heavy Construction". 3<sup>rd</sup> edition. Prentice Hall: Englewood Cliffs.
4. Marsden,P. dan Brigitte,J. (2000). "Construction Equipment Models – Machinery in Miniature". New York : McGraw-Hill.
5. Peurifoy,R.L,Ledbetter,W.B dan Schexnayder,C.J.(1996). "Construction Planning, Equipment and Methods" .5<sup>th</sup> edition. New York: McGraw-Hill.
6. Spence,W.P.(1998). "Construction Methods, Materials and Techniques". Delmar Publishing: Thomson.



**SYNOPSIS:**

This course will give exposure to student on the topic of Introduction to Financial Management, Construction Supply and Demand, Contract Requirement and Financial Implication, Analysis of Financial Statement, Project Feasibility, Construction Financing, Cost Control and Life-Cycle Costing. From end of this course student will be apply appreciate the knowledge to the financial situation of the construction company through the analysis of financial statement, do assessment in selecting construction project that is feasible, Identify types and procedures for construction financing, apply the cost control method in managing construction project and should will be insights and enhance communication skills through discussions, information sharing, analyze and decision making.

**REFERENCES:**

1. Abdul Hakim Mohammed & Ishamuddin Ahmad. 2002. *Pengurusan Projek Binaan: Pembiayaan dan Pengawalan Kos yang Berkesan*. Dewan Bahasa dan Pustaka, Kuala Lumpur.
2. Bany Ariffin et.al . 2002. *Guide to Financial Management*. Thomson Learning, Kuala Lumpur.
3. Faudziah Zainal Abidin, Nasruddin Zainudin, Faizah Ismail & Nurwati Ashikkin Ahmad Zaluki. 2007. *Pengurusan Kewangan "Teori dan Aplikasi"*. Pearson: Prentice Hall , Selangor, Malaysia.
4. Khairani Haji Ahmad. 2005. *Ekonomi Binaan*. Prentice Hall, Selangor, Malaysia.
5. Nor Ainah Abdullah .2004 .*Pengenalan kepada Kontrak Binaan*. Universiti Teknologi Mara, Shah Alam, Selangor.
6. Melati Ahmad Anuar, Mohd Affandi Yusoff, Mohd Norfian Alifiah & Suresh Ramakrisnan. 2006. *Asas Pengurusan Kewangan*. Pearson: Prentice Hall, Selangor, Malaysia.
7. Steven J. Peterson . 2005. *Construction Accounting and Financial Management*. Prentice Hall, Selangor, Malaysia.

**3<sup>rd</sup> YEAR 3**  
**1<sup>st</sup> SEMESTER 1**

**UM\* 1312 : FOREIGN LANGUAGE**

- **UMF 1312 : FRENCH LANGUAGE**

**SYNOPSIS :**

This course is offered to students focusing on the learning of the basic of French. Students are exposed to the skills of listening, reading, speaking and writing with basic vocabulary, grammar and structure. Students are also provided with a lot of opportunities to practice their communication and writing skills.

**REFERENCES:**

1. Girardet, Jacky et Cridlig, Jean-Marie, 1996. Méthod de français: PANORAMA 1. Paris: CLE International.
2. Hatier, 1995. Le Nouveau Bescherelle Complete Guide 12 000 French Verbs. Paris: LIBRAIRIE HATIER.
3. Kaneman-Pougatch, Massia et al, (1997). Méthod de français: Café Crème 1. Paris: HACHETTE F.L.E.
4. Grégoir, Maïa et al, (1995). Grammaire Progressive du Français avec 500 exercices. Paris: CLE International.
5. Miquel, Claire Leroy et al, (1995). Vocabulaire Progressive du Français avec 250 exercices. Paris: CLE International.
6. Capelle, Guy et Gidon, Noëlle, 1995. Méthod de français: Le Nouvel Espaces 1. Paris: HACHETTE F.L.E..
7. Hatier. 2002. Le Nouveau Bescherelle 12,000 French Verbs. English Edition. Paris: Librairie Hatier.
8. Das, Theresa & Yam-Ramanantsoa, Hanta. 1992. Bienvenue Chez Nous. Kuala Lumpur: L'Ambassad de France et DBP.
9. DBP, USM & Kedutaan Besar Perancis, 1996. Kamus Perancis Melayu Dewan. Kuala Lumpur: DBP
10. French Dictionary 1999. The New Collins Robert 5<sup>th</sup> Edition. Paris: Harper Collins Publishers.

- **UMM 1312 : MANDARIN LANGUAGE**

**SYNOPSIS :**

This course is offered to students focusing on the learning of the basic of mandarin. Students are exposed to the skills of listening, reading, speaking and writing with basic vocabulary, grammar and structure. Students are also provided with a lot of opportunities to practice their communication and writing skills.

**REFERENCES :**

1. Liang An Xiang. 2002. EPH Publishing (M) Sdn. Bhd. K.L.
2. Shi Yun. 2002. EPH Publishing (M) Sdn. Bhd. K.L.
3. Claudia Ross & Jing-heng Sheng Ma. 2006. Routledge. London.

4. Dr.Lim Choon Bee. 2005. Universiti Putra Malaysia Press. Serdang.
5. Hui Jin Chang. 2002. United Publishing House(M) Sdn.Bhd. K.L.
6. Claudia Ross. 2002 .Press of Ohio. USA.
7. Duan Duan Li & Yanping Xie. 2002. Press of Ohio. USA.

- **UMR 1312 : ARABIC LANGUAGE**

**SYNOPSIS:**

This course is designed for students to learn the basic Arabic. Students are exposed to the skills of listening, reading, speaking, and writing with basic vocabulary, grammar and structure. Students are also exposed to the real daily situations which will help them to communicate using Arabic language.

