

**The Oslo School of Architecture and Design
Institute of Architecture
Assessment 2008**

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PART ONE: A DESCRIPTION OF THE INSTITUTE AND ITS CONTEXT.

1.1. Architecture.

The main purpose of architecture is to conceive the spaces in which humanity will dwell. Architectural design is at the centre of architecture's space making role. It is what distinguishes architecture from the multiple disciplines which inform it.

Architecture's knowledge base is mainly developed through its exercise. Architecture is informed, facilitated, and sometimes even inspired, by other disciplines and practices, such as the social and natural sciences and the arts and design, but what is at its core and is unique to it, is **architectural design**.

The view that privileges architectural design over the disciplines and practices which may inform it has been undermined by a narrow interpretation of definitions which are still widely accepted as valid views of what architecture is, and thus how the architect should be educated.

Let (the architect) be educated, skilful with pencil, instructed in geometry, know much history, have followed philosophers with attention, understand music, have some knowledge of medicine, know the opinions of the jurists, and be acquainted with astronomy and the theory of the heavens.

Marcus Vitruvius Pollio (c. 90-20 B.C.E.)

Definitions such as this one have been widely used to support the view of the architects as 'universal men' whereby the knowledge of diverse fields combines, magically, to produce good buildings, without attempting to explain how the integration of all this knowledge is to be realised.

This view of architecture explains why curricula of architecture schools tend towards the *generalist*, focusing on teaching the principles and knowledge of many subject areas, and leaving aside or not placing enough focus on the rather difficult task of making explicit how these diverse knowledge fields are to be harmonised by students in their building designs.

My argument is that, at its core, architectural education has to be more than imparting knowledge in the diverse subjects which may inform architectural design tasks.

The argument is not that the diverse knowledge fields which inform architecture are unimportant, but rather that they are not important in themselves, they are valuable **ONLY** in as much as they inform the architectural design process. Consequently, our didactic task is to develop in students a *critical attitude* and set of priorities which stems from it to guide the complex, often contradictory, processes of making of choices in the practice of architectural design.

Once again I turn to Vitruvius for help. When looking into an educational strategy for schools of architecture we could make a distinction between knowledge of *subjects* which inform the practice of architecture, and *attitudes*, which embody the principles which guide decision making beyond the functional, understood in its broadest sense. Vitruvius' definition of the three components of architecture allows us to explain this distinction in another way: *subjects* would lie in the realms of 'firmness' and 'commodity', while 'delight' would correspond to *attitudes*. Although in practice the distinction between *subjects* and *attitudes* is not 'water-tight' it may help us to begin to clarify what is unique to architecture.

1.2. The Context

The Institute of Architecture operates within, and is a component of, larger cultural and institutional contexts, towards which it has duties and responsibilities and from which it obtains privileges and resources.

1.3 The global context.

From around the 1980s architecture seems to have taken a new direction which challenges the ideological domination, in the previous three decades, by postmodernism and deconstructivism. This trend seems to be part of the process of globalization that is taking place in virtually every field of human endeavour. One of the consequences for architecture is the erosion of such postmodern (and deconstructivist) concepts as *contextualism*, *uniqueness*, and *authenticity*.

These ideas have been most forcefully articulated by Marc Auge in his book *Non-Places* where he observes that in the contemporary world, place is giving way to “non-place”, which he defines as spaces dedicated exclusively to one function, such as motorways and airport lounges, mostly spaces of transit where there is little or no social interaction. Contemporary life increasingly consists of a procession through such non-places.

These ideas have been projected to the realm of architecture by Hans Ibeling in his book *Narratives of Supermodernism*, where he observes that

After postmodernism and its deconstructivist off-shoot, a new architecture now seems to be emerging, an architecture for which such postmodernist notions as place, context and identity have largely lost their meaning. (p.10) The new frame of reference – unlike that of postmodernism and deconstructivism – will no longer be dictated by the unique, the authentic or the specific, but by the universal. (p.135)

These new characteristics of a global architecture are connected to the trend in schools of architecture to focus on conceptual design. What is evident is that the focus of architectural education has been moving away from ‘the craft of building’ and towards ontological preoccupations. This change has meant that studios have increasingly set problems which explore essential elements of architecture, rather than considering, and ultimately having to harmonise, the full complexity of factors involved in the craft of building design.

Conceptual design has the virtue of bringing our attention to important architectural issues which could easily be overlooked in the complex process of building design. However, too often the results of conceptual design exercises are self-referential, rather than being validated in confrontation with the full complexity of buildings.

At a professional level the practice of architecture has also been changing, and a recognition of these changes should figure in our curriculum.

- Most architects work comes increasingly from large clients who offer a more or less constant work load.
- These larger clients tend to work globally, both in terms of where they build and where they look for architectural services.
- Clients are increasingly looking for a one-stop-service, i.e., one service provider that will take care of the whole building process, from program generation to design, through building, and even extending to life cycle building management.

- The majority of architectural practices are small. In Britain 85% of practices employ less than 10 architects.¹

These facts raise the question of what type of architects should we be training. Are we training professionals to work in the two type of practices described above, or are we educating a type of architect who has universal qualities which are independent of temporal trends, or are we training academic architects.....?

1.4 The European Context

There are two European initiatives to which Norway has subscribed, which have an influence on the direction of architectural education. They are the Bologna Agreement and the EU Directive on recognition of formal qualifications in architecture.

2.2.1 Bologna Agreement:

Following the principles of the Bologna Agreement² higher education is to be divided into two parts, bachelor and masters. In preparing the way towards compliance with the Bologna Agreement, AHO has divided its curriculum into a three year undergraduate programme, which in the future will lead to a bachelor's degree in architecture, and a two and one half year graduate programme, which will eventually lead to a separate master's degree in architecture. At present the five and one half year programme leads to a single master's degree in architecture.

2.2.2 Council Directive 85/384/EEC of 10 June 1985 on the mutual recognition of diplomas, certificates and other evidence of formal qualifications in architecture.

This EU Directive emanates from the aim to make Europe a single market, one in which its workers can move freely between its member countries; and to ensure that professionals practicing under the same qualification, in this case *architect*, have comparable levels of education and competence. This necessarily leads to making architecture schools across Europe more homogeneous.

"Whereas methods of education and training for those practicing professionally in the field of architecture are at present very varied; whereas, however, provision should be made for progressive alignment of education and training leading to the pursuit of activities under the professional title of architect;..."

In order to achieve the above the directive sets out a basic curriculum for architectural education:

"Education and training leading to diplomas, certificates and other evidence of formal qualifications referred to in Article 2 shall be provided through courses of studies at university level concerned principally with architecture. Such studies shall be balanced between the theoretical and practical aspects of architectural training and shall ensure the acquisition of:

1. *an ability to create architectural designs that satisfy both aesthetic and technical requirements,*

¹ David Alford, lecture at AHO, January 2008, based on the research he has done for the Dutch and Irish governments.

² It is an agreement between European governments that was made in Bologna in Italy on 19 June 1999. The ultimate aim of the Agreement is to place higher education on a more 'European' level through constructing a European Higher Education Area, which will ensure that higher education and research meet the needs of society and are open to the latest scientific developments. The Agreement also aims to set up a Europe-wide system of comparable degrees based on two main cycles – undergraduate and graduate. A system of transferable academic credits and better European co-operation in quality assurance are to be established, to promote better student mobility between European countries and to improve training opportunities for them.

2. *an adequate knowledge of the history and theories of architecture and the related arts, technologies and human sciences,*
3. *a knowledge of the fine arts as an influence on the quality of architectural design,*
4. *an adequate knowledge of urban design, planning and the skills involved in the planning process,*
5. *an 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,*
6. *an 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,*
7. *an understanding of the methods of investigation and preparation of the brief for a design project,*
8. *an understanding of the structural design, constructional and engineering problems associated with building design,*
9. *an 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,*
10. *the necessary design skills to meet building users' requirements within the constraints imposed by cost factors and building regulations,*
11. *an adequate knowledge of the industries, organizations, regulations and procedures involved in translating design concepts into buildings and integrating plans into overall planning."*

1.5 The Nordic context.

Christian Norberg-Schulz taught us the importance of *place* in terms of providing "a common identity and hence a basis for a fellowship or society."³ In the first chapter of *Nightlands* he turns his attention to the Nordic *place*, proposing that the essence of the Nordic is to be found in the nature of light and space. He uses a south-north (Classic-Nordic) comparison as the basis for a characterisation of a Nordic sensibility towards architecture which he characterises as dematerialised, fragmented, deformed (lacking in form) and in a state of metamorphosis.

The Nordic is a particularly difficult concept to define precisely, but must be considered an important factor in understanding Norway's architectural milieu. Juhani Pallasmaa, who to my knowledge has one of the clearest and non-sentimental thoughts on the nature of the Nordic tradition says in his book *Encounters*,

Particular geographic, climatic, as well as political and cultural circumstances, have all certainly moulded an identifiable Nordic mentality regardless of national differences. Nordic culture is a combination of agrarian and small-town-world-views sharing a distinct sense of scale, and an appreciation of understatement and smallness, compared to the desire for monumentality and grandeur in many other cultures.

The Nordic mentality is characterized by a strong sense of causality and contextuality, combined with a rather pragmatic and non-doctrinaire attitude to life. This is united with a strong sense of social cohesion and solidarity based on a shared cultural and social horizon.

Common, as well, is the avoidance of polarization, both in thinking and in the social scene.

Consequently, it has been characteristic of Nordic architecture that extreme or purist attitudes have generally been avoided.

The most significant feature of Nordic architecture is the integration of architecture and society. The degree to which the philosophy and aesthetics of Modernism have become part of the Nordic social reality is unique.

³ C. Norberg-Schulz, *The Concept of Dwelling*, NY: Electa, 1985, p9.

Pallasmaa's views on the Nordic are not aimed at cultural isolationism but to a creative tension with the forces of globalisation,

" ... vital works of art in our specialized culture are always born from an open confrontation between the universal and the unique, the individual and the collective, the traditional and the revolutionary."

1.6 The Local context

Professional registration:

In contrast to other countries, such as the U.S.A. and Britain, Norway places an important responsibility on recognised schools of architecture in allowing them to *de facto* licence professional architects. This responsibility has to be an important consideration when formulating an educational strategy. Norwegian schools of Architecture should ensure that their graduates have professional competence in the craft of designing buildings.

AHO:

The Institute of Architecture operates within AHO's management and educational structure and is charged with pursuing its strategic goals.

At present these strategic goals, as they relate to education, are the following:

Education of the Master's Degree in Architecture candidates shall aim to be at the highest European levels. AHO's education shall provide students with a wide knowledge base which will serve them well both as professionals and citizens.

- AHO should develop a reputation as an excellent place for learning
- The Master's Degree which AHO confers should be recognised both nationally and internationally as having attained a high degree of competence.
- AHO's Master's Degree graduates should be highly prized by the profession.
- AHO's Master's Degree graduates should acquire skills that also allow them to perform well outwith normal professional roles.
- AHO's Master's Degree graduates should, through their choices of courses, be able to develop their own distinct knowledge base.

The undergraduate three year programme aims to provide a systematic survey of the knowledge areas which are considered necessary for the practice of architecture in Norway. It is a programme which all students must go through, structured sequentially in semesters, and confronting students with increasingly complex tasks.

Undergraduate studies are followed by a two and one half year graduate programme organised on the basis of five semesters. In each of the first four semesters students chose one studio (24 credits) and one taught course (6 credits). These studios and courses take in students from both the fourth and fifth years. The aim of the graduate programme is to provide students with the chance to develop their own knowledge base through their choices of courses and studios. AHO exercises no guidance or control over individual student choices, except for the menu of courses on offer.

Structure to date:

UNDERGRADUATE STUDIES	FIRST SEMESTER: Institute of FHT Studio 1 Studio 2 Studio 3	SECOND SEMESTER: Institute of FHT Studio 1 Studio 2 Studio 3
	THIRD SEMESTER: Institute of Architecture: emphasis on technology	FOURTH SEMESTER: Institute of Urbanism
	FIFTH SEMESTER: Institute of Architecture: emphasis on professionalism	SIXTH SEMESTER: Third Year Elective studios Inst. of Arch Studio 3.1 Inst. of Urb. Studio 3.2 Inst. of FHT Studio 3.3
GRADUATE STUDIES	SEVENTH SEMESTER: Elective studios and fordypningskurs	EIGHTH SEMESTER: Elective studios and fordypningskurs
	NINETH SEMESTER: Elective studios and fordypningskurs	TENTH SEMESTER: Elective studios and fordypningskurs
	ELEVENTH SEMESTER: Diploma	

A new structure for undergraduate studies is being implemented in which the Institute of Architecture will be responsible for the whole of the second year and the second semester of the third year would be taken up by a Bachelor’s Thesis, whose form is at present under discussion.

Structure for next semester:

UNDERGRADUATE STUDIES	FIRST SEMESTER: Institute of FHT Studio 1 Studio 2 Studio 3	SECOND SEMESTER: Institute of FHT Studio 1 Studio 2 Studio 3
	THIRD SEMESTER: Institute of Architecture: technology and professionalism	FOURTH SEMESTER: Institute of Architecture: technology and professionalism
	FIFTH SEMESTER: Institute of Urbanism	SIXTH SEMESTER: Bachelor thesis
GRADUATE STUDIES	SEVENTH SEMESTER: Elective studios and fordypningskurs	EIGHTH SEMESTER: Elective studios and fordypningskurs
	NINETH SEMESTER: Elective studios and fordypningskurs	TENTH SEMESTER: Elective studios and fordypningskurs
	ELEVENTH SEMESTER: Diploma	

There are also changes being considered for the diploma:

- How should the semester long course in which pre-diploma students prepare their programs be structured? What is the relation between this course and the diploma supervisors?
- Should the format of diploma examinations be revised?
- How is AHO to organise supervisions in the context of an increasing number of diploma candidates? (see appendix 1)

The Institute of Architecture:

The Institute of Architecture is one of four Institutes at AHO, and within the six semester undergraduate programme it has responsibility for two semesters, numbers three and five, and shares responsibility for the sixth semester with the Institutes of Urbanism and the Institute of Form, History and Theory.

