

FACULTY OF DESIGN AND ARCHITECTURE

Undergraduate Programme Offered

Bachelor Programme

1. *Bachelor of Landscape Architecture*
2. *Bachelor of Science in Architecture*
3. *Bachelor of Design (Industrial Design)*

STUDY SCHEME (BACHELOR OF LANDSCAPE AND ARCHITECTURE)

| Notes : L = Lecture , L/T = Laboratory/Tutorial | | | | | | | |
|---|---|-----------|----------|--------------------------|--|----------|-----------|
| 1 st SEMESTER | | | | 2 nd SEMESTER | | | |
| 1st YEAR | | | | | | | |
| CODE | COURSE NAME | L | L/T | CODE | COURSE NAME | L | L/T |
| LAN3005 | Basic Design Studio | 0 | 5 | LAN3006 | Basic Landscape Design Studio | 0 | 5 |
| LAN3200 | Introduction to Landscape Architecture | 2 | 0 | LAN3201 | History of Landscape Architecture | 2 | 0 |
| LAN3300 | Landscape Plant Science | 2 | 1 | LAN3500 | Technical Drawing | 0 | 2 |
| SKP2101 | Malaysian Nationhood | 3 | 0 | SKP2204 | Ethnic Relation | 2 | 0 |
| SKP2203 | Asian and Islamic Civilization | 2 | 0 | BBI2424 | Academic Writing | 2 | 1 |
| BBI2423 | Academic Interaction and Presentation | 2 | 1 | QK_xxxx | Co-curriculum | 0 | 1 |
| | TOTAL | 11 | 7 | SST3005 | Fundamentals Of Soil Science | 2 | 1 |
| | | | | | TOTAL | 6 | 12 |
| 2nd YEAR | | | | | | | |
| CODE | COURSE NAME | L | L/T | CODE | COURSE NAME | L | L/T |
| LAN3007 | Landscape Site Design Studio | 0 | 5 | LAN3008 | Landscape Site Planning Studio | 0 | 6 |
| LAN3402 | Landscape Ecology | 3 | 0 | LAN3302 | Landscape Operation and Implementation | 2 | 1 |
| LAN3503 | Construction Material | 2 | 1 | LAN3505 | Survey and Site Engineering | 2 | 1 |
| PRT2008 | Agriculture and Man | 2 | 0 | LAN4704 | Landscape Resource Assessment Techniques | 1 | 2 |
| QK_xxxx | Co-curriculum | 0 | 1 | KOM3403 | Public Oration | 3 | 0 |
| LAN3104 | Graphic Computer In Landscape Design | 0 | 3 | | TOTAL | 8 | 8 |
| | TOTAL | 9 | 8 | | | | |
| 3rd YEAR | | | | | | | |
| CODE | COURSE NAME | L | L/T | CODE | COURSE NAME | L | L/T |
| LAN3009 | Landscape Planning Studio | 0 | 6 | LAN4602 | Urban Design Studio | 0 | 6 |
| LAN3202 | Landscape Architecture Philosophy and Theory | 2 | 0 | LAN4304 | Landscape Management and Maintenance | 2 | 1 |
| LAN4303 | Landscape Planting Design And Estimation | 1 | 2 | LAN4507 | Landscape Construction Project Documentation | 1 | 2 |
| LAN3506 | Landscape Construction and Engineering | 2 | 1 | LAN3903 | Seminar on Landscape Architecture Research | 0 | 3 |
| LAN4800 | Professional Practice and Landscape Legislation | 3 | 0 | | Elective | | |
| | TOTAL | 8 | 9 | | TOTAL | 8 | 10 |
| 4th YEAR | | | | | | | |
| CODE | COURSE NAME | L | L/T | CODE | COURSE NAME | L | L/T |
| LAN4901 | Internship (Industrial Training) | 0 | 12 | LAN4949 | Bachelor Project | 0 | 8 |
| | TOTAL | | | | Elective | | |
| | | | | | TOTAL | | |