**REFERENCES :**

1. Mohd Hisyam Abdul Rahim; Ahmad Sharifuddin Mustapha; Mohd Zain Mubarak. 2008. *Bahasa Arab UMR 1312*. Batu Pahat: Penerbit UTHM.
2. Mohd Hisyam bin Abdul Rahim. 2005. *Senang Berbahasa Arab*. Batu Pahat: Penerbit KUiTTHO.
3. Ab. Halim Mohammed; Rabiyyah Hajimaming; Wan Muhammad Wan Sulong. 2007. *Bahasa Arab Permulaan*. Serdang: Penerbit UPM.
4. Mohd Khairudin Khudri. 2006. *Akar Umbi Pembelajaran Bahasa Arab*. Kajang: One Touch Creative.
5. Sini, Mahmud Ismail; Abd Aziz, Nasif Mustapha; Husayn, Mukhtar. T.th. *al-'Arabiyyah Lil Nashiin, Kitab al-Tilmiz*. al-Mamlakah al-Saudiah: Idarah al-Kutub al-Madrasiyyah, Wizarah al-Taalim.
6. Ahmad Hassan. 1995. *Pelajaran Bahasa Arab Untuk Orang Bukan Arab*. Kota Bharu: Pustaka Aman Press.
7. Hashim Hanafiah. 1981. *Al- Lughah al-Arabiyyah*. Kuala Lumpur: Percetakan Watan.

- **UMG 1312 : GERMAN LANGUAGE**

**SYNOPSIS:**

This course is designed for students to learn the basic of German language. Students are exposed to the skills of listening, reading, speaking, and writing with basic vocabulary, grammar and structure. Students are also exposed to the real daily situations which will help them to communicate using German language.

**REFERENCES :**

1. Nur Zakiah binti Amir Hamzah, *Guten Tag der deutschen sprache*, Pejabat Penerbit UTHM
2. Angela Wilkes. 2006. *GERMAN FOR BEGINNERS*, London: Usborne Publishing Ltd.
3. Hartmurt Aufderstrasse. 1998. *Themen Neu 1*, Lehrwerk fuer Deutsch als Fremdsprache, Textbook. Muenchen: Max Hueber Verlag.
4. Dr. Albert H. Small. 1991. *German à la Cartoon*. German Grammar through Cartoons. Passports Books

- **UMJ 1312 : JAPANESE LANGUAGE**

**SYNOPSIS:**

This course is designed for students to learn basic Japanese language such as speaking, listening, reading, and writing. Students will be exposed to the real daily conversations which will enable them to communicate in basic Japanese language.

**REFERENCE:**

1. *Kodansya`s Furigana Japanese Dictionary(2005)*
2. *Minna no Nihongo Listening ( 2006 ) Second Published :3A Corporation Tokyo*
3. *Minna no Nihongo Jap-English ( 2006 ) Second Published :3A Corporation Tokyo*
4. *Japanese Conversation for Beginners (2006) Bonjinsha,Tokyo Japan*
5. *Japanese Language Center for International Students,Tokyo University of foreign Studies*
6. *Modul Pengajaran Bahasa Jepun Tahap 1 (2008) Penerbit UTHM*
7. *The AOTS Nihongo Dictionary for Practical Use (2005) 3A Corporation,Japan*
8. *Informative Japanese Dictionary (2005) Shinchousha Corporation,Japan*

- **UMP 1312 : SPANISH LANGUAGE**

**SYNOPSIS:**

This course is designed for students to learn the basic Spanish language. Students are exposed to the skills of listening, reading, speaking, and writing with basic vocabulary, grammar and structure. Students are also exposed to the real daily situations which will help them to communicate using Spanish language.

**REFERENCES:**

1. Nurul Sabrina Zan: *Hola! Hablo español First Edition Batu Pahat: Penerbit UTHM.*
2. Joy Renjilian - Burgay, Ana Beatriz Chiquito y Susan M. Mraz: *Caminos*
3. Salina Husain : *Vamos a aprender español lengua extranjera*
4. Gail Stein : *The Complete IDIOT'S GUIDE to Learning Spanish on Your Own Second Edition.*
5. Irwin Stern : *Ultimate SPANISH revised and update.*
6. Julianne Dueber : *Spanish Vocabulary by Barron's Educational Series, Inc.*
7. Oxford University Press 1997,2000 Second Edition 2000- *The Pocket Oxford*
8. *Collins Dictionary: Español>Inglés, English>Spanish - New Edition*

**BPA 3112**

**LEADERSHIP AND SUPERVISION**

**SYNOPSIS :**

Kursus ini mengandungi pendedahan kepada pelajar berkaitan kaedah-kaedah dan teknik kemahiran kepimpinan dan penyeliaan yang berkesan secara teori dan 'hands-on' di tempat kerja.

**REFERENCES :**

1. Rue W.L. and Byars L.L (2001). "Supervision: Key Link to Productivity". 7<sup>th</sup> Edition. Irwin, McGraw Hill.
2. Goetsch L.D. (2002). "Effective Supervision : A Guidebook for Supervisors, Team Leader and Work Coaches". Upper Saddle River, New Jersey: Prentice Hall.
3. Certo C.S. (2002). "Supervision : Concepts and Skill Building". 4<sup>th</sup> Edition. Irwin, McGraw Hill.
4. Hilgert L.R. and Leonard C.E. Jr. (2000). "Supervision: Concept and Practices of Management". 8<sup>th</sup> Edition. South Western College Publishing, Thomson Learning.
5. Chapman N.E. and Goodwin C. (1999). "Supervisor's Survival Kit". 8<sup>th</sup> edition. Upper Saddle River, New Jersey: Prentice Hall.

