



جامعة الكتاب-كلية الهندسة
قسم هندسة النفط



وصف البرنامج الأكاديمي (انكليزي)
2023/2022

*Republic of Iraq
Ministry of Higher Education & Scientific Research
Supervision and Scientific Evaluation Directorate
Quality Assurance and Academic Accreditation
International Accreditation Dept.*

*Academic Program Specification Form for the
Academic Year 2022-2023*

University: - Al-Kitab

College: College of Engineering

Number of Departments: - (2) Petroleum Engineering & Surveying Engineering

Date of Form Completion: 20/12/2022

Dean 's Name

Prof.Dr. Sabah mohammed

Date: 20 / 12 / 2022

*Dean 's Assistant for Scientific
Affairs*

Dr. Salim Yahya Kasim

Date: 20 / 12 / 2022

*The College Quality Assurance and
University Performance Manager*

Date: 20 / 12 / 2022

Quality Assurance and University Performance Manager

Date: / / 2022

TEMPLATE FOR PROGRAMME SPECIFICATION

HIGHER EDUCATION PERFORMANCE REVIEW: PROGRAMME REVIEW

PROGRAMME SPECIFICATION

This Program Specification provides a concise summary of the main features of the program and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It is supported by a specification for each course that contributes to the program.

1. Teaching Institution	Al-Kitab University
2. University Department/Centre	Department of Petroleum Engineering
3. Program Title	Study Plan For the B.Sc. Degree of Petroleum Engineering Department
4. Title of Final Award	-
5. Modes of Attendance offered	Regular Attendance at class according to schedule
6. Accreditation	Ministry of Higher Education & Scientific Research
7. Other external influences	Not Exists
8. Date of production/revision of this specification	20 / 12 / 2022

9. Aims of the Program:

The aim of this program is to provide comprehensive quality education to the students in this branch of engineering and to adequately prepare them to meet the existing challenges in their profession and be capable of handling them in the future. Upon graduation, students will have acquired sufficient skills in critical thinking, problem solving, and communication to achieve a successful career. Their background will provide them the opportunity to pursue graduate programs with ease, enabling them to take up a future role in teaching and research, if they so choose. During the course of their study, they will develop the spirit of teamwork and understand the desirability of following professional ethics in order to effectively serve the community.

10. Learning Outcomes, Teaching, Learning and Assessment Methods

A. Knowledge and Understanding

- A1. First of all, we present the lecture objective
- A2. Joint the lecture with practical application.
- A3. We use animation video of proposed problems, which relate to lecture.
- A4. To enhance learning, the Students must read the pertinent lecture before coming to class.

B. Subject-specific skills

- B1. Power Point.
- B2. Skills in class.
- B3. Special Problems.

Teaching and Learning Methods

Use power point and white board to increase assimilate from students.

Assessment methods

- Regular Attendance at class according to schedule.
- Skills in class.
- Homework
- Quizzes.

C. Thinking Skills

- C1. Observation, analysis, interpretation, reflection, evaluation, inference, explanation.
- C2. Problem analysis, then it solves, and decision-making.

D. General and Transferable Skills (other skills relevant to employability and personal development)

- D1. Asking questions and making suggestions
- D2. Balancing working in more than one group simultaneously
- D3. Openness to the ideas of colleagues
- D4. Translating ideas into practical actions
- D5. Making decisions where there is no perfect option

