UNIVERSITY SUBJECT REVIEW

Provision provided by the School of Engineering and the Built Environment

November 2012

Preface

Purpose of University subject review

The purpose of University subject review is to provide a mechanism which enables the University to be confident that the academic standard set and approved for all credit bearing and non-credit bearing provision and the quality of learning opportunities offered to all students meet University and Scottish Funding Council expectations.

Outline of the procedure

University subject review is implemented in three complementary stages: preparation, led and monitored by the Head of School; scrutiny, led by Academic Quality; and, implementation of a school enhancement plan, led by the Head of School and monitored by the University Quality Assurance Monitoring and Review Committee. Faculty Academic Strategy and Enhancement Committee provide support, advice and guidance to schools throughout the process as appropriate. The procedure is evidence-based and is reliant on information gathered during faculty and school-based quality assurance and enhancement activities typically within a six-year cycle. University subject review has been designed to be developmental in nature and encourages self-critical reflection through promoting dialogue between peers on areas where quality might be improved.

Evidence

In order to obtain evidence for the review, the panel carries out a number of activities, including scrutinising a self-critical reflection produced by the school with responsibility for the subject areas being reviewed, reviewing the effectiveness of quality mechanisms and their associated documentation, and holding discussions with relevant staff and students. The panel's discussions are also informed by University policy and procedures and external subject benchmark information.

Outcome of the review

The outcome of the review is a school enhancement plan developed by the Head of School using information from the review report. The report records the panel's findings in relation to the effectiveness of the measures being implemented by the school to set and maintain the academic standard of its provision and to enhance the quality of the learning experience of all of its students. The report includes areas of good practice worthy of further dissemination and recommendations made by the panel to improve the school's management of its provision. A draft school enhancement plan noting the good practice identified by the review panel and any recommendations made will form part of the review report.

The school enhancement plan

Within a timescale agreed by the Head of School and Head of Academic Quality the school completes an enhancement plan by identifying: the action to be taken to either share good practice or address recommendations; the individual with responsibility for implementing the action; a completion date; and, the means by which the success or otherwise of the action will be evaluated and reported. The Head of School will monitor the implementation of the enhancement plan and provide their Faculty Academic Strategy and Enhancement Committee with regular progress reports. Faculty Academic Strategy and Enhancement Committee will provide University Quality Assurance Monitoring and Review Committee with a progress report on the implementation of the enhancement plan as part of the annual reporting procedure.

Executive summary

Summary

The School of Engineering and the Built Environment (the School) is one of three schools within the Faculty of Engineering, Computing and Creative Industries. There are four subject groups within the School: civil and transportation engineering; building and surveying; electrical and electronic engineering; and, mechanical manufacturing and materials engineering. The scope of the review includes all provision developed and delivered by the School which takes account of the expectations set out in the following subject benchmark statements:

- Engineering (2010)
- Engineering (MEng).

At the time of the review 1,571 students were enrolled within the School: 1,132 undergraduate students; 385 postgraduate students; and, 54 research students. Of these 329 students are studying on a part-time basis. The School has approved articulation arrangements with Shanghai Normal University in relation to the BSc Civil Engineering and Hiong Kong University in relation to the BSc Transport and Management but is not currently offering any programmes in partnership with an overseas institution. The School portfolio includes 17 undergraduate, three integrated master's and 20 postgraduate programmes. A list of the programmes delivered by the School at the time of the review is included as Appendix 1.

The panel found no evidence to suggest that the academic standard of all provision in the School did not continue to meet subject, University, sector and professional body expectations. However, the combination of the diversity and complexity of the provision offered by the School and the limitations of the review methodology led the panel to find that it would be inappropriate to conclude that this review had undertaken an in-depth review of the School's provision. The sampling of material provided by the School enabled the panel to find that the School's curriculum is relevant, influenced by staff scholarly activity and research and delivered through a variety of appropriate learning, teaching and assessment approaches. The School monitors the effectiveness of learning and teaching through a range of mechanisms including student staff liaison committees and programme boards of studies. The sample of external examiner reports and student work scrutinised by the panel confirm consistently the appropriateness of the academic standards across all of the School's provision.

The School produced an evaluative and succinct critical reflection which contained areas of good practice and also identified where development activity was required. This critical reflection, the collegiate discussions with staff and students and the scrutiny of the evidence base, demonstrated to the panel that the School was engaging effectively in enhancement-led activities.