### **BPD 3073**

### **CONSTRUCTION PROCUREMENT**

#### **SYNOPSIS :**

This course is concerns on the construction development process. The students is expected to gain some knowledge on the construction process and parties involve. The topics include Introduction to Construction Project, Parties Involve in Construction, Introduction to Construction Procurement Process, Construction Procurement Process, Construction Procurement System, Integrated Procurement System, Management Oriented Procurement System, Selection of Procurement System and Future Trends in Project Procurement.

#### **REFERENCE:**

1. Masterman, J.W.E (2002). "Introduction To Building Procurement Systems, 2<sup>nd</sup> Ed." London: Taylor & Francis Inc.
2. Khairuddin Abd. Rashid (2002). "Construction Procurement In Malaysia: Processes and System." Kuala Lumpur : IIUM
3. Roy Morledge, Andrian Smith, Dean T. Kashiwagi (2006). "Building Procurement" UK : Blackwell Publishing
4. Franks, J. (1998). "Building Procurement Systems." London : The Chartered Institute of Building.
5. Addis, B. and Talbot, R. (2001). "Sustainable Construction Procurement." Harlow, England: Construction Industrial Research & Information Association.

### **BPD 3082**

### **STRUCTURAL DESIGN**

#### **SYNOPSIS :**

This course contents introduction to structural design, reinforced concrete structure design, steel structural design and wood structural design.

#### **REFERENCES :**

1. BS5950:Part 1:1990. Structural Use Of Steelwork In Building
2. BS8110:Part 1:1997. Structural Use Of Concrete-Code Of Practice For Design And Construction
3. MS544:Part 2:1999 Draf. Code Of Practice For Structural Use Of Timber-Permissible Stress Design, For Solid Timber

4. David Yeoh Eng Chuan, Koh Heng Boon And Lee Yee Loo (2005). "Reinforced Concrete Design-A Problem And Solution Approach". McGraw Hill
5. Frixos Joannides & Alan Weller (2002). "Structural Steel Design To BS5950:Part 1". Thomas Telford, London
6. Dennis Lam, Thien-Cheong Ang & Sin Peng Chiew (2004). "Structural Steelwork Design To Limit State Theory". 3rd Ed. Elsevier Butterworth-Heinemann, Oxford.

#### **BPD 3093**

#### **CONSTRUCTION MATERIAL AND TESTING**

##### **SYNOPSIS :**

This course contents include introduction to concrete, brick and brickwork, wood, ferrus metal, non-ferrus metal, other construction materials and green construction materials.

##### **REFERENCES :**

1. Edward A. (2004). "Fundamentals of Buildings Construction, Materials and Method." 4th edition. New York: John Wiley & Sons.
2. Spiegel, R. & Meadows, D. (2006). "Green Building Materials: A Guide to Product Selection and Specification." 2<sup>nd</sup> edition. New York: John Wiley & Sons, Inc.
3. Smith W.F. (1996). "Principles of Materials Science and Engineering." 3rd edition. New York: McGraw-Hill.
4. Vernon John (1997). "Pengenalan kepada Bahan Kejuruteraan." Terjemahan oleh Ani Idris dan Jasmine Hashim, Skudai: UTM.
5. Callister W.D. Jr. (2007). "Material Science and Engineering: An Introduction." 7th edition. New York: John Wiley & Sons.
6. Mat Lazim Zakaria (1997). "Bahan Dan Binaan." Kuala Lumpur: Dewan Bahasa dan Pustaka.

#### **BPD 3242**

#### **CONSTRUCTION SAFETY AND HEALTH MANAGEMENT**

##### **SYNOPSIS:**

This course will give exposure to student on the topic of Introduction to Accident, Theory and Sources of Accident, Health Act, Accident Costs, Risk Management, Construction Safety, Safety Program, Safety Performance Measurement Responsibility of Safety in Construction. From this course lastly student will be apply Safety Management Method and procedure at Construction site effectively, implemented the Practice and Policy of Safety Act at Construction Site and ability to produce Safety Report / Construction Project. Student will be exposed to insights and ability to enhance Generic Skills with Effective Communication and Grouping Work.

##### **REFERENCES:**

1. Holt, A, S, J. (2001). Principles of Construction Safety. Blackwell Science.
2. Health and Safety Executive. 1996. Health and Safety in Construction. Health and Safety Executive Books.
3. Hughes, P & Ferret, E. (2005). Introduction to Health and Safety in Construction. Elsevier.

4. Sariwati Mohd Shafirr. (2007). Occupational Safety and Health Management. 2 nd. Edition.University Publication Centre (UPENA).Universiti Teknologi MARA. Shah Alam.
5. James S. Angle. (2005). Occupational Safety and Health in the Emergency Services. Thomas Delmar Learning. United States of America.
6. Health and Safety Executive. (2001). Managing Health and Safety in Construction: Construction (Design and Management) Regulations 1994. Health and Safety Executive Books.
7. Kolluru R, V. (Editor) (1996). Risk assessment and management handbook: for environment, health, and safety professionals. McGraw-Hill.

## **BPD 3342 RISK MANAGEMENT**

### **SYNOPSIS :**

Kursus ini mengandungi pengenalan kepada risiko, terminologi dalam pengurusan risiko, proses-proses pengurusan risiko, alat-alat pengurusan risiko, mengurus jenis-jenis risiko I, mengurus jenis-jenis risiko I, membuat keputusan dalam mengurus risiko, mewujudkan informasi berguna, retrospek dalam pengurusan risiko dan perbincangan dan kajian kes.