11. Program Structure				12. Awards and Credits
Level/ Year	Course or Module Code	Course or Module Title	Credit rating	
Level One/ First Year	KTB00101	Human Rights	2	Bachelor Degree Requires (170) credits
	MAT10101	Mathematics	6	
	COP10102	Computer Programming I	6	
	ENL10103	English Language I	4	
	END10104	Engineering Drawing and Descriptive Geometry	4	
	STD10105	Static's and Dynamics	4	
	PHY10106	Physics	4	
	ANC12107	Analytical Chemistry	3	
	ELT12108	Electrical Technology	3	
PEN20101	General Geology	8		
Level Two/ Second Year	KTB00202	Democracy	2	
	MAT10209	Mathematics II	6	
	COP10210	Computer Programming II	4	
	ENL10211	English Language II	4	
	ELM10212	Fluid Mechanics	5	
	ENT11213	Eng. Thermodynamics	3	
	STM12214	Strength of Materials	3	
	PEN21202	Petroleum Properties	2	
	PEN20203	Fundamentals of Petroleum Engineering	4	
PEN20204	Structural and Petroleum Geology	6		
Level Three/ Third Year	ENM10315	Engineering Mathematics	6	
	TEE10316	Technical English	4	
	ENS12317	Engineering Statistics	2	
	PEN20305	Petroleum Reservoir Eng. I	8	
	PEN20306	Petroleum Drilling Eng. I	8	
	PEN20307	Petroleum Production Eng. I	4	
	PEN20308	Well Logging	6	
	PEN21309	Geophysics	2	
PEN20310	Petroleum Engineering Economics	4		
Level Four/ forth Year	PEN21411	Gas Technology	3	
	PEN22412	Optimization	3	
	PEN20413	Integrated Reservoir Management	3	
	PEN20414	Petroleum Reservoir Eng. II	6	
	PEN20415	Petroleum Drilling Eng. II	6	
	PEN20416	Petroleum Production Eng. II	6	
	PEN20417	Secondary Oil Recovery	6	
	PEN20418	Numerical Methods and Reservoir Simulation	6	
	PEN20419	Engineering Project	4	

13. Personal Development Planning

- Set goals and objectives.
- What is required to achieve in the short, medium or long term in our professional lives
- Assessment of current facts
- Identifying needs for skills and knowledge
- Selecting appropriate development activities to meet those perceived needs.

14. Admission criteria

The student is required to finish high school in the scientific branch. In addition, to obtain a bachelor's degree in the specialty of petroleum engineering, it is required to complete four years of study, and it is required for the graduate student to achieve success in 170 credit hours to obtain the certificate in the required specialization.

15. Key sources of information about the program

We rely on a study plan for the bachelor's degree, which is a similar plan for the academic program of the Petroleum Engineering Department at the University of Baghdad, taking into account the legal permissibility to regulate the program's vocabulary according to the change of teaching and its opinion on developing students' skill.

Curriculum Skills Map

please tick in the relevant boxes where individual Programme Learning Outcomes are being assessed

				Programme Learning Outcomes																
Year / Level	Course Code	Course Title	Core (C) Title or Option (O)	Knowledge and understanding				Subject-specific skills				Thinking Skills				General and Transferable Skills (or) Other skills relevant to employability and personal development				
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4	D1	D2	D3	D4	
Level One/ First Year	KTB00101	Human Rights	C	√	√	√			√				√			√		√		
	MAT10101	Mathematics	C	√	√	√		√	√	√		√	√			√	√	√		
	COP10102	Computer Programming	C	√	√	√		√	√	√	√	√	√	√		√	√			
	ENL10103	English Language I	C	√	√	√		√	√	√	√	√	√			√	√			
	END10104	Engineering Drawing and Descriptive Geometry	C	√	√	√		√	√	√	√	√	√	√		√	√	√		
	STD10105	Static's and	C	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
	PHY10106	Physics	C	√	√	√	√	√	√	√	√	√	√	√		√	√	√		
	ANC12107	Analytical Chemistry	C	√	√	√														
	ELT12108	Electrical Technology	C	√	√	√	√	√	√	√			√	√			√	√		
PEN20101	General Geology	C	√	√	√		√					√	√	√		√	√	√		
Level Two/ Second Year	KTB00202	Democracy	C	√	√	√			√				√			√		√		
	MAT10209	Mathematics	C	√	√	√		√	√	√		√	√			√	√	√		
	COP10210	Computer	C	√	√	√		√	√	√	√	√	√	√		√	√			
	ENL10211	English Language II	C	√	√	√		√	√	√	√	√	√			√				
	ELM10212	Fluid Mechanics	C	√	√	√		√	√	√		√	√			√	√	√		
	ENT11213	Eng. Thermodynamics	C	√	√	√	√	√	√	√		√	√			√	√	√	√	
	STM12214	Strength of Materials	C	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
	PEN21202	Petroleum Properties	C	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√
	PEN20203	Fundamentals of Petroleum	C	√	√	√		√	√	√		√	√	√		√	√	√		

TEMPLATE FOR COURSE SPECIFICATION TEMPLATE FOR TYPICAL SITE VISIT SCHEDULE

1. The typical site visit schedule is designed for two or three days. It includes pre-arranged meetings. The responsibility for arranging these meetings and fitting the template to the circumstances rests with the Universities Quality Assurance and University Performance departments
2. Site visits will normally commence at 09:00 on day 1. Start times of pre-arranged meetings are indicated. Pre-arranged meetings should not normally last more than one hour. The schedule should not completely fill all times with meetings, but leave space for additional activities by peer reviewers including preparing for meetings, updating notes and records and drafting paragraphs for the draft Programme Review report

