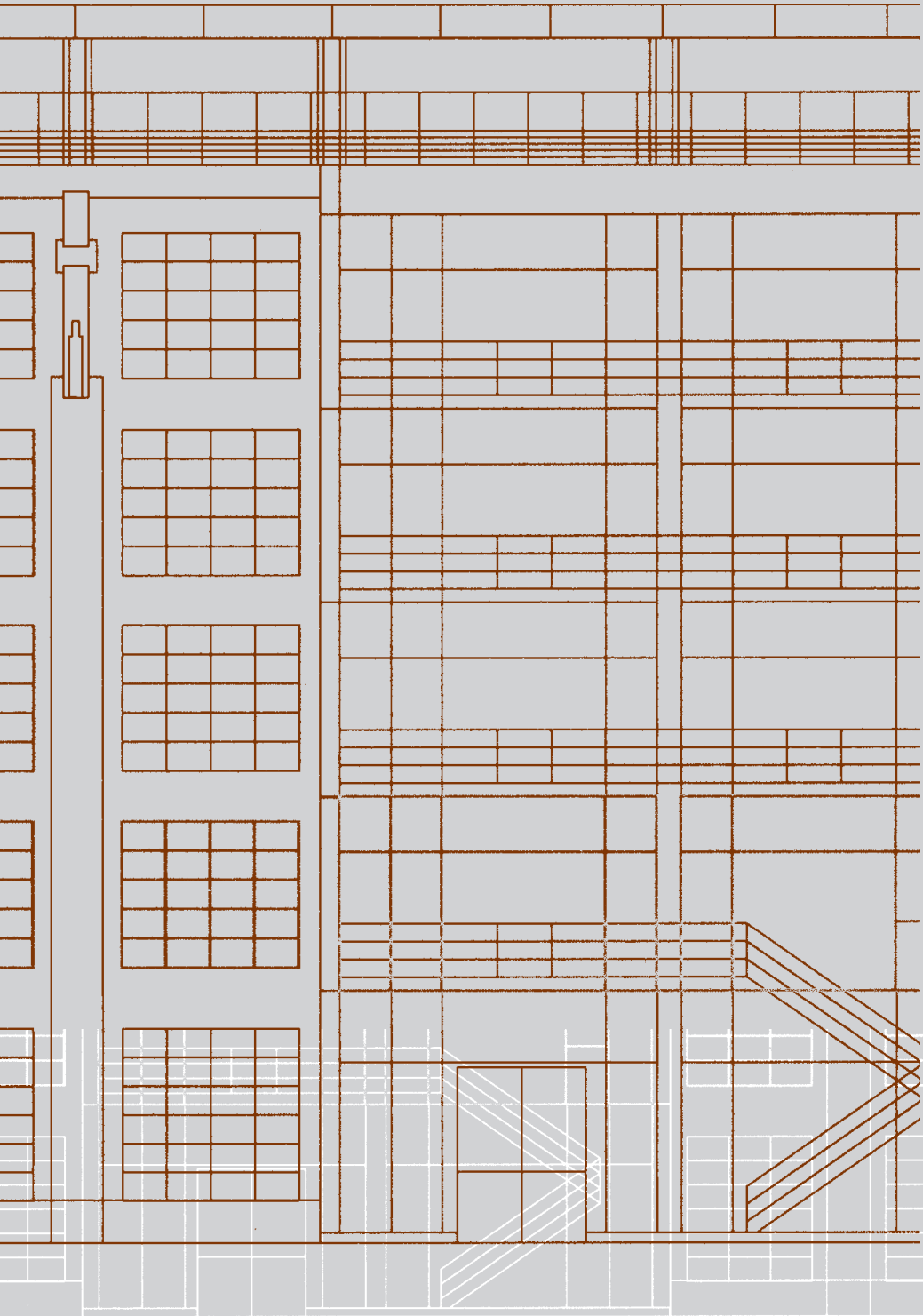
Criteria for the accreditation of degree courses in Architecture

with Qualification Framework Architecture

Seventh edition, 10 Oktober 2021



ASAP
Validation Organisation
for Study Programmes
in Architecture and Planning

Contents

1 Guidelines

In this manual, ASAP sets out the subject-specific criteria for accreditation of degree courses in architecture, which are in addition to the cross-disciplinary standards of the accreditation agencies. Of particular importance is the fact that the Validation Organisation ASAP has brought together representatives of the profession and institutions of higher education to launch and develop procedures for the improvement and securing of the quality of different study programmes.

In view of the great diversity in architecture training offered, this manual aims to provide a reference framework for accreditation that ensures compatibility of international study programmes whilst promoting the institutions of higher education's willingness to exchange students and lecturers as well as maintain their individual and regional characteristics. It is to focus on the specific requirements for accreditation of the regulated profession of architecture.

ASAP's Architecture Committee is aware that these standards will need to be adjusted and updated. With this in mind, it also considers its role as providing a forum for fruitful discussion on the objectives of education in architecture. Thus, this edition of the criteria incorporates the contents and guidelines of the following documents:

- ASAP qualification framework architecture of 10.10.2021
- Findings of the expertise working group of the Validation Council
- Recommendations on the education-related registration requirements for architects of the Federal Chamber of German Architects of 13.07.2016
- Recommendation on education-related issues for registration requirements for architects, landscape architects, interior architects and urban planners for applicants from dual and distance degree courses; resolution by the board of the Federal Chamber of German Architects of 24.02.2021
- State treaty on the organisation of a joint accreditation system for quality assurance in studies and teaching at German institutions of higher education (Studienakkreditierungsstaatsvertrag) (in force since 01.01.2018)
- Model Ordinance pursuant to Article 4, Paragraphs 1 to 4 of the state treaty on the accreditation of studies (resolution of the Conference of Interior Ministers of 07.12.2017, Decision of the Standing Conference of the Ministers of Education and Cultural Affairs (KMK) of 07.12.2017)

1.1 International aspects for architecture education

The trend towards an internationalisation of the architects' fields of activity creates new potential whilst posing new challenges. Traditional professional practices come up against larger political and economic developments as well as changing environmental factors. These changes in the profession affect the institutions of higher education and influence the discussion about study objectives and course content. Particular importance is attached to the study exchange with international institutions of higher education as well as practising the profession at home and abroad, so that the educational objective must be an increase in international opportunities.

The mutual recognition of qualifications and training by once distinct national competencies is a new factor that needs to be promoted in order to increase the mobility of architects and students.

Increased mobility necessitates that architects are educated to respect, analyse and safeguard different cultural backgrounds and accept social responsibility as well as respond to local contexts and the local identity of prospective areas of work in the future.

1.2 Conformity with European and international standards

Architecture plays a special role within the educational landscape, as the profession is regulated by German federal state law relating to architects[1] and is also shaped by international standards. They are:

Europe-wide: EU Professional Recognition Directive (Directive 2005/36/EC of the European Parliament and Council of 7 September 2005 on the recognition of professional qualifications) as in Directive 2013/55/EU amended on 20 November 2013 on recognition of professional qualifications and Regulation (EU) No 1024/2012 on administrative cooperation through the Internal Market Information System (the IMI Regulation)

Worldwide: UNESCO/UIA Charter for Architectural Education (2011/2017) and the Accord on Recommended International Standards of Professionalism in Architectural Practice (2014)

The inclusion in the EU Directive and the UNESCO/UIA Charter create the following framework conditions for education in architecture.

- For professional recognition at European level, the duration of a course of study in architecture according to Article 46 Paragraph 1 (a) is five years on a full-time basis or 300 credits according to the European Credit Transfer System (ECTS). Alternatively, according to the Professional Recognition Directive Article 46 Paragraph 1 (b), it can comprise four years or 240 credits, provided it is supplemented by two years' professional practical experience, of which one year builds on the knowledge acquired during the course of study according to Article 46 Paragraph 2 (11 criteria). The integration of a practical part of the education into the curriculum requires that the balance between theoretical and

1 This also includes the German federal state law for Hessen relating to architects and urban planners (Architekten- und Stadtplanergesetz Hessen), Bavarian Building Chambers Act (Baukammergesetz Bayern) and other relevant laws.

practical aspects of the architectural education is maintained and the acquisition of the 11 criteria over the duration of the course of study is guaranteed. The practical part of the training anchored in the curriculum does not substitute the above-mentioned mandatory two years' professional practical experience.

- Fulfilment of the UNESCO/UIA criteria requires at least five years of full-time study or study of architecture with 300 credits according to ECTS at an institution of higher education. The integration of time spent in practical training is excluded (also see Section 7.2 Unintegrated practice periods).

The educational content must correspond to the requirements of the European Professional Recognition Directive or the UNESCO/UIA Validation System and the UIA Accord, if the educational objectives describe the achievement of appropriate qualifications. At the same time, it must be ensured without doubt and in responsibility towards the students from the beginning of their studies that these goals are achieved to the same extent by all graduates of the study programme.

1.3 Notification aspects

The European Professional Recognition Directive ensures mutual recognition of education degrees and qualification certificates in the field of architecture after each degree course has been evaluated. The EU commission keeps a register of notified degree courses in an annex to the Directive and publishes an updated list on a regular basis in all member states. The degrees listed in Annex V.6.7.1 of the EU Professional Recognition Directive and published in the Official Journal of the European Union guarantee automatic recognition of the graduates in all EU states.

An indication in the educational objectives stating that the degree courses or study programmes lead to automatic EU-wide recognition is only permissible for notified degree courses. Four-year degree courses must prove in the course of the notification procedure that they comply with Article 46 and must prove how the professional practical experience builds on the 11 credits in at least one year.

In the case of notified degree courses, it is also the responsibility of accreditation to review the content and curricular structure.

2 Objectives and course content for architecture education

As degree courses in architecture should lead to students being qualified to work in the regulated profession, it must be defined for the courses which qualifications will lead to eligibility for admission to the chambers of architects. Particularly for Master's degree courses due care must be taken that the basic goal of the qualification is guaranteed in the same form for all students on the course (letter by the Validation Council dated 16.04.2016 to accreditation agencies and system-accredited higher education institutions).

2.1 Qualifications to be obtained in accordance with the definition in the UNESCO/ UIA Charter for Architectural Education through the curriculum (amended 2011)

By the end of their studies, students should have acquired skills in design, planning and construction as well as knowledge and skills that enable them to perform their role as generalists and coordinate interdisciplinary programme objectives. This competence distinguishes architects from other service providers in the field of the built environment. The complexity of integrative skills increases during the course of study in architecture.

