PROGRAM SPECIFICATION

Attachment IV

Bachelor of Science in Quantity Surveying and Commercial Management (2020 – 2021)

Awarding Institution	A'Sharqiyah University
College / Centre	Engineering
Department	Department of Construction Management and Quantity Surveying
Program Title	Bachelor of Science in Quantity Surveying and Commercial Management
Final Award	Bachelor of Science in Quantity Surveying and Commercial Management
Credit hours	131 for Bachelor of Science;
Level of Study	Undergraduate
Mode of Study	Full time
Language of Study	English
Benchmarks	UK QAA Subject benchmark statement for Land, Construction, Real Estate and Surveying, October 2016 Edition. UK Royal Institution of Chartered Surveyors (RICS) Requirements and Competence guidance for Quantity Surveying and Construction.
Entry requirements	a. A student should have successfully passed the courses of all subjects of the general education diploma or its equivalence. b. A student should achieve the standards set for the subjects of the General Foundation Program. c. A student should have passed the following subjects to qualify for enrollment on the program: Pure Mathematics or Applied mathematics. d. A student must be medically fit
Minimum period of registration	9 Semesters
Maximum period of registration	18 Semesters
Date specification produced	15/01/2019
Date specification last reviewed	24/02/2019

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1. THE COLLEGE OF ENGINEERING

The College of Engineering at A'Sharqiyah University (ASU) opened in 2011 and has grown quickly to a current enrollment of over 300 students. The College will continue to grow at this rapid pace in order to accommodate over 700 students in new classrooms and laboratories located in the new College of Engineering building that was completed in September 2017. With a first-rate building and state-of-the-art laboratories, the ASU Engineering College will continue to draw community members and prospective students to the growing campus. The College of Engineering at present offers undergraduate academic programs at Diploma/Degree levels in Civil Engineering, Environmental Engineering, Electronics and Communications Engineering and Construction Project Management.

College Mission
The mission of the College is to educate creative professional engineers, technologists and technicians and to equip them to serve society in a globalized knowledge economy. Working in partnership with its stakeholders; the College is committed to the creation and transfer of new knowledge and technologies through the efforts of faculty, staff and students.

College Vision
The College vision is to achieve national and international stature as a College of Engineering through excellence in engineering education, research and innovation, outreach and external community engagement whilst contributing to the competitiveness, social and economic development and prosperity of the Sultanate of Oman.

College Objectives
The Objectives of the College are to:

1. Enhance the effectiveness of College governance and management structures
2. Develop a set of high value local, regional and international partnerships to leverage strategic priorities
3. Generate maximum funds to invest in our future
4. Achieve cost optimization
5. Improve quality of teaching and learning
6. Develop and maintain innovative curriculum and delivery in the College
7. Contribute to knowledge and innovation through applied research and scholarship in priority areas
8. Ensure innovation in all areas of activity in the College
9. Contribute to the Community's cultural, social and economic development.
10. Provide students with an accessible and supported study experience and transition to employment
11. Improve participation, success and retention of students
12. Recruit, develop and retain talented staff, providing them with an enabling and satisfying work environment.
13. Provide state-of-the-art laboratory equipment and infrastructure for students and staff
14. Promote University values

The proposed Bachelor of Science in Quantity Surveying and Commercial Management will be delivered by the College of Engineering at A'Sharqiyah University. The College at present runs a successful Bachelor of Science in Construction Project Management. The two programs will share some courses. The two programs will together be delivered in the

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Department of Construction Management and Quantity Surveying.

2. PROGRAM OUTLINE

Quantity surveyors play an integral role in the construction industry. They are responsible for the management of costs of buildings and infrastructure from the early stages of a project including feasibility studies, design planning, construction, operations and maintenance. They are responsible for making sure that projects meet legal and quality standards and that commercial risks are allocated and managed effectively. They have overall responsibility of ensuring that client organizations get value for money in building and infrastructure development. Alternative job titles for quantity surveyors in the construction industry include: “cost consultant”, “cost manager”, “cost engineer, and “commercial manager”. The proposed BSc in Quantity Surveying and Commercial Management at A’Sharqiyah University will equip students with the skills involved in design economics, procurement methods, cost planning and estimating, life cycle costing, measurement, quantification and valuation of construction work and contracts management.