Table (1)

Session	Time	Activity
Day 1		
1	09:00	Welcome and introductions; brief introduction to the review (purposes, intended outcomes, use of evidence and self-evaluation report) – Programme Team
2	09:30	Curriculum; discussion with faculty members
3	11:00	Meeting with a group of students
4	12:30	Efficiency: tour of resources
5	14:00	Review panel meeting: scrutiny of additional documentation including sample of students' assessed work
6	15:00	Efficiency: meeting with faculty members
7	16:00	Review panel meeting: review of the evidence and any gaps or matters to follow-up
8	17:00	Meeting with external stakeholders (sample of graduates, employers, other partners)
Day 2		
9	08:45	Review meeting with review chairperson, review coordinator, programme leader: summary of day 1 findings, addressing any gaps, adjust the schedule for day 2 if required
10	09:00	Academic standards: meeting with faculty members
11	10:30	Effectiveness of quality management and assurance: meeting with faculty members
12	12:00	Review panel meeting: review of evidence and any matters still to be addressed
13	14:00	Flexible time to pursue any matters arising
14	14:30	Review panel final meeting: decisions on outcomes and drafting oral feedback
15	16:30	Oral feedback by review chairperson to review coordinator and faculty members

	17:00	Close
--	-------	-------

TEMPLATE FOR THE FOLLOW-UP PROCESS AND REPORT, AND OUTLINE OF TYPICAL SITE VISIT SCHEDULE FOR FOLLOW-UP

TEMPLATE FOR FOLLOW-UP REPORT

Quality Assurance and Academic Accreditation Directorate / International Accreditation Department.

Institution: Al Kitab University

Faculty: Engineering

Programme:

Follow-up Report

1. This report presents the findings of the follow-up visit, which took place on / /20___. This is part of the Universities Quality Assurance and University Performance departments arrangements to provide continuing support for the development of internal quality assurance processes and continuing improvement
2. The purposes of the follow-up review are to assess the progress made in the programme since the Programme Review report, and to provide further information and support for the continuing improvement of academic standards and quality of higher education in Iraq.
3. The evidence base used in this follow-up review and report includes:
 - a) Self-Evaluation Report for the programme together with supporting information
 - b) Improvement plan prepared and implemented since the Programme Review report
 - c) Programme Review Report
 - d) Higher Education Quality Review Report and institutional strategic plan (if any)
 - e) Additional evidence presented during the follow-up visit.
4. The overall conclusions reached as the outcome of the follow-up review are as follows:
 - a) The programme (give title) at (give name of institution) has/has not successfully implemented an improvement plan.
 - b) Good practice in the indicators demonstrated since the Programme Review site visit includes: (insert)
 - c) Matters of particular importance that should be addressed by the institution in its continuing improvement of the programme are: (insert and indicate if they are, or as yet are not, addressed by the improvement plan).
5. The detailed report is provided in Annexure A below.

Annexure A

Name of Institution _____

Date of initial Programme Review site visit _____

Date visited in follow-up _____

Date of follow-up report _____

Names of follow-up reviewers _____ Position/title _____ Signed _____

Part 1: The Internal Quality Assurance System in operation				
	Questions	Yes? (√)	Comment	Further action required?
1	Is the programme Self- Evaluation Report complete?			
2	Do the most recent self-evaluation reports indicate the extent to which the criteria in the Framework for Evaluation are met and/or are being addressed?			
3	Is there an improvement plan in place, informed by external and internal review?			
4	Are there any major gaps that appear not to be addressed?			
5	Is progress with the improvement plan monitored?			
6	Are there any major obstacles to the expected achievement of the improvement plan?			
7	What is the institution's estimate of the time needed to complete improvements to the programme?			
8	What is the reviewers' assessment of the time needed to complete improvements to the programme that would demonstrate the indicators?			