STUDY SCHEME (BACHELOR OF SCIENCE IN ARCHITECTURE)

| Notes : L = Lecture , L/T = Laboratory/Tutorial | | | | | | | |
|---|--|-----------|-----------|------------|--|-----------|----------|
| SEMESTER 1 | | | | SEMESTER 2 | | | |
| 1ST YEAR | | | | | | | |
| CODE | COURSE NAME | L | L/T | CODE | COURSE NAME | L | L/T |
| ARC3000 | Architectural Design Studio 1 | 0 | 5 | ARC3001 | Architectural Design Studio 2 | 0 | 5 |
| ARC3111 | Technical Drawing | 1 | 1 | ARC3200 | History and Theory of Architecture 1 | 2 | 0 |
| SKP2203 | Asian and Islamic Civilization | 2 | 0 | ARC3311 | Material and Building Construction 1 | 2 | 0 |
| SKP2101 | Malaysian Nationhood | 3 | 0 | ARC3400 | Structure 1 | 2 | 0 |
| PRT2008 | Agriculture and Man | 2 | 0 | ARC3600 | Environmental Physics 1 | 2 | 0 |
| ARC3103 | Architectural Graphic | 1 | 2 | ARC3110 | Architectural Communications | 1 | 1 |
| | TOTAL | 9 | 8 | BBI2423 | Academic Interaction and Presentation | 2 | 1 |
| | | | | | TOTAL | 11 | 7 |
| 2ND YEAR | | | | | | | |
| CODE | COURSE NAME | L | L/T | CODE | COURSE NAME | L | L/T |
| ARC3013 | Architectural Studio 3 | 0 | 6 | ARC3014 | Architectural Studio 4 | 0 | 6 |
| ARC3312 | Material and Building Construction 2 | 2 | 0 | ARC3412 | Structural Construction 2 | 2 | 0 |
| ARC3112 | Computer Aided Design (CAD) Applications | 1 | 1 | ARC3313 | Material and Building Construction 3 | 2 | 0 |
| ARC3500 | Building Services 1 | 2 | 0 | ARC3202 | History of Southeast - Asia Architecture | 2 | 0 |
| ARC3601 | Environmental Physics 2 | 2 | 0 | ARC3512 | Building Services System 2 | 2 | 0 |
| ARC3201 | History and Theory of Architecture 2 | 2 | 0 | ARC4113 | Construction Drawing | 0 | 2 |
| BBI2424 | Academic Writing | 2 | 1 | ARC4114 | Elective 1 | 1 | 1 |
| | TOTAL | 11 | 8 | SKP2204 | Ethnic Relation | 2 | 0 |
| | | | | | TOTAL | 11 | 9 |
| 3RD YEAR | | | | | | | |
| CODE | COURSE NAME | L | L/T | CODE | COURSE NAME | L | L/T |
| ARC4901 | Industrial Training | 0 | 12 | ARC3015 | Architectural Studio 5 | 0 | 6 |
| | TOTAL | 0 | 12 | ARC3513 | Building Services System 3 | 2 | 0 |
| | | | | ARC4702 | Theory Of Urban Planning | 3 | 0 |
| | | | | ARC4610 | Socio-Cultural Environment 1 | 3 | 0 |
| | | | | ARC3413 | Structural Construction 3 | 2 | 0 |
| | | | | MGM3180 | Basic Entrepreneurship | 2 | 1 |
| | | | | | TOTAL | 12 | 7 |
| 4TH | | | | | | | |
| CODE | COURSE NAME | L | L/T | | | | |
| ARC3016 | Architectural Studio 6 | 0 | 6 | | | | |
| ARC3811 | Architectural Practice | 3 | 0 | | | | |
| ARC4903 | Integrated Design | 0 | 2 | | | | |
| ARC4902 | Kajian Topikal/ Topical Study | 0 | 2 | | | | |
| | Elective | | | | | | |
| | TOTAL | 5 | 10 | | | | |