### **REFERENCES :**

1. Alexender, K. (1992). "Facilities Risk Management". UK: Facilities. Vol 10. No 4. April.
2. Crouhy, M, Galai, O and Mark, R (2000). "Risk Management". UK: McGraw-Hill Trade.
3. Doherty, N.A (2000). "Integrated Risk Management: Techniques and Strategies for Managing Corporate Risk".McGraw-Hill Professional Publishing.
4. Fischhoff, B. (1983). "Acceptable Risk". Cambridge: Cambridge University Press.
5. Hertz, D.B. and Thomas, H. (1983). "Risk Analysis and Its Application". New York: John Wiley & Sons
6. Jorion, P (2000). "Value at Risk-The New Benchmark for Managing Financial Risk". UK: McGraw-Hill.
7. Raftery, J (1993). "Risk Analysis in Project Management". UK: Spoon Pres Ltd.
8. Rogers, J (2002). "Strategy, Value and Risk-The Real Options Approach Reconciling innovation, Strategy and value management". UK: Palgrave Macmillan Ltd.
9. Singleton, W.T. (1987). "Risk and Decisions". New York: John Wiley & Sons.
10. Ting, W (1982). "Multinational Risk Assessment and Management-Strategies for Investment and Marketing Decision". UK: Greenwood Publishing Group.

**3<sup>rd</sup> YEAR**  
**2<sup>nd</sup> SEMESTER**

**BPD 3103                      CONSTRUCTION COST ESTIMATION**

**SYNOPSIS :**

This course contents the Introduction to construction cost estimation, types of estimation, specification, source of information in estimating, the calculation of construction cost estimation are including excavation works, concreting, bricklaying, steel works, carpentry, roofing, finishes, painting, glazing and external works.

**REFERENCE :**

1. Ahamad Abdullah (2005). "Anggaran Kos Kerja Bangunan" Malaysia : Prentice Hall
2. Spesifikasi Piawai Untuk Kerja-Kerja Binaan Bangunan. Jabatan Kerja Raya (JKR) Malaysia.
3. CIOB (1997). "Code Of Estimating". Berkshire : Berkshire, CIOB.
4. Ahamad Abdullah Dan Khairuddin Abdul Rashid (2003). "Pengukuran Kuantiti Bangunan (Beserta Contoh Kerja Berdasarkan SMM2)". Malaysia : Prentice Hall – Pearson.
5. James A.S Faizinger (1997). "Basic Estimating For Construction ". New Jersey : Prentice Hall.
6. Robert C. Pevrifoys and Garord D. Oberlender (2001). "Estimating Construction Costs" 5<sup>th</sup> Edition. New York ; McGraw-Hill.
7. Richard A. Nickles (2000). "Construction Cost Estimating And Bidding Appendix". New Jersey : Horner Bookstore Publication.
8. Ivor H. Seeley (1999). "Civil Engineering Quantities", 4th. Edition. New York : Mac Millan Education Ltd.

**BPD 3113                      PROJECT PLANNING AND SCHEDULING**

**SYNOPSIS :**

The contents of this subject are intended to serve as an introduction to Construction Planning and Scheduling. The following subject topics are included: The Administration of construction works, the essentials of construction programme and the use of gantt charts, logic diagramming and scheduling, the critical path method(CPM), the calculations for project durations, floats, introduction to the programme evaluation and review technique(PERT), the application of Monte Carlo technique and introduction to project management software.

**REFERENCES :**

1. Fletcher Griffis (2000). "Construction Planning for Engineers." New York:McGrawHill
2. Norlida dan Dayang Sopia (1994). "Mengurus Projek Pembinaan." Kuala Lumpur:Dewan Bahasa dan Pustaka
3. Hojjat Adeli, Asim Karim (2001). "Construction Scheduling , Cost Optimization and Management."England:Spoon Press.
4. Gould, F.E.(2002). "Managing the Construction Process:Estimating, Scheduling and Project Control." London"Prentice Hall



5. Jimmie W.Hinze (2004). "Construction Planning and Scheduling"2<sup>nd</sup> ed. New Jersey;Prentice Hall.
6. Halpin,D.W.(2005). "Construction Management". 3<sup>rd</sup> ed. John Wiley & Sons.

## **BPD 3292 BUILDING SERVICES**

### **SYNOPSIS:**

This course includes introduction to building services, water system, sewage system (piping), sewage disposal system, building ventilation system, air conditioning system, fire protection system, electricity supply system, telecommunication system, building transportation system, and law aspects for building facilities.

### **REFERENCES :**

1. Osbourn, D. and Greeno, R. (2005). "Introduction to Building." 3<sup>rd</sup> Edition. United Kingdom: Pearson.
2. John Knight, Bruce Boulton, Mike James, W.P. Jones and Andrew Prentice (2003). "Newnes Building Services Pocket Book." Newnes Publication.
3. Oughton, D.R., Hodkinson, S. (2001). "Faber and Kell's Heating and Air Conditioning of Building." London: Butterworth-Heinemann.
4. Roger Greeno, Frederick E. Hall (2001). "Building Services Handbook." London: Butterworth-Heinemann.
5. Abd. Hakim Mohamad (2000). "Penyediaan Tapak dan Struktur Bawah." Kuala Lumpur:Dewan Bahasa dan Pustaka.
6. David Chaddeerton (2000). "Build Services Engineering." London: Spon Press Ltd.
7. Roger Greeno (1997), "Building Services Technology and Design (CIOB Textbooks)." London: Longman Group Ltd.
8. Hall, F. (1994). "Building Services and Equipment, Vol.3." London: Longman Group Ltd.
9. Leonard, B. E. (1994). "Sewerage & Sewerage Treatment."New York: A. Wiley Interscience Publication.
10. Mat Lazim Zakaria (1992). "Bahan dan Binaan." Kuala Lumpur: Dewan Bahasa dan Pustaka.
11. Abd. Hakim Mohamad (1990). "Perancangan Projek Binaan." Kuala Lumpur: Dewan Bahasa dan Pustaka.