Part 2: Progress demonstrated with the indicators

Indicators (refer to Framework of Evaluation)	Improvement plan points (comment on match with the Programme Review report's recommendations)	New information from follow-up site visit	Overall conclusion
<u>Curriculum</u> Aims and ILOs Syllabus (content) Progression year on year Teaching and Learning Student assessment			
<u>Efficiency</u> Profile of admitted students Human resources Physical resources Uses made of available resources Student support Ratios of graduation to admitted students			
<u>Academic Standards</u> Clearly articulated standards Use of appropriate benchmarks Achievement of graduates Standards of students' assessed work			
<u>Programme management and Assurance</u> Arrangements for programme management Policies and procedures applied Structured comments collected and used Staff development needs identified and addressed Improvement planning processes working			

--	--	--	--

CRITERIA FOR A SUCCESSFUL REVIEW AND EVALUATION OF THE PROCESS

CRITERIA FOR A SUCCESSFUL REVIEW

1. The criteria for a successful review that informs the arrangements for Programme Review and its evaluation are as follows:
 - i. The programme being reviewed is supported by existing or developing internal systems including specifications and review with a culture of self-evaluation and continuing improvement. These features of internal review provide a sound basis for the external review.
 - ii. The timing of the external review is appropriate.
 - iii. The profile of the visiting peer review panel matches in broad terms the profile of the academic activities in the institution.
 - iv. There is due attention to detail in planning and preparation, by -
 - a. The Quality Assurance and Academic Accreditation Directorate applies consistently its procedures for working with the institution and the reviewers and provides appropriate support for the external review as required
 - b. The review coordinator: ensures that the evidence base generated by internal review and reporting systems is available on time to the visiting peer reviewers, and any requirements for clarification and supplementary information are satisfied
 - c. The institution: provides a self-evaluation report for the programme to be externally reviewed
 - d. The peer reviewers: undertake their preparation for the visit including reading the advance documentation and preparing initial commentaries that inform the conduct of the visit
 - v. There is consistency in the application of the published review method and the protocols by all participants in a way that respects and supports the mission and philosophy of the overall process for continuing review and continuing improvement.
 - vi. Reviewers and representatives of the institution conduct an open dialogue throughout the review that shows mutual respect.
 - vii. The judgements reached by the reviewers are clear, based on the evidence available and systematically recorded.
 - viii. The review report is produced on time in line with the standard report structure and is confirmed by the institution to be factually accurate.
 - ix. The set of conclusions arising from the review are constructive, offering a fair and balanced view of the programme.
 - x. The institution is able to benefit from the external review by giving due reflection and consideration to the findings and preparing where appropriate a realistic improvement plan

EVALUATION

2. The Quality Assurance and Academic Accreditation Directorate wishes to establish and implement procedures for the systematic evaluation of all external Programme Reviews arranged by it. The institution, the review chairperson and the peer reviewers will all routinely be asked to evaluate each external review by completing a short questionnaire. The structured comments will be analysed by the Quality Assurance and Academic Accreditation Directorate and where necessary the Quality Assurance and Academic Accreditation Directorate will take action to follow-up any difficulties highlighted. In addition, the Quality Assurance and Academic Accreditation Directorate will collate the structured comments to compile regular summary reports indicating the main features of the review process in practice, including the overall levels of satisfaction expressed by the participants, together with examples of good practice and opportunities for continuing improvement.

GLOSSARY OF TERMS IN PROGRAMME REVIEW

DEFINITIONS OF TERMS USED IN THE PROGRAMME REVIEW HANDBOOK

Some of the terms used in the Handbook and/or used in internal and external review and reporting may have different meanings according to the context in which they are used. To remove possible ambiguities, the following working definitions of the terms are offered.

ADEMIC FIELDS/SUBJECT AREAS/DISCIPLINES

Academic fields categories recognizable and coherent domains or the scope of study such as Mathematics, Medicine, Engineering and Philosophy. Fields that have a wide scope are often subdivided; for example, Humanities include subjects like History and Literature and Arts may include separate disciplines of Fine Arts and Photography. The curriculum of some programmes may combine academic fields, or may include different subjects and disciplines such as Mathematics in Engineering or Accountancy in Business Administration.

ACADEMIC STANDARDS

Specific standards decided by the institution, and informed by external reference points. They include the minimum or threshold level of knowledge and skills to be gained by the graduates from the programme, and can be used in evaluation and review.

ACCREDITATION

The recognition accorded by an agency or other organization to either an education programme or to an institution to confirm that it can demonstrate that the programme(s) meet acceptable standards and that the institution has effective systems to ensure the quality and continuing improvement of its academic activities, according to published criteria.