Architectural education comprises obtaining the following competences:

Design

- Ability to engage imagination, think creatively, innovate and provide design leadership.
- Ability to gather information, define problems, apply analyses and critical judgement and formulate strategies for action.
- Ability to think three-dimensionally in the exploration of design.
- Ability to reconcile divergent factors, integrate knowledge and apply skills in the creation of a design solution.

Knowledge

Cultural and artistic studies

- Ability to act with knowledge of historical and cultural precedents in local and world architecture.
- Ability to act with knowledge of the fine arts as an influence on the quality of architectural design.
- Understanding of heritage issues in the built environment.
- Awareness of the links between architecture and other creative disciplines.

Social studies

- Ability to act with knowledge of society, and to work with clients and users that represent society's needs.
- Ability to develop a project brief through definition of the needs of society and the target groups (clients and users) and to research and define contextual and functional requirements for different types of built environments.
- Understanding of the social context in which built environments are produced, of ergonomic and space requirements and issues of equality and access.
- Awareness of the relevant codes, regulations and standards for planning, design, construction, health, safety and use of built environments.
- Awareness of philosophy, politics, and ethics as related to architecture.

Environmental studies

- Ability to act with knowledge of natural systems and built environments.
- Understanding of conservation and waste management issues.
- Understanding of the life cycle of materials, issues of ecological sustainability, environmental impact, design for reduced use of energy, as well as passive systems and their management.
- Awareness of the history and practice of landscape architecture, urban design, as well as territorial and national planning and their relationship with the local and global demography and natural resources.
- Awareness of the management of natural systems taking into account natural disaster risks.

Technical studies

- Technical knowledge of structure, materials and construction.
- Ability to act with innovative technical competence in the use of building techniques and the understanding of their evolution.
- Understanding of the processes of technical design and the integration of structure, construction technologies and service systems into a functionally effective whole.
- Understanding of services systems as well as systems of transportation, communications, maintenance and safety.
- Awareness of the role of technical documentation and specifications in design realisation, and of the processes of construction, cost, planning and control.

Design studies

- Knowledge of design theory and methods.
- Understanding of design procedures and processes.
- Knowledge of design precedents and architectural criticism.

Professional studies

- Ability to understand different forms of procurement of architectural services.
- Understanding of the fundamental workings of the construction and development industries, such as finance, real estate investment and facilities management.
- Understanding of the potential roles of architects in conventional and new areas of activity and in an international context.
- Understanding of business principles and their application to the development of the built environments, project management and the functioning of a professional consultancy.
- Understanding of professional ethics and codes of conduct as they apply to the practice of architecture and of the architects' legal responsibilities where registration, practice and building contracts are concerned.

Skill

- Ability to work in collaboration with other architects and members of interdisciplinary teams.
- Ability to act and to communicate ideas through collaboration, speaking, numeracy, writing, drawing, modelling and evaluation.
- Ability to utilise manual, electronic, graphic and model making capabilities to explore, develop, define and communicate a design proposal.
- Understanding of systems of evaluation that use manual and/or electronic means for performance assessments of built environments.

2.2 Qualifications to be obtained in accordance with the definition by the European Professional Recognition Directive through the curriculum

The educational programme must provide a balance between theoretical and practical aspects of architectural training and teach the following educational content:

a. the ability to create architectural designs that satisfy both aesthetic and technical requirements.

b. adequate knowledge of the history and theories of architecture and the related arts, technologies and human sciences.

c. knowledge of the fine arts as an influence on the quality of architectural design.

d. adequate knowledge of urban design, planning and the skills involved in the planning process.

e. understanding of the relationship between people and buildings, and between buildings and their environment, and of the need to relate buildings and the spaces between them to human needs and scale.

f. understanding of the profession of architecture and the role of the architect in society, in particular in preparing briefs that take account of social factors.

g. understanding of the methods of investigation and preparation of the brief for a design project.

h. understanding of the structural design, construction and engineering problems associated with building design.

i. adequate knowledge of physical problems and technologies and of the function of buildings so as to provide them with internal conditions of comfort and protection against the climate within the framework of sustainable development.

j. the necessary design skills to meet the building users' requirements within the constraints imposed by cost factors and building regulations.

k. adequate knowledge of the industries, organisations, regulations and procedures involved in translating design concepts into buildings and integrating plans into overall planning.

2.3 Profile-creation at institutions of higher education

The goals are intended to help institutions of higher education develop individual profiles through placing special emphasis on aspects within architectural education. Bachelor's degree courses should offer a broad range of scientific qualifications in accordance with the Model Ordinance on the Accreditation of Studies, which contradicts specialisation during this stage.

Master's degree courses that qualify for the regulated profession of architecture must teach the content defined in the Professional Recognition Directive; they cannot lead to specialisations.

3 Course structure and course duration

3.1 Structure of time and content of the study systems

Based on the Bologna system and relating to national and international regulations and/or requirements for the architectural profession, the following study systems are conceivable:

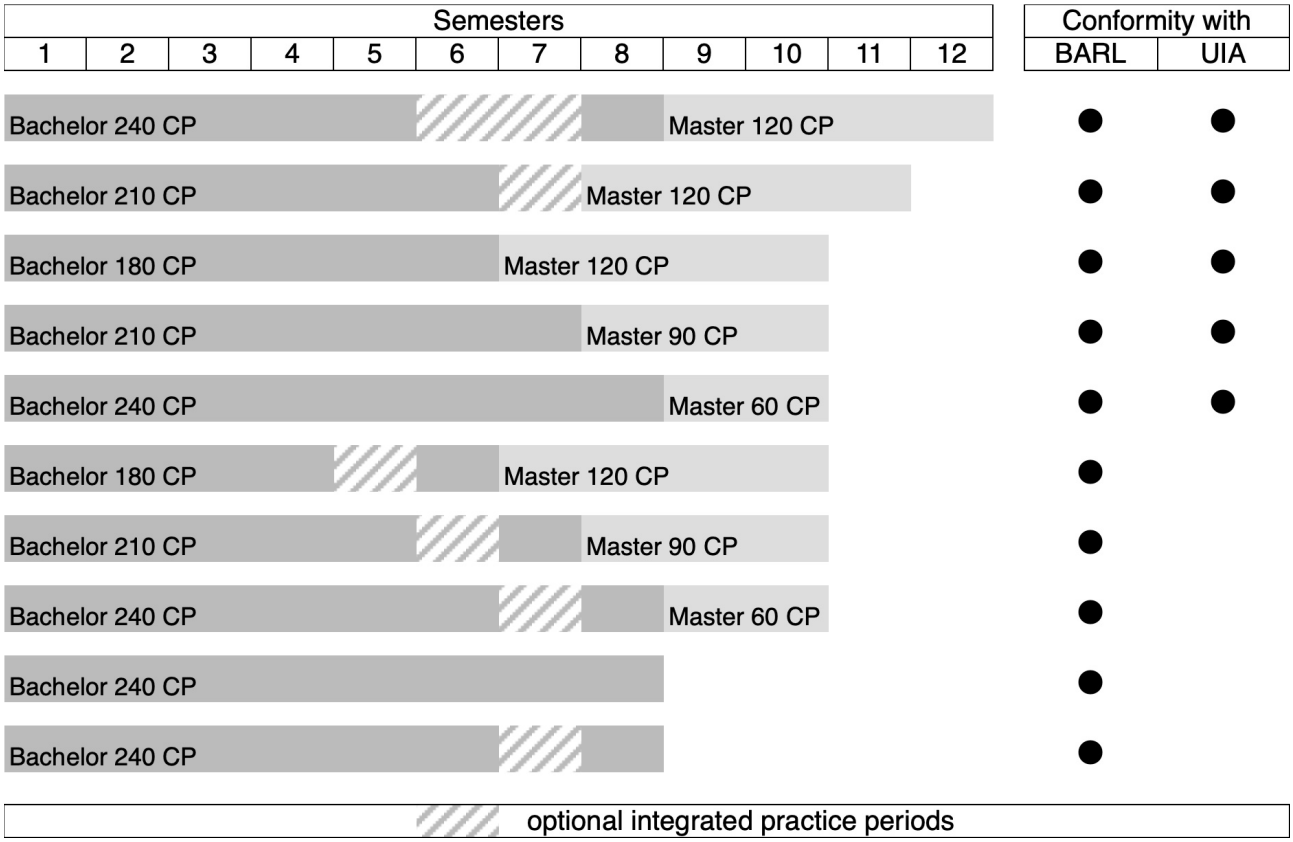
It is the view of ASAP, the Federal Chamber of German Architects and the professional organisations that a five-year academic education is required to practise the profession. Institutions of higher education should, if possible, offer Bachelor's and Master's degree courses with a total of 300 credits in line with the ECTS. .

Attention should be paid that the level of qualification gained in a Master's degree course, in accordance with the qualification framework for degrees from German institutions of higher education and the qualification framework for architecture, is higher than that gained in a Bachelor's degree course. Hence, the Bachelor's and the Master's degree courses must pursue different qualification targets for professional recognition.[2]

Only one standard period of study for each degree programme was permissible according to the agreement of the Standing Conference of the Ministers of Education and Cultural Affairs (KMK).[3]

2 Qualification Framework for Degrees from German Institutions of Higher Education, Qualification Framework for Architecture

3 Decision of the Standing Conference of the Ministers of Education and Cultural Affairs (KMK), 20.09.2012



BARL – Berufsanerkennungsrichtlinie: EPQD – European Professional Recognition Directive

3.2 Bachelor's degree courses

The qualification objectives of the Bachelor's degree courses listed below shall be clearly stated and the connection of the degree to the regulated architectural profession specified.

3.2.1 Bachelor's degree courses with 180 or 210 ECTS credits (six or seven semesters full-time study)

Three-year or three-and-a-half-year Bachelor's courses qualify for all fields of activity in planning and construction, public administration as well as the real estate industry and are a requirement for acceptance on a Master's course of study. However, they do not meet the requirements of the European Professional Recognition Directive or lead to registration with a German chamber of architects.

3.2.2 Bachelor's degree courses with 240 ECTS credits (eight semesters full-time study)

Four-year degree courses combined with two years of professional work experience fulfil the minimum requirements for professional recognition in Europe. Hence, they must teach all necessary subjects required for practising architecture.

Completing the course allows acceptance on a Master's course of study for additional qualifications in accordance with the EU Professional Recognition Directive Article 46, Para 1(a) or UNESCO/UIA Charter (also see Section 3.3.1).