Good practice

The following areas of **good practice** were identified for further dissemination University-wide:

- the practical teaching and innovative assessment methods used to engage students in their learning across the School's provision (paragraph 8)

- the high levels of support provided by staff (paragraph 22)

- staffs' commitment to gaining and retaining a high volume of professional accreditation for its provision (paragraph 26)

- evidence of wide-spread learning, teaching and assessment good practice across the School's provision which should be recognised, celebrated and promoted University-wide (paragraph 26)

Recommendations

The panel recommends that the School of Engineering and the Built Environment:

- continue to work with the Faculty to ensure that the current staff resource is managed efficiently through prioritising the School's activities and future agenda (paragraph 3)

- consider how it might develop and implement ways of engaging staff and students in school-level activities as a means of establishing a more recognisable School identity (paragraph 5)

- continue to regard as a priority area for further development ways in which the provision of assessment feedback might be improved with a view to achieving more consistency in terms of both quality and timeliness (paragraph 11)

- ensure that there is an effective communication policy in place to continually remind students of the purpose of each formative and summative assessment opportunity in the lead up to is delivery (paragraph 12)

- work closely with the Assistant Dean (Academic Quality) and Head of Academic Quality to ensure that the School operates an effective system of routine monitoring of teaching delivery which is completed as near to the end of delivery as is practicable and which takes full account of University expectations (paragraph 19)

- consider how internal quality monitoring expectations might be mapped against external professional body accreditation expectations with a view to reducing duplication of monitoring, review and reporting activities (paragraph 19)

- engage proactively with the work being undertaken to review the Quality Framework as a means of ensuring that future programme specifications meet University expectations (paragraph 21)

- be more proactive in sharing their recognised good practice between subject groups within the School and more widely through existing University mechanisms (paragraph 26)

- review policy on the provision of placement learning as this has the dual advantage of preparing students for future employment and in fostering stronger links with industry (paragraph 30)

Matters to be referred outside the School:

- The panel noted that published information on the student portal and intranet relating to the personal development tutor scheme differs from the service being provided in the School. Internal panel members noted that this matter has been raised in other University subject review reports and suggested that Academic Quality bring this to the attention of the Academic Strategy and Enhancement Committee with a view to reaffirming the University's expectations as to the implementation of the personal development tutor scheme at School level (paragraph 14)

- The panel recommended that Academic Strategy and Enhancement Committee be asked to review the University's use of student achievement, progression and employment destination statistical data as an integral part of its management of academic standards and quality and to ensure that this is provided to subject groups in a timely manner and in a user friendly format (paragraph 20)

EDINBURGH NAPIER UNIVERSITY

UNIVERSITY SUBJECT REVIEW

Provision provided by the School of Engineering and the Built Environment: November 2012

Conduct of the review

1   This report presents the findings of the University subject review of provision provided by the School of Engineering and the Built Environment. The review was carried out by:
  Arthur Morrison, Assistant Dean, Edinburgh Napier Business School (Panel Convenor).
  Professor James Ritchie, Head of Energy, Process and Manufacturing Engineering Research Institute, Heriot-Watt University.
  Dr Neil Dixon, Associate Dean (Enterprise), Professor of Geotechnical Engineering, Loughborough University.
  Mark Lees, Equipment Reliability Programme Manager, EDF Energy.
  Julia Fotheringham, Lecturer, Academic Strategy and Practice, The Office of the Vice-Principal (Academic).
  Ben Bate, Senior Lecturer, The School of Accounting, Finance and Law.
  Liseli Sitali, Sabbatical Officer, Napier Students' Association.
  Grant Horsburgh, Head of Academic Quality (Clerk to the Panel)

Setting the review in context

1   The School of Engineering and the Built Environment one of the largest providers of engineering education in Scotland with approximately 1,600 student enrolments. The breadth of the subject areas includes disciplines as diverse as mechanical engineering, electrical and electronic engineering, civil engineering, architectural technology, transportation, polymer engineering, energy and environmental engineering, renewable energy, quantity surveying, timber engineering and facilities management. In addition to teaching provision, many academic staff are research active and link directly with four of the nine Research Institutes of the University (Institute for Sustainable Construction; Transport Research Institute; Institute for Product Design and Manufacturing; and, Forest Products Research Institute).