Its main responsibilities are in the teaching of architectural design, technology and IT.

The staff of the Institute and their duties are summarised in the following table:

Name	Contract	Teaching				Research 2006			Admin.	Other output	
		Courses 2008		Diploma 2007		PhD 2007	Pub. Points	Verks			Ongoing projects
		Spring	Fall	Spring	Fall						
Einar Dahle	100%	Studio	Studio					1	Books on BEK & on Mch amurar k		
Margrethe Dobloug	100%	Fordyp-k	Fordyp-k and GK5 kurs.			2			Book on Skjetten and A-Forsk	PhD comm. + Research Comm	Tverretatlig <i>nettverk</i> for helse og omgivelser (Norsk Form). Husbankens work on <i>housing quality</i> , Application (Forskningssøknad) NordForsk "Velferdens arkitektur"
Arne Eggen	60%	Construct ion course for 3/GK6 studios	GK3		1				Book on Structures	Educ. ?	
Steinar Eriksrud	100%	Fordyp-k									
Per Olaf Fjeld	100%	Studio	Studio	7/4	7/4				Book on Fehn	Educ com	President EAAE
Neven Fuchs-Mikac	100%	Studio + Fordyp-k	Studio	7/4	7/4						
Lisbeth Funck	100%	Studio	Studio	7/4	7/4			1			
Rolf Gerstlauer	100%	Studio	Studio + Fordyp-k	7/4	7/4			1			
Knut Hjeltnes	60%	Studio	Studio	4	7			3		Opptak k og G.	
Jan Olav Jensen	50%	Fordyp-k	Studio					4			

Per Kartvedt	20%	Studio	Studio								
Bente Kleven	20%-80%	Fordyp-k	GK5							AHO Board	
Erik Nordbye	20%	Fordyp-k	Fordyp-k								
Bjørn Sandaker	100%	Studio + Fordyp-k	GK3	1/2	½	2			Book on Structures & Bridge Design R&D	Research com.	Hosting Nordic Network of Arch Technology
Solveig Sandness	100%	GK1 Materials course	GK3					Prepare structures manual		Education com.?	
Søren Sørensen	100%	Studio + Evening IT kurs	Sabatical				1				
Magne M. Wiggen	40%	Diploma + Studio	Diploma + GK5								
C. Hermansen	100%	Talking Arch	Fordyp-k	2	3					Opptak + Leders	AHO Works + mag.
							1	10			

Notes:

Teaching: courses: S= studio, F= fordypningskurs, C=credits, No= number of students attending.

Research: Points: publishing in the recognized journals/publishing houses, either as author of the publication or author of the work being written about.

Other: outputs placed in the public realm but not included in 'points', such as exhibitions, conference papers, etc. The way I suggest that we assess these types of output is on the basis of whether they have a LOCAL, NATIONAL, or INTERNATIONAL reach.

Projects: includes research projects and initiatives which have received funding from outside AHO.

Administration: includes all administrative activities related to the running of AHO, but not those which are necessary for running courses or Personal research activities.

The main teaching units in the Institute are the following:

Undergraduate.

Contributions to First Year.

Materials Course, Solveig Sandness

The course Material Technology is mandatory for all students in 1st and 2nd semester of first year. The course gives an overview of materials, grouped in metals, organic materials, minerals, synthetic materials and basic material knowledge. The aim is to understand key material values such as strength, elasticity and other physical and mechanical properties for each material, and to be able to consider which material is right for a given design task. The students' skills are tested through several mandatory tasks and a final exam.

IT instruction, Søren Sørensen

The undergraduate courses in IT takes place during the first year, with emphasis on developing student's capabilities in using digital tools. During the fall semester the two architectural studios with 25 students each are introduced to 3D-modelling through a one week course in 3DStudio Max. All studios, including Industrial Designers, are introduced to Adobe Photoshop through one week courses which are related to the assignments of the main course. The second semester includes a one week preparatory course in 3D-modelling for 50 architecture students. This training is provided by IT assistants during an assignment set by the Theory and History course. This is followed by courses in 2D CAD which students use to draw their main project.

Studio 3, Architectural Technology, first semester of second year, Solveig Sandness

The course Architectural technology is mandatory for 3rd semester students of architecture. The course deals with two main topics: structure/form and materials/processes. Structure/form includes the themes building statics, the strength of materials and the understanding of structures in architecture. Materials/processes include the themes construction methods and material technology, with the purpose of understanding architecture as a building process.

The teaching is based on lectures and exercises linked to the main topics in the studio. One part of the course is used for full scale model building, where the purpose is to see the link between form, materials and detailing. The course also consists of design tasks of limited functional complexity, where the goal is to focus on structures and material's physical and spatial properties.

The student's theoretical skills are tested by several mandatory tasks and a final exam.

Studio 5, first semester of third year, Bente Kleven

Habitation is a studio course where the main subject is to investigate dwelling in the framework of different locations and programs. Dwelling is investigated at different levels. The studies cover topics from abstract conceptual studies to designs of chosen spaces and building components and deal with different ways of living, different spaces, construction, building physics and materiality.

The course assignments open up for different approaches to the main habitation theme of the studio.

The studies vary between conceptual work and work related to concrete building.

As a part of the professional approach the course arrangement will try to make the different actors and positions visible and get an understanding of the housing discourse.

Learning outcomes

Studio 5 is a course that engages students at many learning levels. Learning emphasizes the connection between design and other inputs such as lectures, studies of specific subjects, and workshops.

Through studies that concern location, space, construction and materiality the course develops individual positions as well as capacity for group work.

The students acquire knowledge to organize different programs and to investigate the connection between program and space.

The course trains the students in critical reflection around how architectural design will influence the way of living.

Through presentations and reviews the students develop their ability to visualize, write and make oral presentations.

Studio 6, second semester of third year, Einar Dahle

The last semester of undergraduate studies was the shared responsibility of the Institutes of Form History and Theory, Urbanism and Landscape, and Architecture, each teaching a studio unit of around 18 students. The main educational aims of this semester was to draw together the diverse teaching which the students had been exposed to during the previous five semesters, each of the three institutes emphasising their own areas of competence.

The site for the Pilgrimage Church and Hostel studio was somewhere between yourself and Nidaros. The staff suggested four possible sites in Oslo and on the way to Trondheim, but the students were free to choose any site.

Students had to work in different scales from landscape to sacrament and give shape to the whole as well as details of rooms, building parts, and construction. They started out by analyzing modern Norwegian churches and tracing them by hand to become familiar with scale and dimensions, conventions, signs and symbols as bearer of meaning. There were also lectures on these themes. Action painting with mantra word gave the opportunity to test quick set out and expression. The church as space and meeting place were tested without previous drawings of plan and section, only through pure rendering by means of 3D. The same method was used to draw the church in the landscape, to be able to understand size and expression of an edifice of this size in the given site and its context.

From here normal design methods were studied and used.

There were two organized excursions. One local, to see the places and churches on the main pilgrimage route around Oslo, the other to Switzerland and France: Ronchamp.

Teaching methods consisted of frequent reviews, compulsory and elective corrections on the board, lectures, seminars, and colloquiums.

Graduate

Graduate studios (24 credits)

Knut Hjeltnes

To teach through practice the necessary skills for establishing modes of working which allow students to develop projects that master the complex web of ideas and contexts which architecture is made of.

To teach the students the skill to further their ideas into the field of materialisation.

Arne Eggen

Aims of the studio: to introduce students to the challenges of designing and building bridges in an urban context. The last studio consisted of 3 elements:

- Designing a new town bridge, strengthening the so called town axis across the river.
- Excursion to the London, studying bridges crossing the Thames and workshop at Foster & Partners.
- Designing and building two small footbridges in full scale.

The course was completed with an exhibition of the students work in the city of Drammen.

Learning outcomes: to provide students with knowledge and understanding within:

- Coherence between function, form and structure.
- Working with large structures and their implementation in urban landscape.
- Cooperation between architect, engineer and landscape architect.
- Realizing full scale structures in the schools workshops.

Jan Olav Jensen,

Architecture and Landscape: The aim of the studio is mainly to explain and develop a possible link and stepping stone between the protected situation at school, where ideas usually flourish freely without much resistance, and the reality outside this protected situation, where most architectural projects are changed, often to the worse, during the process of realization.

Per Olaf Fjeld, Rolf Gerstlauer, Lisbeth Funck.

Program B.3 works with complex architectural tasks. It is an experimental studio. The chosen theme that sets the stage for each assignment will vary for each semester. A strong effort is always made to find themes that are both current and challenging for the students and teachers in relation to today's architectural discourse.

The working process is regarded as a continuous spatial discourse towards a final result. The final project should induce a stimulating professional discussion.

The course shall find motivation for spatial concepts in relation to the program's particular content. The course is taught from a range of different architectural perspectives complemented by specific knowledge directly related to the given themes.

The pedagogical program concentrates upon the student's comprehension of their own working process. Each student will develop their own posture towards architecture.

Program B3 seeks an architectural depth and renewal. Intuition is regarded as advanced knowledge.

The given program defines the importance of design work as architectural research.

Neven Fuchs-Mikac,

Notch – New Facilities for Performance of Contemporary Acoustic Music in Beijing

In making architecture the architects work with various themes. The choice of themes and the way of working with them varies from one project to another, from one architect to another. Sometimes the themes are more recognizable, sometimes less. Developing one's own, clear and consistent attitude toward chosen themes is what both studying and being an architect is all about.

In the studio, we call these themes *the means of architectural production*. The semester work focuses on the investigation of these tools through the making of an architectural project. The assignment is to design new facilities for the performance of contemporary acoustic music for NOTCH, the foundation promoting the collaboration between Nordic and Chinese musicians in Beijing. The given site is Jian Wai Soho in central Beijing.

The individual investigation of means and processes necessary for the production of architecture will go in parallel to the "conventional" architectural project. By organizing the semester work in a matrix-like structure, which combines both the conceptual and the intuitive way of working, the studio would like to disclose the potential that usually remains hidden behind the architectural end-results.

The design process is deconstructed into four singular small assignments/projects. Each assignment is discussed independently, as infiltrated into, or connected together with the others. The themes the studio investigates are: form, landscape, program and space. The three of them are developed only through the large-scale models. The large models help to carry out the architectural research in terms of space and to inspire an individual approach. The presentation of the fourth project at the end of semester will be both through models and drawings.

Knitting and weaving of the partial themes around the “main” project leads the students to describe and make visible their own stories about the making of the project and about the architectural means employed in their work. By stimulating the exploration within a partly self-defined and partly given framework, the studio would like to initiate a process that could be permanently revised by new ideas and opened to unexpected results.

Søren S. Sørensen, Augmented Reality and Architectural Design.

The course was initially for 12 students due to limitations in equipment, but only 2 applied.

The course was research based and the result of it would be part of the research in and development of Augmented Reality for visualisation of architectural projects and urban plans at AHO. The applicants were highly capable of attending such course and due to the strategic position of the subject regarding the research, the school decided to run it.

Augmented Reality (AR) is a new technology for blending digital models and physical surroundings. AR used throughout the planning process up to presentation gives the possibility of experiencing projects in full scale on site. The course consisted of an architectural design assignment and a series of AR tests connected to the development of this. The students were introduced to the research problems and results as well as the utilisation of the technology.

Through designing architecture utilising AR, testing and using the technology, labs and theoretical knowledge the students gained insight in and experience of a representation technique that will change architectural practice. Much of the resulting material from the students assignments and deliberations was directly applicable in our research and contributed to the development of the visual quality of the AR- system.

Tomas Stokke, A Ferry Terminal (Glasgow, Porto, Oslo studio)

The aim of the studio is to design a complex building in an urban waterfront situation. The building program combines a ferry terminal with a complimentary program of the student’s choice. The studio employs a range of methods for developing spatial readings of the site and to challenge conventions of program, architecture and representation.

The course is run in collaboration with the Macintosh School of Art in Glasgow. Students stay on for one or two terms and are encouraged to forge links with students and projects in Scotland

Architectural design, production & publication: alias “concrete, love & architecture II”, Magne M Wiggen.

Students are challenged to focus on childhood as a source of architecture. Through a **personal entrance** we experience with sites and urban space from early years.

The students **publish** their task. Their personal architecture and the story of themselves is easy to get on print and interesting in a local newspaper.

Together with artists the students make **installations**. Concepts and context is presented as art instead of traditional architecture.

The students make their **own programs** that must be visionary, consistent and possible to release.

They must be able to make a stance politically, ethically, and in terms of sustainability and ecological issues.

Focusing on developing **architecture** through constructions based on choice of materials in parallel with developing their main concept for architecture.

ENOVA, Chris Butters and Steinar Eriksrud

The aims of the course were to give the students knowledge and developing skills in designing energy efficient and sustainable buildings.

Introduction to requirements, methods and tools both technically and architecturally to obtain sustainability, were given by acknowledged lecturers from Norway and abroad.

Two design tasks were given to the students:

- Redesign of a barn in Lier to become center for ecological purposes linked to a rural setting. The goal was thinking freely and designing creatively around concepts linked to energy, healthy materials, local resources, recycling, water and waste cycles and other sustainability themes.
- The main design task was to design a center for water sports at Kuba in Oslo. The main goals were to do an environmentally friendly design, functionally reflecting the neighbourhood to Grünerløkka and to do a design reflecting the neighbourhood to Akerselva and green structures in the area.

The course had a six days excursion to Austria, Switzerland and southern Germany to look at passive houses and sustainable architecture.

The course was supported by Enova.

Graduate Taught courses (6 credits),

Architecture, Film and Morphology of the Body and Space, Rolf Gerstlaue

The Production and Representation of Architectural Space in Film/Video.

A Phenomenological Discussion on Architectural Space, its Nature and the Production of it.

Background / history:

- The production and representation of architectural space/object in film have, since the beginning of film, inspired and influenced architectural practice and its spatial discussion.
- New tools and techniques of production and representation (in film, architecture, etc.) together with new and complex systems/arenas of communication further challenge the perception and understanding of architectural space/object.