If the institution of higher education offers both eight-semester as well as six- or seven-semester Bachelor's degrees, each shall be developed as a separate, autonomous course. For both courses different resilient targets shall be defined and different curricula developed. The relevance of the degrees for the profession of architecture must be shown.

3.3 Master's degree courses

The successful completion of the second stage of studies leads to a Master's degree. Combined with a first degree in architecture, it provides the best basis for gaining professional recognition in Germany and Europe, enables admission to PhD studies or doctorates and meets educational qualifications required for senior civil service. Satisfying the UIA criteria, it fulfils the requirements for recognition as an architect in accordance with UNESCO/UIA standards.

3.3.1 Consecutive Master's degree courses

Consecutive Master's degree courses are, according to the Model Ordinance on the Accreditation of Studies, developed as in-depth, broadening, inter-disciplinary courses or courses in other subjects.

The core areas of architectural education can be complemented with focus areas in research and development as well as artistic activities. However, architecture must remain the main educational element.

For the successful completion of a Master's course of study which is to lead to recognition in accordance with UNESCO/UIA, it is also required that

- after completion of a Master's course of study with a minimum of 300 credits, the requirements of the UNESCO/UIA Charter for architectural education have been met,
- the course is a full five-year academic course of study in architecture, excluding the time spent in practical training.

3.3.2 Continuing Master's degree courses

Continuing Master's degree courses require professional work experience of generally no less than one year. The continuing Master's degree course shall consider the content and tie in with the professional experience. While developing the concept for the Master's degree course the institution of higher education shall indicate the relationship of the course and qualification for the profession and/or research. Continuing Master's degree courses may either lead to specialisation or in-depth studies, but only with the appropriate educational content and following on from a Bachelor's degree in architecture may they lead to a qualification as an architect. In this case they must comply with the requirements set out in Section 3.3.1.

3.4 Cooperation with international institutions of higher education

In the case of cooperative courses with international institutions of higher education that offer students an international degree, the institutions of higher education must review compatibility with the above requirements and inform students in advance.

3.5 Part-time degree courses, part-time degree courses for working students

Part-time degree courses are study programmes that are constituted in curricula and structured by examination regulations. They lead to an academic degree, although not in full-time study but characteristically in continuous and consistent training and self-directed learning and attaining verifiable academic achievements. The educational content and learning of competences must be equivalent to those taught in the corresponding full-time courses, the only difference being the duration.

In part-time degree courses, implications with regard to the allocation of benefits according to BAföG[4] must be taken into account. As a rule, these benefits do not apply to students with a second job.

3.6 Dual degree courses

Dual degree courses are characterised by the use of companies and equivalent institutions as second learning venues alongside the institution of higher education, and divide the curriculum between two learning venues at least. Their intended integration of contents,

4 BaföG – German Federal Training Assistance Act

duration, organisation and contractual obligations is aimed at students achieving a specific qualification profile by linking theoretical and practical teaching. They must be incorporated in quality assurance.

On its webpage,[5] the Validation Council notes the following:

- 'The Validation Council has found that in practice mostly aspects relating to the integration of content lead to uncertainties and misunderstandings, both on the part of the higher education institutions submitting the application and on the part of the validation agencies carrying out the assessment. Some fundamental considerations can be extracted from previous decisions made by the Validation Council:
- As a rule, the Validation Council bases its assessment on the degree course and not on the complementary practical work. This means that the integrating of content must be set out in the curriculum. Training or working in an area with an affinity to the subject of the degree course does not sufficiently justify the profile characteristic 'dual' even if parts of the occupation count towards the course of study without further transfers of credits or parts of the course of study count towards a training programme.
- The integration of content must be systematic. Isolated points of contact with professional practice, for example in the context of a practice semester or the final project, do not justify the profile characteristic 'dual'. In the Validation Council's opinion, it follows that the curriculum of the dual degree course must differ at least in its concrete requirements for students from those on a complementary 'conventional' full-time degree course.
- The integration of content must be anchored in the degree course documents (e.g. module descriptions, study and examination regulations).
- Within the framework of quality control and quality assurance on the part of the institution of higher education, the practice partners can bindingly demand the integration of content, for example through cooperation agreements.'

In addition, the view of the Federal Chamber of German Architects should be considered, which notes the following.[6]

- 'Dual degree courses cannot impart the necessary qualifications for the architectural profession in the same period of time as degree courses taught mainly at institutions of higher education. Due to the stipulations in the Professional Recognition Directive, the practice periods in architectural studies cannot be assessed with more than 30 ECTS credits of workload, as long as the standard duration of studies is not extended beyond the minimum four years stipulated in the Professional Recognition Directive.
- If dual degree courses ….. are to be introduced, they must extend over a longer period of time to make up for the practice periods and, because of the aforementioned Directive on the stipulations and their application in Brussels, they must comprise at least 3.5 years of full-time study at an institution of higher education.
- In this context, institutions of higher education that offer UIA-compliant training must take into account that they fulfil the requirement for a course of study without practice periods and consider this when selecting applicants for a Master's course of study.'

3.7 Distance degree courses

The degree courses considered here are those in which the greater part of the training is not provided at the institute of higher education. Not considered any further is partial online teaching that is provided temporarily, for example

- due to a pandemic
- to reduce the volume of traffic
- or for further qualification.

With regard to distance degree courses, ASAP fully agrees with the Federal Chamber of German Architects' view, which states the following in the above mentioned paper (see Footnote 6):

'Courses of study must distinguish between different qualifications as regards their suitability for being taught on a distance course:

On the one hand, there are topics that require fewer discussions and have definitive solutions, as described in the Annex to the Model Architects Act, for example in items d), h) and i). On the other hand, the goal is to teach problem-solving skills within subjects that do not have a definable solution process ('wicked problems' according to Rittel and Webber). They need constant discourse and are therefore hardly teachable in a distance course of study.

They include architectural and artistic design, as stated in the Annex to the Model Architects Act under items a) and b). The Professional Recognition Directive and its interpretation in the Brussels committees, value architectural design particularly highly.

A degree course in architecture taken only as a distance course of study therefore does not meet the necessary standard of educational objectives that are needed to perform the professional tasks of an architect.'

3.8 Doctoral degree courses

PhD courses provide organised academic education for PhD students. As a general rule, entrance requirements are Master's degrees in accordance with the PhD regulations of each institution of higher education. Other entrance requirements can be set by the institutions of higher education.

5 FAQ 16.2, also see: https://www.akkreditierungsrat.de/de/faq/tag/dualer-studiengang

6 Recommendation on education-related issues for registration requirements for architects, landscape architects, interior architects and urban planner for applicants from dual and distance degree courses; resolution by the board of the Federal Chamber of German Architects of 24.02.2021

The objective of expanding knowledge is a systematic understanding of the research discipline and comprehensive familiarity with literature connected to the subject. The submission of an academic paper is to make an individual contribution to research that expands the boundaries of knowledge and stands up to national and international review by specialised academics. Fields of research and academic problems arise from the high complexity of architecture, and are often linked to one or several other academic disciplines.

PhD studies deepen the students' knowledge and skill with the objective of encouraging their versatile personal development whilst providing qualified and focussed training for young academics. They support PhD projects and provide opportunity to further develop acquired knowledge and skills within a tutorial framework.

PhD studies are research-based further training with the objective of conveying in-depth methodical and scientific knowledge which reaches outside and beyond the previous course of study. If necessary, they also serve the completion of key competences.

The objective of the studies is to successfully complete the PhD programme at a faculty of architecture whilst meeting additional admission requirements in compliance with the doctorate regulations or decrees by the PhD board which are based on them. Successful studies lead to obtaining a PhD.

The curriculum for PhD studies includes research methods, subject-related and issue-specific lectures and courses as well as the teaching, enhancement and updating of key qualifications.

4 Entrance requirements for Bachelor's and Master's courses of study

Admissions requirements are essential for the quality of the courses. Other than the admission conditions listed below, the institutions of higher education may formulate additional admission conditions, as for instance for dual degree courses. They must be robustly defined by the institutions of higher education in special admissions regulations or in the course and examination regulations as well as in the diploma supplements. This must be assessed for accreditation.

4.1 Entrance requirements for Bachelor's courses of study in architecture

The entrance requirements for a Bachelor's degree course are in line with the entrance requirements stipulated by German federal state law. For the subject architecture, an additional entrance qualification, other than the higher education entrance qualification, is recommended in the form of an aptitude test pursuant to the relevant German higher education laws.

4.2 Entrance requirements for Master's courses of study in architecture

A first qualifying degree from an institution of higher education is a mandatory requirement for acceptance onto a Master's degree course. In addition to this, professional work experience of one year as a rule is necessary for admission to continuing Master's degree courses. A Master's degree course must meet high professional and academic standards; therefore admission to a Master's degree course shall be dependent on additional entrance requirements (e.g. admission examination, preliminary work experience). This must be assessed for accreditation.

In accordance with the European Professional Recognition Directive, a minimum study period of four years in the subject of architecture is required to qualify for the regulated architects' profession.[7] The UNESCO/UIA standards for international recognition require at least five years of theoretical studies in the subject of architecture.

This implies the following for study programmes that lead to a Master's degree and qualify for the regulated profession of architecture:

- Entrance requirements for a Master's degree course in architecture which qualifies for the regulated architects' profession must, in accordance with the European Professional Recognition Directive, be a first degree in architecture. Admission of graduates from other disciplines or fields is excluded (also see Section 3.3.1), as otherwise the educational objective cannot be achieved by all graduates to the same extent.
- The institution of higher education must ensure that all credits obtained in both the first architecture degree course and in the Master's degree course at least cover a balance of all theoretical and practical aspects in accordance with the 11 criteria in the Professional Recognition Directive 2005/36/EC Article 46.
- Institutions of higher education offering education in line with the UNESCO/UIA criteria must check at admission whether a first course of studies without practice periods can be verified and guarantee that a total of five years of full-time study in architecture has been completed.
- Master's degree courses that provide a specialisation in the field of architecture or planning and carry this in the title, and so may be directed at graduates from different disciplines, are as a rule only suitable qualifications for the architectural profession, if they, in their essential parts, are based on the continuation of contents in accordance with the European Professional Recognition Directive or – if respectively anchored in the educational objectives – also with the UN ESCO/UIA Charter, and guarantee professional recognition for all who have completed their first course of study in architecture. This must be made absolutely clear and transparent to potential students.

The above issues must be clearly stated in all respective admissions, course and examination regulations as

7 In accordance with Directive 2005/36/EC (Article 21(7) Professional qualifications for architects) amended in Directive 2013/55/EU

well as in the descriptions of available courses, in order to convey transparency for both potential students and students in terms of professional qualification and professional recognition pursuant to national, European and/or worldwide requirements. The issue of professional recognition should therefore not be transferred to the level of the architects' chambers or made the responsibility of the students.