2   The School was formed in 2006 through a merger of the then separate Schools of Engineering and the Built Environment. The Head of School has overall responsibility for leading and managing the School and is responsible for overseeing all aspects of educational provision, managing staff and budgets. The principal aspects of curriculum development are managed within the subject groups overseen by a subject group leader, with input from School Directors for Academic Development, Learning, Teaching and Assessment, Student Experience and Quality as required. Subject group leaders, in consultation with programme leaders, module leaders and other academic staff as required, have overall responsibility for the operation and delivery of the School's provision. This includes responsibility for curriculum control, timetabling, staff workload management, assessment setting and moderation, budget control, management of academic standards and liaison with professional bodies, industry and student representatives. The School believes that the close management of the development and delivery of teaching related aspects which involves the Head of School, subject group leaders and school directors ensures that all aspects are carefully monitored and implemented in an efficient manner.

3   At the time of the review the School employed 63 academic and 24 support staff. In addition the School makes use of 'zero hours' staff plus research student demonstrators as and when there is a need. A total of 12 zero hours staff were employed across the School at the time of the review. The School acknowledged in its critical reflection that the staff to student ratio is a cause for concern that needs careful management particularly as this has been noted by programme external examiners and professional body representatives during accreditation visits. It is recommended that the School continues to work with the Faculty to ensure that the current staff resource is managed efficiently through prioritising the School's activities and future agenda.

4   The School operates an appropriate staff induction programme which covers generic advice to staff in accordance with University expectations. Full-time and zero hours staff are provided with equal access to training and development opportunities through the University's Professional Development Review scheme. Staff new to teaching in higher education are enrolled on the University's Postgraduate Certificate in Teaching and Learning in Higher Education and the School appoints a mentor for each individual. Module leaders are responsible for overseeing all zero hours lecturers associated with teaching delivery and an informal process of peer review of teaching is in operation across the School. Subject group and programme leaders provide additional mentoring on school processes and procedures for all new full-time and zero hours staff.

5   The evident enthusiasm of staff and the School's clear focus on its students were noted as positive features by students and this was endorsed by the panel. However, students commented that their identify lay with their programme or subject group and not the School. Discussions with staff indicated a desire for subject areas to work more closely on inter-disciplinary teaching but felt constrained by University programme design and professional body curriculum requirements. It is recommended that the School considers how it might develop and implement ways of engaging staff and students in school-level activities as a means of establishing a more recognisable School identity.

The appropriateness of the academic standard set and maintained by the School

6   The academic standards set and maintained by the School meet University and sector expectations. The School utilises a wide range of appropriate benchmarking opportunities including subject and qualification benchmark statements, professional body accreditation and the needs and expectations of local and regional employers.

7   The sampling of material provided by the School enabled the panel to find that the School's curriculum is relevant, influenced by staff scholarly activity and research and delivered through a variety of appropriate learning, teaching and assessment approaches. External panel members commented that the sample of student work included examples which demonstrated high levels of achievement indicating that students had engaged effectively with the subjects being assessed. However, the sample also indicated that the weaker students fall some way short of the minimum expected threshold.

8   Practical laboratory work in particular was noted as being of a high standard with a variety of innovative assessments methods being used to encourage student engagement such as the bridge building competition and the use of log books to record student learning over a period of time. Students confirmed that such assessments were effective in encourage them to engage with their subjects and that the competitions in particular were popular with students. The practical teaching and innovative assessment methods used to engage students in their learning are a feature of good practice across the School's provision.

9   Assessment approaches are developed by module leaders to suit the level of the module with input from across the subject group. The School Quality Committee remains in place and proposed assessment approaches are discussed and considered by this group. Staff recognise the tension between changes made to a module assessment and

the effect this might have on the assessment of programme learning outcomes. Subject groups provide a forum for ensuring consistency in assessment approaches and assessment workload is considered at during the programme approval process.

10   Assessment schedules are published on the virtual learning environment. The schedule provides students with clear information on each assessment. Students indicated a lack of consistency in assessment feedback provided by individual staff and the usefulness of such feedback to help students improve their learning. Some students receive a mark without comment while others receive a feedback sheet with detailed written comments. More experienced students suggested that feedback becomes more effective and helpful as their programme progresses. However, there was general agreement among students that assessment feedback from assignments is provided prior to written examinations being taken and that this was sufficient to enable students to achieve a high mark.