## **BPD 3272 : CONSTRUCTION PROFESSIONAL ETHICS**

### **SYNOPSIS :**

This course will give exposure to student on the topic of The Introduction of Ethic, Professional Ethic, Personal Possessions, Mannerism, Management Ethic, Construction Law and Ethic, Construction Practice Profession and Ethic Current Issues In Construction

### **REREFENCES:**

1. Mohd. Janib Johari (2001). "Etika Profesional" Johor Bahru: Universiti Teknologi

Malaysia

2. Mustafa Haji Daud (1996). "Etika Pengurusan". Kuala Lumpur: Utusan Publication & Distribution Sdn. Bhd.
3. Abd. Rahim Abd. Manaf (1999) "Alam Jurutera." Kuala Lumpur: Universiti Malaya
4. Mike W. Martin & Roland Schinzinger (1996) "Ethics In Engineering"; New York, Mc Graw Hill

## **BPD 3302 : ENVIRONMENTAL MANAGEMENT**

### **SYNOPSIS :**

Kursus ini mengandungi pengenalan alam sekitar, pertumbuhan populasi manusia, prinsip ekologi, perhutanan, hidrologi, pengenalan atmosfera, bencana alam, bandar, sisa, pembinaan dan alam sekitar, pembangunan berterusan, etika, dasar dan perundangan alam sekitar, polisi alam sekitar, sistem pengurusan persekitaran, penilaian alam sekitar, penilaian kitar hayar, pengurusan kesihatan, keselamatan dan alam sekitar, cabaran pengurusan alam sekitar di Malaysia.

### **REFERENCES :**

1. Malaysia (2005). "Akta Kualiti Alam Sekeliling." Kuala Lumpur: International Laws Book Services.
2. Canter, L.W. (1996). "Environmental Impact Assessment." London: Mc-Grow Hill.
3. Curan, M.A. (1996). "Environmental Life Cycle Assessment." London: Mc-Grow Hill.
4. Detwler, T.R. dan Marcus, M.G. (1985). "Perbandaran dan Persekitaran Geografi Fizikal Bandar." Kuala Lumpur: Dewan Bahasa dan Pustaka.
5. Erickson, S.L. dan King, B.J. (1999). "Fundamentals of Environmental Management." US: John Wiley & Sons, Inc.
6. Geotsch, D.L. (2000). "Occupational Safety and Health for Technologies, Engineers and Manager." 7<sup>th</sup> edit. UK: Prentice Hall.
7. Goudie, A. (2000). "The Human Impact on The Natural Environmental." 5<sup>th</sup> edit. UK: Blackwell Publishers.
8. Jarvis, P. (2000). "The Ecological Principle And Environmental Issue." UK: Arnold Publiher.

## **BPD 3142 : BACHELOR DEGREE PROJECT I**

### **SYNOPSIS :**

Bachelor Degree Project I devotes its contents to fulfill students' academic requirement. This course introduces students to report writing skills involving Proposals, Seminar Papers, and individual presentation. In order to this, they will learn how to collect data using questioners, population and sampling data and the lastly how to analyzed the data collection. This course Approaches in doing research; concept, type and research process, identify issues and problem statement; literature review and research proposal; scope and methodology; instrument, data collection and sampling operations; data analysis; thesis writing and presentation.

## REFERENCES :

1. Alias Baba. 1999. *Statistik Penyelidikan dalam Pendidikan dan Sains Sosial*. Penerbit Universiti Kebangsaan Malaysia Bangi.
2. Azahar Harun & Nawi Abdullah. 2004. *Metodologi Penyelidikan Ekonomi dan Sains Sosial*. Penerbit Thomson Learning Kuala Lumpur.
3. Buku Log. *Perlaksanaan Projek Sarjana Muda. 2\*\*\**. Penerbit Fakulti Pengurusan Teknologi Universiti Tun Hussein Onn Malaysia. Batu Pahat Johor.
4. Chua Yan Piaw. 2006. *Kaedah dan Statistik Penyelidikan Buku 1. Kaedah Penyelidikan*. Penerbit Mc Graw Hill Educational. Kuala Lumpur Malaysia.
5. Ishak Baba. 2007. *UTHM Syllabus Format*. Penerbit Universiti Tun Hussein Onn Malaysia. Batu Pahat Johor.
6. Mohd. Majid Konting. 2000. *Kaedah Penyelidikan Pendidikan*. Penerbit Dewan Bahasa dan Pustaka Kuala Lumpur.
7. Ticehurst, G. W. and Veal. A.J. 1999. *Business Research Methods: A Managerial Approach, Australia*. Penerbit Longman Kuala Lumpur.

## ELECTIVE I

### BPF 3213 : BASIC OF ARCHITECTURAL LANDSCAPE DESIGN

#### SYNOPSIS :

This course contents the introduction to landscape; definitions, the importance of landscape developments and history of landscape. Landscape planning and development; landscape master plan, site inventory. Analysis and site planning; planning and landscape geographical design, inventory analysis outcomes, water flow and drainage planning system, social and psychological impact factors, conceptual development plan. Landscape design; conceptual and theme of design, hard landscape and soft landscape, main entrance, circulation, main nodus and sub-nodus, rhythm and spatial in landscape , scale and texture.