Thesis / point of departure:

- Architecture's traditional limitations are expanded.
- Architectural space must seek its renewal in a discussion and the further comprehension of a time/space or time/space/place relationship.

Content / experimental design studio:

- Given that architecture's traditional limitations are challenged; how to perceive and understand architectural space when it 'occurs in that expanded environment'?
- How to free the potential for a new architectural space that shall emerge from or exist in that expanded environment?

The first series of elective courses on "Architecture and Film" sets its focus on "Morphology of Body and Space". The aim is to further understand, influence, and develop architectural space through a phenomenological view of it and with the means and tools visual arts such as film and video, offers today.

Glass, constructing affects and sensations. Neven Fuchs-Mikac,

The idea of this elective course is to give students a basic understanding of the constructive/structural and spatial/phenomenological properties of different glass-materials in architecture. Integrating theory, design, artistic practices, together with the knowledge of material processes and constructive methods, the ambition is to build up their interest to investigate the glass material through their own design and to encourage them to experiment with its architectural properties.

The focus is on a series of pedagogically chosen case studies from modern and contemporary architecture. In all of them glass is understood as having "composite" materiality, made up by visible as well as invisible forces and layers. That means that glass doesn't stand alone - it needs to be

enhanced through layering with other materials to increase its performance and to become connected to social and cultural practices of architecture. The argument put forward is that the development of new glass structures and expressions, more than is the case of any other building material, occurs through the introduction of new concepts that grow directly from materiality itself, by way of new compositions, affects and sensations, which in turn allow us to engage with the “architectural layering” in a new way. The students are asked to address this complex synergy between interior and exterior forces, from the surface envelope through entire architectural fabric. The presupposed “affect” of each case study will be investigated, reinterpreted and represented by drawings and physical models.

During the first part of the course the students actively participated in building the temporary glass stage for the installation of modern dance in front of the National Theatre, for CODA – Oslo International Dance Festival, that took place in September 2007.

History and Typology of Housing, MD

The course deals with European history of housing types in cultural and architectural contexts and how international ideas are transmitted and implemented in Norway; focusing especially on post war housing.

Historical and contemporary housing are discussed from a typological perspective, with the objectives of giving students knowledge both of typological theories and of the extensive use of typology in architecture, and to illustrate typology as a device both in analytical and creative work.

The outcome is an overview of “ordinary” urban housing types, their origin and development and how their generic qualities are adjusted, developed and transformed in time and place. The typological approach is used to exemplify and discuss the history of “social housing” in Norway 1900-1970. The aim is to supplement traditional canonical teaching with architectural knowledge and methods concerned with generic qualities (of types) and of the relations between social and spacial patterns which is what typology is about.

The teaching methods are lectures, reading, notes, visits to museums and housing areas, discussions and seminars. The students make a small analysis of a housing scheme with references to typological forerunners.

Representation as Spatial Understanding, C. Hermansen

Explores the relationship between architectural space and social practices.

The tools of the course are **observation** and **representation** seen as critical tools for design. *Observation* of the relationships between social activities and architectural space and *representation* of these relationships, mainly by means of ‘the quick sketch with comments’.

We explore the way in which these observations/representations help us mediate between spatial analysis and architectural design. Although considerations of architectural space and social practices are present every time architecture is conceived they are rarely made explicit and their relations and interactions are hardly ever systematically discussed.

Thus, in this course students will learn about:

- The representation of the relationships between architectural space and social practices.
- The use of a critical stance regarding these relationships as a means to initiate the architectural design process.

In addressing the relationships between these areas students will develop an understanding of alternative modes through which to address this fundamental issue in architectural design.

Professional Practice, Margrethe Dobloug

The course Professional Practice deals with architecture as practice, legal and procedural frameworks and regulations for planning and the construction of buildings, different roles and perspectives of architects, and variations in ways of organizing work on national and international levels.

The outcome of the course is an overview of legal and technical requirements that an architectural project has to meet from its inception to completion, knowledge of the processes of design, of the systems of control in private practice (kvalitetssystemer) and of the documentation of projects and of teamwork with different agents. The students are to understand the background and reasons for laws, regulations and procedures, to inquire critically about them and to be given demonstrations on how architects work within these frameworks. The course also gives examples of different ways of establishing and organizing a practice by visits and analysis.

The teaching methods are lectures, reading, notes, visits to building sites and offices, discussions and seminars. The students are taught to make structured questionnaires and notes and give a digital and oral presentation of an office and the progression of a small architectural work through their chosen office.

3D Modelling, Erik Nordbye

The courses in 3d modelling explore current tools and trends within the field of digital representations of space and structure. Teaching of hands-on use of software is central, and is achieved through developing a small project that aims to explore specific aspects of the tools. The courses focus on experimentation and design and software is chosen accordingly.

Practice and Method, J.O. Jensen,

Each student interviews one architect.

The aim of the course is to understand the how a particular practicing architect, chosen by the student, works by interviewing the practitioner. The interviews are read through and corrected by a number editors and then collected in a book which is published commercially by a publishing house.

Construction and Practice, BK & BS,

The basic idea of this course is to offer a more in-depth survey of the most common construction methods in use in Norway today than is possible at the undergraduate level. Weekly student visits to building sites in the Oslo area help create a better understanding of the routines of the construction industry, how they work and how challenges are met. Our aim is that this will provide a knowledge base that may facilitate the architectural design process from idea to realistic concept, as well as prepare the students for future productive cooperation with the building industry.

Our main focus is on multi-storey buildings for dwellings and commercial use. Structural systems in all the major construction materials are studied; in-situ concrete construction, prefabricated elements in concrete and steel, wooden structural systems in glulam and solid wood, as well as hybrid systems. We also touch upon the construction of large one-storey buildings like sports halls and buildings for industrial use. Emphasis is placed on presenting complete construction systems including foundations and bracing principles as well as the study of details, fire properties and economy.

At the end of the course, students are expected to present a full report on the construction of the building they have been assigned.

Space for all? A closer look at public spaces in cultural buildings, I-M Hølmebakk

The course focuses on public space in cultural buildings, and studies large spaces in relation to universal design, accessibility and participation in society for all. (Keywords: entrance, counter, main stair, elevator, ramp, leading-lines, café, signs, lightning,sound, light, smell, etc.).

Learning outcomes:

The course gives an introduction to the term universal design and informs about the legislation status in the field. The aim is to increase the consciousness within architectural design in a new growing special-field (universal design in architecture). Quality of use and perceptibility will be central items. Contents and teaching methods are lectures, site visits, interviews with architects users, builders, owners, etc. and workshop, analysis, and report writing.

Sustainable Design Processes, S. Eriksrud.

The main goal of the course is to give an introduction to sustainable design processes, sustainable design criteria and how this is applied in construction.

Key elements in this course is introduction to integrated design process, to different method and tools to obtain sustainability in architecture

A short version of the ECOBOX "startpakke" is given to students.

Lectures, seminars, case studies and site visits are given to describe the integration of sustainability in architecture.

The student task is interviewing some of the architects who have participated in the ECOBOX "startpakke" course to see into how sustainability has been implemented into their architectural projects.

Additional Educational Contributions

IT software assistance and evening courses, Søren S. Sørensen & Student Assistants.

The former "IT-fagområde" established a system of student-assistants on duty, aiding the other students with the use of software at the computer labs. There is also on offer a series of evening courses on the use of digital tools run by these assistants.

AHO WORKS exhibition, Christian Hermansen

At the end of every semester the Institute organises a public exhibition of the work of all graduate studios at AHO, which consist of students from the third, fourth and fifth years.

This event fulfils several objectives. The main ones are to display the work of our students to the community outside the school and to display the result of studios to AHO students and staff, an essential element in a system where students elect their studio units.

The exhibition is not selective, it displays the work of all graduate students, thus constituting a 'snapshot' of the AHO's graduate industrial, architectural and urban design work.

AHO WORKS student projects review, Christian Hermansen

The purpose of the AHO WORKS mag will be to show the work of AHO's students in the best possible light; in this sense it does not aim at covering all of AHO student's output but to highlight AHO's best.

This is the first publication of an annual series.

Talking Architecture, an open symposium for discussing contemporary architecture, Christian Hermansen

With the aim of encouraging a broader discussion of contemporary architecture at AHO we run a weekly symposium called Talking Architecture. I use the term symposium in its original classical sense: '*a convivial meeting for drinking, conversation, and intellectual entertainment (OED)*', and the objective is to end the working week with an informal, stimulating and uplifting event.

We ask each speaker to focus their talk on a single contemporary building (finished after 1985) which has not been designed by the speaker but is, nonetheless, interesting and embodies some of the qualities which the speaker considers architecture should have.

Current Strategic objectives of the Institute:

The Institute will continue to move towards the formalisation of a 3+2+0.5 structure in accordance with the Bologna Agreement.

The Institute will continue to promote internationalisation.

The Institute will promote greater contact with the local milieu, both the profession, industry, and the public at large.

The Institute will stimulate staff research initiatives in the areas of: research by design, research by practice, and traditional research.

Strengthen the relation between technical competence and building design which is perhaps one of the fundamental characteristics of 'Scandinavian design'.

Develop studio groups with clear identities which guide their teaching and research efforts.

Increase inter-institute activities within AHO

Maintain studio-based-learning as the main educational form at the institute.

Continuous assessment of the orientation of the curriculum, towards academic or professional knowledge base.

Build up and strengthen studio teams that work on common platforms and have medium to long term objectives.

Develop PhDs by Design as a potential research area which is closely related to the practice of architecture.

PART TWO: TOWARDS AN EDUCATIONAL STRATEGY

A curriculum for INSTITUTE OF ARCHITECTURE

Could the current group of staff which makes up the Institute of Architecture reach a consensus on a set of beliefs (cosmology) to underpin our educational strategy?

This is, of course, a rhetorical question. After having participated numerous discussions on this subject in the last two years it is my opinion that the Institute of Architecture staff display widely varied views on both the nature of architecture and how it should be taught. Furthermore there is a tradition at AHO which allows staff a wide discretion related to both subjects to be taught and teaching methods.

Given these facts it seems to me that the only reasonable way forward is to accept that our curriculum will tend towards diversity and have a *pluralistic* character. In other words the curriculum will not stem from a unitary position regarding the nature of architecture and how it should be taught, but rather from a position which both reflects, and makes a virtue of, the variety which is inherent in our diverse points of view.

Diversity does not equate to an anarchic free-for-all. Norwegian means society has devolved to AHO responsibilities in the education of professional architects which when combined with the social and economic constraints on the practice of architecture form quite a demanding starting point for an architectural curriculum.

What should we be teaching?

In order to start defining an appropriate architectural education strategy we have, first of all, to discuss what is the nature of the architectural knowledge which is required for both a pluralistic curriculum and the education of competent architects.

And this leads us to one of the oldest and most rehearsed issues in discourses on the nature of architecture, the relation between *practice* and *theory*.

In *The Statesman* (c.360 BC), Plato divided *episteme* (knowledge or understanding) into 'knowledge that leads to action' (*praktike*) and 'knowledge for the sake of understanding' (*gnostike*).⁴

Plato envisaged *praktike* and *gnostike* as 'constitutive of the unity of *knowledge* as a whole'. In illustrating the difference Plato used the example of **kings and architects** (*architecton* = master builder) as representing a distinctive kind of practical knowledge: knowledge which is '**imperative**' (or executive) rather than purely '**critical**' (philosophical, scientific or mathematical), as being concerned with **commanding** rather than **ascertaining** facts.

⁴ Liddell-Scott-Jones define "episteme: **I** *acquaintance with a matter, understanding, skill* (as in archery)... **2** *professional skill, hence profession* [e.g. painter]... **II** generally *knowledge* **2** *scientific knowledge, science*". Plato himself and his disciple Aristotle restricted the meaning of *episteme* to knowledge based on unquestionable first principles. This idea had a large influence at the beginning of the development of modern science, but no contemporary philosopher of science, not even with respect to mathematics, thinks of sciences in this way, but rather in terms of what Aristotle called *zetesis* which means research.

Plato draws attention to the analogous executive roles of kings and architects:

So we may fairly say he [the architect] comes under understanding which is concerned with knowing.

Exactly.

But his business, I take it, is not to deliver a judgment, and so make an end and have done, like the calculator; his task is to give each group of his workmen the requisite directions until they have executed his instructions.

True.

Thus such callings are one and all concerned with knowledge, no less than those which we may rank with computation; the difference between the two types is that between judging and commanding.

So it appears.

Then if we bisected intellectual knowledge as a whole and called one part the commanding and the other the judging part, might we say he had made a fitting division.

Yes, if I may judge.

And harmony between partners in a common task is always a thing to be thankful for.

Plato, The Statesman, 260A-B.

So the task of the architect, according to Plato, is to harmonise, architects use the word 'integrate', critical and imperative knowledge.

This categorisation of the type of knowledge required for the practice of architecture is taken up by Vitruvius Pollio. At the beginning of the *De architectura libri decem* Vitruvius makes the distinction between the 'practical' side of architecture (*fabrica*) and the 'theoretical' (*ratiocinatio*).

BOOK 1, CHAPTER I: THE EDUCATION OF THE ARCHITECT

*1. The architect should be equipped with **knowledge of many branches** of study and varied kinds of learning, for it is by his judgement that all work done by the other arts is put to test. **This knowledge is the child of practice** (*fabrica*) **and theory** (*ratiocinatio*). Practice is the continuous and regular exercise of employment where manual work is done with any necessary material according to the design of a drawing. Theory, on the other hand, is the ability to demonstrate and explain the productions of dexterity on the principles of proportion.*

2. It follows, therefore, that architects who have aimed at acquiring manual skill without scholarship have never been able to reach a position of authority to correspond to their pains, while those who relied only upon theories and scholarship were obviously hunting the shadow, not the substance. But those who have a thorough knowledge of both, like men armed at all points, have the sooner attained their object and carried authority with them.

Taken seriously these views would suggest a curriculum composed of diverse elements WHOSE VALIDITY IS ONLY CONFIRMED WHEN HARMONISED INTO A BUILDING DESIGN.