11   During discussions it was acknowledged that while some subject groups have fared better than others that overall the School has recorded a poor result against the provision of assessment feedback in the National Student Survey. The School Teaching Fellow group is exploring ways in which the provision of assessment feedback might be improved with a view to achieving more consistency in terms of both quality and timeliness and the panel recommends that the School continues to regard this as a priority area for further development.

12   The panel agreed that the School faces a continuing challenge in balancing the delivery of an effective educational experience to students against students' expectations in graduating with an accredited qualification. External panel members suggested that a review of assessment strategies to ensure that assessment is supporting effectively the student experience might address this challenge. Internal panel members indicated that the Confident Futures team provided an informative session for students and staff on the value and purpose of assessment feedback. In noting that students are provided with detailed information on their assessments, in undertaking such a review the School should ensure that there is an effective communication policy in place to continually remind students of the purpose of each formative and summative assessment opportunity in the lead up to is delivery.

The quality of the learning opportunities and the learning experience provided to students

13   Students were unanimous in their praise of the supportive learning culture across the School. The panel noted the variety of appropriate teaching methods in place and that students believed that staff are proactive in encouraging them to engage with their learning throughout their programmes.

14   The School is providing its students with appropriate tutorial support and while this takes full account of the intended function of the scheme it is not being operated in the full spirit of the scheme. The panel noted that published information on the student portal and intranet relating to the personal development tutor scheme differs from the service being provided in the School. Internal panel members noted that this matter has been raised in other University subject review reports and suggested that Academic Quality bring this to the attention of the Academic Strategy and Enhancement Committee with a view to reaffirming the University's expectations as to the implementation of the personal development tutor scheme at School level.

15   The School provides a programme of induction activities to help articulating students in their transition to higher education study. The programme draws on Week 1 activities and centrally available resources and services. Further support is provided to students as they approach their first assessment. In addition staff visit partner colleges to ensure that students have an awareness of university life and what will be expected of them if they are

to succeed. Such visits also enable staff to gain an awareness of the teaching context within a further education environment. It was noted that staff believe that students articulating from further education colleges are generally extremely motivated and that there is no suggestion that the School has had to compromise on standards to make allowances for them.

16   The panel concurred with the School's view that students are being provided with a quality learning experience. Evidence to support this view includes employers coming to the School to seek out prospective employees and students returning to the School to undertake further learning.

The effectiveness of the systems implemented by the School to manage the quality and standard of its provision

17   Overall, the School has in place effective systems for managing the quality and standard of its provision. Appropriate account is given to University and faculty expectations and requirements to ensure that academic standards are set and maintained at an appropriate level and that the student learning experience is enhanced through a process of critical evaluation involving internal and academic peers. Effective mechanisms are in place to take account of and act upon student feedback and students are encouraged to engage with their learning through an appropriate variety and range of teaching and assessment strategies.

18   The panel regarded the School's critical reflection as being open and honest. This demonstrated the School's willingness to engage in critical and evaluative reflection on their practise and provided the panel with appropriate and sufficient information to enable them to undertake the review. However, staff acknowledged that, contrary to University expectations, students had not been given the opportunity to comment on the critical reflection prior to its publication.

19   The School acknowledged in its critical reflection that there has been an inconsistent application of the routine monitoring procedure set out in the University's Quality Framework. In particular, there has been some difficulty in ensuring that module, programme and subject group leaders provide the Head of School with monitoring reports on the delivery of taught provision in a timely manner in accordance with University expectations. Discussions with staff indicated that routine monitoring is regarded as an unnecessary form filling exercise which lacks the value of a parallel professional body accreditation exercise and is therefore not given the priority it should. The panel recommends that the Head of School works closely with the Assistant Dean (Academic Quality) and Head of Academic Quality to ensure that the School operates an effective system of routine monitoring of teaching delivery which is completed as near to the end of delivery as is practicable and which takes full account of University expectations. In so doing, the Head of School should consider how internal quality monitoring expectations might be mapped against external professional body accreditation expectations with a view to reducing duplication of monitoring, review and reporting activities.