STUDY SCHEME (BACHELOR OF DESIGN – INDUSTRIAL DESIGN)

| Notes : L = Lecture , L/T = Laboratory/Tutorial | | | | | | | |
|---|--|-----------|----------|------------|--|----------|-----------|
| SEMESTER 1 | | | | SEMESTER 2 | | | |
| 1ST YEAR | | | | | | | |
| CODE | COURSE NAME | L | L/T | CODE | COURSE NAME | L | L/T |
| IND3000 | Design Fundamentals | 1 | 3 | IND3001 | Industrial Design in Communication | 1 | 2 |
| IND3800 | Plan and Completion Technology | 2 | 1 | IND3002 | Industrial Design Presentation Techniques | 0 | 2 |
| IND3300 | Design History and Appreciation | 2 | 0 | IND3200 | Ergonomic and Basic Technology | 1 | 2 |
| IND3602 | Industrial Design Workmanship Technology | 0 | 2 | IND3603 | Industrial Design Model Making Technique | 0 | 2 |
| SKP2203 | Asian and Islamic Civilization | 2 | 0 | IND3100 | Ergonomic Data Studio | 1 | 2 |
| SKP2204 | Ethnic Relation | 2 | 0 | SKP2101 | Malaysian Nationhood | 3 | 0 |
| BBI2420 | Oral Interaction Skills | 2 | 1 | PRT2008 | Agriculture and Man | 2 | 0 |
| | TOTAL | 11 | 7 | | TOTAL | 8 | 10 |
| 2ND YEAR | | | | | | | |
| CODE | COURSE NAME | L | L/T | CODE | COURSE NAME | L | L/T |
| IND3101 | Creative Design Studio I | 1 | 2 | IND3102 | Creative Design Studio II | 1 | 2 |
| IND3201 | Design and Realization Laboratory I | 1 | 2 | IND3202 | Design and Realization Laboratory II | 1 | 2 |
| IND3400 | 2D Computer Aided Design | 1 | 2 | IND3401 | Reka Bentuk Berbantu Komputer 3D/ 3D Computer Aided Design | 1 | 2 |
| BBI2421 | General Writing Skills | 2 | 1 | IND3801 | Material And Manufacturing Technology I | 3 | 0 |
| MGM3101 | Principles of Management | 3 | 0 | MGM3211 | Principles of Marketing | 3 | 0 |
| SKP2501 | Introduction to Psychology | 3 | 0 | | Elective | | |
| | TOTAL | 11 | 7 | | TOTAL | | |
| 3RD YEAR | | | | | | | |
| CODE | COURSE NAME | L | L/T | CODE | COURSE NAME | L | L/T |
| IND3103 | Design Technology Studio | 1 | 2 | IND4901 | Industrial Training | 0 | 12 |
| IND3205 | Design And Manufacturing Laboratory | 1 | 2 | | TOTAL | 0 | 12 |
| IND3402 | Advance Computer Aided Design | 1 | 2 | | | | |
| IND3802 | Material And Manufacturing Technology II | 3 | 0 | | | | |
| IND3900 | Industrial Research | 0 | 2 | | | | |
| ACT2111 | User and Planning of Accounting Infomation | 3 | 0 | | | | |
| | TOTAL | 9 | 8 | | | | |
| 4TH YEAR | | | | | | | |
| CODE | COURSE NAME | L | L/T | CODE | COURSE NAME | L | L/T |
| IND4200 | Industrial Design Project I | 1 | 4 | IND4201 | Industrial Design Project II | 1 | 7 |
| IND3500 | Professional Practice | 2 | 0 | IND4999 | Final Year Project | 0 | 6 |
| IND3700 | Industrial Product Marketing | 2 | 0 | | TOTAL | 1 | 13 |
| IND3901 | Industrial Dialog | 3 | 0 | | | | |
| | Elective | | | | | | |
| | TOTAL | | | | | | |

COURSE SYNOPSIS

Department of Landscape Architecture

LAN3005 Basic Design Studio 5(0+5)

Prerequisite : None

This course covers basic techniques in producing 2D and 3D visual objects by using graphic medium and drawing elements. Emphasis is given on the application of design principles, idea formation and idea development strategy towards fundamental design concept in producing a particular design

LAN3006 Basic Landscape Design Studio 5(0+5)

Prerequisite : LAN3005

This course covers basic landscape architectural design process which includes the principles of inventory and analysis, design idea generation and adaptation of idea for a landscape space. Aspects in producing design proposal for a simple small landscape space or hypothetical space are emphasized

LAN3007 Landscape Site Design Studio 5(0+5)

Prerequisite : LAN3006

This course covers landscape site design process which includes the application of techniques in site inventory and analysis, design idea generation as well as adaptation of idea for a landscape site. Landscape design proposal for a small scale landscape site is produced