5 Qualifications

5.1 Degree titles

Courses in architecture may generally lead to three different types of degree:

- Bachelor or Master of Arts (B.A. / M.A.)
- Bachelor or Master of Science (B.Sc. / M.Sc.)
- Bachelor or Master of Engineering B.Eng. / M.Eng.)

The title 'arts' denotes arts-oriented courses (including study courses in liberal arts); the title 'science' denotes courses in natural sciences and the title 'engineering' denotes courses in engineering. Since architecture can be attributed to all of these fields, the institution of higher education must define the focus of the course.

Bachelor's and Master's degree courses are distinct courses that lead to distinct degrees. Therefore, successful completion of a Bachelor's or Master's course can each only achieve one degree. Consequently, Bachelor's and Master's degrees cannot be gained at the same time as completing a diploma or magister course. Similarly, a diploma or magister degree cannot be gained at the same time as completing a Bachelor's or Master's degree course.

In the field of architecture, the term 'qualifying for a profession' can only be used for qualifications that undoubtedly lead to an education-related registration requirement for architects. If the higher education laws for the German federal states stipulate that the degrees of all Bachelor's programmes must be recognised as qualifying for the profession, institutions of higher education should, in case of degrees that are not sufficient for practising in the regulated profession (e.g. three-year Bachelor's degree course), transparently point out the relevance of the prerequisites for registration. In this context, reference can be made to the option of practising the profession in a participatory capacity or under supervision, for instance.

5.2 Degree certificates, diploma supplement

The diploma supplement and transcript of records provide proof of students' qualifications, which they need in particular if they want to change institutions of higher education.

The institutions of higher education must clearly define in their examination regulations and in the diploma supplement which qualifications graduates will have gained on completion of the respective degree courses with regard to registration or licensing.

5.3 Securing educational objectives in relation to professional recognition

Institutions of higher education offering an education in architecture must – in the interest of consumer protection and, in particular, the registration committees of the German chambers of architects – ensure that the contents of courses leading to a qualification in architecture, as defined by the architects law of the federal states, EU Professional Recognition Directive or, where applicable, by the UNESCO/UIA Charter, are the subject of the training and thus part of the course objectives. Therefore, accreditation or quality assurance must assess whether it is a course in architecture or a combined course that leads to professional recognition. If this is not the case, the title of the course must not make reference to the regulated activity in the field of architecture.

For five-year study programmes that lead to a Master's degree in architecture, both the Bachelor's and the Master's courses of study must meet the criteria of EU or, with the appropriate definition of the educational objectives, of the UNESCO/UIA Charter. This must be verified for both degree courses:

Issues relating to professional recognition can be summarised as follows:

For a Bachelor's degree after six or seven semesters of studies

- The course of study provides a first professionally qualifying academic degree
- It does not qualify practising in the regulated profession of architecture.

For a Bachelor's degree after eight semesters of studies

- The degree qualifies, in accordance with the Professional Recognition Directive, provided it is combined with supervised two years' professional practical experience, of which one year must build on the knowledge, skills and competences listed below and in the Professional Recognition Directive, to practice the profession of architecture, which is regulated in Europe.
- The course of study does not qualify for practising architecture pursuant to the UNESCO/UIA Charter.

For all Bachelor's degrees

The Bachelor's course of study with eight, seven or six semesters can be completed with a two, three or four-semester Master's degree course, in order to

- account for five years of education pursuant to the Professional Recognition Directive, Article 46(1)a
- provide training in line with the UNESCO/UIA criteria (without periods of time spent in practical training).

For a Master's degree

- The course of study qualifies pursuant to the architects law of the federal states and the Professional Recognition Directive for the profession of architecture, which is regulated Europe-wide.
- It also fulfils the requirement for the profession of architecture pursuant to the UNESCO/UIA Char-

ter, provided the course of study has a total of ten theory semesters or 300 ECTS credits and does not contain practice periods which are anchored in the curriculum. Institutions of higher education must be able to rely on the diploma supplement or the transcript of records for the Bachelor's degree from the previous institution of higher education (see Entrance requirements in Section 4.2). This must be incorporated in the examination regulations and reviewed for accreditation.

5.4 Civil service

Course-related accreditations ensure that the degrees fully meet the educational qualifications required for the civil service. In accordance with the agreement between the Conference of Interior Ministers of the States in the Federal Republic of Germany (IMK) and the Standing Conference of the Ministers of Education and Cultural Affairs of the States in the Federal Republic of Germany (KMK), Master's degrees gained at both higher education institutions and universities of applied sciences qualify for work in the senior civil service (höherer Dienst) while Bachelor's degrees, irrespective of the duration of the studies, qualify for higher civil service (gehobener Dienst).[8]

6 Modularisation, mobility and the European Credit Transfer System

6.1 Modularisation concept

The degree must promote the internationalisation of professional studies. The studies are required to be modular in structure, and their assessment must be in line with the European Credit Transfer System to ensure national and international compatibility.

For the accreditation of a Bachelor's or Master's degree course, it must be verified that the course is modular and the ECTS is in place. As a rule, the content of modules must be designed so that they can be taught within one semester or one year. In justifiable cases, a module may extend over several semesters.

As a rule, 60 credits can be obtained during one academic year in accordance with the ECTS – that is 30 credits per semester. This assumes that one credit is equivalent to students' workload of 25 to 30 hours maximum self-directed studies and classroom presence, so that the workload on a full-time course in one semester of lectures and lecture-free periods amounts to a total of 750 to 900 hours. This is equivalent to 32 to 39 hours per week for 46 weeks per year.

The proviso of the Model Ordinance on the Accreditation of Studies requiring that modules should not offer less than five credits intends to ensure that the old structure of courses is not retained. However, the specific conditions of a degree course or a module will determine the specification of a module's size, which in some cases may justify the allocation of fewer credits.

It is important to note that the allocation of credits does not necessarily require an examination, but the successful completion of a particular module. The allocation of credits must be precisely and comprehensibly described in the examination regulation and in the accreditation documentation.

The objectives of modules must be related to the different qualification objectives of the individual courses. Robust rules must be developed for a possible recognition of modules taken in parallel degree courses.

'The dual use of modules whose content builds on previous modules of a degree course' is excluded.[9] This is the case for consecutive and continuing courses at Master's degree level. The duplication of modules from Bachelor's degree courses in Master's courses is permitted in exceptions, if the partial qualification, which is gained after successful completion of the relevant module, plays an adequate role in accomplishing the overall educational objective of the Master's degree course.

The following applies in all other cases: The qualification standard defined for each degree level must be maintained. The institutions of higher education must ensure that students cannot take the same or essentially similar modules in a Bachelor's and again in a Master's course of study.

6.2 Academic feasibility

The logical consistency of a course concept and the academic feasibility (studiability) of a course of study, including self-directed work, must be ascertained by the institutions of higher education and reviewed as well as confirmed for accreditation.

In addition to reviewing the structure of modules and examinations, the course plans and methods employed for determining and updating the workload should be scrutinised particularly.

6.3 Recognition of educational credits at other institutions of higher education

Responsibility for the recognition of credits that have been obtained at another higher education institution lies with the institution of higher education that is asked to accept credits ('reversal of burden of proof' pursuant to the Lisbon Convention). The focus of assessment by the institutions of higher education has now shifted from 'equivalence' or 'similarity' of qualifications to their materiality of differences.[10] The recognition process must be based on manageable provisions, which are also part of the examination regulations. This is subject to accreditation. Reasons must be given for non-recognition of modules. The aim is to facilitate mutual recognition of modules at other insti-

8 Agreement between Conference of Interior Ministers of the states in the Federal Republic of Germany (IMK) of 07.12.2007 and the Standing Conference for Ministers of Education and Cultural Affairs (KMK) of 20.09.2007.

9 Statement on the Model Ordinance, State Treaty on the Accreditation of Studies, page 21

10 Recognition policies for the Lisbon Convention applicable to institutions of higher education based in Germany qua federal and/or state law, see statement on the Model Ordinance on the State Treaty on the Accreditation of Studies, page 15

tutions of higher education; this is a key element of the Bologna reform.

Experience with past accreditations has shown that mutual recognition of modules tends to involve comparison of course content rather than the competences learnt during the module (outcome orientation).

Since students of architecture are increasingly involved in an international context, it is recommended that the ECTS marking system is also used for individual modules.

6.4 Credit for competences gained outside institutions of higher education

In accordance to the requirements of the Standing Conference of the Ministers of Education and Cultural Affairs (KMK), it was permissible that verified equivalent competences and skills obtained outside educational institutions may account for up to half of the credits allocated for a degree course. If an institution of higher education applied this exception, it had to be proven whether a suitable procedure for verifying the students' qualifications had been developed. It had to be ensured that the institution of higher education reliably declared the abridged academic part of the course of study in their examination regulations and in the diploma supplement, whilst recognising the provisions of the EU Directive.

The credit for competences acquired outside the institution of higher education is the responsibility of the institution of higher education. Through their recognition, they ensure that the achievements gained outside the institution of higher education correspond to the achievements gained within the institution of higher education and thus guarantee the qualification for professional recognition. Particularly for courses of study in architecture, the criteria listed expressly for practice periods within a course under Section 7.2 also apply.

Both the State Treaty on the Accreditation of Studies and the Model Ordinance do not provide information on this requirement by the Standing Conference of the Ministers of Education and Cultural Affairs (KMK); however, the appropriate requirements are specified by the German federal law governing higher education.

6.5 Transparency

In order to provide comprehensive information to prospective students, students, employers and chambers of architects, it is necessary to ensure that publications of information on the course structure are easily accessible. For this purpose, it is useful to publish the following information on all degree courses on the institution of higher education's website:

- qualification objectives, also in relation to professional recognition
- admission requirements
- examination regulations
- overview of modules with information on the related credits
- module manuals.

In addition, it is recommended to name modules, briefs for design work and final projects in such a way that they allow conclusions to be drawn about the qualifications imparted.

7 Professional practice

7.1 Course integrated practice periods

Periods of time spent in practical training within a full-time course of study and dual study courses (see also Section 3.6), which are integrated into the course of study and whose content is set by the institution of higher education and thus is a supervised element of the professional experience, form part of the workload and are rewarded with ECTS credits. This includes practice periods during lecture-free periods, since the students' workload is calculated over the whole academic year or semester.