#### REFERENCES :

1. Aldrin Abdullah. "Perancangan Lanskap." dlm. Badaruddin Mohamed et. al. (2003). "Prinsip-Prinsip Perancangan." Selangor: Prentice Hall.
2. Motloch, J.L. (2001) "Introduction to Landscape Design." 2nd. ed. New York: John Wiley & Sons, Inc.
3. Norman K. Booth (2005) "Residential Landscape Architecture" Prentice Hall, USA
4. Leroy G. Hannebaum (1998) "Landscape Design" Prentice Hall, USA
5. Steven L. Cantor (1997) "Innovative Design Solutions" John Wiley & Sons, USA.
6. John Ormsbee Simonds (1997) "Landscape Architecture" McGraw-Hill, USA
7. William A. Mann (1993) "Landscape Architecture" John Wiley & Sons, USA
8. Michael Laurie (1975) "An Introduction to Landscape Architecture" American Elsevier, USA.

## **BPF 3163 : URBAN PLANNING FOR CONSTRUCTION**

### **SYNOPSIS :**

The content of this course is Definition of Urban Planning, History and Development Concept Urban Planning in 21 Century, Urban Planning Components, Development Planning Policy in Malaysia, Urban Planning System in Malaysia, The Planning Regulation and Law, Development Control, Development Control Process, Site Planning, Report of Suggestion Progress and Planning Propriety.

### **REFERENCES :**

1. Radcliffe, J & M. Stubbs (2004). Urban Planning and Real Estate Development (2<sup>nd</sup>. Edition). Taylor and Francis
2. Radcliffe, John (1975). An Introduction to Town and Country Planning. London. Hutchinson & Co.
3. John, M. Levy (2008). Contemporary Urban Planning. (8<sup>th</sup>.ED.). Prentice Hall.
4. Kenneth B. Hall, Jr. (2001). Community By Design. McGraw-Hill, New York, U.S.A
5. Badaruddin Mohamed & Rahmat Azam Mustapha (2001). "Prinsip-prinsip Perancangan". Petaling Jaya: Prentice Hall.
6. Goh Ban Lee (1991). "Urban Planning in Malaysia: History, Assumptions and Issues". Petaling Jaya: Tempo Publishing.
7. Ibrahim Wahab (1991). "Perancangan Bandar: Aspek Fizikal dan Kawalan Pembangunan." Kuala Lumpur: Dewan Bahasa & Pustaka.
8. Town and Country Planning Act 1976 (Act 172)

## **BPF 3173 : LAND ECONOMICS FOR CONSTRUCTION**

### **SYNOPSIS :**

The content of this course is Introduction to Land Economic, Land and Property, Development, Urbanization, Theory of Urban Development, The Urban Economic function and activity, Defrayal of Development, Urban Planning, Development Policy and Control, Urbanization Issues.

### **REFERENCES :**

1. Balchin P, Isaac D and Jean C (2000). "Urban Economics: A Global Perspective" UK: Palgrave Macmillan Publishers Ltd. UK.
2. Dipasquela, D. (1996). "Urban Economic and Real Estate Markets." Englewoods Cliffs, New Jersey: Prentice Hall.
3. Harvey, J. (1996). "Urban Land Economics: The Economics of Real Property." London: MacMillan. 4<sup>th</sup> edition.
4. McDonald, JF (1997). "Fundamentals of Urban Economics". UK: Prentice Hall International Ltd.
5. Tsai, TW (2001). "Factors Influencing the Purchasing Decisions of Urban House Buyers in China, Hong Kong and Taiwan". USA: PhD Dissertation. United States

- International University.
6. McKenzie, DJ & Betts RM (2001). "Essentials of Real Estate Economics". Ohio: Thomson Learning.

## **BPF 3183 : TRAFFIC AND TRANSPORTATION MANAGEMENT**

### **SYNOPSIS :**

Kursus ini mengandungi pengenalan kepada pengangkutan, kenderaan dan kemanusiaan, aliran lalulintas, pengukuran lalulintas, rekabentuk geometri, rekabentuk geometri persilangan dan persimpangan, rekabentuk geometri tempat letak kenderaan dan kemudahan memunggah, peraturan kenderaan dan pemandu, peranti kawalan lalulintas dan kaedah kawalan lalulintas

### **REFERENCES :**

1. Everett C. Carter, Wolfgang S. Homeburger (1994). "Pengenalan Kejuruteraan Pengangkutan". Dewan Bahasa dan Pustaka, Kuala Lumpur
2. C.A. O'Flaherty (1979) "Highway and Traffic Vol.1 ", Edward Arnold
3. C.S. Papacostas, P.D. Prevedouros(1993) . "Transportation Engineering and Planning ", Prentice Hall Englewood Cliffs.
4. A.S. Narasimha Murthy, Henry R.Mohle (2001), "Transportation Engineering Basics", ASCE Press.

### **YEAR 3 SEMESTER 3**

## **BPD 3152 : INDUSTRIAL TRAINING**

### **SYNOPSIS :**

Pemilihan tempat latihan praktikal, penyediaan laporan dan seminar latihan industri.

### **REFERENCES :**

1. University Log Book
2. University ISO Manual Procedure
3. Journal
4. Magazines
5. Industrial Training Report

### **YEAR 4 SEMESTER 1**

## **BPD 4192 : COMPUTER APPLICATION FOR CONSTRUCTION**

### **SYNOPSIS:**

This course includes introduction to computer application in construction, project management information system (PMIS) also computer software have been used by construction organizations for project scheduling and planning purposes. Software that usually used is Microsoft Access, Microsoft Project and Primavera Project Planner (P3). Students will also be exposed with current and future trend on ICT application in construction.