3. PROGRAM AIMS

The overall aim of the program is to deliver a high quality vocationally relevant undergraduate course in Quantity Surveying and Commercial Management to prepare students for professional roles in the overall management of finances, costs and value during the evaluation, planning, coordination and control of construction projects from beginning to completion. More specifically, the program aims to:

- Provide students with knowledge and understanding of the context and concepts, theories relevant to Quantity Surveying and Commercial Management in the design, creation and maintenance of a sustainable built environment.
- Achieve needed accuracy in quantity estimation and quantitative problem solving;
- Enable students to understand and evaluate construction materials contents;
- Provide students with the ability to use innovative tools and perform financial control, cost and contractual administration of a project throughout project life cycle from the feasibility and design phases until project completion;
- Develop transferable skills which students will be able to apply both within an academic context and in their professional careers.
- Develop cognitive skills which students will be able to apply in reaching professional judgments, solving problems and making decisions.
- Develop practical and technical skills relevant to Quantity Surveying and Commercial Management which students will be able to apply in their

professional careers.

- Encourage self-motivation and independent thought, such that graduates will be confident in challenging established working practices and responding to the future needs of the construction industry and its associated professions.
- Promote a culture of intellectual enquiry such that graduates will recognize the importance of lifelong learning for both personal and professional development.

4. PROGRAM LEARNING OUTCOMES

Graduates from this program will have an understanding of the principles underpinning the management of finance, costs and value throughout the building and infrastructure development lifecycle from project inception through feasibility studies, outline design, detailed design, construction, operations and maintenance and eventual demolition. In so doing, they will also demonstrate regard for the physical, technological, legal, health and safety, economic, environmental, political and business decisions that affect project costs and contractual advice. On completion of this program, graduates will be able to:

1. Demonstrate an awareness of the technology and resources required for constructing domestic, industrial, commercial buildings and infrastructure;
2. Assess the environmental impact of construction developments and initiatives to minimize energy, reduce carbon emissions, flood protection, protect and increase biodiversity and increase health and wellbeing;
3. Demonstrate the ability to measure and quantify the resources to support the design process, production of project information and commercial management of projects;
4. Demonstrate an appreciation of time, cost, quality and value drivers affecting the design and construction and occupancy of buildings;
5. Demonstrate the ability to value construction work in progress, completed buildings and infrastructure;
6. Demonstrate an awareness of the legal and regulatory frameworks impacting on the design and construction of buildings, the principles of procurement and contract administration;
7. Demonstrate an awareness of the digital technologies that support the construction process and management of costs;
8. Recognize the roles of other professionals and parties associated with construction, property and surveying throughout the project lifecycle and be aware of the benefits of collaborative practice;
9. Recognize the importance of professional ethics, their impact on the operation of the profession and their influence on society, conflict avoidance, disputes resolution, communities and stakeholders with whom they have contact;
10. Demonstrate an understanding of the principles and processes that deliver an inclusive environment recognizing the diversity of user needs by putting people at the heart of the quantity surveying and commercial management process.

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5. DETAILED PROGRAM LEARNING OUTCOMES

Upon completion of the program, students will be able to:

A. KNOWLEDGE AND UNDERSTANDING	(a) Demonstrate systematic knowledge and Understanding of the principles; concepts and theories underpinning the discipline of quantity surveying and commercial management. (b) Demonstrate thorough knowledge and understanding of the contractual environment in which design, construction, operation and maintenance of major infrastructure projects is undertaken (c) Demonstrate knowledge and understanding of cost management systems, procurement strategies and project management techniques as applied to construction projects; (d) Manage the financial aspects of design and development of a construction project to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.
B. SUBJECT-SPECIFIC INTELLECTUAL SKILLS	(a) Estimate the anticipated development costs of a project during the planning stages and advise a client accordingly (b) Prepare bills of quantities using the Standard Method of Measurement and the Civil Engineering Standard Method of Measurement; (c) Apply the knowledge of construction technology, construction equipment and construction safety to plan and manage delivery of construction projects effectively and efficiently; (d) Apply the principles of construction cost estimating, and construction finance to prepare and evaluate tenders; (e) Value construction work in progress, completed buildings and infrastructure; (f) Apply the principles of construction law and contract administration to avoid or resolve disputes on construction projects. (g) Demonstrate an awareness of digital technologies and Building Information Modelling in delivery of construction projects (h) Apply cost modelling techniques to construction projects