ACTION OR IMPROVEMENT PLANS

Realistic plans for improvement derived from the consideration of available evidence and evaluations; they may be implemented for more than one year, but should be prepared and reviewed annually at each level of courses, programmes and the institution.

ADMITTED STUDENTS

Students registered on a programme, including those accepted holding prior credits for

admission after year 1.

BENCHMARK/REFERENCE POINTS

Benchmark statements represent general expectations about the standards of achievement and general attributes to be expected of a graduate in a given academic field or subject. Reference standards may be external or internal. External reference points allow comparison of the academic standards and quality of a programme with equivalent programmes in Iraq and internationally. Internal reference points may be used to compare one academic field with another, or to identify trends over a given time period.

COMMUNITY

A defined segment of wider society served by the institution, as determined in its mission and bylaws. It may be defined geographically or in terms of the range of organizations, groups and individuals engaged in its activities.

COURSE AIMS

Overall course aims should be expressed as the outcomes to be achieved by students completing the course as significant and assessable qualities. They should contribute to the achievement of defined aims within one or more education programmes.

CURRICULUM OR (IN THE PLURAL) CURRICULA

The complete organised learning as designed and managed by an institution for an admitted student, determined by the intended learning outcomes (ILOs) and comprising the content, the arrangements for teaching and learning and assessments of students' achievements together with the access to the range of facilities available within the University and, by arrangement, outside it, including libraries, computers studies, social, sports, internships and field studies.

DIRECTED SELF-LEARNING/INDEPENDENT LEARNING

The active promotion of personal skills included in the curriculum that support the student and graduate to seek, assimilate and learn from a range of structured and unstructured experiences. Methods of promotion include e-learning, personal and autonomous learning and fieldwork, assignments, internships, and reflexive learning. Devices commonly used that support directed self-learning beyond formal teaching lectures include logbooks, self-assessment reports, interactive learning tools or the equivalent.

E-LEARNING

Electronic-based learning using information technology may be the primary or secondary element in material associated with a programme or a course. It may be stand-alone or integrated with other teaching and learning approaches. It may include self-determination of aims, ILOs and materials using self-selection and will usually include self-assessment. It generally increases the levels of autonomy in, and responsibility for, learning. Converting existing texts or lecture notes to a website or pre-recorded media alone is generally not considered to be e-learning.

EXTERNAL EVALUATOR/EVALUATION

An appointment to a specific programme, part of a programme or course(s) by the institution

to establish an independent and external professional opinion on the academic standards set and achieved in the examinations for the award of the degree.

FRAMEWORK FOR EVALUATION

The framework for evaluation provides a standard structure for evaluation of programmes. It will form the basis for self-evaluation, the site visits by external peer reviewers and the Programme Review report. It is designed to operate in all academic fields and institutions, and to apply to internal and external reviews.

GENERAL PRECEPTS/BY-LAWS

Principles, by-laws and regulations, which the educational institution must have as part of the policies covering its operations.

HIGHER EDUCATION INSTITUTE (HEI)/INSTITUTION

A Faculty, College or University providing higher education programmes leading to a first university degree (B.Sc. or B.A.) or a higher degree.

INTENDED LEARNING OUTCOMES (ILOS)

The ILOs are the outcome-related definition of knowledge, understanding and skills which the institution intends for its programmes. They should be mission-related, capable of measurement (assessable) and reflect the use of external reference standards at appropriate level.

INTERNAL SYSTEM FOR QUALITY MANAGEMENT AND ASSURANCE

The system adopted by the institution to ensure that its education programmes and contributing elements meet specified needs and are continually reviewed and improved. An outcomes-related system of quality management involves precise specifications for quality from design to delivery; evaluation; the identification of good practice as well as of learning deficiencies and obstacles; performance follow-up; suggestions for development and enhancement; and the systematic review and development of processes for establishing effective policies, strategies and priorities to support continuing improvement.

JOB/LABOUR MARKET

The availability of professional, commercial, research-oriented or other fields of employment that a graduate is qualified to join upon graduation.

MISSION STATEMENT

A brief statement clearly identifying the educational institution's duty and its role in the development of the community; a mission statement may also offer brief supporting statements on the vision, values and strategic objectives of the institution.

PEER REVIEWER

A person who is professionally equal in caliber and with management and/or subject expertise to those delivering the provision, but not from the same institution and without any conflict of

interest, who can contribute to the review of an education programme for internal and external quality assurance or for accreditation purposes.

