

## **Architecture**

### **Introduction**

The Architecture study program at BINUS UNIVERSITY has taken the steps to design the curriculum in order to anticipate the developments of information technology in the global era and to fulfill market demand.

The subjects of the core curriculum are based on several competences such as: Personal Development, Science and Skills, Working Expertise, Working Behavior, and Community Involvement. The required minimum credits that have to be taken are 146 credits. This curriculum will allow the opportunity to increase the knowledge and technology in architecture, to provide knowledge for those who want to be an entrepreneur in architectural work, and to pursue professional education or further studies in master program (S2) and doctorate program (S3).

The Architecture study program focus on delivering graduates of architecture who are ready to work, and are innovative, since they are comprehensively educated with an integrated environmental concept and strong cultural values. Furthermore, mastery in information technology becomes a value-added as a graduate of Architecture of BINUS UNIVERSITY.

### **Vision**

To become a world class architecture department in continuous pursuit of innovation and enterprise based on IT.

### **Mission**

The mission of Architecture Department is to contribute to the global community through the provision of world-class education by:

1. Educating students in ICT based on creative and innovative design skills that help to improve the quality of life.
2. Educating students through cases on building environment, highlighting professional services and entrepreneurial skills.
3. Conducting research and improving student's research experience in sustainable building environment and local values.

### **Program Objective**

The objectives of the program are:

1. To provide students with the ability to produce an integrated building environment design using creative, innovative and ICT based solutions that help to improve quality of life.
2. To conduct research that focuses on sustainable building environment and local values.
3. To prepare students with knowledge of the professional ethics of an Architectural Entrepreneur.

### **Student Outcomes**

After completing the study, graduates are:

1. Able to develop a design concept that integrate research; which in particular are human behaviour, environment, technical aspect and local values; with architectural design.
2. Able to do architectural design independently with research-based methods, and produce a creative architectural design which the solution on the contextual culture problem and which has been analysed based on the principles of architectural design.

3. Able to communicate their ideas and design in the form at graphics, narration and model comprehensively both in manual and digital techniques.
4. Able to present alternative design solutions and determine the decision based on architectural design principles.
5. Able to harness their design capability to do a supervision of a building environmental development
6. Able to develop students with ethical and aesthetic behaviour, adaptive and appreciative.
7. Able to produce a creative, innovative and humane architectural principles, local values and urban architecture.
8. Able to design the architecture of the digital enrichment architecture integrated art, science and technology based on information and communication technology (ICT).
9. Able to design the architecture of the real estate enrichment integrated art, science and technology based on information and communication technology (ICT).
10. Able to design the architecture of the interior enrichment integrated art, science and technology based on information and communication technology (ICT).

### **Prospective Career of the Graduates**

The graduate of the architecture program will have sufficient knowledge on Planning, Programming and Designing, Building Technology, Project Management, Property Management, Interior Design and mastery of Information Technology.

Therefore, the graduate of Architecture has the choice of a wide range of professions that include:

1. Consultancy : Architect
2. Construction : Engineer, contractor
3. Construction Management : Construction Manager
4. Banking : Credit Analyst (Appraisal)
5. Property : Building Manager, Marketing, Real Estate Manager.
6. Interior : Interior Designer
7. Development : Planner, Urban Designer, Developer
8. Information Technology : 3D Animator
9. Research : Researcher
10. Media (Printed or Electronic media) : Architecture Journalist, Writer, Editor.
11. Independent Business : Freelance Architect
12. Education : Lecturer and Instructor

### **Curriculum**

Famous for its reputation in Information Technology, BINUS UNIVERSITY has developed its expertise in the field of architecture that has orientation in computing or ICT either in design processing or in building operations. Architecture Department of Binus University updates with the development of information technology in architecture as today, industry requires employees to have mastery in information technology. Based on these qualifications, the architecture study program focused on the implementation of information of technology in the architectural design as the core competency in which this core competency has to be mastered by every student. The curriculum also has enrichment program such as internship and industrial experience for each student. The curriculum is based on both the National Curriculum and Architecture Study Program Association. Additionally, in order to fulfill the requirement of housing facility and sustainable development, the Architecture Study Program at BINUS UNIVERSITY also include

"sustainable human settlement" as a part of its curriculum. All of the curriculum are supported by MCL (Multi Channel Learning) system namely BINUS Maya. It assists the students in the learning activity so that the students are able to study systematically integrated with BINUS Maya.