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C. PROFESSIONAL / PRACTICAL SKILLS	(a) Recognize the roles of other professionals and parties associated with the design and delivery of construction projects. (b) Demonstrate an awareness of the legal and regulatory frameworks impacting on the design and construction of buildings, (c) Explain concepts in management, business, public policy, and leadership as applied in the construction industry. (d) Recognize the importance of professional ethics, their impact on the operation of the profession and their influence on society, (d) Explain the importance of professional registration.
D. TRANSFERABLE SKILLS	**Communication** (a) Develop and apply good oral and written Communication skills with a range of stakeholders including colleagues, team members and the general public. **Teamwork and interpersonal skills** (b) Create and share learning and knowledge and to contribute effectively to teamwork. **Information literacy and study skills** (c) Apply contemporary theory and critical thinking to real-time issues faced in delivering construction projects. (d) Demonstrate competence in using information technology for quantity surveying and commercial management practice **Numeracy** (e) Apply numerical and quantitative techniques appropriate in quantity surveying and commercial management practice. **Leadership and entrepreneurship** (f) Apply leadership principles for effective control, employee empowerment and motivation in delivering construction projects.

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6. PROGRAM STRUCTURE

Students must achieve the required credit hours for the program by completing the University Requirements, College Requirements, Major Requirements and Electives listed below:

University Requirements — 12 Credits

Course Code	Course Title	Pre-Requisites	Credits
ISLM101	Islamic Civilization		3
ENGL101	English Communication Skills I		3
ENGL102	English Communication Skills II	ENGL101	3
MNGT313	Entrepreneurship		3
Total			**12**

College Requirements — 22 Credits

Course Code	Course Title	Pre-Requisites	Credits
PHYS1001	Physics I		4
ENGR201	Engineering Drawing		3
ENGR202	Technical Writing and Presentation	ENGL102	3
MATH2001	Mathematics		4
ENGR4001	Engineering Economics		4
ENGR1001	Mechanics of Materials		4
ENGR322	Summer Internship	Pass 85 Credits	0
Total			**22**

Major Requirements — 97 Credits

Course Code	Course Title	Pre-Requisites	Credits
CVEN2002	Civil Engineering Materials		4
CVEN2001	Construction Surveying		4
SURV201	Design Economics and Cost Planning		3
SURV202	Standard Method of Measurement		3
SURV301	Quantification and Costing I	SURV202	3
SURV302	Civil Engineering Standard Method of Measurement		3
SURV303	Procurement and Tendering		3

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CNMN3007	Construction Technology I	CVEN2002	4
CNMN3008	Construction Technology II	CNMN3007	4
CNMN3002	Construction Safety		4
CNMN3003	Construction Equipment		4
CNMN3004	Construction Law		4
CNMN3005	Contract Administration		4
CNMN3009	Construction Site Planning and Control	CNMN3007	4
SURV403	Quantification and Costing II	SURV301	3
SURV404	Construction Commercial Management		3
CNMN4002	Mechanical and Electrical Systems	CVEN 2002	4
CNMN4004	Construction Accounting and Finance	MATH2001	4
ENGR4002	Engineering Project Management	CNMN3007	4
CNMN4005	Building Information modeling	ENGR2002	4
CNMN4007	Sustainable Construction	CVEN2002	4
SURV4007	**Risk and Value Management**		4
CNMN4001	Research Project	Senior Status	4
Quantity Surveying and Commercial Management Elective (3 Courses)			12
Total			**97**

Quantity Surveying and Commercial Management **Electives (Choose 12 Credit Hours)**

Course Code	Course Title	Pre-Requisites	Credits
CVEN4007	Environmental Engineering		4
ENEN4001	Renewable Energy		4
SURV4005	Property Valuation		4
SURV4006	Project Finance		4
ENEN4002	Solid Waste Management		4
COEN5087	GIS Application in Civil Engineering		4
PHIL2001	**Professional Ethics**		4

7. PROGRAM REFERENCE POINTS

The Bachelor of Science in Quantity Surveying and Commercial Management has been designed to take account of the University's mission statement in that the program seeks to provide high quality higher education for the intellectual, social and the professional development of the individual and the social and economic development of the Sultanate of Oman.