20   The panel noted that the School does not make regular use of student achievement or progression statistical data as an integral part of its management of academic standards or quality. Discussion with staff indicated that the School would welcome centrally provided statistical information which is presented in a user friendly format to assist their monitoring and review activities. The panel also suggested that the School should consider gathering statistical information on the employability record of former students as a further source of valuable quantitative information. The panel recommended that Academic Strategy and Enhancement Committee be asked to review the University's use of student achievement, progression and employment destination statistical data as an integral part of its management of academic standards and quality and to ensure that this is provided to subject groups in a timely manner and in a user friendly format.

21   There is inconsistency in the presentation of programme specifications in that the majority are not written in a student friendly manner contrary to University expectations. The panel recommends that the School engages proactively with the work being undertaken to review the Quality Framework as a means of ensuring that future programme specifications meet this expectation.

The effectiveness of the School's engagement with University and faculty strategies, policies, procedures and initiatives

22   Discussions with students and staff indicated a strong identity with programmes as opposed to the School. All students are allocated a personal development tutor and are reminded each trimester of who their tutor is and how to contact them. The School does not implement compulsory timetabled meetings between students and personal development tutors in accordance with University expectations. However, students are generally content that they are provided with appropriate and effective personal development support through the School's 'open door' policy. Students commented that programme leaders are easily accessible to address individual concerns. The majority of students were aware of the support facilities provided by Student & Academic Services and of the student wellbeing information provided on the Student Portal. The high levels of support provided by staff are a feature of good practice.

23   Students were generally aware of the programme of Week 1 activities provided by the School. Examples were provided of students being given the opportunity to learn about and plan for the topics to be covered in the coming year. Taught master's students indicated that they received introduction on teaching delivery and expectations for the coming trimester. Articulating students noted that they had been provided with an induction to the University and their programme during their Week 1 activities. However, a small number of students indicated that Week 1 in subsequent years of study was a normal teaching week in some subject areas. Individual module induction is provided by module leaders at the start of each module which covers the learning outcomes, assessment strategies and schedules and possible future module choices.

24   The School is aware of the need to take account of the globalisation of subjects and industry more generally. Internationalisation of the curriculum is being explored through developing links with overseas institutions and through inviting overseas students to bring their home experience during group learning and teaching activities.

25   During the discussion the proposed University introduction of a programme as opposed to the current module and subject focus was explored and the panel noted the School's enthusiasm for such a change in emphasis. As noted earlier in this report students have a strong allegiance to their programmes and are not particularly concerned about the delivery of individual modules. Staff indicated that a change in University programme design rules to allow the introduction of long-thin modules would be welcomed within engineering subject areas. It was suggested that this would help to encourage an inter-disciplinary approach to programme design which is a feature valued by employers, particularly project managers. The challenge for programme teams is to provide students with a programme identity while retaining choice and inter-disciplinary teaching.

The effectiveness of the School's engagement with employers and professional and statutory bodies to ensure that its provision remains relevant and produces employable graduates

26   The majority of the School's provision has been accredited by one of 13 professional bodies. The School noted in the critical reflection that this is of great importance and believes that such accreditations are critical to attracting students to study on their programmes. The panel commended staffs' commitment to gaining and retaining such a high volume of professional accreditation for its provision. During discussions it was noted

that the desire to achieve professional accreditation had influenced strongly the design of the curriculum and learning, teaching and assessment approaches in some areas. This led the panel to believe that such influence was to the detriment of the School's full engagement with some University learning, teaching and assessment initiatives, particularly the Feedback for Learning Campaign and the Learning, Teaching and Assessment Resource Bank. The panel noted that this was unfortunate as the School has much to contribute to the University's enhancement agenda as there is an evident energy and belief among staff that enhancement activity improves the student learning experience. There is evidence of wide-spread learning, teaching and assessment good practice across the School's provision which should be recognised, celebrated and promoted University-wide. The School is encouraged to be more proactive in sharing their recognised good practice between subject groups within the School and more widely through existing University mechanisms.

27   A feature of particular note is the Industrial and Professional Advisory Committee (IPAC), an over-arching School employer liaison committee with similar sub-committees in each subject group. The sub-committees were formed to cater for the over whelming support offered by employers when the School suggested forming the school-level group. The subject-level groups are used to test ideas for new programmes and the development of existing programmes and to provide an opportunity for staff to learn from employers of recent industrial developments and engineering techniques. Each meeting of the groups have a topical subject specific theme for discussion and are popular with staff and employers. Student representatives are invited to attend the School IPAC.

