# Architecture

## Faculty of Engineering
## Universitas Muhammadiyah Surakarta

http://arsitektur.ums.ac.id/

Program Spesification (Bachelor)

# Architecture

## Faculty of Engineering

## Universitas Muhammadiyah Surakarta

Update: 20/09/2020

## 1. Description of Study Program

Architecture Program of Universitas Muhammadiyah Surakarta was established in 1993 with the SK no: 91/DIKTI/Kep/1993. It has become one of recognized architecture program in Indonesia after receiving an excellent award on accreditation from National Accreditation Board (Accredited with grade A). Meanwhile, the philosophy of architectural education itself is influenced by the position of the prophetic education concept: humanization, liberation, and transcendence. On the completion of SP-Architecture UMS, '*architecture graduates should be able to master knowledge, progress to be professional architect, and contribute to the community development based on Islamic value'.*

## 2. Accreditation

Accreditation A (Excellent) by BAN-PT (National Accreditation Board) Decree no. 2043/SK/BAN-PT/Akred/S/IX/2016

## 3. Type of Study: Full time, campus based

## 4. Head of Study Program: Dr. Ir. Widyastuti Nurjayanti, M.T

## 5. Vision and Mission of the Study Program

The vision of SP-Architecture is organized consistently, in line with vision and mission at university and faculty level. UMS has a vision that by 2029, it will become the center of Islamic science and technology development and education and provide direction for change. At the faculty level, Faculty of Engineering is expected to become the center of excellence for the education and development of Islamic science, art, and technology in engineering field. The vision of the SP-Architecture is to become the centre of excellent for Islamic Architecture education, which then transformed into Program Educational Objectives to be 'the centre of excellent for the education and development of Islamic Architecture'.

The missions of SP-Architecture are following:

1. Developing Islamic Architecture professionally, scientifically and sustainably at macro, mezzo and micro level.
2. Preparing skilled graduates in Islamic Architecture design, entrepreneurship based and information technology.
3. Developing research and devotion based on Islamic Architecture.
4. Developing human resources, facilities and infrastructure as well as cooperation network under one umbrella of Islamic Architecture.

## 6. Expected Learning Outcomes

| | |
|---|---|
| **Attitudes** | |
| ELO 1.1. | Representing Islamic characteristics, personally and interpersonally |
| ELO 1.2. | Representing distinguished characteristics, academically and professionally |
| **General skill** | |
| ELO 2.1. | Organizing scientific thinking approach, independently and responsibly, with problem-solving-orientation |
| ELO 2.2. | Presenting the communication of thinking and ideas on writing, verbal, and graphics with manual and digital techniques |
| **Knowledges** | |
| ELO 3.1 | Explaining the knowledge of social-cultural context, theory, and methods related to architectural design |
| ELO 3.2. | Exemplifying the knowledge of science and technology related to architectural |
| ELO 3.3. | design |
| | Implementing the knowledge in entrepreneurship and architecture related |
| ELO 3.4. | profession in accordance with the regulation |
| | Integrating the knowledge in Islamic architecture design |
| **Specific Skills** | |
| ELO 4.1. | Creating architectural design at building and urban level |
| ELO 4.2. | Creating architectural design based on the Islamic concepts of *rahmatan lil alamin* (well-being for the universe) |

