

BACHELOR OF INFORMATION TECHNOLOGY (HONS) IN SOFTWARE ENGINEERING (BSE)
PROGRAMME STRUCTURE (FULL TIME)

YEAR 1: SEMESTER 1

| NO | COURSE CODE | CATEGORY | PRE - REQ | COURSE NAME | CREDIT |
|----|-------------|-----------------------|-----------|---|-----------|
| 1 | ISB10103 | Common Core | | Principles of Computer Programming | 3 |
| 2 | IGB10403 | Common Core | | Discrete Mathematics for IT | 3 |
| 3 | INB23503 | Common Core | | IT Essentials | 3 |
| 4 | ISB16103 | Discipline Core | | Introduction to Software Engineering | 3 |
| 5 | WEB10302 | University Compulsory | | Fundamental English | 2 |
| 6 | MPU3192 | MPU | | Falsafah dan Isu Semasa / Philosophy and Current Issues (L) | 2 |
| | MPU3142 | | | Bahasa Melayu Komunikasi 2 (I) | |
| | | | | TOTAL | 16 |

YEAR 1: SEMESTER 2

| NO | COURSE CODE | CATEGORY | PRE - REQ | COURSE NAME | CREDIT |
|----|-------------|-----------------------|---|---|-----------|
| 1 | ISB16003 | Common Core | ISB10103 Principles of Computer Programming | Object-Oriented Programming | 3 |
| 2 | ISB16204 | Discipline Core | | Computer Organization and Operating Systems | 4 |
| 3 | WEB20202 | University Compulsory | | Professional English 1 | 2 |
| 4 | IEB20603 | Common Core | | Database Management Systems | 3 |
| 5 | IGB20303 | Common Core | | Probability and Statistics for IT | 3 |
| 6 | IEB20703 | Common Core | | Object-Oriented System Analysis and Design | 3 |
| | | | | TOTAL | 18 |

YEAR 1: SEMESTER 3

| NO | COURSE CODE | CATEGORY | PRE - REQ | COURSE NAME | CREDIT |
|----|-------------|-----------------------|-----------|--|----------|
| 1 | W*D10101 | University Compulsory | | Foreign Language 1** | 1 |
| 2 | MPU3332 | MPU | | Isu-isu Kontemporari Muslim di Malaysia (L-M) | 2 |
| | MPU3342 | | | Culture and Lifestyle in Malaysia 2 (L-NM & I) | |
| 3 | MPU34*2 | MPU | | Co-Curriculum* | 2 |
| 4 | MPU3182 | MPU | | Penghayatan Etika dan Peradaban (L) | 2 |
| | MPU3192 | | | Falsafah dan Isu Semasa / Philosophy and Current Issues (I) OR Penghayatan Etika dan Peradaban (I) | |
| | MPU3182 | | | TOTAL | 7 |

YEAR 2: SEMESTER 1

| NO | COURSE CODE | CATEGORY | PRE - REQ | COURSE NAME | CREDIT |
|----|-------------|-----------------------|---|-----------------------------------|-----------|
| 1 | ISB30503 | Discipline Core | ISB16003 Object-Oriented Programming | Data Structures and Algorithms | 3 |
| 2 | ISB26504 | Discipline Core | ISB16003 Object-Oriented Programming | Software Design and Integration | 4 |
| 3 | ISB42503 | Discipline Core | ISB10103 Principles of Computer Programming IEB20603 Database Management Systems | Internet Programming | 3 |
| 4 | ISB26404 | Discipline Core | | Software Requirements Engineering | 4 |
| 5 | W*D10201 | University Compulsory | W*D10101 Foreign Language 1** | Foreign Language 2** | 1 |
| 6 | | Elective | | Elective 1*** | 3 |
| | | | | TOTAL | 18 |