LAN3008 Landscape Site Planning Studio 6(0+6)

Prerequisite : LAN3007

This course covers landscape site planning process which includes site inventory and analysis, idea development and adaptation of idea for a particular landscape area. Emphasis is given on the aspects of developing proposal for multi-use medium scale landscape design and its detailings

LAN3009 Landscape Site Planning Studio 6(0+6)

Prerequisite : LAN3008

This course covers the aspects of landscape resource planning that includes the landscape resource inventory and analysis studies as well as idea development for land use planning. The process of developing a complex and large scale landscape planning master plan is emphasized together with its detailings

LAN4602 Urban Design Studio 6(0+6)

Prerequisite : LAN3009

This course covers the urban design principles and processes in solving the issues of urban design and its community. Methods in developing urban design master plan and design details are emphasized with consideration of local community participation

LAN4949 Bachelor Project 8(0+8)

Prerequisite : LAN4602

This course covers the aspect of planning and executing design process for a landscape project. These include topic selection, conducting precedent study, collecting and analyzing site information, suggesting solutions for specific problem through design as well as documenting and presenting design project output

LAN3200 Introduction to Landscape Architecture 2(2+0)

Prerequisite : None

This course covers the aspects and scope of landscape architecture field and its relation to the current development and needs. Clarification of landscape architecture issue, career and prospect is highlighted

LAN3201 History of Landscape Architecture 2(2+0)

Prerequisite : None

This course covers the historical development of landscape architecture in past civilization which includes the aspect of evolution of history, landscape design styles as well as the influence of environment and local culture on landscape during the respective period

LAN3300 Landscape Plant Science 3(2+1)

Prerequisite : None

This course encompasses the aspects of plant taxonomy, morphology and physiology as well as factors that influence their growth. Emphasis is given on the identification of various landscape plants species according to the plants' group category

LAN3302 Landscape Operation and Implementation 3(2+1)

Prerequisite : None

This course encompasses the aspects of landscape plant production and nursery management practice. Technical exposure on planting techniques and operations as well as technology in softscape implementation is given attention

LAN4105 Digital Landscape Architecture 3(0+3)

Prerequisite : None

This course covers the exploration of technologies and advanced digital hardwares that can be used in landscape architecture practices. Technical exposure is given on suitable technology for digital production in landscape design process, design details, design presentation as well as landscape management

LAN4303 Planting Design and Estimation 3(1+2)

Prerequisite : None

This course encompasses the study on design characteristic of plants and their suitability in landscape. Emphasis is given on the planting design process which includes site analysis, selection of plant species, planting details and specifications, irrigation system as well as cost estimation for softscape project implementation

LAN4304 Landscape Management and Maintenance 3(2+1)

Prerequisite : None

This course encompasses the effective landscape management principles and practices including landscape maintenance technology and its application in landscape management. Study on the landscape management plan and maintenance programme is conducted

- LAN4403 Landscape Environmental Responsive Design** 3(2+1)
Prerequisite : None
This course encompasses study on the current issue of environment, concept of sustainable environment and principles of environmental responsive design from the perspectives of climate, plants, building and people. Emphasis is given on the exploration of landscape environmental responsive design application through design analysis and implementation
- LAN4508 Green Technology in Landscape Construction** 3(2+1)
Prerequisite : None
This course encompasses the principles of green technology design and environmental friendly practices for landscape construction management. The emphasis is on the technical aspects in green design and producing design details which are responsive to the environment
- LAN3402 Landscape Ecology** 3(3+0)
Prerequisite : None
This course covers the basic theories in ecology and its relationship with climate and topography that influence the diversity of ecosystems. Other factors that affect the local landscape changes are discussed
- LAN3500 Technical Drawing** 2(0+2)
Prerequisite : None
This course encompasses the basic principles in producing landscape technical drawings including design details and measured drawings. The emphasis is given on the technical aspects, graphics and composition of drawing components
- LAN3505 Survey and Site Engineering** 3(2+1)
Prerequisite : None
This course encompasses the aspects of land survey and site engineering which includes the methods of measuring distance, direction and elevation. Study on the contours and site grading, site drainage system and fundamental of low speed road design are also highlighted
- LAN3506 Landscape Construction and Engineering** 3(2+1)
Prerequisite : None
This course encompasses the aspects of landscape construction and engineering technology specifically on civil, structural as well as mechanical and electrical works in landscape project. Technical approach and practicality in producing detail design and construction details are emphasized
- LAN3503 Construction Material** 3(2+1)
Prerequisite : None
This course encompasses the study on construction materials found in landscape construction industry and their suitability to be used in landscape design. Technical aspects of producing basic landscape construction detail drawings for construction documentation are emphasized
- LAN4507 Landscape Construction Project Documentation** 3(1+2)
Prerequisite : None
This course encompasses the landscape construction project management practices including contract and construction site management. Approach on the technique of producing comprehensive construction drawings, preparation of contract documents and cost estimation for a landscape project are highlighted
- LAN4704 Landscape Resource Assessment Techniques** 3(1+2)
Prerequisite : None
This course encompasses theories, processes and techniques in conducting analysis and assessment of landscape resources as well as their suitability for landscape development studies at different areas. Emphasis is given on the use of Geographical Information System application

