



AAU

Newsletter

NCAAA at a Glance...

The National Commission for Academic Accreditation and Assessment, NCAAA, was established by the Higher Council of Education in the Kingdom of Saudi Arabia with the responsibility for determining standards and criteria for academic accreditation and assessment and for accrediting post secondary institutions and the programs they offer. The system is designed to ensure that the quality of post secondary education and training in the kingdom is equivalent to high international standards, and is widely recognized as such in the international academic and professional communities. NCAAA system is based on 4 elements:

- 1) A national qualifications framework,
- 2) Eleven NCAAA standards for the accreditation and quality assurance,
- 3) A set of self evaluation scales of NCAAA standards, and
- 4) A set of forms and templates

The National Qualifications Framework describes the standards of learning outcomes expected for post secondary academic awards for higher education and for technical and vocational training in the Kingdom of Saudi Arabia. The framework is intended to ensure consistency within the Kingdom in the standards of student learning outcomes regardless of institution attended, and to make clear the equivalence of those standards with equivalent qualifications granted by post secondary education institutions in other parts of the world. The framework describes the expected increasing levels of knowledge and skill in these areas for each qualification or academic award. This is done through rules on qualification titles related to qualification levels as well as rules on allocated credit hours.

NCAAA accreditation and quality assurance are based on 11 standards that cover different aspects of activities carried out by any academic entity. The eleven broad standards apply to both institutions and programs though there are differences in how they are applied for these different kinds of evaluation.

The self evaluation scales are intended to provide guidance to academic and administrative units in higher education institutions in their planning, self-review, and quality improvement strategies. These self evaluation scales are based on the 11 NCAAA standards for accreditation and quality assurance.

Evaluations of quality in post secondary education are made with reference to generally accepted standards of good practice. The self evaluation scales draw attention to practices that are commonly followed in high quality institutions and call for respondents to indicate if those practices are followed and how well this is done.

In the self evaluation scales document, information about the standards is presented at two levels. The first is a general statement of the standard as it applies to a broad area of activity and the second is a description of why it is important along with the kinds of processes that are expected if the standard is achieved.

This explanatory information is followed for each standard by a number of more specific statements of "good practices" that are typically carried out in a high quality institution with scales to indicate whether and how well the practice is followed. The scales are presented in groups that deal with major components or sub-sections of the general standards.

The main target of NCAAA is to ensure that the quality of post secondary education and training in the kingdom is equivalent to high international standards, and is widely recognized as such in the international academic and professional communities.

in its accreditation process, NCAAA has considered the merits of such international accreditation and practically exempted the Saudi institutions that have international accreditation from following NCAAA accreditation procedure. Instead, NCAAA states that the details of the procedures followed and the judgments made by International Accreditors may be submitted to the Commission which will consider them along with other material it requires in making its own accreditation decisions.

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NCAAA National Qualifications Framework

Qualification Titles

Since the levels of qualifications in technical training and higher education overlap and since similar titles are used for both sectors, it is necessary to have a clear distinction in the titles used. Qualification titles used in technical education should include the term “technical”. On the other hand, the words “technical” or “technology” should not be used in the titles of higher education qualifications.

It is also important that the descriptions of fields in which studies are undertaken be accurately and consistently used through field descriptors to describe the broad area of study (Arts, Science, Engineering etc.), and in some cases areas of specialization within the field.

Levels

NCAAA multi sector qualifications framework specifies nine qualification levels and links them to qualification titles to describe the increasing intellectual demand and complexity of learning expected as students progress to higher technical or academic awards. The following table describes these nine levels.

	Levels	Secondary	Technical and Vocational Training	Higher Education
Post Secondary Levels	9			Doctor
	8			Master
	7			Higher Diploma
	6		Bachelor of Technology Education	Bachelor
	5		Technical Diploma	Diploma
	4		Technical Associate Diploma	Associate Diploma
Secondary Levels	3	Year 12	Vocational Certificate 3	
	2	Year 11	Vocational Certificate 2	
	1	Year 10	Vocational Certificate 1	

Credit hours

Allocated credit hours should be used to describe the amount of work or volume of learning expected for an academic or technical qualification or for courses, study units or other components of a program. The following rules are considered for credit hours:

- 50-minute lecture, or two or three 50-minute laboratory or tutorial sessions over a 15-week teaching semester are regarded as one credit hour.
- 18 credit hours are regarded as an acceptable maximum workload per semester.
- 15 credit hours are taken as a measure of the amount of teaching and instruction normally expected for a full time student at undergraduate levels in a semester.
- Periods of field work or internship may be assigned a number of credit hours that must be justifiable in relation to the student learning outcomes expected from that experience.
- The length of programs (and the number of credit hours allocated) may differ for programs with the same or similar titles.
- A minimum of 120 credit hours are required for a bachelor degree.
- A master degree requires studies beyond a bachelor degree involving 24 credit hours plus a thesis, or 39 credit hours plus a major project.

Domains of learning

The framework also groups the kinds of learning expected of students into 5 specified learning domains and describes learning outcomes at each qualification level in each of these domains that are:

- 1) **knowledge**, the ability to recall, understand, and present information including knowledge of specific facts,
- 2) **cognitive skills**, the ability to apply understanding of concepts, principles, theories and procedures in critical thinking and creative problem solving, both when asked to do so and when faced with unanticipated new situations,
- 3) **interpersonal skills and responsibility**, the ability to take responsibility for their own learning and continuing personal and professional development, work effectively in groups and exercise leadership when appropriate, act responsibly in personal and professional relationships, and act ethically and consistently with high moral standards in personal and public forums,
- 4) **communication, information technology and numerical skills**, including the ability to communicate effectively in oral and written form, use information and communications technology, and use basic mathematical and statistical techniques, and
- 5) **psychomotor skills**, involving manual dexterity is the fifth domain that applies to only some programs. Psychomotor skills are extremely important in a number of technical trades and occupations and in some fields in higher education. For example very high levels of psychomotor skills are required for a tradesmen, major equipment operators, surgeons, or musicians.