While I consider this the main principle which should guide our decisions regarding an architectural curriculum, this principle should be understood in its widest sense. For example, we should not stop teaching history of architecture because it does not appear directly in student's design work. However we should expect students, and demand of them, to refer to and speak knowledgeably about building precedents, at the same time as demanding that the teaching of history deals with the full complexity of the constituents of buildings.

Architecture

Architecture is a practice informed and facilitated by multiple disciplines and a curriculum for educating architects needs to:

1. Ensure the centrality of architectural design as the reference by which other subjects are taught.
2. Make reference to all those subjects which inform the practice of architecture in sufficient depth to make students aware of: the extent and limitations of their knowledge, and where to consult when it is not sufficient.

However, in the space of five years the school cannot hope to develop all the knowledge and skills required for the responsible practice of architecture, thus a double selection has to take place, first in the number of subjects to be included, and second in the depth at which these subjects should be treated.

However, the most important skill which the Institute should develop in its students is the ability to harmonise diverse knowledge into the full complexity of the building design task while retaining the ideas embodied in what we previously defined as *attitudes*.

This aim places responsibility on both those imparting specific fields of knowledge AND on studio teachers which have to demand that students integrate that knowledge into their building designs.

The Context:

The global context

Above I argued that both the nature of the spaces being built is changing at the same time that the profession of architecture realigns itself to cope with these changes.

Are the subjects we teach and the building programs we pose to students engaging with these changes?

The European Context.

The Bologna Agreement has been adopted by Norway and AHO is far into the process of complying with its aims. In effect the Masters in Architecture degree has already been structured into an undergraduate three year programme and a graduate two year programme. The last big step yet to be taken is to award a mid-career Bachelors in Architecture degree.

EU recognition of formal architectural qualifications. These provisions have now been in place for more than 20 years. What remains relevant is the list of subject which the EU considers the minimum common knowledge which all European architects should have:

1. an ability to create architectural designs that satisfy both aesthetic and technical requirements,

AHO concentrates its efforts on what the EU calls the “aesthetics of architectural design”, to the detriment of the integration of other requirements into building designs exercises. The Institute should work towards redressing this balance.

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

This may not be the direct responsibility of the Institute of Architecture, but it is legitimate to ask to what extent are our students able to articulate coherent views of the world, the society they live in, and current architecture, and to what extent do we make this knowledge part of the the discourse surrounding the building design tasks we set.

3. a knowledge of the fine arts as an influence on the quality of architectural design,

We could pose a similar question to no. 2 above.

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

We could pose a similar question to no. 2 above.

5. an 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,

The relation of people and buildings is a very difficult subject, one which very few, if any, have addressed systematically (see e.g. Space Syntax group). As far as I know this subject is not systematically taught at AHO, although it is discussed in relation to specific building design projects. Should this subject be addressed in a taught course?

6. an 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,

There are three courses which deal with the architect's professional activities, however the preparation of programs seems to be, to my knowledge, only encouraged in very few studios.

7. an understanding of the methods of investigation and preparation of the brief for a design project,

As far as I know there is no course that deals with research methods in either undergraduate or graduate studies. Should there be one?

8. an understanding of the structural design, constructional and engineering problems associated with building design,

Although there is good instruction in structural design, and the instruction in construction has recently increased, these factors seem to play only a small role in student's building designs. It is largely in the hands of studio teachers to demand more evidence of structure, construction and services in student projects.

9. an 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,

There is practically no instruction in building services. Instruction in sustainability and energy has recently increased and will be strengthened by the employment of a new member of staff in this area.

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

User requirements are currently discussed in relation to specific studio projects and a course has been recently created on Universal Design. However, there is no instruction on the implication of costs constraints on building design. Should this be introduced?

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

There is instruction on Norwegian planning and building regulations. To what extent are they incorporated into the working constraints set by most studios?

PART THREE: TOWARDS A RESEARCH STRATEGY

General

The largest challenge for the Institute follows from the Norwegian government's initiative to assess the research output of all higher education institutions in Norway. For the Institute of Architecture, whose staff appointments up until now have been based mainly on excellence in architectural practice, this poses a particularly difficult problem whose solution hinges on formulating a relevant research policy in relation to architectural design, and in establishing a fruitful relation between practice and research.

Research is generally understood as an original inquiry undertaken in order to gain communicable knowledge and understanding. However, traditionally there is a tacit agreement that knowledge is generated in two areas: the natural and social sciences and the humanities. Each of these areas of knowledge, often referred to as 'cultures', has developed sets of coherent principles, methods and procedures which validate its research. These ways of conducting research are generally considered the only legitimate ways of generating knowledge.

The problem for architectural design, and the design disciplines in general, is that the principles, methods and procedures for research which have been developed for the two traditional 'cultures' are not appropriate for the way in which design disciplines generate knowledge. However, if we expand our conception of knowledge generation to include the ways in which knowledge is generated within the design disciplines, then many of the activities which the staff in the Institute of Architecture are currently engaged in are not far from constituting valid forms of research.

In practical terms, if we expand our understanding of knowledge and of valid forms of research, then the following criteria would define valid design based research output:

- Executed designs would be considered an equivalent contribution to conventional publishing.
- the same principles of peer review applied to the sciences and humanities would apply to design.
- the following forms of research output would be considered valid contributions:
 - prizes for constructed buildings
 - favourable critical comment in reputable journals
 - prize winning competition entries
 - reviewed public exhibitions
 - design output which demonstrates its generic contribution beyond solving a local problem.

The staff of the Institute of Architecture have agreed, as a very loose goal, that every member of staff should aim to have one research outcome, as described above under 'valid types of research output', per year measured as an average in periods of four years. This measure is important because it will eventually be used as a way of allocating teaching loads; those staff members that are 'research active' having a lighter teaching load than those who are 'teaching active'.

Research strategy

The main aim of the Institute of Architecture is a didactic one: the teaching of architectural design in the undergraduate and graduate programmes at AHO. Most available resources have been used to fulfil this principal aim. There is no doubt that research activity can be a rich source for the renewal of teaching. However, the need for accounting for a research output must not distract the Institute from its didactic aims.

The staff at the Institute of Architecture are aware of the importance for AHO of giving account of a research output, but we must be conscious that this represents a change in culture, from one in which the staff saw themselves almost exclusively as practitioners and teachers to one in which they will have to both teach and engage in some form of research production. To a large extent the success of this 'culture' change will depend on the flexibility of the staff and on the criteria used for defining what research in architecture is.

It seems to me that perhaps the only way to achieve this change in culture is to progress gradually, making fairly small demands to start with in order to generate confidence: self-belief as researchers and the realisation that research can be a means to enrich teaching activity.

However, it is unlikely that all members of the Institute will take up research, some will naturally prefer to devote their efforts to teaching. In this case the allocation of teaching loads will have to differ, probably on a sliding scale, between those who are 'research active' and those who mostly teaching. The principles which will guide this apportionment of duties are the responsibility of AHO, as it is necessary to achieve parity between Institutes.

With the above in mind the present strategy is based on using our staff's current activities and seeing how these could be used or transformed in order that they generate a type of research outputs which are a contribution to the government's research accounting.

Doctoral Studies

AHO has an established PhD programme which recently has been going through a process of change on two fronts:

1. The structure and content of the one year introductory taught course.
2. The introduction of research through practice, or PhDs by Design.

Doctoral studies at AHO consist of an introductory year in which PhD candidates receive training in conducting research while at the same time having the opportunity to reconsider and refine their thesis proposals.

Introduction to doctoral studies.

The overall aim of the mandatory PhD program is to equip incoming PhD students with a basic knowledge about issues and questions that are critical to the design fields. Its goal is to acquaint students with the basic practical skills necessary to undertake research. Most critically, the program provides the student the opportunity to begin to define the 'what, why and how' of his/her research topic; in other words it provides the framework for decisions about the substance and direction of research as well as the necessary methods and tools needed to accomplish the research.

The program consists of two core courses (one in each semester), one compulsory lecture series running through both semesters, one elective, as well as a discipline-specific course provided by the various institutes.

CORE COURSE 1: PERSPECTIVES ON ARCHITECTURE AND DESIGN

Module 1 Issues and Perspectives in Current Architectural and Design Debates

Module 2 Changing Frames

Module 3 Form, Society and Culture

Module 4 Making and Knowing

CORE COURSE 2: RESEARCH: APPROACHES AND PRACTICES

Module 1 Explanation, Interpretation and Criticism

Module 2 Uses of History

Module 3 Socio-spatial Practices

Module 4 Material / Structure / Form

Module 5 Positioning Oneself

'DOING RESEARCH' a weekly lecture / seminar which introduces students to the practical aspects of doing research.

This structure is currently being revised. The new structure will consist of a one semester Introductory course for all new PhD candidates, and a second semester which will be the responsibility of the Institute to which the student is affiliated. The actual content of each of these semesters is currently being discussed.

Research by Practice.

Architecture is informed, facilitated, and sometimes even inspired, by other disciplines and practices, such as the social and natural sciences and the arts and design, but what is at its core and is unique to it, is architectural design. In acknowledgment that most theses that come out of PhD programmes in schools of architecture do not address what is at the core of architecture: the architectural design process, AHO is opening the possibility of doing PhDs by design practice. This is a new venture, the final form of which is being considered. The PhD candidates who will join the programme in the autumn of 2008 will take the first semester of the Introductory programme which will deal with the basics of research. The Institute of Architecture will have to consider carefully the nature of the taught programme to be offered to this new breed of PhD candidates.

This development is of great significance for the Institute of Architecture as it will allow the development of research into its core subject, architectural design, as understood and practiced by the profession.

Types of research being currently developed at the Institute of Architecture.

The main areas of academic/practice activity of the staff of the Institute of Architecture are:

Nettverk for arkitekturforskning – A-forsk

Margrethe Dobloug has taken the initiative to bring together those Norwegian institutions (NAL, NPA, SINTEF, NBI, NTNU, and AHO) engaged in architectural research in order to create a research network whose aims are:

- to work for more resources for research in architecture
- create a network for information about activities in this subject area
- a way of disseminating activity in this area
- act as a lobby group

The research benefits deriving from this initiative are expected to be long term, and are likely to result from contacts and knowledge gained as to the research interests and activities of the other partners in the network.

Architectural practice based research

A large number of the staff of the Institutt for Arkitektur are engaged both in teaching architectural design and in practice. The combination of both these activities is very demanding of their time and it is unrealistic to insist that they engage in conventional research.

However, in the normal course of their practice there are activities which could give rise to research output which would contribute to AHO's research reporting:

1. Publication of the work of the architecture office in reputable journals.
2. Public lectures.
3. Exhibitions of the work of the practice.
4. Innovation; during the course of practice architects often have to experiment with new materials and building techniques. These practices provide the opportunity to set up research projects whose aim is to develop, and eventually to commercialise the idea.

Architectural Teaching/Research Unit: Bygg 3

Bygg 3, at present staffed by Per Olaf Fjeld, Rolf Gerstlauer, and Lisbet Funck, has had a consistent and sustained approach to architectural design teaching, and are currently in the process of preparing an exhibition which documents this experience.

Nordic network for Universal Design research

I.M. Hølmekvakk is working on setting up a research network involving educational and governmental institutions which are currently engaged in universal design research.

IT research. AR Labs Norway

AR Labs Norway is a group formed by staff from IFE and AHO which leads the world in Augmented Reality research applied to architecture. The group has had several proof of concept projects which lead to a government grant to set up a company to exploit the technique and conduct further research.

PhD studies at the Institute of Architecture.

The Institute has three PhD candidates doing research into Augmented Reality, Universal Design, and Professionalism and Architecture. With the current recruitment of new PhD candidates into the new area of research by design we will have a significant PhD presence at the Institute.

At present these PhD candidates are contributing to the Institute either through teaching or through contributing to the on-going research projects.

Individual research initiatives

Jan Olav Jensen has had two books published: One on the work of his firm, *Jensen and Skodvin*, Oslo: Pax, 2007. and another on the results of a course he ran at AHO, *10 Architects Interviewed*, Oslo: Pax, 2007.

Bjørn Sandaker recently published *On Span and Space: Exploring Structures in Architecture*, London: Routledge 2007.

Bjørn Sandaker and Arne Eggen will soon re-publish their *Structural Basis of Architecture* with Routledge.

Einar Dahle published *Inn_Ut_I*, with the work he has done with his students at AHO and is working on a book on the work of the architect Bengt Espen Knutsen.

Margrethe Dobloug recently obtained a PhD with the thesis "Knowledge and Requirements to Quality in the Architectural Profession. Exemplified by Housing for the Elderly 1930-1980".

Christian Hermansen will have *Words and Deeds* published by Kegan Paul in 2008 and has a long term project of translating Ildefonso Cerda's *Teoría General de la Urbanización* (1867) to English. This is the first complete translation of this work to any language and on completion it should lead to its publication.

PART FOUR: SELF ASSESSMENT OF THE INSTITUTE OF ARCHITECTURE

PEOPLE

Academic Staff

The staff of the Institute of Architecture are committed and responsible. Everyone takes their jobs seriously and endeavours to produce good results.

At the same time there is an overall tendency towards individualism which has the benefit of concentrating efforts and keeping up enthusiasm for each individual's self-chosen-tasks. Although groups of staff gather and dissolve, there has only been one group who has consistently worked together for a significant span of time.

Although individualism is counter to the development of a unitary and coherent identity for the Institute the diversity of views can be considered an asset, especially at a time when there is far from being a global consensus as to the direction which architecture should take. The diversity of opinion within the Institute may be seen as a reflection of the diversity outside of it.

We enjoy the privilege of having amongst our professors some of the most distinguished Norwegian architects, and we must make sure that we create the right conditions for the difficult task of combining practice and teaching to be possible.

See appendix 3 for staff output in the last four years.

Students

AHO has wide discretion to choose the students who are admitted into its programmes, and as the applicants significantly exceed the places on offer, the school most likely gets amongst the best students that are available. It is evident that staff recognise the quality in our student body, and this attitude is the likely cause for the fact that the relations between staff and students are much better at AHO, less confrontational, than in other schools of architecture.