28   The School acknowledged in its critical reflection that student placement opportunities have fallen by 30 per cent in recent years. The panel noted the School is currently exploring appropriate alternative learning experiences to replace a student work placement. Students who do not have an opportunity to complete a work placement take an additional taught module which provides an equivalent learning experience. While the school remains committed to the provision of student placements, a strategic decision has been taken by the School to provide students with short periods of non-credit bearing work placements as these become available through industry contacts. The panel noted that the School is continuing to encourage students to find non-credit bearing placements and that the intention is that a work placement element within undergraduate programmes will be a non-credit bearing option module in the future.

29   Students expressed their disappointment that the year-long work placement is no longer available. A number of undergraduate students indicated that the School does not provide support or coaching for students in arranging a work placement while others stated that staff provided assistance and guidance in helping them to secure a placement. In general, undergraduate students stated that it is particularly difficult for them to find an appropriate work placement. Those students who had completed a work placement were unanimous in agreeing that this was a valuable learning experience which provided them with interesting and relevant ideas for their dissertation projects. Students agreed that a year-long work placement would be useful to students.

30   During the discussion the challenge of finding an appropriate year-long work placement for every student in the current economic climate was noted. The difficulty in replicating the placement learning experience through a taught module was acknowledged as was the challenge in assessing different types of work placement experiences. External panel members described examples of students undertaking a year-long placement and giving a separate award in addition to their degree and of seeking sponsorship from companies to provide students with work placement learning opportunities. The panel recommends that the School review its policy on the provision of placement learning as this has the dual advantage of preparing students for future employment and in fostering stronger links with industry.

The effectiveness of mechanisms for encouraging student engagement with their learning and with quality processes

31   A reluctance for students to volunteer to act as student representatives and to attend student staff liaison committee meetings was acknowledged in the critical reflection. To address this one subject group has trialled operating the student staff liaison function through the virtual learning environment. However, this was unsuccessful as students did not engage with the pilot. Various other schemes have been tried to engage students in the student staff liaison meeting process but with little success in improving engagement. Discussions with students and staff indicated that lack of engagement with the student staff liaison committee process was not regarded as a matter of concern as students with an individual or collective problem would approach a member of staff directly to resolve the matter and the School's open door policy helps to facilitate this.

32   The Napier Students' Association representative indicated that the Association could take a lead in impressing upon student representatives the additional life skills offered through being a class or cohort representative and in engaging fully with the system. However, it was acknowledged that the format of a formal meeting might be regarded as outdated by many students and that many meetings clash with timetabled teaching which prohibits student attendance.

33   The School has in place long-established articulation agreements with a number of further education colleges to enable appropriately qualified students to enter year three of specific bachelor degree programmes. A formal mapping exercise has been undertaken of Higher National Diploma learning outcomes and students who have not achieved a Merit grade may be required to undertake an additional bridging module during the summer prior to entry to year three. The role of the Edinburgh, Lothians, Fife and Borders Regional Articulation Hub was noted in helping to ensure that students have the correct level of skills and knowledge to articulate onto a bachelor degree programme. During the discussion staff stated that the small numbers of students articulating onto undergraduate programmes from further education colleges or from Europe does not affect the student dynamic in years three or four. Conversely, the presence of articulating students contributes positively to the diversity of the student learning experience.

The effectiveness of staff engagement with research, knowledge transfer and other personal and professional development activities

34   Many staff are active in research and knowledge exchange activities which are managed through the Research Institutes, though workload itself is managed within the subject group. The School acknowledges that this approach can give rise to challenges in agreeing workload and, if appropriate, buy-out of staff from the School by the Institute is used to cover gaps in teaching. Students indicated that they value teaching provided by such visiting lecturers. The School works closely with the Institutes to build on possible future research areas, for example, renewable and sustainable energy.

35   Staff continuing professional and personal development needs are identified through the University's Personal Development Review scheme. Individual staff use memberships of professional bodies as a means of identifying subject specific training through professional development programmes which helps to ensure that they keep abreast of developments within their respective subject areas. The panel were provided with several examples of appropriate and relevant professional and non-professional training undertaken by staff including membership of a professional body forum on curricula development which enables relevant topics to influence learning and teaching activities as part of the routine monitoring process.