### **REFERENCES :**

1. Johnson, S. (2007). "Microsoft Office 2007: On Demand". USA: Perspection, Inc, Que Publishing.
2. Newitt, J.S (2005). "Construction Scheduling: Principle and Practice". USA: Pearson Education, Inc.
3. Marmel, E. J. (2004). "Master Visually Project 2003".Canada: Wiley Publishing, Inc.
4. Sun, M. and Howard, R. (2004). "Understanding IT in Construction". New York: Spon Press, Taylor & Francis Group.
5. Thilak, M. ( 2003 ). " Microsoft Project 2002 ". Kuala Lumpur: Venton Publishing.
6. O'Leary, T.J. and O'Leary, L.I. (2003). "Microsoft Office Access 2003". Boston: McGraw Hill.
7. Heong, N.K. (2002). "Primevara Project Planner Version 3.0". Kuala Lumpur: Venton Publishing.
8. Marchman, D.A.( 2002 ). "Construction Scheduling with Primavera Project Enterprise, 2nd Edition". New York: Thomson Delmar Learning.
9. Cleland, D.I. and Ireland, L.R. (2002). "Project Management: Strategic Design and Implementation" McGraw Hill.
10. Hinze, J.W. (1998). "Construction Planning And Scheduling". USA: Prentice Hall.

## **BPD 4252 : FACILITIES MANAGEMENT IN CONSTRUCTION**

### **SYNOPSIS:**

The course provides a perspective of the major functions of facilities management including introduction to facilities management, facilities practices, facilities life cycle, retaining services in-house vs outsourcing, change management, human resource management implication, design cycle, operation and maintenance.

### **REFERENCES :**

1. Barret P, and Baldry D. (2003), Facilities Management: Towards Best Practice, 2<sup>nd</sup> Edition, Blackwell Publishing, UK.
2. Atkin B, & Brooks, A. (2005), Total Facilities Management, 2<sup>nd</sup> Edition, Blackwell Publishing, UK
3. Sunil Shah, (2007), Sustainable Practice for Facilities Manager, Blackwell Publishing, UK.

4. Rondeau, Brown, Lapides, (2006), Facility Management, 2<sup>nd</sup> Edition, John Wiley & Sons, Inc. Canada.
5. Booty, F., (2006), Facilities Management Handbook, 3<sup>rd</sup> Edition, Butterworth-Heinemann, USA
6. Alexander, K, Atkin, B, Brocher and Haugen (editors), (2004), Facilities Management: Innovation and Performance, Spoon Press, London.
7. Smith, et. Al., (2004), Procurement of construction facilities: a case study of design management within a design and construct organization, Facilities, Vol. 22, No. 1/2, pp. 26-24.
8. Brochner, (2008), Construction Contractors Integrating into Facilities Management, Facilities, vol. 26, No. 1/2, pp. 6-15.

## **BPD 4282 : CONSTRUCTION ECONOMICS**

### **SYNOPSIS :**

This course contents: introduction to construction economics, construction industry, supply and demand in factor market, the role of government in economics structure, investment marketing and real estate, real estate development, industriliazation and built-in system, cost aspects in construction development, financial development, possibility studies and real estate valuation methods.

### **REFERENCES :**

1. Manser, JE (1994). "Economics:A Foundation Course For The Built Environment". London:Spon Press
2. I.H. Seeley. "Building Economics".London:Macmillan
3. A.Ashworth."Cost Studies Of Buildings". London:Longman Group Ltd
4. G.Briscoe. "The Economics Of Construction Industry". London:Batsford
5. D.Richmond. "Introduction To Valuation". London:Macmillan
6. D.J.Ferry. "Cost Planning Of Building". Granada
7. P.M. Hilleb Randt. "The Modern Construction Firms".London:Macmillan.

## **BPD 4292 : CONSTRUCTION STRATEGIC MANAGEMENT**

### **SYNOPSIS :**

The contents of this course are Strategic Management, The Process in Strategic Management, Internal Environment Assessment, External Environment Assessment, Strategic Legislation, Business Strategic, Matric and analysis, Implementation strategic , Performance Appraisal.

## REFERENCES :

1. Saloner, G.; Shepard, A. and Podlny, J. (2001). "Strategic Management". New York, John.Wiley & Sons.
2. Wheelen, T.L. and Hunger, J.D. (1999). "Strategic Management Business Policy". New Jersey: Prentice Hall.
3. Karl E. Case dan Ray C. Fair, (2004), "Principles of Economics", 7<sup>th</sup> Edition, Prentice Hall.
4. Hussey,D. (1998). "Strategic Management from Theory to Implementation". Oxford: Butterworth Heinemann.
5. David, F.R. (2001). "Strategic Management Concepts & Cases". New Jersey: Prentice Hall.
6. Mohd Khairuddin Hashim(2008). "Strategic Management : Text &Cases".2<sup>nd</sup> Edition, Kuala Lumpur: Thomson.
7. Haim Hilman Abdullah.(2006). "Pengurusan Strategik :Konsep dan Kes", 2<sup>nd</sup> Edition, Kuala Lumpur : Mc Graw Hill.

## BPD 4204 : BACHELOR DEGREE PROJECT II

### SYNOPSIS :

This course emphasizes upon problem with approaches in doing research; problem operations; objectives and hypothesis; elaboration and review of previous works critically; development of research concept framework; identification of variables in research; determination of originality in research; data and information collection; elaboration and data presentation; data analysis; thesis research measurement; thesis writing; writing skills. The end of this course student will be analyzed a data, transferred into graphic forms, analytical writing and presented orally.