LAN4705 Advanced Geographical Information System in Landscape Architecture 3(0+3)

Prerequisite : None

This course covers advanced applications of Geographical Information System (GIS) in landscape architecture studies. Emphasis is given on the technical aspects on analysis components of ArcToolbox and advanced modelling application in GIS as well as process of producing final GIS display for a particular subjects in landscape architecture study

LAN4800 Landscape Architecture Legislation and Professional Practice 3(3+0)

Prerequisite : None

This course covers the aspects of landscape architecture professional practice and business knowledge in landscape architecture industry which consists of organization management, design management and professional ethics. The legislation system in relation to landscape architecture practice in Malaysia is discussed

LAN4901 Industrial Training 12(0+12)

Prerequisite : None

This course exposes students to real working environment in industries and organizations. A 24 week training programme includes application of the theoretical and practical aspects that have been studied with current practices at the workplace. Problem solving and communication skills are also emphasized

LAN3903 Seminar on Landscape Architecture Research 3(0+3)

Prerequisite : None

This course encompasses the landscape architecture research methods. It consists of preparing research proposal, research works, data analysis and interpretation as well as research output write up and presented in a seminar organized by students

LAN3202 Landscape Architecture Philosophy and Theory 2(2+0)

Prerequisite : None

This course covers the role of philosophy and theory in influencing the worldviews, life styles as well as landscape architectural practices in different eras. Several main theories in landscape architecture and other related fields are discussed

Department of Architecture

- ARC3000 Architectural Design Studio 1** 5(0+5)
Prerequisite : None
This course covers the basic design elements and principles for two and three dimensional objects as well as basic issues relating to sustainability.
- ARC3001 Architectural Design Studio 2** 5(0+5)
Prerequisite : ARC3000
This course covers the application of basic design process in architecture, ergonomic studies and spatial arrangements of single interior and exterior spaces with consideration of sun-shading, daylighting and natural ventilation aspects.
- ARC3013 Architectural Studio 3** 6(0+6)
Prerequisite : ARC3001
This course covers the design process of a two storey residential building and a semi-public small-scaled building as well as the consideration of basic structure, building materials, construction, solar shading and natural ventilation.
- ARC3014 Architectural Studio 4** 6(0+6)
Prerequisite : ARC3013
This course covers designing of buildings with single use, with multiple spaces which incorporate building technologies, site planning and planning for formal and informal public spaces, as well as environmental factors such as passive design strategies, daylighting design and noise control.
- ARC3015 Architectural Studio 5** 6(0+6)
Prerequisite : ARC3014
This course covers the application of environmental issues, which influence the building design process with emphasis on passive design strategy. The project site will be in urban and suburban context and the allowable building height is from three to five storeys, total building gross floor area not exceeding 2500m².
- ARC3016 Architectural Studio 6** 6(0+6)
Prerequisite : ARC3015, ARC3313, ARC3513, ARC3601
This course covers the design of a building which integrates energy-efficient design strategy within a social-cultural context and disabled friendly design which confirm with building codes related to building technology through a comprehensive design project.
- ARC3103 Architectural Graphic** 3(1+2)
Prerequisite : None
This course covers the basic architectural drawing skills and presentation which emphasises building forms, landscapes, and architectural objects through application of various media and techniques.
- ARC3110 Architectural Communications** 2(1+1)
Prerequisite : None
This course covers the presentation techniques in architectural projects through verbal and visual communication either individually or in groups with graphics, models and audio visual aids.
- ARC3111 Technical Drawing** 2(1+1)
Prerequisite : None
This course covers knowledge and skills using various drawing construction systems in preparation of two and three-dimensional technical drawings.
- ARC3112 Computer Aided Design (CAD)** 2(1+1)
Prerequisite : None
This course covers several common and latest computer applications used in architecture field for digital presentation.