36   Research students are given the opportunity to deliver teaching to undergraduate students and to engage in their laboratory work but this is not compulsory. The School also encourages research students to mentor undergraduate students undertaking their final

year dissertations. The School confirmed that all research students involved in teaching or mentoring activities are provided with an induction programme and an experienced member of teaching staff to act as a mentor.

The effectiveness of the School's engagement with professional service areas

37   As noted throughout this report the School has an affective working relationship with a variety of individual colleagues and teams in Student & Academic Services, Finance, Planning and Commercial Services and Information Services.

Provision included within the scope of the review

1   Undergraduate programmes:

    a)   BEng (Hons) Civil Engineering
    b)   BEng (Hons) Civil and Transportation Engineering
    c)   BEng (Hons) Electrical and Electronic Engineering
    d)   BEng (Hons) Electrical Engineering
    e)   BEng (Hons) Electronic Engineering
    f)   BEng(Hons) Energy and Environmental Engineering
    g)   BEng(Hons) Engineering with Management
    h)   BEng(Hons) Mechanical Engineering
    i)   BEng(Hons) Mechatronics
    j)   BEng(Hons) Polymer Engineering
    k)   BSc (Hons) Architectural Technology
    l)   BSc (Hons) Building Surveying
    m)   BSc (Hons) Civil Engineering
    n)   BSc (Hons) Construction and Project Management
    o)   BSc(Hons) Product Design Engineering
    p)   BSc (Hons) Property Development and Valuation
    q)   BSc (Hons) Quantity Surveying

2   Integrated master's degree programmes:

    a)   MEng Civil Engineering
    b)   MEng Civil and Transportation Engineering
    c)   MEng Mechanical Engineering

3   Taught master's programmes:

    a)   MSc Advanced Materials Engineering
    b)   MSc Advanced Structural Engineering
    c)   MSc Automation and Control
    d)   MSc Construction Project Management
    e)   MSc Digital Systems
    f)   MSc Electronic and Electrical Engineering
    g)   MSc Energy and Environmental Engineering
    h)   MSc Engineering Design
    i)   MSc Environment Sustainability
    j)   MSc Facilities Management
    k)   MSc Mechanical Engineering
    l)   MSc Polymer Engineering
    m)   MSc Property Management and Investment
    n)   MSc Property and Construction Management
    o)   MSc Safety and Environmental Management
    p)   MSc Timber Engineering
    q)   MSc Timber Industry Management
    r)   MSc Transport Planning & Engineering

School enhancement plan: School of Engineering and the Built Environment, November 2012						
Good practice						
	Action to be taken	**Target date**	**Action by**	**Success indicators**	**Reported to**	**Evaluation**
Practical teaching and innovative assessment methods used to engage students in their learning across the School's provision.	Instigate a School LTA Conference/ Dissemination of good practice when presented (Aug 2013)	August 2013	Director of Academic Development	Modules will reflect more innovative assessment methods.	SMT, FASEC	
High levels of support provided by staff	Ensure that staff WAM loading enables the support to be maintained.	On-going	Head of School/Subject group Leaders	Students questionnaires will continue to reflect a high degree of satisfaction	SMT	
Staffs' commitment to gaining and retaining a high volume of professional accreditation for its provision	Update accreditations as required	On-going	Head of School/Director of Quality/Director of Academic Development/Subject group Leaders	Continued accreditation of School programmes. Accreditation of new programmes.	FASEC	
Evidence of wide-spread learning, teaching and assessment good practice across the School's provision which should be recognised, celebrated and promoted University-wide	Staff encouraged to present their work at the many university opportunities e.g. Staff Conferences participation and greater use of the Resource Bank	Tri2 2013 - 14	All	More staff to participate in educational conferences by attending and presenting. Publish their good practice on the Resource Bank	FASEC	