### **Elective Group**

The objective of this group is to provide the students with the insight knowledge and skills required by business and industry. The materials for this group will always be updated in accordance with the latest market demands, so that graduates are ready to participate in and face the competition of the job market. The elective group contains of three concentration subjects (stream).

### **Concentration Subject (Stream)**

#### 1. Digital Architecture

This stream focuses on the insight of the ICT implementation on architectural design. The objective is to enable the students in integrating several architecture and simulation software in the architectural design that indeed the students will produce a variant architectural design that is resulted from a quantified simulation studies.

#### 2. Interior Architecture

The focus of this stream is to integrate a deep knowledge of interior aspect on architectural design that enables students to produce design based on behavior and character of user, completed with information technology, the visualization of the design will appear more creative and realistic.

#### 3. Real Estate

This stream adds several knowledge of economics as the modules. Therefore, the integration between architecture and the economic value enables students to produce creative and innovative design. The comprehensive teaching learning process enables students to understand various market demands.

All subjects of Architecture are distributed in 8 semesters. The concentration subjects (stream) are opened in the 4th Semester to 8th Semester.

### **Course Structure**

| <b>Sem</b> | <b>Code</b>                         | <b>Course Name</b>                    | <b>SCU</b> | <b>Total</b> |  |
|------------|-------------------------------------|---------------------------------------|------------|--------------|--|
| 1          | CHAR6013                            | Character Building: Pancasila         | 2          | 20           |  |
|            | ARCH6001                            | Introduction to Architecture          | 2          |              |  |
|            | ARCH6089                            | Aesthetics*                           | 2          |              |  |
|            | ARCH6015                            | Architectural Communication Technique | 4          |              |  |
|            | ARCH6018                            | Building Technology I                 | 4          |              |  |
|            | ARCH6042                            | Architectural Design I*               | 4          |              |  |
|            | <b>English University Courses I</b> |                                       |            |              |  |
|            | ENGL6128                            | English in Focus                      | 2          |              |  |
|            | ENGL6130                            | English for Business Presentation     | 2          |              |  |

| Sem | Code                                  | Course Name                                | SCU | Total |  |
|-----|---------------------------------------|--|-----|-------|--|
| 2   | CHAR6014                              | Character Building: Kewarganegaraan        | 2   | 21    |  |
|     | ARCH6019                              | Building Technology II*                    | 4   |       |  |
|     | ARCH6041                              | Design Methods*                            | 2   |       |  |
|     | ARCH6043                              | Architectural Design II*                   | 4   |       |  |
|     | ARCH6048                              | Traditional Architecture*                  | 2   |       |  |
|     | ARCH6086                              | Architectural Design Computing I*          | 4   |       |  |
|     | LANG6061                              | Indonesian                                 | 1   |       |  |
|     | <b>English University Courses II</b>  |  |     |       |  |
|     | ENGL6129                              | English Savvy                              | 2   |       |  |
|     | ENGL6131                              | English for Written Business Communication | 2   |       |  |
| 3   | CHAR6015                              | Character Building: Agama                  | 2   | 24    |  |
|     | ARCH6020                              | Building Technology III*                   | 4   |       |  |
|     | ARCH6044                              | Architectural Design III*                  | 4   |       |  |
|     | ARCH6047                              | Behavior in Architecture                   | 2   |       |  |
|     | ARCH6049                              | Modern Architecture*                       | 2   |       |  |
|     | ENTR6003                              | Entrepreneurship I                         | 2   |       |  |
|     | ARCH6017                              | Site Planning*                             | 4   |       |  |
|     | ARCH6087                              | Architectural Design Computing II*         | 4   |       |  |
| 4   | ARCH6050                              | Tropical Architecture                      | 2   | 22    |  |
|     | ARCH6052                              | Utility*                                   | 2   |       |  |
|     | ARCH6004                              | City and Settlement                        | 2   |       |  |
|     | ARCH6021                              | Building Technology IV                     | 4   |       |  |
|     | ARCH6045                              | Architectural Design IV*                   | 6   |       |  |
|     | ARCH6096                              | Architectural Research Methods             | 2   |       |  |
|     | <b>Stream : Real Estate</b>           |  |     |       |  |
|     | ARCH6009                              | Introduction to Real Estate*               | 2   |       |  |
|     | ARCH6071                              | Property Assessment I**                    | 2   |       |  |
|     | <b>Stream : Digital Architecture</b>  |  |     |       |  |
|     | DSGN6010                              | Architectural Photography**                | 2   |       |  |
|     | ARCH6090                              | Architectural Geometry Design*             | 2   |       |  |
|     | <b>Stream : Interior Architecture</b> |  |     |       |  |
|     | ARCH6054                              | Interior Design Principles                 | 2   |       |  |
|     | ARCH6072                              | Building Material Knowledge*/**            | 2   |       |  |