ABET Students Outcomes Versus NCAA Domains of Learning

It could be easily demonstrated that ABET Students outcomes (a-k) cover the four NCAA domains of learning as follows:

i. Knowledge:

Outcome (1): Knowledge of facts, concepts and theories of Math and basic sciences.

Outcome (2): Knowledge of discipline-related industrial practices and procedures.

ii. Cognitive Skills

Outcome (b): an ability to design and conduct experiments, as well as to analyze and interpret data

Outcome (c): an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability

Outcome (e): an ability to identify, formulate, and solve engineering problems

Outcome (h): the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context.

Outcome (j): a knowledge of contemporary issues

Outcomes (l- m): body of working knowledge specified in the program criteria.

iii. Interpersonal Skills and Responsibility

Outcome (i): a recognition of the need for, and an ability to engage in life-long learning

Outcome (d): an ability to function on multidisciplinary teams

Outcome (f): an understanding of professional and ethical responsibility

iv. Communication, IT, and Numerical Skills

Outcome (a): an ability to apply knowledge of mathematics, science, and engineering

Outcome (g): an ability to communicate effectively

Outcome (k): an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

NCAA Standards for Accreditation and Quality Assurance

NCAA accreditation and quality assurance are based on 11 standards that cover different aspects of activities carried out by any academic entity. The eleven broad standards apply to both institutions and programs though there are differences in how they are applied for these different kinds of evaluation. In evaluations for institutional accreditation, performance in relation to all of these areas is considered for the institution as a whole including an overview of programs across the institution. For a program evaluation each standard is considered from the perspective of the particular program under review. Each standard is presented in the NCAA document as consisting of three parts:

- 1) A general statement,
- 2) A set of requirements embedded in that standard, and

ABET Criteria Versus NCAA Standards

The eleven NCAA standards correspond to the nine ABET EC2000 criteria as follows:

- 1) Standard #1: Mission and Objectives (ABET Criterion 2 – Program Educational Objectives)
- 2) Standard #2: Program Administration (ABET Criterion 6 - Faculty)
- 3) Standard #3: Management of Program Quality Assurance (ABET Criterion 4 – Continuous improvement)
- 4) Standard #4: Learning and Teaching (ABET Criterion 3 – Students Outcomes)
- 5) Standard #5: Student Administration and Support Services (ABET Criterion 1 – Students)
- 6) Standard #6: Learning Resources(part of ABET Criterion 7 – Facilities)
- 7) Standard #7: Facilities and Equipment (ABET Criterion 7 – Facilities)
- 8) Standard #8: Financial Planning and Management (ABET Criterion 8 – Support)
- 9) Standard #9: Employment Processes (part of ABET Criterion 6 – Faculty)
- 10) Standard #10: Research (part of ABET Criterion 6 Faculty)
- 11) Standard #11: Relationships with the Community (part of ABET Criterion 2 – Program Educational Objectives)

NCAA requirements correspond (one – to – one) to ABET requirements. Nevertheless while NCAA imposes very specific formats, forms, and templates for all documentations, ABET requires courses and programs to present themselves in whatever format they may consider appropriate. Over the last 5 years, the 12 programs of the Faculty of Engineering at KAU have developed their documentation in formats that differ considerably from those of NCAA.

Lessons learned from CIVIL Engineering Department ABET EC-2000 Preparations:

- ◆ The commitment and support of the department chair & the top management of the College of Engineering and their belief in the importance of the accreditation were key factors in the preparation process.
- ◆ The accreditation process requires a sincere effort from all faculty members and staff of the department.
- ◆ The CE department will not be able pass the accreditation without the real cooperation of the CE faculty members with the ABET committee as a highly performing team.
- ◆ Commitment of the assisting staff, lectures, lab technicians, and secretaries has a great deal of influence on the success of the preparation for the accreditation.
- ◆ Student engagement in the process through their constructive feedback on the educational process is highly required in the preparation for the accreditation process.
- ◆ A well-formed department advisory committee is highly required to complete the process.
- ◆ Having a good contact with the alumni and our graduate employers is highly required to accomplish the preparation for the accreditation process.



Q & A : ?

What is meant by “*Stimulating Innovation*”?

ABET’s vision has been recently changed to: “ABET will provide world leadership in assuring quality and in stimulating innovation in applied science, computing, engineering, and technology education.” Also, one of ABET’s mission statements became: “ABET will promote quality and innovation in Education.” By “*Stimulating Innovation*,” ABET means to “develop the educational program to be ahead of the trend”. This can be done by adding some courses in the curriculum such as “Entrepreneurship, Leadership, Innovation, Interpersonal Skills and Emotional Intelligence”. Actually some universities, such as the University of Colorado at Colorado Springs (UCCS), are offering a full Bachelor degree in Innovation with a common core that combines innovation and entrepreneurship. (For more details visit the website: <http://innovation.uccs.edu/>).

ACADEMIC ACCREDITATION UNIT



Faculty of Engineering

Phone: +966 2 6400000 (ext. 68097)

Fax: +966 2 6401686

E-mail: eng.aau@kau.edu.sa