Institutions of higher education must make clear the learning objectives of practical training and how they relate to the curriculum. The content of the professional practical experience must be modularised and agreed with the place of work, for instance in a 'learning agreement'. The content and organisation of the practice periods during a course of study must be made known to students as well as their place of work and are subject to accreditation. Practical training must be recognised in a formal and comprehensible procedure and anchored in the examination regulations.[11]

Equating practice periods with academic study periods – for example in optional mobility semesters – is not permitted in architecture courses due to the various qualification objectives.

It is important to bear in mind that practice periods integrated into studies do not replace parts of the professional practical experience required for professional recognition.

Integration of professional practice according to the European Professional Recognition Directive:

The integration of curricularly anchored and supervised practice periods into the course of study is the responsibility of the institutions of higher education. If professional recognition is pursued in accordance with national and European legislation, it must be ensured that the contents listed in the directive in sufficient detail and the practice period is not allocated too much workload (see Section 3.6, Dual study courses). This must be proven by notification – particularly in the case of four-year Bachelor's degree courses (see also Section 7.3).

Integration of professional practice in accordance with the UESCO/UIA Charter for Architectural Education:

The UESCO/UIA criteria explicitly stipulate five years of full-time study in an accredited study programme. Prac-

11 See former proviso for the interpretation of the structural requirements common to all German federal states, resolution of the Validation Council of 12.02.2011

tice periods must be outside this study period as they will otherwise shorten the periods for theory studies.[12]

7.2 Unintegrated practice periods

7.2.1 Preliminary work experience

Institutions of higher education may, in consideration of the higher education law, ask for preliminary work experience as an admission requirement to a Bachelor's or Master's course of study, which does not count towards the duration of studies. The institutions of higher education may stipulate in the admission conditions that proof of preliminary work experience can be submitted after the course has started.

Construction-related work experience:

As a rule, work experience in construction is recommended prior to starting the course of study. Work experience serves to confirm the suitability of the chosen subject, provides valuable experience that will be of use during the course and offers insights into professional practice and everyday work on a construction site.

Preliminary work experience in an office:

Work experience in an office should be carried out under the guidance of a member of the chamber of architects and provide an in-depth insight into professional practice to support the course of study.

The following framework conditions should be considered for the preliminary work experience:

- Institutions of higher education that require preliminary work experience must ensure that there are no restrictions on studies, for example by overlapping practice periods and study periods.
- The practical training period between Bachelor's and Master's courses of study does not compromise the consecutiveness of a Master's course, but the direct transition from Bachelor's to consecutive Master's programmes should not be jeopardised.
- If the institution of higher education recommends a longer period of work experience before the beginning of the Master's course and thus a later start into further studies, this can count towards the professional practical experience required for professional recognition, as described in Section 7.2.2.
- Proof of at least one year's professional experience is required for continuing Master's degree courses.

7.2.2 Extra-curricular practice periods within the duration of studies

Study programmes can include practice periods outside the curriculum, as for instance in part-time study programmes. In the case of these courses of study pursuing professional recognition in accordance with the German architects law, the duration of studies is extended.

Please note in this context:

- Extra-curricular practice periods can be evaluated by the chambers of architects as part of the professional work experience required for professional recognition, subject to the appropriate legislation at state level. In accordance with the Professional Recognition Directive, this may relate to practical training periods which are carried out after completion of the first three years of studies (see also Section 7.3).
- The inclusion of practice periods that extend the duration of studies presupposes that the students working in the profession are paid according to legal requirements (minimum wage). As a rule, this means that no BAföG (see Footnote 4) benefits are provided.

7.3 Professional work experience after completion of the course of study

In order to register as an architect with a chamber, graduates from German institutions of higher education must prove that they have worked for two years in the profession in accordance with the architects law of the federal states. As a rule, the architects law of the federal states stipulate that this is to take place after completion of the studies leading to a professional qualification. In some federal states, the professional work experience required for registration, which is carried out in the period between the completion of the Bachelor's course of study and the beginning of the Master's course of study, may be partially recognised.

The professional work experience following the course of study is not subject to accreditation, but must be seen in relation to the curriculum and study programme. The European Professional Recognition Directive also has consequences for the notification of four-year courses in the field of architecture:

- At European level, in the case of four-year degree courses, two years of professional work experience following the course of study are required.
- At least one year of this professional work experience must build on the knowledge, skills and competences acquired during the studies.
- The professional practical experience must be completed under the supervision of an authorised person or agency.

Four-year Bachelor's degree courses pursuing the objective of professional recognition are therefore only notified if it can be shown that they also meet the requirements of the Professional Recognition Directive with regard to the two years' professional practical experience. For these degree courses, the curricular integration of practice periods in the notification procedures is therefore subject to special consideration.

8 Research and teaching

Teaching in the field of architecture is born by contributions by practising professionals and research at the institution of higher education itself. The key compe-

12 Reconfirmed by the UIA General Assembly in Tokyo 2011 (Amendment to the UNESCO/UIA Charter for Architectural Education, 2011, Article II-5.1), and for 'supervised' practical training periods confirmed again by the UIA Commission on 20.12.2012.

tence of architects is their ability to deliver architectural designs. In their creative process, they apply intellectual knowledge, test it and give new impetus for research in all dimensions of a building project, and at best become researchers themselves. Design is also scientific research.

To uphold the quality of architectural teaching and maintain the essential real-world reference to the complex demands of professional working life, it is necessary for the teaching staff at higher education institutions to be involved in research. This is generally based on applied methods and experience, including architectural practice, project work and construction methods as well as other academic disciplines.

Architecture is considered a science that is structured in a theoretical and a practical field, and its continual differentiation give rise to a number of sub-disciplines. Research fields are based upon the autarky of architecture and natural sciences, but also increasingly upon the humanities, social sciences and the arts.

The natural sciences field of architectural research considers inanimate and living nature by observing, recording and analysing it through computation. In this context, nature is the whole of all empirically accessible phenomena of matter and energy. One of the important tasks is to apply this and make it available to people. In the field of architecture, this research area includes aspects of energy and construction physics, structural design subjects, building services, materials and their properties.

Research areas related to the humanities and social sciences use different methods to study various fields that relate to intellectual, media, cultural, social, historical and political phenomena. Anthropology would be a possible starting point, since people and their products are at the centre of all 'habitation'. Alongside history of architecture, the theory of architecture and urban planning play key roles in architecture. Specific building traditions are historically analysed and the underlying theories explored. These researches lead to reflection on architecture and urban planning, and establish a basis for appreciating and comprehending the complex characteristics of space, place, building and city as well as the various cultural, social, societal and political forces that have affected their creation.

Artistic processes are always explorative, based on experience and leading to knowledge. Art and science are two dimensions in a shared cultural space. Artistic research could be characterised as a process of searching that skirts the boundary between knowledge and ignorance, or not yet knowing and wanting to know. Designing also shifts between intuition and issues that can be solved with knowledge-based methods. Therefore, research in architecture must, to a large extent, make reference to the analysis and presentation of design and planning processes (object – method – product) since its findings form the basis for teaching the architects' key competences.

Accreditation must consider the correlation of research and teaching. It is a fundamental aspect of internal quality assurance.

9 Staff structure

Accreditation documentation should give an overview of an institution's academic teaching staff, which is to include information about teaching but also about research projects, publications, independent professional work and social involvement, e.g. tasks in self-government. The student to teacher ratio must be stated as well as the number of first semester students, the total number of students and the annual number of graduates.

The faculty must make available sufficient supervisory staff for the courses of study offered. Proof must be provided of lecturers' qualifications for the modules they teach (job description at the time of appointment, practical experience, academic and artistic reputation) as well as the quantitative capacity of the teaching workload. The suitability of the participating teaching staff's qualifications regarding the profile of the course of study must be checked. This applies in particular to Master's degree courses with a special focus.

9.1 Professors

Availability of sufficient basic staff resources of professorships is a requirement for setting up a course of study. ASAP recommends a minimum provision of full-time positions for the protection and development of teaching pursuant to Article 46 of the European Professional Recognition Directive.

Professors represent their subject in all aspects of research and teaching. They are usually appointed from within the profession. In addition to an excellent professional reputation, they must also demonstrate particular academic or artistic accomplishments and pedagogical competence.

The credentials of higher education teaching staff can only be assured in the long term if they – within the limits of available time – engage in planning, design and construction projects or research projects.

9.2 Non-professorial teaching staff

The research and/or artistic staff support the implementation of research and teaching. The qualification for a teaching position is substantial work experience after graduation. Since most positions are offered on fixed-term contracts, the faculty should ensure that in addition to the statutory basis for further professional or academic qualifications, participation in competitions and other design or research projects allow the development of individual profiles. Funds must be allotted for this purpose that not only cover periods of leave.

9.3 Non-academic staff

Staff with specialist training provide important supplements and support in research and teaching, either by supporting laboratories and workshops or by taking on administrative tasks. They can also act as teachers for special areas and take over parts of the teaching, thus relieving professors and non-professorial teaching staff.

9.4 Student assistants and tutors

Successfully qualified students in higher semesters can usefully support teaching of specific subjects in direct contact with students. They must be instructed by the relevant professors.

9.5 Lecturers, visiting lecturers, guest critics

Lecturers, visiting lecturers and guest critics support the organisation of research and teaching. Furthermore, their teaching adds a specific focus on issues facing practitioners. The required subject-specific qualifications of lecturers with a right of examination should be the same as for professors.

The curriculum must identify options offered by external lecturers, visiting lecturers and guest critics and at interdisciplinary events.

10 Infrastructure

New didactic methods, growing diversification of the content of teaching in technical and laboratory-related areas as well as a changing dependence on IT infrastructure have led to increasing demand for subject-specific infrastructural facilities at schools of architecture since the mid-1900s. This leads to the traditional distribution of funds in the budget of institutions of higher education to become obsolete, in particular among the technical sciences. With scarce resources at institutions of higher education, this can lead to disputes about the codes for the distribution of funds and calculation criteria. In this respect, accreditation can contribute by providing the independent assessors' external and objective views on the one hand whilst supporting the faculties of architecture in justifying their requirements on the other.

Accreditation must evaluate whether the existing infrastructural facilities are adequate and suited to guaranteeing the educational objectives and the quality of courses of study.

10.1 Studio workspaces for students

It is essential for the quality of training that students of architecture have workspaces in a studio; this is currently the usual standard. They must be adequately equipped and, if possible, individually accessible 24 hours a day, also outside the institution of higher education's regular opening hours. ASAP recommends the provision of individual studio workspaces for all students, corresponding to European and US standards.