# 7. Program Structure (Curriculum)

| | SEMESTER 1 | SEMESTER 2 | SEMESTER 3 | SEMESTER 4 | SEMESTER 5 | SEMESTER 6 | SEMESTER 7 | SEMESTER 8 |
|---|---|---|---|---|---|---|---|---|
| UMUM | | Civil Society Education (2) | Pancasila (2) | Indonesian Language (2) | | | | |
| | Islamic Study I (Attitude) (2) | Islamic Study 2 (Act and Deed) (2) | Islamic Study 3 (Science and Technology) (2) | Muhammadiyah Value (2) | | | | |
| | *English: Academic Purposed (2)* | *English: Standardized Test Preparation (2)* | | | | | | |
| INTI | **Architecture Design Studio 1 (3)** | **Architecture Design Studio 2 (4)** | **Architecture Design Studio 3 (4)** | **Architecture Design Studio 4 (4)** | **Architecture Design Studio 5 (4)** | **Architecture Design Studio 6 (4)** | | **Thesis (3)** |
| | **Building Structure and Utility 1 (2)** | **Building Structure and Utility 2 (2)** | **Building Structure and Utility 3 (3)** | **Building Structure and Utility 4 (4)** | **Building Structure and Utility 5 (2)** | Life-skill (2) | Field Study (3) | **Final Design Studio (5)** |
| PENDUKUNG | Nusantara Architecture History (2) | World Architecture History (2) | Islamic Architecture History (2) | Islamic Architecture Concept (2) | Architecture Bureau (2) | Project Management (2) | Internship (2) | |
| | Engineering Mechanics (2) | Engineering Concept (2) | Building Physics 1 (2) | Building Physics 2 (2) | Housing and Settlement (2) | | Syari'ah Real Estate (2) | |
| | Architectural Drawing (2) | Architectural Building Material Technology (2) | Site and Landscape Design (3) | Tropical Architecture (2) | Environmental Architecture and Behaviour (2) | Building Economics (2) | | |
| | Working Drawing (2) | Geometric Mathematics (2) | Computer Application 1 (2) | Computer Application 2 (2) | Computer Application 3 (2) | Mosque Architecture (2) | | |
| | Two- and Three-Dimensional Design (3) | | | | Architectural Research Method and Statistics (2) | Urban Morphology and Planning (2) | Research Seminar (3) | |
| | | | | | Interior Architecture (2) | Architecture Conservation (2 SKS) | | |
| | | | | | Sustainable Architecture (2) | | | |
| PILIHAN | | | | | | **Elective 1A (2)** | **Elective 1B (2)** | |
| | | | | | | Options: Javanese Traditional Architecture; The Art of Islamic Geometry; Green Architecture | Options: Green Open Space; Syari'ah Tourism Precinct; Urban Architecture Pathology | |
| | | | | | | **Elective 2A (2)** | **Elective 2B (2)** | |
| | | | | | | Options: Islamic Architecture Typology and Morphology; Architecture Critics; Multidisciplinary Project | Options: Waterfront Architecture; Experimental Architecture; KKN-MU (Public Service) | |
| | 20 | 20 | 20 | 20 | 20 | 20 | 16 | 8 |

**Total 144 SKS**

| Course code | | Courses | Credit |
|---|---|---|---|
| **SEMESTER I** | | | **20** |
| 1 | TKA10133 | Architectural Design Studio 1 | 3 |
| 2 | TKA10232 | Structure and Utility 1 | 2 |
| 3 | TKA10332 | History of Archipelago Architecture | 2 |
| 4 | TKA10433 | Two and Three Dimensional Design | 3 |
| 5 | TKA10532 | Architectural Drawings | 2 |
| 6 | TKA10632 | Engineering Drawings | 2 |
| 7 | UMS10112 | Religion 1 (Aqidah & Akhlak) | 2 |
| 8 | TKA10822 | Engineering Mechanics | 2 |
| 9 | UMS10312 | English for Academic Purposes | 2 |
| **SEMESTER 2** | | | **20** |
| 10 | TKA20134 | Architectural Design Studio 2 | 4 |
| 11 | TKA20232 | Structure and Utility 2 | 2 |
| 12 | TKA20332 | World Architecture History | 2 |
| 13 | TKA20432 | Architectural Building Material Tech. | 2 |
| 14 | TKA20522 | Mathematical Geometry | 2 |
| 15 | ENG20421 | Concept Engineering | 2 |
| 16 | UMS20112 | Religion 2 (Worship & Muamalah) | 2 |
| 17 | UMS20812 | Citizenship Education | 2 |
| 18 | UMS20312 | Standardized Test Preparation | 2 |
| **SEMESTER 3** | | | **20** |
| 19 | TKA30134 | Architectural Design Studio 3 | 4 |
| 20 | TKA30233 | Structure and Utility 3 | 3 |
| 21 | TKA30332 | Islamic Architecture History | 2 |
| 22 | TKA30432 | Building Physics | 2 |
| 23 | TKA30533 | Site and Landscape Engineering | 3 |
| 24 | TKA30632 | Computer Applications I | 2 |
| 25 | UMS30112 | Islam, Science & Technology | 2 |
| 26 | UMS10212 | Pancasila | 2 |
| **SEMESTER 4** | | | **19** |
| 27 | TKA40134 | Architectural Design Studio 4 | 4 |
| 28 | TKA40234 | Structure and Utility 4 | 4 |
| 29 | TKA40332 | Islamic Architecture Concept | 2 |
| 30 | TKA40432 | Building Physics II | 2 |
| 31 | TKA40532 | Tropical Architecture | 2 |
| 32 | TKA40632 | Computer Applications II | 2 |
| 33 | UMS40112 | Muhammadiyah Value | 2 |
| 34 | UMS30212 | Indonesia Language | 2 |