- ARC3200 History & Theory of Architecture 1** 2(2+0)
 Prerequisite : None
 This course covers architectural history and expression in the Middle East, Western Europe and Asia from 3200BC to early 19th century.
- ARC3201 History & Theory of Architecture 2** 2(2+0)
 Prerequisite : None
 This course covers the history and theory of western architecture which traces the key movements, architects and famous artists from middle 19th century to the middle 20th century that laid the foundations of modern architecture.
- ARC3202 History of Southeast-Asia Architecture** 2(2+0)
 Prerequisite : None
 This course covers the historical elements of Southeast Asia architecture, the factors that influence the characteristics of local architecture such as religion and belief, lifestyles, environment and building technology available in Southeast Asia. It also covers the concepts and characteristics of vernacular and indigenous architecture in Southeast Asia.
- ARC3311 Material and Building Construction 1** 2(2+0)
 Prerequisite : None
 This course covers aspects in building system including structures, building envelopes, materials and methods of construction with emphasise on the wood based material.
- ARC3312 Material and Building Construction 2** 2(2+0)
 Prerequisite : None
 This course covers aspects in building system including structures, building envelopes, materials and methods of construction with emphasis on bricks and concrete-based materials.
- ARC3313 Material and Building Construction 3** 2(2+0)
 Prerequisite : None
 This course covers various new construction materials and construction methods from conventional system to the latest high technology integrated building system. Emphasis is given to new materials including steel, glass and fabrics.
- ARC3400 Structure 1** 2(2+0)
 Prerequisite : None
 This course covers the fundamental principles of structures, structure systems, types of material behaviour and structural forms used in building design.
- ARC3412 Structural Construction 2** 2(2+0)
 Prerequisite : None
 This course includes the types of load, analysis of truss structure and the types of building foundation.
- ARC3413 Structural Construction 3** 2(2+0)
 Prerequisite : ARC3412
 This course covers analysis of structural behaviour and sizing calculation of structure for reinforced concrete and steel used for a construction.
- ARC3500 Building Services 1** 2(2+0)
 Prerequisite : None
 This course covers basic concepts of water supply, drainage, sanitation, sewerage and disposal system in designing a building. Compliance with Uniform Building By-Law (UBBL) is emphasised.
- ARC3512 Building Services System 2** 2(2+0)
 Prerequisite : None
 This course covers basic concepts of electrical supply system, telecommunication, air conditioning and ventilation systems in designing a building. Compliance with Uniform Building By-Law (UBBL) is emphasised.