However, an issue which is often raised is the extent to which our students committed to architecture and the level of student output. Explanations for this are not easy; the two most often heard are:

1. There is a generational split: the older generations see architecture as 'a way of life', rather than as a mere profession, and expect young people training in architecture to share this perception. Architecture 'as a way of life' implies that all other activities should take a secondary place. When students make the decision to apportion their time to a diversity of activities, it is perceived by staff as a lack of commitment to architecture.
2. Norwegian affluence has meant that graduating architects have virtually guaranteed employment. Thus the quality of student portfolios at the end of their studies is not decisive to their employment prospects.

Administrative Staff

The Institute is served by AHO's central administrative section which deals with areas such as economy, student matters, building, IT, library, etc.

The Institute has no administrative staff of its own apart from the head of the Institute.

Teaching staff are expected to do all the administration directly related to their teaching and research activities.

There is a strong feeling amongst Institute staff that administrative support for the organisational aspects of their teaching and research activities could be higher. If this provision were made it would free time which could be devoted to increasing student contact and research time. For example, it seems wasteful of academic staff time that the Institute does not have its own secretary to run day to day administrative matters.

TEACHING

Undergraduate

The objective of the three year undergraduate studies is to expose students to those subjects which make up the basic body of knowledge considered necessary for the responsible practice of architecture.

The structure of undergraduate is undergoing change. In the past year two professors have been appointed in first year which has undergone a restructuring process.

In the current semester the Institute of Architecture has been given the responsibility for teaching the second year. The proposed new structure for the second year is contained in Appendix 4 of this document.

As this structure has not yet been applied it is too early to assess it.

Furthermore, the final semester of undergraduate studies, which in the past consisted of three studios, each under the responsibility of a different Institute, will, from the Spring semester of 2009, be the responsibility of the Institute of Architecture and will contain the Ex Phil course (an introduction course to philosophy which is a requirement of Norwegian University education) and a studio. The aim of the studio projects will be to integrate the basic architectural subjects which constitute the main learning objectives of undergraduate studies into one or two architectural projects. The subject of these studios will be urban public buildings in Oslo which deal, as much as is possible in an academic setting, with the full complexity of the architectural production process.

See Appendix 2 for the notes on a current discussion of the structure of undergraduate studies at AHO.

See Appendix 4 for the proposed curriculum for second year.

Graduate

The objective of the two year Masters programme is to allow students to choose from amongst a menu of elective courses and studios; and in so doing to specialise or sample from a variety of subject and attitudes. This variety must, of course, be balanced by a curriculum which ensures that students are prepared for the responsible practice of architecture, or in other words that courses in graduate studies continue to develop the basic skills which were the educational objective of undergraduate studies.

The success of such a programme depends to a large extent on the nature and variety of the offering and at the same time on a sensible equilibrium between variety of attitudes and the needs to develop the craft of architecture, and this raises some important questions. Does the variety of courses and studios on offer constitute a real choice? To what extent does the choice offered reflect what students will encounter when they leave the school? To what extent is there a balance between variety of attitudes and training in the craft of architecture.

In terms of the elective taught courses we have also been redirecting our efforts. First of all there is a much larger offering of this type of courses than there was a year ago. This has allowed us to address some areas which were previously not covered. This is the case for sustainability and universal design as well as for construction, professionalism, and practice.

In 2007 students criticized the fact that too few studios were dealing with building design tasks, such as those which would form the majority of a professional architect's jobs. Although the semester in which this issue was raised was not totally typical, there is no doubt that there the students raised a valid point. There is an imbalance in that the nature of studio programme offerings tends towards the abstract. The fact that this preference for the abstract seems to be a global architectural education phenomenon is no excuse. In the past semesters we have been trying to redress this balance, both by asking some recurring studios to redirect their focus and by introducing new studios which address important current issues, such as sustainability.

This imbalance is exacerbated by two other factors.

Structures teaching is of a high quality and is adequately covered. However, sound applied structural knowledge is not evident in student work. This is most likely caused by a combination of two factors. 1. A significant amount of studio staff, most likely due to the abstract nature of the tasks they set, do not bring issues such as structures into the studio discourse; and 2. Staff teaching structures do not structure the teaching around projects which the students are working on.

Until recently there was little teaching of construction; and, again, abstract nature of studio tasks results in construction issues not being prioritised.

Furthermore there are subjects such as sustainability and universal design which up to a year ago had a rather weak presence in the school. We are now in the process of appointing a 'sustainability' lecturer, and we have amongst our funded PhD students a very active 'universal design' person.

One of the advantages of being a relatively small institution is that changes can be implemented fairly quickly. For example, the one semester studio teaching structure was considered inflexible, especially if a studio wanted to develop a bigger, more complex task. This rule has now been changed to allow for the possibility of two semester studios.

AHO has set as one of its top priorities to aim for excellence in its output. However some its practices prioritise 'equality' over excellence. For example:

The pass/fail system of grading students does not highlight the best work; as a student you are either in a group that is OK, or you fail. AHO tried to introduce grades throughout the school, but students opposed the move, and the compromise was that grades would be given in undergraduate studies and the pass/fail system would be retained in graduate studies.

Operating a system of elective studio units in the graduate school has the advantage of allowing students to specialize in both design attitudes and subjects. However it carries with it the problem that certain units are over subscribed and others undersubscribed. The current system of student selection in oversubscribed studios is seniority; older students have preference over younger ones. It would be possible to introduce a selection system based on 'meritocracy', in which the studio staff in oversubscribed studios would have the chance to select the students they want to work with. This would encourage students to perform at a higher level.

Diploma

'Diploma' is a misnomer which reveals that the final Master's project done at the school is in a state of transition.

The tradition was, I am reliably informed, that the Diploma projects used to be independent pieces of work which graduating students did outwith the school and brought back when they felt they were ready for examination. Slowly AHO has been taking more responsibility for this final project, supplying supervisors and offering a course in which students do the preliminary preparation for their final project. However, this final part of AHO studies, still retains elements of the old system; for example it is the only time in which students chose their own studio topics, write their own programmes, and chose their own supervisors.

The process of examination has also been changing to reflect the increasing role which AHO is taking in the final project.

Whether the gradual changes done to date are enough or whether a more radical change is needed in the direction which other schools have been moving, that is to make the final project one other studio, is something which AHO as a whole will need to consider.

See Appendix 1 for the current list of diploma students and their chosen supervisors.

Facilities and resources

AHO is privileged to be housed in a fantastic building sitting on a park by a river and to have space standards and facilities (such as studio space, workshops, IT equipment) which most schools of architecture can only dream of.

AHO enjoys staff to student ratios which are, when compared to other schools of architecture, very good the resources made available to studios and courses in the form of budgets which the staff are free to use as they see fit are, in comparative terms, very generous.

Assessment summary

We have good students, in comparative terms we enjoy very good facilities and resources, so it is up to the staff of AHO to make it one of the best architecture schools.

Appendix 1

Diploma candidates for Fall 2008, with supervisors

Kandidat		Ansvarlig veileder	Ekstra intern/-e veileder/-e
Knut Gullbrand	Borgen	Beate Hølmekbakk	
Anja	Ellingsrud	Beate Hølmekbakk	
Chris-Johan	Engh	Beate Hølmekbakk	
Sindre	Grønli	Beate Hølmekbakk	Jan Olav Jensen
Tone	Selmer-Olsen	Beate Hølmekbakk	
Kjersti Aase	Winjum	Beate Hølmekbakk	
Fredrik	Haukeland	Christian Hermansen	Magne Wiggen
Fisnik	Haxhimehmedi	Christian Hermansen	
Henrik Width	Kristiansen	Christian Hermansen	
Mattis	Myhra	Christian Hermansen	Tomas Stokke
Maiken	Seglem	Christian Hermansen	
Marit	Skarstøl	Christian Hermansen	
Tea Helene Mørne	Eikeland	Knut Hjeltnes	Erik Langdalen
Anja	Fagereng	Knut Hjeltnes	
Mathilde	Herdahl	Knut Hjeltnes	
Maria Sieglinde Walther	Muribø	Knut Hjeltnes	Erik Langdalen/Tanja Lie?
Erlend	Seilskjær	Knut Hjeltnes	
Tom Erik	Wiik	Knut Hjeltnes	Magne Wiggen
Vilhelm Hofseth	Christensen	Neven Fuchs-Mikac	
Carl-Julius	Claussen	Neven Fuchs-Mikac	
Nicolay Frølich	Nicolaysen	Neven Fuchs-Mikac	
Tine Margit	Schia	Neven Fuchs-Mikac	
Mladen	Sukara	Neven Fuchs-Mikac	
Sondre Honore	Gundersen	Neven Fuchs-Mikac	
Ingvild	Støvring	Birger Sevaldson	
Knut Jørgen	Rishaug	Birger Sevaldson	
Johan	Høgåsen Hallesby	Birger Sevaldson	Mosse
Christopher	Svendsen	Birger Sevaldson	
Bo	Werenskiold	Birger Sevaldson	
Claudia	Araneda	Peter Hemmersam	
Tanja	Bergqvist	Peter Hemmersam	

Håvard	Breivik	Peter Hemmersam	
Floire Nathanael	Daub	Peter Hemmersam	Ellen Helsten
Vebjørn	Kjelsrud	Peter Hemmersam	

Harald Kenneth	Foss	Bygg 3	
Elisa	Grindland	Bygg 3	Tomas Stokke/Magne Wiggen
Anders Eik	Pilskog	Bygg 3	
Jan Gunnar	Skjeldsøy	Bygg 3	Per Kartvedt
Annette Sabrina	Widen	Bygg 3	

Erik	Engebretsen	Jan Olav Jensen	
Per	Halle	Jan Olav Jensen	

Mariann	Fossheim	Søren Sørensen	Erik Nordby
Christian	Thrane	Søren Sørensen	Erik Nordby

Christian Berrum	Lervik	Kolbjørn Nybø	
Kjartan Homlong	Stavseth	Kolbjørn Nybø	
Wenche	Henriksen	Kolbjørn Nybø	

Helder	Neves	Steinar Eriksrud	
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Anders Espen	Bærheim	Magne M. Wiggen	Erik Langdalen/Bård Helland
Birgit Kollandsrud	Friis	Magne M. Wiggen	Erik Langdalen
Espen	Hofsvang	Magne M. Wiggen	Erik Langdalen
Mari	Ulland	Magne M. Wiggen	Erik Langdalen
Erik	Morset	Magne M. Wiggen	Bård Helland

Don	Lawrence	Tomas Stokke	
Jonas	Major	Tomas Stokke	

Appendix 2

Komiteén for teorifagene i grunnundervisningen

TEORIFAG I GRUNNUNDERVISNINGEN VED AHO

Rektor har nedsatt en gruppe for å se på teoriundervisningen i grunnutdanningen arkitektur og design ifbm den forestående rokkingen av grunnundervisningen. Gruppen ledes av Mari Hvattum. Christian Hermansen, Bjørn Sandaker, Dag Tvilde, Steinar Killi og Jonathan Rom har deltatt i møtene. Utgangspunktet for gruppens arbeid var rektors notat B52 som slår fast følgende:

- Ex Phil skal introduseres i grunnundervisningen
- 1. klasse skal ivaretas av FTH, 2. klasse av Ark / ID, 5. semester av URB / ID. 6. semester skal inneholde en 'Bachelor Thesis'. En egen gruppe arbeider med å spesifisere hva en slik Bachelor thesis skal være.

På møtet 13. februar ble følgende aspekter drøftet:

1) Ex Phil – hensikt og plassering

Gruppen er enige om at Ex Phil bør plasseres enten helt i begynnelsen eller helt på slutten av grunnutdanningen. Det er flere grunner til det. For det første er det her Ex Phil kan innpasses uten at det går ut over annen fagspesifikk teoriundervisning. For det andre vil Ex Phil enten som oppstart eller avslutning kunne tjene to ulike pedagogiske siktemål:

Alternativ a) Ex Phil i første semester (se matrise-alternativ A)

Om man la den til 1. semester ville den tjene som det Ex Phil opprinnelig var tenkt som, nemlig en introduksjon til den akademiske diskursen og en kunnskapsbasis for videre studier. Å ha et relativt arbeidskrevende teorikurs i første semester ville dessuten sende signaler om at AHO har en høy akademisk standard både når det gjelder teori og praksis, og være med å etablere gode arbeidsvaner.

Ulempen ved å legge Ex Phil i første semester er først og fremst knyttet til studentenes forventninger og 'hunger' etter praksiserfaring. Første år har tradisjonelt vært rettet mot å introdusere studentene til forgiving; en arbeidsmåte som er ny for de fleste og som krever en viss fordypning. Å kjøre dem igang med et tungt og konvensjonelt akademisk studium i første klasse ville motarbeide denne intensjonen. Ex Phil i første semester ville også skyve unna de nåværende teorifagene (materialteknologi + arkitektur- & designhistorie) som nå fungerer som integrale deler av førsteklassestudio. Ex Phil i første semester må også sies å harmonere dårlig med den faglige profilen som nå utvikles i første klasse, med sin utpregede material- og prosjekteringsorienterte tilnærming.

Alternativ b) Ex Phil i sjette semester (se matrise-alternativ B)

Om man la Ex Phil til 6. semester ville den kunne tjene som en 'fullending' av et teoretisk forløp som starter med fagspesifikk og praksisrelatert teori, og ender med å plassere denne kunnskapen inn i en filosofisk og historisk kontekst gjennom Ex Phil. Faget ville dessuten tjene som et godt 'refleksjonsrom' og akkompagnement til en avsluttende prosjekteringsoppgave i 6. semester. Denne plasseringen ville også gjøre det enkelt å tilby valgbare fordypningskurs til studenter som allerede har Ex Phil.