| Course code | | Courses | Credit |
|---|---|---|---|
| **SEMESTER 5** | | | **20** |
| 35 | TKA50134 | Architectural Design Studio 5 | 4 |
| 36 | TKA50232 | Structure and Utility 5 | 2 |
| 37 | TKA50332 | Architecture Bureau | 2 |
| 38 | TKA50432 | Settlement Principles | 2 |
| 39 | TKA50532 | Environmental and Behaviour Arch. | 2 |
| 40 | TKA50632 | Computer Applications 3 | 2 |
| 41 | TKA50732 | Sustainable Architecture | 2 |
| 42 | TKA50832 | Interior Architecture | 2 |
| 43 | TKA50932 | Methods & Statistics of Arch Research | 2 |
| **SEMESTER 6** | | | **20** |
| 44 | TKA60134 | Architectural Design Studio 6 | 4 |
| 45 | TKA60232 | Mosque Architecture | 2 |
| 46 | TKA60332 | Project Management | 2 |
| 47 | TKA60432 | Morphology and Planning of City | 2 |
| 48 | TKA60632 | Building Economics | 2 |
| 49 | TKA60732 | Architectural Conservation | 2 |
| 50 | UMS60112 | Life Skill | 2 |
| 51 | <br>TKA60842<br>TKA60942<br>TKA61042 | **Elective Courses 1**<br>Javanese Traditional Architecture<br>Islamic Geometry Art<br>Green Architecture | 2 |
| 52 | <br>TKA61142<br>TKA61242<br>ENG70122 | **Elective Courses 2**<br>Typology Morphology of Islam Arch<br>Architecture Critique<br>Multidisciplinary Project | 2 |
| **SEMESTER 7** | | | **17** |
| 53 | TKA70133 | Field Study | 3 |
| 54 | TKA70232 | Internship | 2 |
| 55 | TKA70333 | Research Seminar | 3 |
| 56 | TKA70432 | Syari'ah Real Estate | 2 |
| 57 | <br>TKA70543<br>TKA70643<br>TKA70743 | **Elective Courses 1**<br>Green open space<br>Syari'ah Tourism Area<br>Pathology of Urban Architecture | 3 |
| 58 | <br>TKA70843<br>TKA70943<br>UMS71013 | **Elective Courses 2**<br>Water Front Region<br>Experimental Architecture<br>KKNMU | 3 |
| **SEMESTER 8** | | | **8** |
| 59 | TKA80133 | SKPA | 3 |
| 60 | TKA80235 | Final Project Studio | 6 |

## 8. Registration Period

The normal period of registration starts in January and ends in August every year.

## 9. Typical Entry Requirement

Requirements for SP-Architecture students are: high school graduates majoring in Science or Vocational Schools, not color blind, and passing the entrance test at the Muhammadiyah University of Surakarta. Entrance test pass scores is 50. Details of entry requirement follow UMS procedures mentioned in https://pmb.ums.ac.id/

## 10. Program Regulation

- **Credit**
  The program consists of 144 credits with average 20 credits taken at each stage. Normally not more than 24 credits would be allowed in any one term, particularly for students with a Grade Point Average (GPA) of a semester higher than 3.5; see appendix for more detail rule: https://www.ums.ac.id/id/krs-online-semester-gasal-tahun-akademik-2020-2021. The pass mark for award of credit in each module is 40%.
- **Pre-requiste**
  Architecture Design Studio 1-6: must pass with minimum C to take the next level
  Building Structure and Utilities: must have taken previous level with minimum E
  Internship: complete minimum 99 credit
  Research Seminar: complete minimum 119 credit, passed 9 related courses with minimum C
  Design Thesis: complete 135 credit
  Final Design Studio: complete 138 credit, with maximum 14% D, except English minimum C
- **Progression**
  In case students cannot pass the exam, he or she will be entitled for a reassessment of the course. Architecture Design Studio (ADS) are the core courses which requires students to pass in order to take the next level of ADS.
  In order to progress to next academic year, students must pass following condition:
  - Pass 30 credit in the end of first year with minimum GPA of 2.00
  - Pass 60 credit in the end of second year with minimum GPA of 2.00
  - Pass 90 credit in the end of third year with minimum GPA of 2.00

- **Completion**

  To graduate from the study program, the students should:
  - complete 144 credits (*Sistem Kredit Semester/SKS*) in minimum and have a cumulative grade point average/GPA (*Indeks Prestasi Kumulatif/IPK*) of 2.0 in minimum.
  - Achieve at least C mark for Al Islam and Kemuhammadiyahan
  - Achieve at least C mark for Pancasila and Kewarganegaraan (Civic Education)
  - Achieve score at least of 400 for English for Academic Purposes (EAP) test
  - Have no more than 14 credits of D mark