YEAR 2: SEMESTER 2

| NO | COURSE CODE | CATEGORY | PRE - REQ | COURSE NAME | CREDIT |
|----|-------------|-----------------|--------------------------------------|---|-----------|
| 1 | MPU3242 | MPU | | Innovation Management | 2 |
| 2 | IEB21703 | Discipline Core | | Computer Network - A Business User's Approach | 3 |
| 3 | ISB36403 | Discipline Core | | Interaction Design | 3 |
| 4 | ISB26603 | Discipline Core | ISB16003 Object-Oriented Programming | Mobile and Ubiquitous Computing | 3 |
| 5 | | Elective | | Elective 2*** | 3 |
| 6 | | Elective | | Elective 3*** | 3 |
| | | | | TOTAL | 17 |

YEAR 2: SEMESTER 3

| NO | COURSE CODE | CATEGORY | PRE - REQ | COURSE NAME | CREDIT |
|----|-------------|-----------------------|--|------------------------|----------|
| 1 | IDB30102 | Common Core | | Research Methodology | 2 |
| 2 | IDB30303 | Discipline Core | | IT Project Management | 3 |
| 3 | WEB20302 | University Compulsory | WEB10302 Fundamental English, WEB20202 Professional English 1 | Professional English 2 | 2 |
| | | | | TOTAL | 7 |

YEAR 3: SEMESTER 1

| NO | COURSE CODE | CATEGORY | PRE - REQ | COURSE NAME | CREDIT |
|----|-------------|--------------------|--------------------------------------|---------------------------------------|-----------|
| 1 | IPB49804 | Final Year Project | | Final Year Project 1 | 4 |
| 2 | ISB38104 | Discipline Core | | Software Testing | 4 |
| 3 | ISB37804 | Discipline Core | ISB16003 Object-Oriented Programming | Reuse and Component-Based Development | 4 |
| 4 | WBB20103 | Common Core | | Technopreneurship | 3 |
| | | | | TOTAL | 15 |

YEAR 3: SEMESTER 2

| NO | COURSE CODE | CATEGORY | PRE - REQ | COURSE NAME | CREDIT |
|----|-------------|--------------------|-------------------------------|---|-----------|
| 1 | IPB49906 | Final Year Project | IPB49804 Final Year Project 1 | Final Year Project 2 | 6 |
| 2 | ISB37904 | Discipline Core | | Software Quality and Configuration Management | 4 |
| 3 | | Elective | | Open Elective | 3 |
| | | | | TOTAL | 13 |

YEAR 3: SEMESTER 3

| NO | COURSE CODE | CATEGORY | PRE - REQ | COURSE NAME | CREDIT |
|----|-------------|---------------------|-----------|---------------------|----------|
| 1 | WIB42009 | Industrial Training | | Industrial Training | 9 |
| | | | | TOTAL | 9 |

Additional Module** (Credit not included in Total Credit to Graduate –TCG)**

| NO | COURSE CODE | CATEGORY | PRE - REQ | COURSE NAME | CREDIT |
|----|-------------|----------|-----------|---------------------|----------|
| 1 | MPU3212 | MPU | | Bahasa Kebangsaan A | 2 |
| | | | | TOTAL | 2 |

Total Credit to Graduate (TCG) : **120**

Co-Curriculum*

| NO | COURSE CODE | CATEGORY | PRE - REQ | COURSE NAME | CREDIT |
|----|-------------|----------|-----------|-----------------------------------|--------|
| 1 | MPU3412 | MPU | | Career Guidance 2 | 2 |
| 2 | MPU3422 | MPU | | Community Service 2 | 2 |
| 3 | MPU3432 | MPU | | Culture 2 | 2 |
| 4 | MPU3442 | MPU | | Rakan Masjid 2 | 2 |
| 5 | MPU3452 | MPU | | Siswa Siswi Bomba & Penyelamat 2 | 2 |
| 6 | MPU3462 | MPU | | Kor Siswa-Siswi Pertahanan Awam 2 | 2 |
| 7 | MPU3472 | MPU | | Sports Management 2 | 2 |
| 8 | MPU3482 | MPU | | Personal Financial Management 2 | 2 |
| 9 | MPU3492 | MPU | | Askar Wataniah | 2 |
| 10 | MPU34102 | MPU | | Integriti & Anti - Rasuah | 2 |
| 11 | MPU34112 | MPU | | Huffaz Professional 2 | 2 |