PROGRAMME

For the purpose of Programme Review an education programme is defined as one which admits students who, on successful completion, receive an academic award.

PROGRAMME AIMS

The broad purposes for providing the programme which in turn guide the development and implementation of strategic objectives (to ensure that the aims are met) and ILOs (to ensure that the students work towards attaining the specified outcomes).

PROGRAMME REVIEW

Programme Review applies to all education programmes in all higher education institutions. Where the programme is studied in more than one institution, the whole programme is included in Programme Review. Programme Review in Iraq has three objectives:

- 1) To provide decision-makers (in the higher education institutions, Quality Assurance and Academic Accreditation Directorate, parents, students, and other stakeholders) with evidence-based judgements on the quality of learning programmes
- 2) To support the development of internal quality assurance processes with information on emerging good practice and challenges, evaluative comment and continuing improvement
- 3) To enhance the reputation of Iraq's higher education internationally.

QUALITY ASSURANCE

The institution has the means of assuring that for each education programme, academic standards are defined and achieved in line with equivalent national and international standards, that the quality of the curriculum and related infrastructure are appropriate and fulfil the expectations of the range of stakeholders, that its graduates represent the range of attributes specified and that the organisation is capable of sustained, continuing improvement.

REVIEW COORDINATOR

The nominee of an institution to coordinate a Programme Review to assist in the gathering and interpretation of information and to support the application of published methods of review.

REPORT

The regular reports prepared on the basis of Programme Reviews and evaluations of its education programme.

SELF-EVALUATION

An institution's process of evaluating a programme as part of Programme Review and within an internal system of quality management and assurance.

SITE VISIT

A scheduled visit by external peer reviewers as part of Programme Review. Normally the site visit will be for two or three days. A typical outline timetable is provided in Appendix (1).

SPECIFICATION

The detailed description of the aims, construction and intended outcomes of a programme, and any courses, specific facilities or resources that contribute to it. The specification provides information to design, manage, deliver and review the programme.

STAKEHOLDER

Those organisations, groups or individuals which have a legitimate interest in the educational activities of the institution both in respect of the quality and standards of the education and also in respect of the effectiveness of the systems and processes for assuring the quality. An effective strategic review process will include the key stakeholder groups. The precise range of stakeholder groups and their differentiated interests depend upon the mission of the institution, its range of educational activities and local circumstances. The range is usually defined by a scoping study. Examples of groups with a legitimate interest include current students, graduates, intending students and their parents or family, staff in the institution, the employing community, the relevant Government ministries, the sponsors and other funding organisations and, where appropriate, professional organisations or syndicates.

STRATEGIC OBJECTIVES/PLANS

A collection of institution-specific objectives that are derived from its mission and developed into a realistic plan based on evidence-based evaluations. Objectives concentrate on the means by which an institution seeks to deliver its mission. The plan sets out the matters to be addressed, timeframe, person responsible and estimate of costs, and is accompanied by an implementation plan with arrangements for monitoring the progress and evaluating impact.

STUDENTS' ASSESSMENT

A set of processes, including examinations and other activities conducted by the institution to measure the achievement of the intended learning outcomes of a programme and its courses. Assessments also provide the means by which students are ranked according to their achievement. Diagnostic assessment seeks to determine the existing range of knowledge and skills of a student with a view to constructing an appropriate curriculum. Formative assessment provides information on the student's performance and progress to support further learning, without necessarily counting a grade towards graduation. Summative assessment determines the final level of attainment of the student on the programme or at the end of a course that contributes credits to the programme.

STUDENTS' EVALUATIONS

The systematic gathering of students' opinions on the quality of their programme in a standardized structure together with the analysis and outcomes. Surveys using questionnaires are the most frequently used methods to collect opinions; other mechanisms include websites conferences, panels or focus groups, and representation on councils or other committees.

TEACHING AND LEARNING METHODS

The range of methods used by teachers to help students to achieve the ILOs for the course. Examples include: lectures, small group teaching such as tutorials, seminars and syndicate groups; a case study to teach students how to analyse information and reach a decision; assignments such as writing a review paper for the students to gain the skills of self-learning and presentation; field trips; practical sessions for the students to gain practical skills; and carrying out experiments to train the students to analyse the results, reach specific conclusions and prepare a report, presentation or poster.