- ARC3513 Building Services System 3** 2(2+0)
Prerequisite : None
This course covers basic concepts in vertical and horizontal transportation systems and fire fighting system in designing a building. Compliance with Uniform Building By-Law (UBBL) is emphasised.
- ARC3600 Environmental Physics 1** 2(2+0)
Prasyarat : Tiada
This course covers the criteria of thermal comfort, sun shading, air ventilation system and indoor air quality. Emphasis will be given to passive environmental design in designing building.
- ARC3601 Environmental Physics 2** 2(2+0)
Prerequisite : ARC3600
This course covers the exposure to basic theories of day lighting, artificial lighting and acoustic design. Emphasis is given to day lighting application in building design and energy saving.
- ARC3811 Architectural Practice** 3(3+0)
Prerequisite : None
This course covers the function, role, responsibilities and ethics of a professional architect based on the Architects Act 1967 which covers the relationship between professional architects with other related professionals in the construction industry and business operation for architectural firm.
- ARC4610 Socio-cultural Environment 1** 3(3+0)
Prerequisite : None
This course covers the need for barrier-free design for residential and public buildings based on relevant guidelines and regulations.
- ARC4702 Theory of Urban Planning** 3(3+0)
Prerequisite : None
This course covers the evolution, theories, aspects and process of urban planning. It also includes the impact of planning on human beings, townscape and environment as well as planning and sustainable development issues.
- ARC4901 Industrial Training** 12(0+12)
Prerequisite : ARC3014
This course provides exposure on the scope of work and responsibility of an assistant architect by placing them in government agencies or private practice. Students will be trained and guided by the supervisors at the place of training and will be assessed by the representative from Department of Architecture.
- ARC4903 Integrated Design** 2(0+2)
Prerequisite: ARC3015
This course covers the integration of architectural design, structure and building services. Each student is required to prepare and submit a comprehensive report of their studio's final project.
- ARC3102 Art Appreciation** 2(1+1)
Prerequisite : None
This course covers the process of appreciation through observation, articulation, and thinking skills of visual arts. It is also provides opportunities to develop understanding of creativity and critical reasoning.
- ARC3220 History and Development of Islamic Architecture** 3(3+0)
Prerequisite : None
This course covers the concepts of Islamic architecture that influence the architectural characteristics of an Islamic community such as the geography, cultural lifestyle, local building resources and the construction technology.
- ARC4620 Interior Architecture** 3(3+0)
Prerequisite : None
This course covers fundamentals of interior design, quality and function of spaces, and space with aesthetic and taste. It also includes space planning, furniture arrangement, material selection, colour, texture and scale for comfortable interior environment.

- ARC4113 Construction Drawing** 2(1+1)
Prerequisite : None
This course covers the skills in preparing construction working drawings including production of detail drawings and measured drawings according to specific formats.
- ARC4114 Photography 1** 2(1+1)
Prerequisite : None
This course covers the design fundamental of digital photography as to produce quality architectural images.
- ARC4120 Computer Aided Design (CAD) Applications** 2(0+2)
Prerequisite : None
This course covers production of presentation drawings and multimedia using CAD applications.
- ARC4612 Environmental Behaviour Survey** 2(1+1)
Prerequisite : None
This course covers methodologies in analytical observation of human behaviour in selected environment as to propose an effective solution in the architectural field.
- ARC4902 Topical Study** 2(0+2)
Prerequisite : None
This course covers analysis of selected issues in architectural design which include the evaluation of working documents and discussions with professionals' involved. The result of the study will be presented in a seminar.

Department of Industrial Design

IND3000 Design Fundamentals 4 (1+3)

Prerequisite : None

This course covers basic knowledge in principles and elements of design, skills in producing two dimensional visuals and various type of medium usage in producing design illustration.

IND3001 Industrial Design In Communication 3 (1+2)

Prerequisite : IND3000

This course covers the use of various computer softwares in preparing graphical and technical design illustration for visual presentation.

IND3002 Industrial Design Presentation Techniques 2(0+2)

Prerequisite : None

This course covers practical session which emphasizes drawing and sketching techniques, the use of various medium in producing comprehensive design illustration and verbal presentation which is aided by audio visual equipments.

IND3100 Ergonomic Data Studio 3 (1+2)

Prerequisite : None

This course covers skills in product design process which are structured based on design problem solving and ergonomics factors in producing a 3 Dimensional product.

IND3101 Creative Design Studio I 3 (1+2)

Prerequisite : IND3100

This course covers the design problem solving process which emphasizes on ergonomics values, aesthetics and style through the process of design concept generation until 3 Dimensional model fabrication.

IND3102 Creative Design Studio II 3 (1+2)

Prerequisite : IND3101

This course covers on design, analysis and design enhancement process towards existing product design, whereby it emphasizes on ergonomic factors, technology, design, graphics and contemporary style.

IND3103 Design Technology Studio 3 (1+2)

Prerequisite : IND3102

This course covers problem solving, planning and product design process with the application of appropriate technology.

IND3200 Ergonomic And Basic Technology 3 (1+2)

Prerequisite : None

The course covers application of basic technology, fabrication process and component study through the making of a functional prototype in order to solve the ergonomic problems of a product.