Ulempen ved å legge Ex Phil i sjette semester er først og fremst av praktisk art. Man ville kunne forvente en relativt høy strykprosent i dette faget, noe som ville skape problemer for studentenes progresjon inn på masterprogrammet. Hvordan ville man f.eks taklet situasjonen med brillante formgivere som ikke kommer seg gjennom Ex Phil? I forhold til slike spørsmål ville det utvilsomt være en fordel om Ex Phil lå tidligere i studiet, da dette ville gi studentene sjansen til å kontinuere uten å forsinke dem i det samlede studieforløpet. Plasseringen av det relativt tunge Ex Phil-faget i 6. semester ville også fordre at 'Bachelor thesis' ikke ble en ordentlig 'thesis' i betydningen 'minidiplom', men at den besto av et relativt normalt studio-arbeid, eventuelt med en samlet portfolie-vurdering til slutt.

2) Valgbarhet eller obligatoriske teorifag?

I dagens ordning velger studentene valgbare fordypningskurs i 5. og 6. semester. Slik vi oppfatter B52 legges det opp til en mer foreskrevet Bachelor, utifra en enkel tankegang om at på Bachelor-nivået blir man undervist, mens på Master-nivå velger man sin spesialisering.

Dersom man er enige om denne modellen, åpner det seg muligheter for å introdusere nye teorikurs i grunnutdanningen, som kan bidra til å fylle en del kunnskapshull. Vi diskuterte særlig muligheten for å introdusere et nytt kurs i Norsk / nordisk arkitekturhistorie, som til nå har fått særdeles stemoderlig behandling ved AHO. Dette kunne f.eks legges i 3. semester (se alternativ B), og tenkes sammen med Norges-ekskursjonen. Arkitektur kunne dessuten styrke undervisningen i bygningskonstruksjon ved å fordele den over to 6-vekttskurs gjennom hele 2. år, som vist nedenfor.

Dagens situasjon

	studio (18 ECTS)		historie & teori		teknologi		teori integrert i studio	
	ARK	ID	ARK	ID	ARK	ID	ARK	ID
SEM 1	STUDIO 1-3		Tverrsnitt gjennom arkitektur- og designhistorien		Materialteknologi		Geometrikurs Fargekurs Tegnekurs IT-kurs	
SEM 2	STUDIO 1-3		Moderne arkitektur- og designhistorie		Materialteknologi		Tegnekurs IT-kurs	
SEM 3	Teknologi (12 ECTS)	Ergonomi, interaksjons design	Arkitektur-teoriernes historie	Designteori 1	Konstruksjonslære	Mekanikk		
SEM 4	Urbanisme	Teknologi	Byhistorie	Designteori 2		Produksjonsteknologi	Urbanisme i et samfunns vitenskapelig perspektiv	
SEM 5	Arkitektur	Profesjonsrettet design	Valgbare fordypningskurs				Profesjonskunnskap Bygningsfysikk	
SEM 6	Studio 6	Merkevarebygging	Valgbare fordypningskurs					

Alle overstående teorikurs er på 6 ECTS, alle studioskurs er på 24 ECTS, dersom ikke noe annet oppgis i matrisen

Ny situasjon, alternativ A:

	studio (18 ECTS)		historie & teori		teknologi	teori integrert i studio			
SEM 1	ARK	ID	ARK	ID	Ex. Fac.	ARK	ID	ARK	ID
	STUDIO 1-3		Ex Phil						Tegning IT
SEM 2	ARK	ID	ARK	ID		ARK	ID	ARK	ID
	STUDIO 1-3		Tverrsnitt gjennom arkitektur- og designhistorien (+ROMA)			Materialteknologi		Tegning IT	
SEM 3	ARK	ID	ARK	ID		ARK	ID	ARK	ID
	Arkitekt ur studio 3	ID studio 3	Moderne arkitektur- og designhistorie (+PARIS)			Materialteknologi			
SEM 4	ARK	ID	ARK	ID	ARK	ID	ARK	ID	
	Arki- tektur studio 4	ID studio 4	Norsk arkitektur- historie (+ NORGES- EKS- KUR- SJON)	Design- teori 1	Konstruk- sjonslære (6 ECTS)	Mekanikk	Profesjons kunnskap	Bygnings- fysikk	
SEM 5	ARK	ID	ARK	ID	ARK	ID	ARK	ID	
	Urban- isme	ID studio 5	Byhistorie	Design- teori 2	Konstruk- sjonslære (6 ECTS)	Produk- sjons- teknologi	Urbanis- me i et samfunns vitenskap elig perspektiv		
SEM 6	ARK	ID	ARK	ID	ARK	ID	ARK	ID	
	Bachelor thesis (24 ECTS)		Arkitektur- teorienes historie	Design- teori 3					

Alle overstående teorikurs er på 6 ECTS dersom ikke noe annet oppgis i matrisen

Ny situasjon, alternativ B:

	studio (18 ECTS)		historie & teori		teknologi	teori integrert i studio			
SEM 1	ARK	ID	ARK	ID	Ex. Fac.	ARK	ID	ARK	ID
	STUDIO 1-3		Tversnitt gjennom arkitektur- og designhistorien			Materialteknologi	Tegning IT		
SEM 2	ARK	ID	ARK	ID		ARK	ID	ARK	ID
	STUDIO 1-3		Moderne arkitektur- og designhistorie (+ROMA)			Materialteknologi	Tegning IT		
SEM 3	ARK	ID	ARK	ID		ARK	ID	ARK	ID
	Arkitekt ur studio 3	ID studio 3	Norsk arkitektur-historie (+NORGES-EKSKUR-SJON)	Designteori 1		Konstruksjonslære	Mekanikk		
SEM 4	ARK	ID	ARK	ID	ARK	ID	ARK	ID	
	Arki-tektur studio 4	ID studio 4	Arkitektur-teoriernes historie (+PARIS)	Designteori 2	Konstruksjonslære	Produk-sjons-teknologi	Profesjons kunnskap	Bygnings-fysikk	
SEM 5	ARK	ID	ARK	ID	ARK	ID	ARK	ID	
	Urban-isme	ID studio 5	Byhistorie				Urbanis-me i et samfunns vitenskap elig perspektiv		
SEM 6	ARK	ID	ARK	ID	ARK	ID	ARK	ID	
	Bachelor thesis		Ex Phil						

Alle overstående teorikurs er på 6 ECTS dersom ikke noe annet oppgis i matrisen

Alternativ B, overgangsordning 2008/9:

Dersom vi satser på alternativ B, må det bli et overgangsår for å takle det problemet at 2.klasse (som har hatt urbanisme i 4. semester) ikke kan gå inn på den nye ordningen direkte, der urbanisme ligger i 5. semester. Derimot må de få et 'ekstra' arkitektursemester ettersom de hadde urbanisme i 4. semester. Dette betyr stor undervisningsbelastning for institutt for Arkitektur i 2008/9, mens urbanisme får et 'friår' mens de venter på at neste kull kommer opp i 5. semester. FTH forslår et nytt historiefag i Norsk arkitekturhistorie som skal legges til 3. semester. For å få tid til å utvikle et slikt nytt kurs forslår vi imidlertid at det i overgangsperioden 2008/9 legges til 4. semester. Dette faget kan gå godt sammen med norgesekskursjonen.

studio (18 ECTS)		historie & teori		teknologi		teori integrert i studio		
SEM 1	ARK	ID	ARK	ID	ARK	ID	ARK	ID
	STUDIO 1-3		Tversnitt gjennom arkitektur- og designhistorien		Materialteknologi		Tegning IT	
SEM 2	ARK	ID	ARK	ID	ARK	ID	ARK	ID
	STUDIO 1-3		Moderne arkitektur- og designhistorie (+ROMA)		Materialteknologi		Tegning IT	
SEM 3	ARK	ID	ARK	ID	ARK	ID	ARK	ID
	Arkitekt ur studio 3	ID studio 3	Arkitektur-teorienenes historie (+ PARIS)	Designteori 1	Konstruksjonslære	Mekanikk		
SEM 4	ARK	ID	ARK	ID	ARK	ID	ARK	ID
	Arki-tektur studio 4 (for 2.klasse)	ID studio 4	Norsk arkitekturhist orie (+ NORGES-EKSKURS-JONEN)	Designteori 2	Konstruksjonslære	Produk-sjons-teknologi	Profesjons kunnskap	Bygnings-fysikk
SEM 5	ARK	ID	ARK	ID	ARK	ID	ARK	ID
	Arkitekt ur studio 4 (for 3.klasse)	ID studio 5	Valgbart fordypnings-kurs	Valgbart fordypnings-kurs				
SEM 6	ARK	ID	ARK	ID	ARK	ID	ARK	ID
	Bachelor thesis		Ex Phil					

Alle overstående teorikurs er på 6 ECTS dersom ikke noe annet oppgis i matrisen

Appendix 3

Research catalogues of the last four years (2004, 2005, 2006, 2007.)

	Academic Publications ⁵						Works								
	Monograph		Artikkel				National or International prize		Work in National or Internat. Period. or monograph ⁶		Exhibition in national or internat. venue		Prize in arch. competition		
	L. 1	L. 2	Anthology		Periodical										
			L.1	L.2	L.1	L.2	Int.	Nat	Int.	Nat	Int.	Nat	Int.	Nat	
Dahle, Einar						1		1	1	1	1				
Dobloug, Margrethe															
Eggen, Arne					1				1						
Eikseth, Barbro Grude															
Eriksrud, Steinar															
Fjeld, Per Olaf			1	2					1		4				
Fuchs-Mikac, Neven											3				
Funck, Lisbeth									1	1	3				
Gerstlauer, Rolf										1	4				
Hermansen, Christian				2	1										
Hjeltnes, Knut								1	3	4					
Høgset, Halvor															
Hølmebakk, Inger Marie															
Jensen, Jan Olav	1				1		4	1	12	10	1				
Kartvedt, Per															
Kleven, Bente												1			
Nordbye, Erik															
Sandaker, Bjørn		1													
Sandness, Solveig															
Stokke, Tomas															
Sørensen, Søren S.						2									
Wiggen, Magne M															

⁵ The publications included in this part use the Norwegian classification system for 'scientific publications' in approved journals which are classified into two categories.

⁶ The criteria for inclusion in this category is that the article is about a work executed by a member of staff of the Institute of Architecture and published in approved journals or books as per 1 above.

Appendix 4

INSTITUTE OF ARCHITECTURE SECOND YEAR CURRICULUM

To be submitted to UU's meeting 7 May.
28-04-08

AHO has made the principal aim of the curriculum of the first three years of education to teach those subjects which make up the basic body of knowledge considered necessary for the responsible practice of architecture.

We take as our starting point the European Union's definition of what this basic body of knowledge should consist of:

"Education and training leading to diplomas, certificates and other evidence of formal qualifications referred to in Article 2 shall be provided through courses of studies at university level concerned principally with architecture. Such studies shall be balanced between the theoretical and practical aspects of architectural training and shall ensure the acquisition of:

- 1. an ability to create architectural designs that satisfy both aesthetic and technical requirements,*
- 2. an adequate knowledge of the history and theories of architecture and the related arts, technologies and human sciences,*
- 3. a knowledge of the fine arts as an influence on the quality of architectural design,*
- 4. an adequate knowledge of urban design, planning and the skills involved in the planning process,*
- 5. an 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,*
- 6. an 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,*
- 7. an understanding of the methods of investigation and preparation of the brief for a design project,*
- 8. an understanding of the structural design, constructional and engineering problems associated with building design,*
- 9. an 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,*
- 10. the necessary design skills to meet building users' requirements within the constraints imposed by cost factors and building regulations,*
- 11. an adequate knowledge of the industries, organizations, regulations and procedures involved in translating design concepts into buildings and integrating plans into overall planning."*

Those sentences highlighted in the quotation above correspond to those areas of knowledge which fall into the subject areas which AHO has defined as the themes for second year; architectural design, technology, and professionalism.

However, second year is but one part of basic education, so to start of this discussion we need to address, albeit at a general level, a student's progression through first year. There have been extensive discussions with first year staff to ensure that coordination and progression through these two years is coherent.

The didactic and organisational principles which runs through the first two years are:

- Years one and two should be seen as parts of a unitary, but flexible, teaching strategy.
- Education in first and second year will centre on design tasks related to building for human occupation.
- Studio teaching (learning by doing) will be the central educational form around which all other teaching is structured.
- A series of increasingly complex studio tasks will form the basis of progression throughout first and second years. Although these tasks may contain restrictions for the sake of educational focus and clarity, each task will aim to deal with the full complexity of architectural design, to simulate as closely as possible the complexity experienced by a practicing architect.

SECOND YEAR: TEACHING OBJECTIVES

The overall objective of the second year is INTEGRATION of the diverse subject areas which constitute the main components of architectural design and building, into coherent building designs. Second year aims to teach both basic knowledge in design, technology and professional subjects, and to ensure that students learn how to INTEGRATE this knowledge into their building designs.

- The focus of year is on technology and professionalism. This focus will be delivered principally through progressively more complex studio tasks focusing on *building for human occupation* and supported by taught courses.
- In each task we will aim to deal with the full complexity of an architectural commission.
- The third semester will focus on urban dwelling as a response to social trends and place, and thus it will be a continuation of the habitation theme initiated in the second semester.
- The fourth semester will use a small public building in an urban setting as the main studio task.
- The focus on the context of the building (social and site conditions) would link second year with Urbanism's fifth semester.
- The second year will be organized on the basis of four studio units of approx. 14 students, each unit dealing with the same program, but taking different approaches according to the specific focus of the tutor in charge of that unit.
- We will endeavor to integrate staff teaching in graduate studios with the second year undergraduate programme. We will use graduate studio staff to give an introductory talk related to the design task and to give a 'master review' of the projects of the whole class at the end of each project.

It is extremely important that all teaching takes on a critical standpoint to its subject and its place in the architectural process. It is necessary not only to impart the basic knowledge in these diverse topics but to develop in students a critical understanding of the principles underlying each subject, so that students can use the knowledge gained in a creative way.