10.2 Workshops and laboratories

Workshops and laboratories are essential elements for teaching and research on courses of study in architecture. Equipment, size and supervision must correspond to the number of students accepted. It is sensible to distinguish between areas that belong to a particular teaching department and areas that are accessible to all students.

10.3 IT equipment

The availability of subject-specific hardware and software is essential for the efficient teaching of architecture. Accreditation is to evaluate whether the existing equipment corresponds to the study and research objectives and whether it meets the curricular requirements in the high-end segment.

10.4 Library

A library is an important facility for teaching architecture. It should be well equipped with current literature, have long opening hours and be easily accessible from the studio workspaces.

10.5 Research laboratories

Appropriately sized and equipped spaces used for a specific discipline's research activities for interdisciplinary work must be accounted for.

10.6 Communication and presentation spaces

In addition to other functional spaces, architecture schools need communication and presentation spaces that are available to all teaching staff and students. These mainly include conference rooms, spaces for crits of student projects and spaces for public presentation of student projects.

11 Budget

The listing of available funds shall provide clear information on the allocation for academic staff, material resources, investment resources and freely available personnel resources (e.g. for teaching assignments, student assistants, etc.).

Evidence must be provided that the didactic and spatial targets of the curriculum can be met by the current budget.

12 Quality assurance

12.1 Formalised quality assurance procedures

The institution of higher education or faculty should have a concept and concomitant procedure for assuring the quality and standards of its study programme and degrees. In order to achieve this, it should develop a strategy for a continuous quality development as well as for the implementation of this strategy. The strategy, concept and procedure should have a formal status and be accessible to the institution of higher education's public. Additionally, it should allocate specific roles for students and other stakeholders.

The tools and procedures for quality assurance employed by a faculty must be reviewed in terms of their relevance to the course of study in architecture. This applies particularly to the adoption of inter-faculty quality assurance systems.

Programme accreditation

Additionally to providing evidence of the minimum criteria for the quality of academic achievements as a

requirement for accreditation, ASAP also asks for the formulation of evaluation criteria. Strengths and weaknesses in the teaching concept should be identified and recommendations made for improving the quality. For this purpose, the institutions of higher education should hold ready examples of students' work. The institution of higher education's self-report must also include the type, frequency and assessment procedures for students' evaluation as a means for developing their education. Students are also questioned about their educational standards in student interviews.

System accreditation

There are no significant differences between programme accreditation and the required proof with regulated procedures and criteria for quality assurance. The principle of continuous, that is regularly recurring reviews of the provisions remains in place. Only the assessment procedure varies depending on the quality of the institutions of higher education's assurance processes, which are tested for system accreditation. Since architectural education has a special role in the educational landscape due to its tie to the regulated and defined architecture profession, ASAP recommends that an assessment is made by external experts in any case.

System-accredited higher education institutions must ensure that professional law issues are considered sufficiently during internal accreditation and that the educational objectives pursued in the study programmes are achieved with regard to professional qualification.

12.2 Informal quality assurance methods

In addition to formal procedures of quality assurance required for degree courses in architecture, the following informal aspects are also significant:

- **Interaction with society and profession**

  In the field of architectural teaching, interaction with internal and external stakeholders is an important means to control and develop the quality of teaching. This includes exhibitions of student projects, publications, etc. Particularly the presentation of results, study processes and teaching philosophy for public critique guarantees a constant scrutiny of educational objectives and optimal quality control.

- **Interaction in the realm of higher education**

  The involvement of faculties and degree courses in partnerships with national and international institutions of higher education and research facilities not only enhances choices available for students but also provides an essential tool for broadening educational experiences and for reviewing their own positions.

  The assessors should discuss with the faculty to what extent cooperation between institutions of higher education is put into practice. The extent to which the faculty engages in discourse about architectural theory and education involving several institutions of higher education must be reviewed.

- **Interdisciplinarity**

  Interdisciplinarity plays a significant part in the actual work of architects. This is why it forms a requirement for research and teaching. Particularly design projects in which numerous disciplines are applied present a broad sphere of activity. Explicit evidence is required of the ways in which the curriculum of the architectural school reflects this interdisciplinarity.

Appendix

Other applicable documents

Worldwide

- UNESCO/UIA Charter for Architectural Education, Revised Edition 2011, Approved by UIA General Assembly, Tokyo 2011
- Revised 2017 Edition without modifications of the 2011 edition, UNESCOUIA Validation Council for Architecture
- UIA Accord on Recommended International Standards of Professionalism in Architectural Practice, September 2017

European Union

- Joint declaration by the European ministers for education, 19 June1999, Bologna
- Directive 2005/36/EC of the European Parliament and of the Council of 07.11.2005 on the recognition of professional qualifications, last amended by Directive 2013/55/EU of 28.12.2013
- European Commission: ECTS Users' Guide 2015, Luxembourg: Publications Office of the European Union, 05.01.2017

Federal Republic of Germany

- Hochschulrahmengesetz (HRG) (German Higher Education Framework Act) notification version of 19 January 1999 (BGBl. I p.18), last amended by Article 1 of the Act on 15.11.2019 (BGBl p.1622)
- Qualification framework for degrees from German institutions of higher education, KMK/HRK/BMBF, of 16.02.2017
- Qualification framework for degrees from German institutions of higher education in architecture, ASAP (June 2016), DARL, fbta (November 2016), updated ASAP 10.10.2021
- Agreement of the Conference of Interior Ministers (07.12.2007) and the Standing Conference of the Ministers of Education and Cultural Affairs (KMK) (20.09.2007): admission to careers in the senior civil service with a Master's degree from universities of applied science
- Law on the agreement of 11 April 1997 on the recognition of qualifications from institutions of higher education in the European region, 16 May 2007

- Conference of the Ministers of Education and Cultural Affairs (KMK): The following resolutions of the Conference of the Ministers of Cultural Affairs have shaped the original wording in the Professional Criteria. These resolutions are, or will be replaced by the State Treaty on the Accreditation of Study Courses and the supplementary regulations of the federal states. In so far as they have been formulated already, reference to the State Treaty on the Accreditation of Study Courses and the Model Ordinance has been amended in the sixth edition of the Professional Criteria.
- Development of the Bologna process, resolution of the Standing Conference of the Ministers of Education and Cultural Affairs (KMK), 15.10.2009
- Structural guidelines common to all German federal states for the Accreditation of Bachelor's and Master's courses of study (resolution of the Standing Conference of the Ministers of Education and Cultural Affairs (KMK), 10.10.2003, amended 04.02.2010)
- Interpretation of the Structural guidelines common to all German federal states for the accreditation of Bachelor's and Master's courses of study, 04.02.2010. Handout by the Committee on Institutions of Higher Education at the Standing Conference of the Ministers of Education and Cultural Affairs (KMK), 25.03.2011, 25.03.2011
- State Treaty on the organisation of a joint accreditation system for quality assurance for study programmes and teaching at German institutions of higher education (State Treaty on the Accreditation of Study Courses) in force since 01.01.2018
- Model Ordinance in accordance with Article 4 (1-4) State Treaty on the Accreditation of Study Courses, resolution by the Standing Conference of the Ministers of Education and Cultural Affairs (KMK), 07.12.2017
- Statement by ASAP, ZEvA and the Standing Conference of the Ministers of Education and Cultural Affairs (KMK) on the duration of BA and MA study courses in architecture, 8.12.2003
- Validation Council: Reply to ASAP's query on the qualification level of Bachelor's and Master's courses, 21.11.2011
- 'On current questions on the accreditation of degree courses in architecture' – Bonn 18.02.2009 – Statement by Dr. Achim Hopbach, Managing Director of the Validation Council, Prof. Prof.h.c. Herbert Bühler, then chairman of ASAP

States of the Federal Republic of Germany

- German federal state law on institutions of higher education
- Architects law of the German federal states (including architects and urban planners law, builders' chamber law, etc.)
- Ordinance in accordance with Article 4 (1-4) State Treaty on the Accreditation of Study Courses

Abbreviations

ACQUIN	Accreditation, Certification and Quality Assurance Institute (Akkreditierungs-, Certifizierungs- und Qualitätssicherungs-Institut)
AR	Validation Council (Akkreditierungsrat)
ASIIN	Accreditation Agency for Courses of Study in the Engineering Sciences, Informational Services, Natural Sciences and Mathematics (Akkreditierungsagentur für Studiengänge der Ingenieurwissenschaften, der Informatik, der Naturwissenschaften und der Mathematik)
BAFöG	German Federal Training Assistance Act (Bundesausbildungsförderungsgesetz)
BARL	EPQD Professional Qualifications Directive on the recognition of professional qualifications (Berufsanerkennungsrichtlinie)
DAAD	German Academic Exchange Service (Deutscher Akademischer Austauschdienst)
ECTS	European Credit Transfer System
EPQD	European Professional Qualifications Directive
HRK	German Rectors' Conference (Hochschulrektorenkonferenz)
KMK	Standing Conference of the Ministers of Education and Cultural Affairs of the States in the Federal Republic of Germany (Kultusministerkonferenz)
WR	German Council of Science and Humanities (Wissenschaftsrat)
UIA	Union Internationale des Architectes
ZEvA	Central Evaluation and Accreditation Agency (Zentrale Evaluations- und Akkreditierungsagentur)

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Qualification Framework Architecture

Third edition, 10 October 2021

Contents

Level 6 A: Bachelor's 6 or 7 semesters (180 or 210 ECTS credits)

A Preamble

The standard and basis for the description of the qualifications that students of architecture obtain according to the relevant qualification level are the categories of the UNESO/UIA Charter for architectural education (2011), the 11 criteria pursuant to Article 46 (2) European Directive on the Recognition of Professional Qualifications (BARL) (Directive 2013/55/EU of the European Parliament and of the Council of 20 November 2013 and the Qualification Framework for Degrees from German Institutions of Higher Education (HQR) of the Standing Conference of the Ministers of Education and Cultural Affairs (KMK), 16.02.2017.

The course of study provides a first professional academic degree preparing for professional qualification.

It does not qualify practising in the regulated profession of architecture.

B Competence dimensions pursuant to the Qualification Framework for Degrees from German Institutions of Higher Education (HQR) / qualification pursuant to Article 46 (2) Professional Recognition Directive (BARL) and the UNESCO/UIA Charter for architectural education

1 Knowledge and understanding

Knowledge and understanding build on the level of the entrance eligibility to higher education and extend beyond that significantly.

Expanding knowledge:

- Graduates have proven knowledge and understanding of the subject-specific principles of architecture.