IND3201 Design and Realization Laboratory I 3 (1+2)

Prerequisite : IND3200

The course covers design process which is structured on research output and ideas with the application of appropriate basic technology.

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| IND3202 | Design and Realization Laboratory II | 3 (1+2) |
| Prerequisite : IND3201 | | |
| The course covers the structural construction and physical form of design which emphasizes on solving the manufacturing and production problems by utilizing current mechanism or technology. | | |
| IND3205 | Design And Manufacturing Laboratory | 3 (1+2) |
| Prerequisite : IND3202 | | |
| This course covers design preparation in producing a prototype that fullfils the consumer, marketing and manufacturing needs | | |
| IND3300 | Design History And Appreciation | 2 (2+0) |
| Prerequisite : None | | |
| The course covers art history studies and industrial design evolution as well as its implication towards industrial sector, social, economy, environment and technology. | | |
| IND3400 | 2D Computer Aided Design | 3 (1+2) |
| Prerequisite : None | | |
| This course covers the skills in utilizing various computer software as an aid towards industrial design works in producing 2 dimensional products. | | |
| IND3401 | 3D Computer Aided Design | 3 (1+2) |
| Prerequisite : IND3400 | | |
| This course covers the skills towards using various computer software as an aid in industrial design works in producing 3 Dimensional products. | | |
| IND3402 | Advance Computer Aided Design | 3 (1+2) |
| Prerequisite : IND3401 | | |
| This course involves skills in applying product design simulation softwares as well as production testing in order to identify the material suitability and fabrication process especially for plastic and metal based products. | | |
| IND3500 | Professional Practice | 2 (2+0) |
| Prerequisite : None | | |
| The course covers discussion on responsibilities, code of ethics, skills, entrepreneurship and legislation in industrial design practice. | | |
| IND3602 | Industrial Design Workmanship Technology | 2 (0+2) |
| Prerequisite : None | | |
| The course covers basic skills and techniques in workmanship through the use of hand tools, machine and various materials in producing product. | | |
| IND3603 | Industrial Design Model Making Technique | 2 (0+2) |
| Prerequisite : IND3602 | | |
| IND3700 | Industrial Product Marketing | 2 (2+0) |
| Prerequisite : MGM3211 | | |
| This course covers discussion on policy, analysis and production planning of a product. It also emphasizes on new product development process, product's organisation, placement and life cycle as well as contemporary issues in product marketing strategy. | | |
| IND3800 | Plan And Completion Technology | 3 (1+2) |
| Prerequisite : None | | |
| The course covers skills in using technical equipment, techniques and standard in producing manual and digital technical drawings. | | |

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| IND3801 | Material And Manufacturing Technology I | 3 (3+0) |
| Prerequisite : None | | |
| The course covers discussion on production and product manufacturing which is based on diverse type of materials such as wood, metal, glass, rubber, plastic and composite. | | |
| IND3802 | Material And Manufacturing Technology II | 3 (3+0) |
| Prerequisite : IND3801 | | |
| The course covers discussions on production and products manufacturing which is based on diverse type of materials such as wood, metal, glass, rubber, plastic and composites. | | |
| IND3900 | Industrial Research | 2 (0+2) |
| Prerequisite : None | | |
| The course covers skills in conducting industrial design research which involves discussion and report presentation. | | |
| IND3901 | Industrial Dialog | 3 (3+0) |
| Prerequisite : IND3900 | | |
| The course covers discussion session and paper presentation related to contemporary issues in industrial design. | | |
| IND4200 | Industrial Design Project I | 5 (1+4) |
| Prerequisite : IND3103 and IND3205 | | |
| This course covers research and proposing innovative design which fulfills consumer, market and manufacturing needs. | | |
| IND4201 | Industrial Design Project II | 8 (1+7) |
| Prerequisite : IND4200 | | |
| This course covers the production of a complete innovative product in the aspects of design, technology application, consumer and environment. | | |
| IND4901 | Industrial Training | 12 (0+12) |
| Prerequisite : None | | |
| This course covers student's exposure and placement in design and manufacturing organization for the purpose of future career needs. | | |
| IND4999 | Final Year Project | 6 (0+6) |
| Prerequisite : IND3901 | | |
| The course covers presentation and documentation technique in academic writing which relates to the final year design project. | | |