## 11. Regulation of Assessment and Academic Standards

The grading scheme of the student assessment is regulated by the University (*SM-UMS 04: Standar Mutu Penilaian*). The grading scheme for students is stated in A, AB, B, BC, C, D and E marks with criteria and grade point representation as follows:

| Score | Letter | Grade Point |
|---|---|---|
| >=77 | A | 4.0 |
| 70-76.99 | AB | 3.5 |
| 63-69.99 | B | 3.0 |
| 56-62.99 | BC | 2.5 |
| 50-55.99 | C | 2.0 |
| 35-49.99 | D | 1.0 |
| <=0 | E | 0.0 |

The completion of a subject is determined using the criteria as follows:

1. Minimum passing grade is C or 2.0 out of 4.0.
2. Minimum 75% attendance.

## 12. College Support for Students and Students' Learning

For learning and teaching activities, SP-Architecture provide a number of facilities such as six classrooms (distributed in Building J and H), an audio visual room, laboratories (Building Phisic, Digital Architecture, Building Structure), design studios, a final design studio, a thesis exam room, and a reading room (mini library). The mini library (reading room) supports architecture students to read and learn on some collection including final project and research seminar documentation In addition, four rooms for seminar or large class are available in Building G, Building I, Building J, and Main Building Siti Walidah. SP-Architecture also developed with Islamic Architecture Research Centre. To bring professional

atmosphere into campus, the faculty developed a unit called PPKS (Pusat Pengembangan Kawasan Strategis), a unit for strategic regional development.

To improve leadership, teamwork, and soft skills, SP-Architecture supports student extra-curricular activities particularly under KMTA Svarga Citra, the Architecture Students Association. This covers several sub-activity unit such as photography (Artephac), design community (Diskomvis), architectural sketch (Sinan Aga), discussion club on Islamic Architecture (KAI-Kelompok Arsitektur Islam), and so on.

UMS policy states that all students should actively interacts with the academic supervisor and academic tutors. Academic tutors are particularly helpful for students at the initial stage, for example through mentoring program. Academic supervisor is responsible to monitor students' academic progress personally. UMS creates a mechanism which allow students to also consult for non-academic related problems, either with the academic supervisor or counceling office provided by the university. The main duty of the advisor is to control the student's academic achievement and to guide the student to optimize their ability.

## 13. University Support for Students and Students' Learning

**Learning Resources**: UMS Library maintains its principal collections in the Central Library buildings in Campus II. UMS also provides a Book Store in Campus I for students to purchase stationaries and reference book for their study.

**Wellbeing Supports:** Health facilities are available across the university, for example Muhammadiyah Medical Centre (MMC) and Dentish and Mouth Hospital. Sport facilities are available, such as Sport Centre and Football court. UMS also developed a new Edutorium within an Edupark, which combine education, sport, exhibition, and park facilities near Campuss IV. At least three big mosques are also available within the main campus area. For social activity, a number of student's activity groups are available both at university level and faculty level. UMS supports 27 student activity units (http://kemahasiswaan.ums.ac.id/daftar-ukm/).

**IT Services** provide a wide range of services throughout all UMS campuses, including 24/7 wireless internet connection. The IT Office also provides an IT Helpdesk for all staff and students on 5$^{th}$ floor of Gedung Induk Siti Walidah (rectorat building). Student can also access the internet using a personal computer provided in the main library building.

## 14. Indicators of Quality and Standards

In 2016, SP-Architecture UMS undergraduate program received an A-grade accreditation by the National Accreditation Board for Higher Education (BAN-PT). This demonstrates that the study program presents an excellent quality management system; it received the recognition at national level.

## 15. Methods for Evaluating and Improving Quality and Standards

SP-Architecture maintains the quality and standars on the basis of several elements such as: Key Performance Indicator (KPI), staff evaluation, teaching and learning evaluation, student evaluation, and feedback from stakeholders and alumni. UMS sets up a unit called LJM (Lembaga Penjaminan Mutu/Quality Assurance Unit) to monitor the quality and standards. LJM extends its task to faculty and study program level. LJM runs an annual internal audit for all unit and study program across the university.

Besides that, a major curriculum review is carried out every five years, along with some minor review throughout the years. In every 5 years, SP-Architecture must also submit intitutional progression report to National Accreditation Board. Selain itu, review besar terhadap kurikulum dilakukan setiap lima tahun, disertai beberapa review kecil sepanjang tahun. Setiap 5 tahun, Prodi Arsitektur juga harus menyampaikan laporan perkembangan kelembagaan kepada Badan Akreditasi Nasional.

## 16. Partner College(s)/institution

- Indonesian Ascociation for Architecture Higher Education (APTARI/Asosiasi Pendidikan Tinggi Arsitektur Indonesia)
- Institute of Indonesian Architects (IAI/Ikatan Arsitek Indonesia)