If we use the previously mentioned EU recommendations for an architectural curriculum and apply it to the courses to be taught in second year we come up with the following table:

Course	Content
Studio	<ul style="list-style-type: none"> - <i>an ability to create architectural designs that satisfy both aesthetic and technical requirement.</i> - <i>an 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.</i>
Structure	<ul style="list-style-type: none"> - <i>an understanding of the structural design, constructional and engineering problems associated with building design.</i>
Building physics	<ul style="list-style-type: none"> - <i>an 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.</i> - <i>an 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</i>
Construction	<ul style="list-style-type: none"> - <i>an understanding of the structural design, constructional and engineering problems associated with building design.</i>
Services	<ul style="list-style-type: none"> - <i>an 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</i>
Sustainability & energy	<ul style="list-style-type: none"> - <i>... the relationship between ... buildings and their environment ...</i>
Professional studies	<ul style="list-style-type: none"> - <i>an 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.</i> - <i>the necessary design skills to meet building users' requirements within the constraints imposed by cost factors and building regulations.</i> - <i>an adequate knowledge of the industries, organizations, regulations and procedures involved in translating design concepts into buildings and integrating plans into overall planning.</i> - <i>an understanding of the methods of investigation and preparation of the brief for a design project.</i>

In addition to the above the Institute of FTH will deliver two history and theory lecture courses during the second year, each associated to a study trip. In the first semester there will be Norwegian architectural history course associated with a Norwegian study trip. In the second semester there will be a The History of Architectural Theory course associated with a study trip to Paris.

WEEKLY STRUCTURE, THIRD & FOURTH SEMESTERS

In general terms the mornings would be used for lectures and the afternoons for studio, except for Friday which would be kept clear for studio events.

The general weekly timetable is the following:

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
Morning	STUDIO	Structures and Construction	Arch. Practice: Building physics and services	Arch. Practice: Professional studies	History and theory
Afternoon	STUDIO	STUDIO	STUDIO	STUDIO	History and theory

Each

taught course would consist of approx. 10 lectures per semester.

The credits gained in each course are the following:

STUDIO &	Architectural Practice	Structures and Construction	History and theory
12 credits	6 credits	2 credits	6 credits

The following are general descriptions of these courses:

COURSE DESCRIPTIONS:

Studio and Architectural Practice (12+6 ECTS)

Studio

According to the EU, architectural training should develop:

- *an ability to create architectural designs that satisfy both aesthetic and technical requirement.*
- *an 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.*

The theme of the studio will be urban housing in the first semester and a small public building in the second semester. The brief for the project will reflect current social needs and an understanding of the place where the site is located. The sites for the projects will be in and around the centre of Oslo.

The overall objective of the second year is INTEGRATION of the diverse subject areas which constitute the main components of architectural design and building into coherent and interesting building designs. Second year aims to teach both basic knowledge in design, technology and professional subjects, and to ensure that students learn how to INTEGRATE this knowledge into their building designs.

The focus of year is on technology and professionalism. This focus will be delivered principally through progressively more complex studio tasks focusing on *building for human occupation* and supported by taught courses.

In each studio task we will aim to deal with the full complexity of an architectural commission.

- The third semester will focus on urban dwelling as a response to social trends and place, and thus it would be a continuation of the habitation theme initiated in the second semester.
- The fourth semester will use a small public building in an urban setting as the main studio task.
- The focus on the context of the building (social and site conditions) would link second year with Urbanism's fifth semester.
- The second year will be organized on the basis of four studio units of approx. 14 students, each unit dealing with the same program, but taking different approaches according to the specific focus of the tutor in charge of that unit.

We will endeavor to involve staff teaching in graduate studios with the second year undergraduate programme.

There will be two studio projects in each semester, a preparatory small project followed by the main project. The first project will be shorter and used as means to introduce students into the subjects of urban housing and the small public building. The second project will be the main task of the semester, the one which will be the main vehicle in which students will demonstrate their ability both to develop a good architectural design solution and to integrate the knowledge imparted in the taught courses.

In addition to the regular taught courses, interspersed into the semester will be a series of support activities such as talks, workshops, visits, etc. whose aim is to inform different aspects of the task at hand.

The predominant form of teaching will be one-to-one studio tutorials

As the main objective of this year is INTEGRATION of the diverse knowledge which goes into the design and making of a building all assessments will not only measure the knowledge in each subject area, but also how the student integrates that knowledge into their building designs.

The predominant assessment of studio work will be based on the architectural quality of the building (approx. 60%). However this assessment will also take into account the extent to which the student integrated those knowledge areas taught in other courses (approx. 40%).

Architectural Practice

According to the EU, architectural training "shall ensure the acquisition of:

- *an 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.*
- *an understanding of the methods of investigation and preparation of the brief for a design project.*
- *the necessary design skills to meet building user's requirements within the constraints imposed by cost factors and building regulations.*
- *an adequate knowledge of the industries, organizations, regulations and procedures involved in translating design concepts into buildings and integrating plans into overall planning".*
- *an 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".*

- *an understanding of the relationship between people and buildings, and between buildings and their environment”.*

The aim of the course is multifarious and directed towards a number of subjects that need to be confronted by the professional architect; ranging from urban and building regulations to building physics and detailing for climate protection, as well as questions about sustainability, energy and services.

Three main topics may be identified as professional studies, building physics and detailing, and sustainability and energy.

The idea of professional studies is to bring up and discuss urban planning regulations, building regulations, the process of project approval, how architects organise their practices to achieve their design objectives, the concept of universal design, professional drawing conventions etc.

In the building physics and detailing sequence, the aim is to offer basic knowledge of the response of the exterior surfaces of buildings to weather and climate parameters like heat, rain and wind. Moreover, the course focuses on presenting common detailing of exterior walls, roofs and floors in different materials that seeks to overcome the difficulties of acting as barriers between spaces having widely different temperature and moisture conditions. The need for technical services will also be brought up and discussed.

The aim of the sustainability and energy sequence is to offer basic knowledge and understanding about how to integrate sustainable demands on architecture. The aims of sustainability are obtaining a balance between environmental, economic and social goals in such a way that the needs of the present are met without compromising the ability of future generations to meet their own needs. Focus will be placed on environmental issues. There is a natural link and potential of integration between this sequence and the building physics and detailing sequence. The latter will be taught in the autumn semester while sustainability issues will follow in the spring semester.

The course will run in the 3rd and 4th semesters with one lecture per week during 10 + 10 weeks, comprising 6 ETCS + 6 ECTS. Final exam(s) will be held. In assessing the course the exam(s) will count 80% and integration of practice knowledge into the project will count 20%.

Structural Mechanics and Construction (6 ECTS)

According to the EU, architectural training *“shall ensure the acquisition of:*

- *an ability to create architectural designs that satisfy both aesthetic and technical requirements.*
- *an understanding of structural design, constructional and engineering problems associated with building design”.*

The aim of the course on structures and construction is to offer basic knowledge of fundamental structural types, how structures behave when subjected to loads, and the relationship between form and the mechanical concepts of strength, stiffness and stability. Moreover, the course illustrates and discusses structural concepts in relation to various architectural works.

Furthermore, the course focuses on the similarities and differences between the properties of the different materials and how they are used in actual construction practices. Besides, the most common construction systems for small and larger buildings will be presented and discussed.

Main topics are:

- structural form and behaviour
- structural elements and construction systems
- structures and architecture

The course will run continuously in the 3rd and 4th semester with one lecture per week, counting 10 + 10 lectures altogether, comprising 5 ECTS + 5ECTS. A number of compulsory exercises will be given and a final exam will be held. In assessing the course the exam will count 60% and integration of structural and construction knowledge into the project will count 40%.

Responsible: Bjørn N. Sandaker, professor.

History and Theory (6 ECTS)

Norwegian architectural history

The class covers Norwegian architectural history from prehistory until today. Through lectures and study trips, we study traditional vernacular architecture as well as modern, architect-designed buildings. Experience of buildings in situ is emphasised, and the class arranges several day trips and one longer excursion.

The students will gain knowledge about key moments in the development of Norwegian architecture. Through literature studies, lectures, and field trips, they will also be trained to situate the Norwegian architectural tradition into a historical and cultural context.

The History of Architectural Theory

The course outlines main tendencies in the history of western architectural theory, from the present to antiquity. It is organized as a lecture series with parallel reading seminars.

The course aims to give an overview over key theoretical currents in the history of architecture as well as to encourage students to engage theoretically through academic writing and discussions.

2008 Fall Semester

2008	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T
August					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
September	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30							
October			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31				
November						1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
December	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31						

Lecture courses consist of 10 lectures which would finish on 14 November 2008

	Small project: Small public building, set by Graduate staff
	Large project
	Interim project reviews
	Final Project reviews
	Workshops
	Norway study trip
	Course exam week and AHO WORKS

- Details:
1. Introduction to Small Project by Graduate Studio teacher.
 2. Final Reviews of Small Project.
 3. Norway trip
 4. Introduction of Main Project
 5. Interim reviews Main Project
 6. Structural workshop: Kanada
 7. Material's workshops: concrete
 8. Final Reviews, main project
 9. AHO WORKS week

2009 Spring Semester

2009	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T							
January				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
February							1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
March							1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
April			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31				
May					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
June	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31						

	Small project: Small public building, set by Graduate staff
	Large project
	Interim project reviews
	Final Project reviews
	Workshops
	Paris study trip
	1:1 construction of building component
	Course exam week and AHO WORKS

- Details:
1. Introduction to Small Project by Graduate Studio teacher.
 2. Final Reviews of Small Project.
 3. Introduction of Main Project
 4. Interim reviews Main Project
 5. Structural workshop: Kanada
 6. Material's workshops: steel
 7. Paris trip
 8. Final Reviews, main project
 9. Final exam, AHO WORKS week

Assessments

The main objective of this year is INTEGRATION of the diverse knowledge which goes into the design and making of a building. Thus, all assessments will not only measure the knowledge in each subject area, but also the ability of students to integrate this knowledge into their building designs. Thus all taught courses will have two assessment components:

- The examination of the knowledge gained in the specific subjects dealt with in the course.
- The examination of the integration of this knowledge into a building design. Subject teachers will have to assess, in student's building designs, the extent to which the subject area they taught has been coherently incorporated into the building.

The predominant assessment of studio work will be based on the architectural quality of the building. However studio assessment will also take into account the extent to which the students have integrated knowledge taught in other courses.

Appendix 5

AHO WORKS assessor's reports from December 2007:

1. from Andy Macmillan.
2. from Julian Lynghjem

Instructions for assessors.

At the end of every semester AHO displays the work of its Industrial Design, Architecture, and Urbanism graduate studios.

This exhibition has several aims:

1. To show the semester's work to AHO's community of students and staff. This is especially important for students who have to choose their studio-units for the coming semester.
2. To show the work to the wider community outside AHO. More than 300 invitations are sent out to interested parties to come to the exhibition.
3. To assess the quality of the work of studios:
 - 3.1 to compare studio results; which studios are performing well and which need attention.
 - 3.2 to assess AHO's student work in terms of international standards. This assessment is particularly important in regard to AHO's strategic aim of improving student work at the master's level to a high international level. AHO would like assessors to place particular emphasis on this point.
4. To celebrate student's work by offering prizes to those whose work stands out.

In order to realize the four aims described above we invite a panel of assessors from outside AHO to look at the work of our students and let us know what they think we are doing right and what needs to be improved. This is done in the form of a report which is submitted to our Rektor and intended for dissemination amongst the AHO community.

In addition the assessors award a series of prizes which are sponsored by organizations outside AHO.

AHO WORKS EXHIBITION : DECEMBER 2007

Assessor's Report: Professor Andy MacMillan OBE RSA

INITIAL IMPRESSIONS OF THE SCHOOL AND THE EXHIBITION

1.1 The School is housed in a building conversion of some distinction which provides extremely generous and highly appropriate accommodation. It also has an excellent staff student ratio of 1/7 and seems to have a fine staff and to attract good quality students.

The speed with which an annual Christmas Dinner for around 350 people was organised at the end of a long day's assessment was particularly impressive, revealing an excellent relationship between staff and students as well as a strong sense of community and identity. Marks of a good school.

1.2 The Exhibition was well organised and hung, permitting easy appraisal of individual student work and assessment of the aim and achievement of the unit as a whole. Comparison of the work and apparent aims of each unit was facilitated and an opportunity offered to gain a wider view of what might be the School's aims.

1.3 Discussion with staff and students revealed that individual choice or selection of units taken in the upper years of the course was given a high priority. The exhibition made it possible for them to select a personal route to Qualification after the early structured teaching years.

Such routes clearly could vary in challenge, content and ambition suggesting that the value of a final professional qualification could be difficult to assess.

1.4 Some units are clearly teaching driven, some are learning led offering wider opportunities for a personal approach.

The demands of the units thus vary and some routes are clearly easier or less demanding than others. One well subscribed unit in particular could be seen as offering an easy choice and well taught and useful in itself as it is, is misplaced in later years. I shall return to this later.

1.5 Nevertheless the overall impression of a Good School remains strong, a school sharing accepted values, cultural and professional.

That many of the projects relate to local and Norwegian needs and sites was encouraging though awareness of wider contemporary issues, of urban social and ecological problems and opportunities, was also clearly in evidence.

GENERAL OBSERVATIONS ON THE UNITS

2.1 Ten units were assessed (including Second Year GK3).

In making the assessments I have described them as appropriate to Third, Fourth or Fifth (Final) years, relating them to similar projects found at that level in UK or European and overseas courses where year structures rather than semesters are common.

The judgement is based on the progress and increasing degree of skill and competence expected in the projects.

One particular unit I consider would better be placed in the early teaching years, preferably in a First year semester.

In examining individual units in the later years I had reason to question how or even if technical aspects of say sustainability are taught as a course in later years. This may be outwith my remit but can be regarded as natural curiosity.

2.2 Three were clearly appropriate to Final Year studies; one in architectural design one in urban design, and one in landscape design unit.

2.3 Five were more appropriate to Third and Fourth year studies : one, an energy based design, two were conservation studies, one on the upgrading of an older building ; one on finding a new use for a student selected building of character, and two were concerned with the insertion of small scale structures and interventions into sensitive landscapes.

2.4 One unit appropriate to Fourth and Final years, offered the opportunity for an individual student selected, self programmed project.

2.5 Finally one well subscribed unit seemed to me to be more appropriate and indeed highly desirable in a First or Second year.