In-depth knowledge:

- Graduates have a critical understanding of the theories, principles and methods in architecture.
- Graduates are aware of design processes and methods and planning tools for the development of simple architectural designs.

Understanding knowledge:

- Graduates reflect on the accuracy of subject-specific and practical statements. These are interpreted in relation to their context and critically weighed up against one another.
- Graduates are aware of the factors and constraints of architecture and are able to apply them to projects of low complexity.

2 Use, application and generation of knowledge

Graduates are able to apply their knowledge and understanding to their profession and find and develop solutions to problems relating to architecture.

Use and transfer:

Graduates

- collect, evaluate and interpret relevant information as a basis for a building project;
- derive initial professionally founded judgements from it;
- are able to grasp and evaluate simple spatial situations and develop solutions for them;
- carry out practical projects and contribute to solving basic problems in a team;
- develop further learning processes independently;
- are able to apply the above knowledge in their supporting activity within the professional field of architecture.

Scientific innovation:

Graduates

- are able to work on a problem of less complexity scientifically and methodically within a given period of time and to classify it in interdisciplinary contexts.

3 Communication and cooperation

Graduates

- are able to contribute to work in teams;
- have the ability to communicate with clients, experts as well as citizens and concerned persons;
- are able to present the results of their work on projects of a manageable size;
- have the skills for argumentation and reasoning that are necessary to practise their profession;
- reflect on and take into account different perspectives and interests of other involved parties.

4 Scientific identity and professionalism

Graduates

- are able to reflect on their personal development;
- develop a professional self-image which is based on the goals and standards of professional conduct in architecture;
- justify their professional conduct with theoretical and methodical knowledge;
- are able to assess their own abilities, reflect autonomously and make use of pertinent design and decision freedom under guidance;
- recognise the framework conditions for their professional conduct which is appropriate to the situation and justify their responsible ethical decisions and
- critically reflect on their professional conduct in relation to social expectations and consequences.

C Formal aspects

1 Entrance requirements

Higher education entrance eligibility:

In accordance with the requirements of the institution of higher education or the legal regulations of the German federal states.

- General or subject-linked entrance qualification;
- university of applied sciences entrance qualification, where applicable subject-linked or course-related;
- proof of subject-specific or artistic aptitude.

2 Duration

Including final project, 3 or 3 ½ years in full-time study, i.e. 180 or 210 ECTS credits.

3 Transitions from vocational education

Qualifications and competences gained outside institutions of higher education which are verified by exams may be recognised by the institution of higher education at the start of a course of study by means of an equivalence test, corresponding to the performance requirements of the respective degree course.

Compare: Article 2, State Treaty on the organisation of a joint accreditation system for quality assurance for study programmes and teaching at German institutions of higher education (Studienakkreditierungsstaatsvertrag) (in force since 01.01.2018); Model Ordinance for the State Treaty on the Accreditation of Study Courses pursuant to the resolution by the Standing Conference of the Ministers of Education and Cultural Affairs, 07.12.2017; Federal State Higher Education Act (Landeshochschulgesetz).

4 Professional qualification

Degrees at Bachelor's level provide a first professionally qualifying academic degree preparing for professional qualification. However, they do not qualify practising the EU-wide regulated profession of architecture.

5 Follow-up options

- Consecutive or continuing Master's degree courses aiming to gain professional qualification pursuant to German architects laws, EU Professional Recognition Directive, Article 46, Paragraph 1(a) or UIA standard, provided the course of study comprises 300 ECTS credits excluding practice periods;
- consecutive or continuing Master's degree courses aiming at specialisation (this is not the subject of the description in the Qualification Framework Architecture for Level 7);
- entry into higher civil service;
- PhD under special circumstances (this does not qualify practising the regulated profession of architecture).

Level 6 B: Bachelor's 8 semesters (240 ECTS credits)

A Preamble

The standard and basis for the description of the qualifications that students of architecture obtain according to the relevant qualification level are the categories of the UNESO/UIA Charter for architectural education (2011), the 11 criteria pursuant to Article 46 (2) European Directive on the Recognition of Professional Qualifications (BARL) (Directive 2013/55/EU of the European Parliament and of the Council of 20 November 2013 and the Qualification Framework for Degrees from German Institutions of Higher Education (HQR) of the Standing Conference of the Ministers of Education and Cultural Affairs (KMK), 16.02.2017.

The degree in Level 6 B, in accordance with the Professional Recognition Directive, provided it is combined with two years' of supervised professional practice experience of which one year must build on the knowledge, skills and competences listed below and in the Professional Recognition Directive, qualifies to practise the profession of architecture, which is regulated in Europe.

The course of study does not qualify practising in the regulated profession of architecture pursuant to the UNESCO/UIA Charter.

B Competence dimensions pursuant to the Qualification Framework for Degrees from German Institutions of Higher Education (HQR) / qualification pursuant to Article 46 (2) Professional Recognition Directive (BARL)

1 Knowledge and understanding

Knowledge and understanding build on the level of entrance eligibility to higher education and extend beyond that significantly.

Expanding knowledge:

- Graduates have the required depth and breadth of knowledge as listed in Article 46 (2) Professional Recognition Directive.

In-depth knowledge:

- Graduates have a critical understanding of the main theories, principles and methods in architecture;
- graduates are familiar with design processes and methods as well as planning tools for the development of architectural designs.

Understanding knowledge:

- Graduates reflect on the correctness of subject-specific and practical statements. They are considered in relation to their context and critically weighed up against one another;
- graduates are aware of the factors and constraints of architecture and can apply them to projects of moderate complexity.

2 Use, application and generation of knowledge

Graduates are able to apply their knowledge and understanding to the qualified professional activity and to find and develop solutions to problems related to architecture.

Use and transfer:

Graduates have the skills as set out in Article 46 (2) Professional Recognition Directive.

Scientific Innovation:

Graduates are able to work on a problem of moderate complexity scientifically and methodically within a given period of time and to classify it in interdisciplinary contexts.

3 Communication and cooperation

Graduates are able to

- work in interdisciplinary teams;
- communicate with clients, experts as well as citizens and concerned persons;
- present the result of their work;
- formulate subject-related positions and solutions;
- make their own independent contribution to teams;
- argue their position and justify their conduct and
- reflect on and take into account different perspectives and interests of other involved parties.

4 Scientific Identity and Professionalism

Graduates

- are able to reflect on their personal development;
- develop a professional self-image which is based on the goals and standards of professional conduct in architecture;
- justify their professional conduct with theoretical and methodical knowledge;
- are able to assess their own abilities;
- reflect autonomously and make use of pertinent design and decision freedom;
- recognise the framework conditions for their professional conduct which is appropriate to the situation and justify their responsible ethical decisions;
- critically reflect on their professional conduct in relation to social expectations and consequences and
- are able to reflect on the role of architects in society at European level, based on an ethically sound understanding of the profession, after completing the two-year professional practice experience required for professional qualification.

C Formal Aspects

1 Entrance requirements

Higher education entrance eligibility:

In accordance with the requirements of the institution of higher education or the legal regulations of the German federal states.

- General or subject-linked entrance qualification;
- university of applied sciences entrance qualification, where applicable subject-linked or course-related;
- proof of subject-specific or artistic aptitude.

2 Duration

Including final project 4 years in full-time study, i.e. 240 ECTS credits.

3 Transitions from vocational education

Qualifications and competences gained outside institutions of higher education which are verified by exams may be recognised by the institution of higher education at the start of a course of study by means of an equivalence test, corresponding to the performance requirements of the respective degree course.

Compare: Article 2, State Treaty on the organisation of a joint accreditation system for quality assurance for study programmes and teaching at German institutions of higher education (Studienakkreditierungsstaatsvertrag) (in force since 01.01.2018); Model Ordinance for the State Treaty on the Accreditation of Study Courses pursuant to the resolution by the Standing Conference of the Ministers of Education and Cultural Affairs, 07.12.2017; Federal State Higher Education Act (Landeshochschulgesetz).

4 Professional Qualification

The minimum educational requirement for acceptance to an architects chamber and thus to practise architecture in Germany are fulfilled.

Working as an architect in Europe requires, in addition to the described course of study, two years of supervised practical work of which one must build on the knowledge, skills and competences listed above and in the Professional Recognition Directive.

The course of study does not qualify practising architecture worldwide, pursuant to the UNESCO/UIA Charter. This requires a minimum of five years of full-time study, excluding the practical period anchored in the curriculum.

5 Follow-up options

- Consecutive or continuing Master's degree courses aiming to gain professional qualification pursuant to EU Professional Recognition Directive, Article 46, Paragraph 1(a) or UIA standard, provided the course of study comprises 300 ECTS credits excluding practice periods;
- consecutive or continuing Master's degree courses aiming at specialisation (this is not the subject of the description in the Qualification Framework Architecture for Level 7);
- entry into higher civil service;
- PhD under special circumstances (this does not count towards the required supervised two-year practice period, of which one must build on the knowledge, skills and competences listed above and in the Professional Recognition Directive and thus does not qualify practising the regulated profession of architecture).

Level 7: Master's 2, 3 or 4 semesters (60, 90 or 120 ECTS credits)

A Preamble

The standard and basis for the description of the qualifications that students of architecture obtain according to the relevant qualification level are the categories of the UNESO/UIA Charter for architectural education (2011), the 11 criteria pursuant to Article 46 (2) European Directive on the Recognition of Professional Qualifications (BARL) (Directive 2013/55/EU of the European Parliament and of the Council of 20 November 2013 and the Qualification Framework for Degrees from German Institutions of Higher Education (HQR) of the Standing Conference of the Ministers of Education and Cultural Affairs (KMK), 16.02.2017.

The course of study in Level 7, in accordance with the Professional Recognition Directive, qualifies to practise the profession of architecture, which is regulated in Europe.
Additionally, it meets the requirements for practising architecture pursuant to the UNESCO/UIA Charter, provided the course of study adds up to a total of ten theory semesters or 300 ECTS credits and these do not include curricularly anchored practice periods.

B Competence dimensions pursuant to the Qualification Framework for Degrees from German Institutions of Higher Education (HQR) / qualification pursuant to Article 46 (2) Professional Recognition Directive (BARL) and the UNESCO/UIA Charter for architectural education

1 Knowledge and understanding

Knowledge and understanding build on the level of a first degree qualifying for practising the profession and extend beyond that significantly.

Expanding knowledge, in-depth knowledge, understanding knowledge:

- Graduates have the required knowledge about practising architecture pursuant to the requirements in the European Professional Recognition Directive and, provided no practice periods were completed, the UNESCO/UIA Charter for architectural education;
- they have broad and comprehensive knowledge of a high scientific standard and
- are highly aware of the factors and constraints of architecture.