School enhancement plan: School of Engineering and the Built Environment, November 2012						
Recommendations						
It is recommended that the School:	**Action to be taken**	**Target date**	**Action by**	**Success indicators**	**Reported to**	**Evaluation**
Continue to work with the Faculty to ensure that the current staff resource is managed efficiently through prioritising the School's activities and future agenda.	Replace staff members when they leave/are promoted	On-going	Head of School/Subject group Leaders	New staff to replace leaving members. New staff to reduce the loading on existing staff members	Dean, FECCI	
Consider how it might develop and implement ways of engaging staff and students in school-level activities as a means of establishing a more recognisable School identity.	Investigate the provision of School module; Master Project; Engineering Communication Maths etc.	On-going	Head of School/Subject Group Leaders/Director of Academic Development	School wide modules developed and taken by SEBE not subject group students.	FASEC	
Continue to regard as a priority area for further development ways in which the provision of assessment feedback might be improved with a view to achieving more consistency in terms of both quality and timeliness.	Investigation of good practice and dissemination of same to all staff. Build on results of Feedback Focus Group	Tri 1 2013 - 2014	Specific Teaching Fellow Sub group to develop/ Head of Academic Development to monitor	School LTA Conference Paper/Staff Conference Paper/ Guidelines for SEBE staff	SMT. FASEC	

School enhancement plan: School of Engineering and the Built Environment, November 2012						
Recommendations						
It is recommended that the School:	**Action to be taken**	**Target date**	**Action by**	**Success indicators**	**Reported to**	**Evaluation**
Ensure that there is an effective communication policy in place to continually remind students of the purpose of each formative and summative assessment opportunity in the lead up to is delivery.	All modules to provide students with assessment briefs	Tri 1 2013 - 2014	Director of Academic Development/ Subject Group Leaders	Assessment briefs provided for all students in their course work assessment exercises in all Subject Groups	SMT, FASEC	
Work closely with the Assistant Dean (Academic Quality) and Head of Academic Quality to ensure that the School operates an effective system of routine monitoring of teaching delivery which is completed as near to the end of delivery as is practicable and which takes full account of University expectations.	RM1 and RM2 reports to be completed in a timeous manner. Staff to be encouraged to complete drafts prior to module boards. Final data to be made available as soon as possible	As per University calendar	Director of Quality/ School Administration/ Subject Group Leaders/ Head of School	The feedback from module, programme and subject groups to be reported to Faculty and thence into the general University Quality System to allow analysis.	School Quality Committee/Faculty Quality Committee/FASEC	

School enhancement plan: School of Engineering and the Built Environment, November 2012						
Recommendations						
It is recommended that the School:	**Action to be taken**	**Target date**	**Action by**	**Success indicators**	**Reported to**	**Evaluation**
Consider how internal quality monitoring expectations might be mapped against external professional body accreditation expectations with a view to reducing duplication of monitoring, review and reporting activities.	Assess the existing UKSPEC, Professional Institution requirements and University Quality requirements with a view to aligning all areas.	Aug 2014	Director of Quality/ School Administration/ Faculty Quality	The doubling of review and monitoring events is reduced. Less repeat paperwork generation.	School Quality Committee/Faculty Quality Committee/FASEC/Academic Quality (SAS)	
Engage proactively with the work being undertaken to review the Quality Framework as a means of ensuring that future programme specifications meet University expectations.	SEBE will have a full and thorough input to the process through the School Quality Committee, SMT, Faculty Quality and FASEC .	On-going process	Director of Quality/ School Administration/ Faculty Quality/Programme Leaders	Evidence that consultation has taken place from SEBE perspective and any potential anomalies identified to ensure Quality Framework fit for purpose.	School Quality Committee/Faculty Quality Committee/FASEC/ Academic Quality (SAS)	

School enhancement plan: School of Engineering and the Built Environment, November 2012						
Recommendations						
It is recommended that the School:	**Action to be taken**	**Target date**	**Action by**	**Success indicators**	**Reported to**	**Evaluation**
Staff to be more proactive in sharing their recognised good practice between subject groups within the School and more widely through existing University mechanisms.	Instigate an in-house LTA Conference. Encourage use of Resource Bank and other University wide forums for dissemination of their work.	Tri 2 2013 - 2014	SEBE Staff	Greater submission from SEBE staff to Resource Bank. Participation in University and External Conferences to be encouraged.	SMT, FASEC	
Review policy on the provision of placement learning as this has the dual advantage of preparing students for future employment and in fostering stronger links with industry.	Data to be passed to Part-Time Advisor from RFC Coherence Fund when appointed.	Performance reviewed in 2 year as per grant.	Director of Academic Development /Director of Student Experience/ Programme Leaders	Students will make use of the facility and larger numbers will have the opportunity for work based learning in a relevant discipline.	SMT, RFC Coherence Fund Feedback	