| Sem                         | Code                                  | Course Name                            | SCU | Total |  |
|-----------------------------|---------------------------------------|--|-----|-------|--|
| 5                           | ENTR6004                              | Entrepreneurship II                    | 2   | 20    |  |
|                             | ARCH6003                              | Building Physics*                      | 2   |       |  |
|                             | ARCH6076                              | Project Management                     | 2   |       |  |
|                             | ARCH6006                              | Seminar                                | 2   |       |  |
|                             | ARCH6046                              | Architectural Design V                 | 6   |       |  |
|                             | ARCH6061                              | Sustainable Architecture*              | 2   |       |  |
|                             | <b>Stream : Real Estate</b>           |  |     |       |  |
|                             | ARCH6051                              | Urban Architecture*                    | 2   |       |  |
|                             | ARCH6094                              | Property Assessment II**               | 2   |       |  |
|                             | <b>Stream : Digital Architecture</b>  |  |     |       |  |
|                             | ARCH6103                              | Architectural Design Computing III*/** | 4   |       |  |
|                             | <b>Stream : Interior Architecture</b> |  |     |       |  |
|                             | ARCH6095                              | Acoustics and Lighting Design*/**      | 2   |       |  |
|                             | ARCH6067                              | Interior Installation                  | 2   |       |  |
| 6                           | <b>Enrichment Program I</b>           |  | 15  | 15    |  |
| 7                           | <b>Enrichment Program II</b>          |  | 16  | 16    |  |
| 8                           | ARCH6039                              | Final Project                          | 8   | 8     |  |
| <b>TOTAL CREDIT 146 SCU</b> |                                       |  |     |       |  |

\*) This course is delivered in English

\*) Entrepreneurship embedded

**English University Courses:**

- ) For 1<sup>st</sup> Semester : English University Courses I, student with score Binus University English Proficiency Test less than 500 will take English in Focus, and student with score test greater than or equal to 500 will take English for Business Presentation
- ) For 2<sup>nd</sup> Semester: English University Courses II, student with score Binus University English Proficiency Test less than 500 will take English Savvy, and student with score test greater than or equal to 500 will take English for Written Business Communication
- ) Students should pass English Savvy with a minimum Grade is C.

**Enrichment Program I (6<sup>th</sup> Semester) & Enrichment Program II (7<sup>th</sup> Semester):**

- ) Student will take one of enrichment program tracks (off campus).

### Enrichment Track Scheme

| Track | Semester 6 |    |      |    |    |      | Semester 7 |    |      |    |    |      |
|-------|------------|----|------|----|----|------|------------|----|------|----|----|------|
|       | I          | RS | ENTR | CD | SA | *etc | I          | RS | ENTR | CD | SA | *etc |
| 1     | v          |    |      |    |    |      | v          |    |      |    |    |      |
| 2     | v          |    |      |    |    |      |            | v  |      |    |    |      |
| 3     | v          |    |      |    |    |      |            |    |      | v  |    |      |
| 4     | v          |    |      |    |    |      |            |    |      |    | v  |      |
| 5     | v          |    |      |    |    |      |            |    | v    |    |    |      |

Notes:

- I : Internship
- RS : Research
- ENTR : Entrepreneurship
- CD : Community Development
- SA : Study Abroad
- \*etc : Department specific needs

Notes:

Student can choose one of the available tracks

### Enrichment Internship Track

| Code                         | Course Name                              | SCU | Total |
|------------------------------|--|-----|-------|
| <b>Enrichment Program I</b>  |  |     | 15    |
| ARCH6091                     | Industry Experience                      | 8   |       |
| ARCH6092                     | Integrated Architectural Design          | 4   |       |
| ARCH6085                     | Project Programme                        | 3   | 16    |
| <b>Enrichment Program II</b> |  |     |       |
| ARCH6104                     | Internship                               | 8   |       |
| ARCH6100                     | Advanced Integrated Architectural Design | 4   |       |
| ARCH6093                     | Advanced Project Programme               | 4   |       |

### Enrichment Entrepreneurship Track

| Code     | Course Name  | SCU | Total |
|----------|--|-----|-------|
| ENTR6290 | Business Start Up                                    | 8   | 16    |
| ENTR6197 | Architectural Business Model & Validation            | 2   |       |
| ENTR6198 | Launching New Venture Architectural Entrepreneurship | 2   |       |
| ENTR6199 | EES in New Architectural Business                    | 4   |       |

### Enrichment Research Track

| Code     | Course Name                      | SCU | Total |
|----------|----------------------------------|-----|-------|
| RSCH6222 | Research Experience              | 8   | 16    |
| RSCH6145 | Architectural Scientific Writing | 4   |       |
| RSCH6146 | Global EES in Architecture       | 4   |       |

**Enrichment Community Development Track**

| Code     | Course Name  | SCU | Total |
|----------|--|-----|-------|
| CMDV6122 | Community Outreach Project Implementation                          | 8   | 16    |
| CMDV6065 | Community-Based Architecture                                       | 4   |       |
| CMDV6066 | Employability and Entrepreneurial Skills in Architecture Community | 4   |       |

**Enrichment Study Abroad Track\***

| Code     | Course Name                         | SCU | Total |
|----------|-------------------------------------|-----|-------|
| GLOB6005 | Elective Course for Study Abroad 1  | 4   | 16    |
| GLOB6006 | Elective Course for Study Abroad 2  | 4   |       |
| GLOB6007 | Elective Course for Study Abroad 3  | 4   |       |
| GLOB6008 | Elective Course for Study Abroad 4  | 4   |       |
| GLOB6009 | Elective Course for Study Abroad 5  | 2   |       |
| GLOB6010 | Elective Course for Study Abroad 6  | 2   |       |
| GLOB6011 | Elective Course for Study Abroad 7  | 2   |       |
| GLOB6012 | Elective Course for Study Abroad 8  | 2   |       |
| GLOB6013 | Elective Course for Study Abroad 9  | 2   |       |
| GLOB6014 | Elective Course for Study Abroad 10 | 2   |       |
| GLOB6015 | Elective Course for Study Abroad 11 | 2   |       |
| GLOB6016 | Elective Course for Study Abroad 12 | 2   |       |

\*) Transferred courses will be transferred based on credit transfer policies on study program with total of 16 credits.

**Student should pass all of these quality controlled courses as listed below:**

| No.                                  | Code     | Course Name                        | Minimum Grade |
|--------------------------------------|----------|------------------------------------|---------------|
| 1                                    | CHAR6013 | Character Building: Pancasila      | B             |
| 2                                    | ENTR6004 | Entrepreneurship II                | C             |
| 3                                    | ARCH6042 | Architectural Design I*            | C             |
| 4                                    | ARCH6043 | Architectural Design II*           | C             |
| 5                                    | ARCH6044 | Architectural Design III           | C             |
| 6                                    | ARCH6017 | Site Planning*                     | C             |
| <b>Stream: Real Estate</b>           |          |                                    |               |
| 7                                    | ARCH6009 | Introduction to Real Estate        | C             |
| 8                                    | ARCH6051 | Urban Architecture                 | C             |
| <b>Stream: Interior Architecture</b> |          |                                    |               |
| 7                                    | ARCH6054 | Interior Design Principles         | C             |
| 8                                    | ARCH6067 | Interior Installation              | C             |
| <b>Stream: Digital Architecture</b>  |          |                                    |               |
| 7                                    | ARCH6090 | Architectural Geometry Design      | C             |
| 8                                    | ARCH6103 | Architectural Design Computing III | C             |

\*) Tutorial & Multipaper