2 Use, application and generation of knowledge

Graduates are able to apply their knowledge and understanding as well as their problem solving skills also in new and unfamiliar situations that are in a wider or multi-disciplinary context to architecture.

Use and transfer:

Graduates

- have all the skills required for the profession of architecture at European and at international level beyond that;
- are able to apply their knowledge to self-directed activity in the profession and develop solutions to highly complex tasks;
- are able to independently collect all relevant information required for complex architectural tasks, evaluate and interpret them scientifically;
- derive professionally and scientifically sound judgements and
- work and reason in a self-directed, quality-aware, analytical and conceptual manner.

Scientific innovation:

Graduates

- are able to present scientifically sound positions and solutions and integrate them into research activities and
- grasp and evaluate complex spatial situations and develop differentiated solutions to them in consideration of scientific findings.

3 Communication and cooperation

Graduates

- are able to work in interdisciplinary teams – also in an international context;
- are able to independently communicate with researchers, experts, citizens and concerned persons as well as public authorities and administrations;
- are able to present the results of their work, also for complex contexts;
- are able to make independent contributions in teams, take on a key role and also lead the team and
- are highly skilled in scientific reasoning and justification.

4 Scientific identity and professionalism

Graduates

- are aware of the responsibility towards human, social, cultural, urban, architectural and environmental values as well as architectural heritage and
- on the basis of their ethically sound understanding of the profession, are able to reflect on the role of architects within society worldwide.

C Formal aspects

1 Entrance requirements

A first completed course of study that, pursuant to Art. 46 (2) Professional Recognition Directive, is mainly directed at architecture and in conjunction with a Master's degree course gains a total duration of studies of at least 300 credits.

Where applicable, additional entrance requirements to be defined by the institution of higher education, for example preliminary work experience, application portfolios, aptitude tests, etc.

2 Duration

Including final project 1½ or 2 years of full-time study, i.e. 90 or 120 ECTS credits, so that in combination with the first degree at least 300 ECTS credits are earned.

3 Transition from vocational training

Notwithstanding the requirements of a first degree leading to a professional qualification, qualifications and competences gained outside institutions of higher education, which are within the same qualification level and verified by exams at the start of a course of study, may be recognised, provided they are relevant to the performance requirements of the respective degree course.

Compare: Article 2, State Treaty on the organisation of a joint accreditation system for quality assurance for study programmes and teaching at German institutions of higher education (Studienakkreditierungsstaatsvertrag) (in force since 01.01.2018); Model Ordinance for the State Treaty on the Accreditation of Study Courses pursuant to the resolution by the Standing Conference of the Ministers of Education and Cultural Affairs, 07.12.2017; Federal State Higher Education Act (Landeshochschulgesetz).

4 Professional qualification

The educational requirement for acceptance to an architects chamber and thus to practise as an architect in Germany are fulfilled.

The requirements for entering the profession pursuant to the European Professional Recognition Directive are fulfilled.

The UNESO/UIA standards for practising architecture are fulfilled, provided the course of study has a total of ten theory semesters, excluding any practice periods anchored in the curriculum.

5 Follow-up options

- PhD
- entry into senior civil service
- training for a position in government or administration (Regierungsbaumeister_in or Bauassessor_in); this applies to some German federal states only.

Appendix to Item B: Competence dimensions pursuant to the Qualification Framework for Degrees from German Institutions of Higher Education (HQR) / qualification pursuant to Article 46 (2) Professional Recognition Directive (BARL) and the UNESCO/UIA Charter for architectural education

1. Knowledge and skills pursuant to the European Professional Recognition Directive

Directive 2005/36/EC of the European Parliament and of the Council of 7 September 2005 on the recognition of professional qualifications amended by Directive 2013/55/EU

Article 46 (2)

Architecture must be the principal component of the course of study referred to in Paragraph 1. The study shall maintain a balance between theoretical and practical aspects of architectural training and shall guarantee at least the acquisition of the following knowledge, skills and competences:

a. The ability to create architectural designs that satisfy both aesthetic and technical requirements;
b. adequate knowledge of the history and theories of architecture and the related arts, technologies and human sciences;
c. knowledge of the fine arts as an influence on the quality of architectural design;
d. adequate knowledge of urban design, planning and the skills involved in the planning process;

e. understanding of the relationship between people and buildings, and between buildings and their environment, and of the need to relate buildings and the spaces between them to human needs and scale;

f. understanding of the profession of architect and the role of the architect in society, in particular in preparing briefs that take account of social factors;

g. understanding of the methods of investigation and preparation of the brief for a design project;

h. understanding of the structural design, and constructional and engineering problems associated with building design;

i. adequate knowledge of physical problems and technologies and of the function of buildings so as to provide them with internal conditions of comfort and protection against the climate, in the framework of sustainable development;

j. the necessary design skills to meet building users' requirements within the constraints imposed by cost factors and building regulations;

k. adequate knowledge of the industries, organisations, regulations and procedures involved in translating design concepts into buildings and integrating plans into overall planning.

2 Knowledge and skill pursuant to UNESCO/ UIA Charter for architectural education

Revised 2011/2017

II 3 That architectural education includes the following fundamental objectives:

3.1 Ability to create architectural designs that satisfy both aesthetic and technical requirements.

3.2 Adequate knowledge of the history and theories of architecture and the related arts, technologies and human sciences.

3.3 Knowledge of the fine arts as an influence on the quality of architectural design.

3.4 Adequate knowledge of urban design, planning and the skills involved in the planning process.

3.5 Understanding of the relationship between people and buildings, and between buildings and their environment, and of the need to relate buildings and the spaces between them to human needs and scale.

3.6 Understanding of the profession of architecture and the role of the architect in society, in particular in preparing briefs that take account of social factors.

3.7 Understanding of the methods of investigation and preparation of the brief for a design project.

3.8 Understanding of the structural design, construction and engineering problems associated with building design.

3.9 Adequate knowledge of physical problems and technologies and of the function of buildings so as to provide them with internal conditions of comfort and protection against the climate.

3.10 The necessary design skills to meet building users' requirements within the constraints imposed by cost factors and building regulations.

3.11 Adequate knowledge of the industries, organisations, regulations and procedures involved in translating design concepts into buildings and integrating plans into overall planning.

3.12 Awareness of responsibilities toward human, social, cultural, urban, architectural, and environmental values, as well as architectural heritage.

3.13 Adequate knowledge of the means of achieving ecologically responsible design and environmental conservation and rehabilitation.

3.14 Development of a creative competence in building techniques, founded on a comprehensive understanding of the disciplines and construction methods related to architecture.

3.15 Adequate knowledge of project financing, project management, cost control and methods of project delivery.

3.16 Training in research techniques as an inherent part of architectural learning, for both students and teachers.

II 4 That architectural education involves the acquisition of the following capabilities:

4.2.1 Cultural and Artistic Studies

- Ability to act with knowledge of historical and cultural precedents in local and world architecture.
- Ability to act with knowledge of the fine arts as an influence on the quality of architectural design.
- Understanding of heritage issues in the built environment.
- Awareness of the links between architecture and other creative disciplines.

4.2.2 Social Studies

- Ability to act with knowledge of society, and to work with clients and users that represent society's needs.
- Ability to develop a project brief through definition of the needs of society users and clients, and to research and define contextual and functional requirements for different types of built environments.
- Understanding of the social context in which built environments are procured, of ergonomic and space requirements and issues of equity and access.
- Awareness of the relevant codes, regulations and standards for planning, design, construction, health, safety and use of built environments.
- Awareness of philosophy, politics, and ethics as related to architecture.

4.2.3 Environmental Studies

- Ability to act with knowledge of natural systems and built environments.

- Understanding of conservation and waste management issues.
- Understanding of the life cycle of materials, issues of ecological sustainability, environmental impact, design for reduced use of energy, as well as passive systems and their management.
- Awareness of the history and practice of landscape architecture, urban design, as well as territorial and national planning and their relationship to local and global demography and resources.
- Awareness of the management of natural systems taking into account natural disaster risks.

4.2.4 Technical Studies

- Technical knowledge of structure, materials, and construction.
- Ability to act with innovative technical competence in the use of building techniques and the understanding of their evolution.
- Understanding of the processes of technical design and the integration of structure, construction technologies and services systems into a functionally effective whole.
- Understanding of services systems as well as systems of transportation, communication, maintenance and safety.
- Awareness of the role of technical documentation and specifications in design realisation, and of the processes of construction, cost, planning and control.

4.2.5 Design Studies

- Knowledge of design theory and methods.
- Understanding of design procedures and processes.
- Knowledge of design precedents and architectural criticism.

4.2.6 Professional Studies

- Ability to understand different forms of procurement of architectural services.
- Understanding of the fundamental workings of the construction and development industries, such as finance, real estate investment and facilities management.
- Understanding of the potential roles of architects in conventional and new areas of activity and in an international context.
- Understanding of business principles and their application to the development of built environments, project management and the functioning of a professional consultancy.
- Understanding of professional ethics and codes of conduct as they apply to the practice of architecture and of the architects' legal responsibilities where registration, practice and building contracts are concerned.

4.3 Skill

- Ability to work in collaboration with other architects and members of interdisciplinary teams.
- Ability to act and to communicate ideas through collaboration, speaking, numeracy, writing, drawing, modelling and evaluation.
- Ability to utilise manual, electronic, graphic and model making capabilities to explore, develop, define and communicate a design proposal.
- Understanding of systems of evaluation that use manual and/or electronic means for performance assessments of built environments.

Appendix

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BAK	Bundesarchitektenkammer
BDA	Bund Deutscher Architektinnen und Architekten
BDIA	Bund Deutscher Innenarchitekten
BDLA	Bund Deutscher Landschaftsarchitekten
SRL	Vereinigung für Stadt-, Regional- und Landesplanung
AK BW	Architektenkammer Baden-Württemberg
AK NRW	Architektenkammer Nordrhein-Westfalen
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FBTA	Fachbereichstag Architektur
DARL	Deutsche Dekane- und Abteilungsleiterkonferenz für Architektur, Raumplanung und Landschaftsarchitektur
IfR	Informationskreis für Raumplanung
ARL	Akademie für Raumforschung und Landesplanung
HKL	Hochschulkonferenz Landschaft
BGL	Bundesverband Garten-, Landschaft und Sportplatzbau
DASL	Deutsche Akademie für Städtebau und Landesplanung

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