### REFERENCES :

1. Ahmad Mazhan (1985). *Kaedah Penyelidikan Sosio-Ekonomi: Suatu Pengenalan*. Kuala Lumpur: Dewan Bahasa & Pustaka.
2. Chua Yan Piaw. 2006. *Asas Statistik Penyelidikan*. Mc Graw Hill.
3. Salkind, NJ (2003). *Exploring Research* . 5<sup>th</sup> Edition. New Jersey: Prentice Hall.
4. Miles, M.B., Huberman, A. M., 1994. *Qualitative data analysis: A sourcebook of new methods, 2 nd. Edition*, Thousand Oaks, CA: Sage.
5. Creswell, J. W., (1994), *Research Design: Qualitative and Quantitative Approaches*, Thousand Oaks, CA: Sage.
6. Yin,R.K., (2003), *Case Study Research: Design and Methods*, 3<sup>rd</sup>, edition, London: Sage Publications Ltd

## ELECTIVE II

## BPD 4093 : SUSTAINABLE CONSTRUCTION

### SYNOPSIS :



This subject includes introduction to building technology for health and comfort, indoor air quality, thermodynamic, odour, noise and hearing control, construction materials for health and comfort, health and comfort building in law aspects.

#### **REFERENCES :**

1. Coble, R.J., Hinze, J. and Haupt, T.C. (2000). "Construction Safety And Health Management". USA: Prentice Hall.
2. CIBSE Guide H. (2000). "Building Control Systems". London: Butterworth-Heinemann.
3. Ibrahim, M. and Abu Bakar, M. (1997). "Pencemaran Bunyi Bising". Johor: UTM.
4. Greeno, R. (1997). "Building Services, Technology And Design". England: Longman.
5. Chadderton, D.V. (1995). "Building Services Engineering, 2<sup>nd</sup> Edition". London: E&FN Spon.
6. Bradshaw, V. (1993). "Building Control System". 2<sup>nd</sup> Edition. Canada: John Wiley & Sons Inc.
7. Burberry P. (1992). "Environmental Services". London: Longman Publishers.
8. Binggeli, C. (2003). "Building Systems for Interior Designers". Canada: John Wiley & Sons.
9. Lechner, N. (2001). "Heating, Cooling, Lighting: Design Methods for Architects". Canada: John Wiley and Sons.
10. Stein, B. and Reynolds, J.S. (2000). "Mechanical and Electrical Equipment for Buildings, 9<sup>th</sup> Edition". USA: John Wiley and Sons.
11. Green, R. (1997) "Building Services, Technology and Design". London: Longman Publishers.

### **BPD 4103 : WATER RESOURCES AND TREATMENT**

#### **SYNOPSIS :**

Kursus ini mengandungi ujaliti air, hidrologi, kuantiti dan ciri-ciri air sisa, sistem pembentukan, prinsip dan reka bentuk logi olahan, olahan dan pelupusan sisa industri tak berbahaya, olahan dan pelupusan enapcemar, sistem olahan murah di cuaca panas, kualiti air dan kesihatan, perundangan, isu rawatan air di Malaysia dan pengurusannya.

#### **REFERENCES :**

1. Droste, R.L. 1996. "Theory and Prctice of Water and Wastewater Treatment." John Wiley & Sons Ltd: Boston.
2. Mays,L.W. 2000. "Water Resources Engineering through objectives question." McGraw Hill: Singapore.
3. May Larry W. 1996. "Water Resource Handbook." MaGraw-Hill : Boston.
4. Linsley R. K. 1992. "Water Resources Engineering" McGraw-Hill: New Jersey.

### **BPD 4203 : ENVIRONMENTAL TECHNOLOGY**

## **SYNOPSIS :**

The content of this course is Introduction to Environmental Technology, Definition and terminology, Environmental Technology, Type of Waste, Waste management, Waste Control Technique, Biotechnology and environmental, Sustainable Development.

## **REFERENCES :**

1. Boyee, A. (1997) "Introduction to Environmental Technology". Wiley & Sons Inc: New York.
2. Nathanson J.A. (2000) "Basic Environmental Technology." Prentice Hall: New Jersey.
3. Cornwll D. (1998) "Introduction to Environmental Engineering." Prentice Hall: New Jersey.
4. Paul Weaver et. al. (2000) "Sustainable Technology Development". Greenleaf Publishing: UK.
5. Scragg, A. (1998) "Environmental Biotechnology". Longman: UK.
6. Ausubel, J.H. & Sladovich, H.E. (1989) "Technology and Environment." National Academy , Press: Washington.

## **BPD 3103 : PROPERTY DEVELOPMENT**

### **SYNOPSIS :**

Kursus ini mengandungi Pengenalan Kepada Pembangunan Harta Tanah; Reka Bentuk Dan Jenis-Jenis Produk; Pasaran-Saran Dan Kitaran-Kitaran; Modal; Analisis Awalan; Bajet Dan Proforma; Analisis Tapak Dan Perolehan Tapak; Konsep Pembangunan Dan Kumpulan Pembangunan; Proses Kelulusan Projek Dan *Entitlements*; Pembinaan; Pemasaran, Pajakan, Pengurusan Harta Tanah Dan Jualan.

## **REFERENCES :**

1. Akta Pembangunan Perumahan. 2002.
2. Collier, N.S. 2001. Construction Funding: The Process of Real Estate Development, Appraisal and Finance. 3<sup>rd</sup> . Editional, USA: John Wiley & Sons.
3. Hosak, W. M. 2001. *Land Development Calculations: Interactive Tools and Techniques for Site Planning, Analysis and Design*. USA: McGraw-Hill Professional.
4. Ishak Baba. 2007. *UTHM Syllabus Format*. Penerbit UTHM. Batu Pahat.
5. Miles, M., Berens, G.& Weiss, M. 2000. *Real Estate Development: Principles & Process*. 3<sup>rd</sup> . Editional, London: Urban Land Institute.
6. Schmitz, A. 2000. *Multifamily Housing Development Handbook* (Uli Development Handbook Series). London: Urban Land Institute.
7. Woodson, R.D. 2000. *How to be a Successful Land Developer*. USA: McGraw-Hill Professional.