Foreign Languages 1**

| NO | COURSE CODE | CATEGORY | PRE - REQ | COURSE NAME | CREDIT |
|----|-------------|-----------------------|-----------|-------------------|--------|
| 1 | WAD10101 | University Compulsory | | Arabic 1 | 1 |
| 2 | WFD10101 | University Compulsory | | French 1 | 1 |
| 3 | WID10101 | University Compulsory | | Italian 1 | 1 |
| 4 | WKD10101 | University Compulsory | | Korean Language 1 | 1 |
| 5 | WMD10101 | University Compulsory | | Mandarin 1 | 1 |
| 6 | WSD10101 | University Compulsory | | Spanish 1 | 1 |

Foreign Languages 2**

| NO | COURSE CODE | CATEGORY | PRE - REQ | COURSE NAME | CREDIT |
|----|-------------|-----------------------|-----------|-------------------|--------|
| 1 | WAD10201 | University Compulsory | | Arabic 2 | 1 |
| 2 | WFD10201 | University Compulsory | | French 2 | 1 |
| 3 | WID10201 | University Compulsory | | Italian 2 | 1 |
| 4 | WKD10201 | University Compulsory | | Korean Language 2 | 1 |
| 5 | WMD10201 | University Compulsory | | Mandarin 2 | 1 |
| 6 | WSD10201 | University Compulsory | | Spanish 2 | 1 |

Electives (Software Engineering)***

| NO | COURSE CODE | CATEGORY | PRE - REQ | COURSE NAME | CREDIT |
|----|-------------|----------|---|--|--------|
| 1 | ISB42603 | Elective | ISB16003 Object-Oriented Programming IEB 20603 Database Management Systems | Advanced Programming | 3 |
| 2 | ISB46103 | Elective | | Web Application Framework | 3 |
| 3 | ISB46203 | Elective | ISB16003 Object Oriented Programming | Emerging Trend in Software Engineering | 3 |
| 4 | IKB21503 | Elective | | Secure Software Development | 3 |

Electives (Automation and Robotics)***

| NO | COURSE CODE | CATEGORY | PRE - REQ | COURSE NAME | CREDIT |
|----|-------------|----------|--|--------------------------------------|--------|
| 1 | ISB46903 | Elective | ISB16003 Object-Oriented Programming IEB20703 Object Oriented Analysis and Design | Automated Fare Collection Technology | 3 |
| 2 | ISB37503 | Elective | ISB16003 Object-Oriented Programming | Real Time and Embedded Systems | 3 |
| 3 | ISB47103 | Elective | ISB16003 Object Oriented Programming IGB20303 Probability and Statistics for IT | Computer Vision | 3 |

Electives (Applied Data Science)***

| NO | COURSE CODE | CATEGORY | PRE - REQ | COURSE NAME | CREDIT |
|----|-------------|----------|--|---------------------------------------|--------|
| 1 | ISB46703 | Elective | ISB16003 Object-Oriented Programming | Principles of Artificial Intelligence | 3 |
| 2 | IBB32403 | Elective | | Data Science Essential | 3 |
| 3 | ISB47003 | Elective | ISB16003 Object-Oriented Programming IGB20303 Probability and Statistics for IT | Machine Learning | 3 |

Note :

1. ****Additional Module - MPU3212 Bahasa Kebangsaan A

- a. For local students without credit in B. Melayu (SPM) only and the credit is not included in program Total Credit to Graduate (TCG).

2. Legend :

- a. (L) – For Local Students
- b. (I) - For International Students
- c. (L-M) – For Local Muslim Students
- d. (L-NM) – For Local Non-Muslim Students