2.6 The Second year structure seemed most appropriate in its material and design studies and the live building element very admirable

ASSESSMENT OF INDIVIDUAL UNITS

3.1 FERRY TERMINAL

This programme provided a programme which allowed for an individual approach to the design of a highly important urban building, on a challenging site where the sea meets the land at the centre of the Capital. The individual projects displayed a wide variety of invention, understanding and ambition. The presentations of the ideas was also clear, some at an extremely high level. The learning and investigation process was also visible. This unit would hold its place in any good School of Architecture as indicated by the number of the prizes awarded to it.

3.2 SEALED AGAINST THE REAL

An Urban Design Project which was extremely well organised as an exhibition it displayed graphically the large amount of information gathered towards the design of a new urban area in Copenhagen which incorporated a large shopping mall and housing at an important road junction ie it had a strong learning component. It also displayed a variety of different ideas proposed and explored by individuals or teams of students, e.g. personal choice was visible. Invention and ambition and response to content, context and challenge were also apparent. This unit was appropriate for a Final Year course and again, would favourably compare with schools in the UK and European model.

3.3 REISENS LANDSCAPE

A unit which examined the special needs of a Tourist Route in a sensitive landscape. Clearly much research had been done. Ideas had emerged and were developed in a number of very interesting ways. Much of it was innovative and original and responsive to an idea of Norway in a modern world. Again a coherent exhibition making the aims and ambitions of the Unit clear and showing individual work of the student in the context of the unit. Once again a unit which would compare with the better schools anywhere and could offer example to the road construction industry.

3.4 All three of the foregoing units can be said to be well construed and well executed. They show the AHO to advantage. The varied content of the units fits well with a suitable degree of specialisations at a Diploma year level and allowing also a clear degree of individual assessment.

3.5 ENOVA

This is an energy driven unit using a project for the design of a swimming pool/bathing complex, as a medium to examine its energy and eco concerns. The site and building type are well chosen, the degree of complexity in planning is at a suitable Diploma level and the possibility of students choice of how to tackle the subject is clear. Variety and form approach could be seen and clearly at least one solution was prizeworthy. An interesting diagram and paper on how the unit was assessed was shown to us.

This is a worthwhile unit particularly suitable for a Fourth year but raising a question of how teaching of this subject is treated throughout the course. It is a major concern to all architectural designers nowadays, and it could be held to be a necessary component of every students course, not just those who choose this unit.

3.6 ARCHITEKTURVERN

One of two conservation units this unit asked students to select an older or even historical building and propose a suitable new use for it. A large unit it provided a wide variety of approaches and solutions some drawn some additionally supported by text and or models. Some examples were clearly ambitious some less so. All in all this seems an appropriate unit of Third or Fourth year study. The element of student choice of subject meant a wider range of building by type, or location could bring about interesting discussions of the what, how and where of build form.

3.7 GK5 ARK

This other conservation unit, took the approach of examining the possible upgrading and reuse of an essentially dull system built tower block, through re-cladding or re-planning and/or modifying the section even, in the light of modern needs and demands. Some aims were relatively simplistic, some were driven by the idea of the icon or landmark function of the tall block. Some solutions were at a higher level and showed a fair degree of sophistication. Students ability was easy to compare, and the project can be seen as appropriate today where the alternative to modification is demolition. Depending on the level of discussion and research involved in this project could be usefully seen either as a Third or Fourth year project, higher level of skill and concern being expected in a Fourth year student.

3.8 Both conservation projects usefully examined different aspects of the idea of conservation of useful or historic structures. In its non specialised way it could usefully open the mind of the student in a holistic way. Normally conservation in a school of architecture is seen as a post graduate specialism.

3.9 ARCHITECKTUR I LANDSKAP

One of the two units examining the development of small structure and interventions along a tourist walk in a landscape.

The buildings are presented at a level of planning and outline detailing, and are associated with the landscape interventions.

Skill in designing cabins and in imagining and making landscape interventions is revealed in some variety of form and surface. Some relatively sophisticated ideas and forms can be seen along with a competent level of architectural drawing.

3.10 A MOTE LANDSKAPET

This unit is similar to Architektur I Landskap in its content, but with perhaps slightly less sophistication and more interest in material and facilities. Similar small scale buildings and interventions in the landscape were examined with rather more model building. One student built a large scale model showing the use of timber weaving, examining various patterns. This was awarded a prize.

3.11 I would normally have reservations about placing buildings of the small scale proposed, in the later years of a Diploma course but could believe that in rural Norway such structures may be a significant part of practice.

However there is no doubt that in Oslo, Trondheim and Norway's larger urban areas, a normal urban complexity can be found. I wonder if the balance of time a student spends examining building of urban scale is enough. Schools, office blocks, commercial structures, structures with lifts/escalators, parking consideration, transport structures present organisational problems which need addressed and should be addressed in architectural education.

3.12 SELVPROGAMMERING

This unit allowed the student to formulate a programme for a self chosen project. The results were interesting and reached a commendable level. The intentions and ideas shown were clearly developed, drawings and models were shown and the programme seems appropriate in a Diploma course. Self programming in final years is not uncommon and indeed customary in many UK schools in the final year. The amount of tutoring need not exceed, even should not exceed the normal in any unit.

3.13 All of the foregoing units, with the slight reservations expressed seem well taught programmes which allow for student learning and permit the possibility of individual approaches. However the last unit examined poses a serious problem.

3.14 ROM SOM GENERING

This is an excellent elementary form making exercise, strongly teacher driven where the work of individual students is difficult to distinguish. It is a programme often found in First or Second year of architecture courses, as well as in Design courses in general. It takes up a session in the Diploma years at a time when problems of architectural complexity should be addressed. It is clearly popular perhaps because it offers avoidance of more challenging problems. It would be better placed in an earlier year. In itself it seems an excellent well taught unit, but I do not find it appropriate at this stage in the course.

CONCLUSIONS AND RECOMMENDATIONS

4.1 The School is fortunate in its generous and appropriate accommodation and in having a very good 7/1 staff ratio. It also possesses fine teachers and good students and as indicated in my initial remarks, a very good relationship exists between them conveying the impression of community and identity.

4.2 The work of the units as a whole, with one exception, seem appropriate to the years in which they occur, and to elicit work which is inventive and well presented. The quality of teaching and

learning in the units can be read in the work. And the exhibition as organised, clearly reveals the range of individual achievement and ethos on the unit itself as well as the co-operative effort put in.

4.3 The standards set and achieved compare favourably with good International Schools. In making comparisons I tended to compare with schools in the UK system which I have had a very long involvement as an Architect and as an Academic. I have also had considerable international experience as can be seen in my CV.

4.4 As assessors we are asked to look at what improvements might be considered. I have already indicated my general satisfaction and pleasure on the day but suggest below the minor reservations mentioned in the Unit reports.

4.5 First I strongly believe that the ROM SOM GENERING Unit be placed in an earlier stage. Perhaps it might be replaced by a unit which addresses a project of some complexity.

4.6 I draw attention to the relatively low level of complexity in the two landscape walk buildings and thought it may have more relevance to rural Norway. There may be something there worth discussing. I did feel the road in the landscape was at a more suitable level of complexity and I do believe rural problems have their place, but perhaps not in the later years.

4.7 I consider the ENOVA project was suitable in the Diploma years, but felt that I would like to know more about how sustainability and energy considerations were taught in the school. I think today they must surely be integral to any building albeit not necessarily the driver of the design. I can see a useful discussion there.

4.8 With the exception of the ROM SOM GENERING unit these are relatively minor recommendations I hope might provoke discussion.

4.9 Finally I would like to say how much I enjoyed visiting your School and seeing the work and meeting your staff and students. I also enormously enjoyed the atmosphere, and felt I had extended my own learning process
Many good wishes for the coming year, I hope this report will be useful.

11.01.08

Julian Lyngghjem
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12.02.08

Evalueringsnotat for Arkitektur- og designhøgskolen i Oslo

Notatet er basert på Arkitektur- og designhøgskolen i Oslo sin skoleutstilling, desember 2007, som et faglig og konstituerende grunnlag for evaluering av følgende tema:

1. **evalueringsnotat – overordnede betraktninger**
2. **evalueringsnotat - utstilling**
3. **evalueringsnotat - studios**
4. **evalueringsnotat – internasjonal standard**

Erfaringsgrunnlaget refereres til befaring av utstilling og dialog med tilgjengelige studenter og fagansatte. Arbeidets omfang omfattet studentprosjekter ved ni ulike studios. Til sammen over hundre prosjekter innen urbanisme, landskap og arkitektur. Det ble avsatt 4 timer til befaring av utstilling.

Forut for befaring, ble det gitt en kort innføring i hvilke institusjonelle holdninger som ligger bak kursutviklingen, og hvilke føringer som legges til grunn for faglig innhold og gjennomføring.

Den faglige strategien som ble formidlet, var Arkitektur- og designhøgskolens hovedmål i å legge til rette for kursmenyer, med klar markedsorientering og et profesjonsorientert faglig innhold. Videre at de enkelte fagkurs som tilbys, dyrkes som innbyrdes uavhengige kursprofiler, utviklet av de faglige ansatte på de respektive fagområder. Vært semester tilbys et utvidet tilbud av konkurrerende kursmenyer, som begrenses og gjennomføres på basis av studentenes tilslutning.

1. Evalueringsnotat – overordnede betraktninger

Arkitektur- og designhøgskolen faglige strategi, kommer tydelig til uttrykk i utstillingen. En bred og variert meny av ulike kursprofiler, som samlet sett dokumenter god bredde i sin faglige virksomhet. Et gjennomgående inntrykk er at samtlige studios har gjennomarbeidede prosjekter med høyt ferdighetsnivå og artikulerte prosjektpresentasjoner.

Ved nærmere gjennomgang av de enkelte fagkurs (studios) er et gjennomgående trekk at faglige sikteområder oppleves som sektororienterte, med spesifikke problemstillinger som overordnes reelle og supplerende utfordringer som produkt av omgivelseskontekster. Dette gjelder i hovedsak byggerorienterte studios, der prosjektarbeider i liten grad vektlegger situasjonens kontekstuelle kvaliteter som supplerende grunnlag for besvarelsenes arkitekturproduksjon.

Dette farger utstillingen som et faglig produkt. En rekke studios tilbyr forenkla vikeligheter som grunnlag for idéutvikling og faglig referansegrunnlag for arkitekturprosjektering.

Utstillingen reiser derfor spørsmål om studios muligheter for utvikling av et fagideologisk innhold utover det rent markedsorienterte og tabloide. Særlig med henblikk på at studentene (ikke profesjonelle) representerer de reelle driv- og endringskreftene i et konkurransestyrt marked.

Dette vurderes som et viktig anliggende for Arkitektur- og designhøgskolen i Oslo sin internasjonale orientering. Herunder bør det vurderes om å supplere undervisningstilbudet med en autonom fagkultur. En sterkere fagpolitisk plattform, som sikrer fagområdene styrkede rammebetingelser gjennom systematiske prosesser, for en mer kritisk utvikling av faget på alle nivå, også ideologisk.

Dette vil kunne supplere undervisningens institusjonelle og fagpolitiske verdigrunnlag og konstruktivt bidra til sterk og motivert fagkultur, med klar orientering og profil. Et viktig anliggende for markedsføring av Arkitektur- og designhøgskolen i Oslo som et faglig atraktor både lokalt, nasjonalt og internasjonalt.

2. Evalueringsnotat - utstilling

Utstillingen er klart og oversiktlig organisert, med studentarbeider gruppert i klynger etter studios. Summen av utstilte plan- og prosjektarbeider fremstår som et omfangsrikt og spennende material. En rik og sammensatt utstilling, som oppleves som et interessant og levende utstillingsvindu for skolens samlede arkitekturproduksjon og faglige innhold.

Studentarbeidene underbygger institusjonens varierte undervisningstilbud på en god og tydelig måte. Studioenes autonome og uavhengige kursprofiler, gir utstillingen et mangfoldig uttrykk, som samlet presenterer en mangfoldig og variert arkitekturproduksjon.

3. Evalueringsnotat - studios

Utstillingen kombinert med tilrådelig tid, har resultert i en evaluering av mer generelle karakter.

Generelt reflekteres Arkitektur- og designhøgskolens målsetning om å kunne tilby kursprofiler med markedsmessig aktualitet og overføringsverdi til dagens arkitektbransje.

Samtlige studios dokumenter solide prosjektpresentasjoner, og vitner om stor produksjon med solid grafisk standard og tematisk variasjon. Alt fra gjennomarbeidede byggdetaljer til fotorealistiske manipulasjoner.

Inntrykkene av studioenes faglige sikteområder samlet sett gir et bredt og interessant faglig inntrykk, men at det enkelte studio i begrenset grad reflekterer denne kvaliteten (ref pkt 1) og generelt oppfattes som lite representativ for den kompleksitet man skal håndtere som profesjonell planlegger eller arkitekt.

4. Evalueringsnotat – internasjonal standard

Utstillingen dokumenter solide prosjektpresentasjoner på et høyt grafisk nivå, med tekniske solide og grafiske spektakulære arbeider. Inntrykket er at studentene behersker solide ferdigheter, både i formidling av prosjekt og visuell kommunikasjon.

Utfordringen er de faglige problemstillingene som tilbys. De fremstår klart definert som "spin-off"-produkter, tilknyttet et provinsielt marked. En aktuell utfordring, gitt skolens internasjonale orientering. Særlig med henblikk på at det norske markedet er i liten grad representativ (aktualitet), sammenlignet med de internasjonale og globale utfordringer faget står ovenfor.

For å videreutvikle og styrke skolens internasjonale satsning og faglige standard, bør det vurderes å styrke Arkitektur- og designhøgskolen som en fagpolitisk autonom institusjon, uavhengig av skiftende markedsconjukturer.

Etablere en definert og ansvarlig posisjon som faginstitusjon, med mål om å bidra til en systematiske og målrettet arkitekturproduksjon for å avdekke, definere og utkrystallisere rammene for morgendagens og fremtidens arkitekturproduksjon.

Mvh

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