The Program has also been developed based on the UK's QAA Subject benchmark statement for Land, Construction, Real Estate and Surveying (October, 2016 Edition). The Program has

also been structured following UK Royal Institution of Chartered Surveyors (RICS) Requirements and Competence guidance for Quantity Surveying and Construction.

The Quantity Surveying and Commercial Management Program was constructed by a team of faculty who have benchmarked the program content against other university programs and are confident that the ASU program can achieve RICS accreditation.

The ASU Quantity Surveying and Commercial Management program was benchmarked against RICS accredited undergraduate programs in Quantity Surveying and Commercial Management at University of Ulster, University of the West of England, University of Westminster and Loughborough University.

8. TEACHING AND LEARNING METHODS (indicative)

In accordance with sound educational research and current best practice, the programme will be delivered through a broad range of learning and teaching strategies. The delivery of the programme and its assessment will reflect A'Sharqiyah University's Learning, Teaching and Assessment Strategy and in particular emphasises:

- The development of autonomous learners
- Provision of learning opportunities that are personally and professionally relevant and quality assured
- The maintenance of a supportive learning environment
- The promotion of the scholarship of teaching

At this level of study, students are encouraged to take responsibility for their own learning with staff facilitating the learning process. The aim is to encourage a high level of student autonomy in learning and the capacity to apply this within the wider environment. These overall aims are achieved through the use of a variety of learning and teaching techniques which include lectures, **tutorials, seminars, laboratory experiments, site visits, self-study, projects, workshops, discussions, debates, group work, case studies, problem-based learning and visiting speakers**.

A learner-centred approach will be adopted with the aim of promoting independent learning; as a consequence, direct face-to-face teaching contact hours will be supplemented by tutor-guided and independent reading and research which will emphasise the need to work in a critical way with theory and empirical research sources.

Additionally, Moodle Virtual Learning Environment will be used for developing interactive activities such as quizzes or forums; it also allows staff and students to create discussion groups. Students are encouraged to make significant use of on-line resources especially journals and e-books.

9. ASSESSMENT METHODS (Indicative)

In developing the assessment strategy the team members have considered the Learning and Teaching Strategy and International best practice. Additionally, the assessments reflect the University's Academic Regulations.

Students will be assessed on their achievement of the programme learning outcomes which,

in turn, are achieved by meeting the learning outcomes of both the core and elective courses. The assessment of the programme learning outcomes will therefore be achieved by assessment at the course level. Selection of the methods for assessment will be determined by the requirements of each individual course and the rationale for selection of those methods will be left to the course descriptors.

Assessments are chosen to examine a student's ability to integrate theory and practice, and to think critically in relation to theory, empirical research and practice. Subject specific, professional and transferable skills are developed within classroom-based and independent learning activities. Most courses assess a variety of skills, either directly or indirectly through the assessment work for the module.

The assessment strategy in the taught elements of the course is designed to allow students to demonstrate subject knowledge, skills, tools and techniques appropriate to the discipline. Examples of assessment methods which will be used include: **Quizzes, midterm exams, final exams, practical assessment in labs, project evaluation, viva questions.**

The research course enables students to study and research into a specific topic in depth, and also develops further the capacities for self-managed learning, critical thinking and the creative application of knowledge to solve problems.

10. CAREER and STUDY OPPORTUNITIES

Graduates from this program will find employment opportunities in a range of organizations including quantity surveying consultancies, property development companies, the oil and gas sector, construction companies, specialist sub-contractors, central and local government departments, specialist tax consultants, management consulting firms, civil and heavy construction companies, and house building companies, etc.

Graduates from this course can also pursue further study and can improve their academic qualification by doing a Master's degree.

11. STUDENT SUPPORT

Students attend an orientation program at the start of their studies. They are supported by a Course Coordinator and the Head of Department is also available to advise on program-related queries.

Academic advising is an essential element of the educational process. Students are assigned academic advisors who help them in selecting their course of study and in planning their schedules. Academic advisors also approve students' schedules each semester. The academic advisor assists students in obtaining a well-balanced education and in interpreting university policies and procedures, it is ultimately the students' individual responsible for selecting their courses, meeting course prerequisites, and adhering to university policies and procedures. Students

may also consult faculty, department or program chairs, program coordinators, and Deans.

Students have access to the University's library with a range of reading materials, online resources and study support.

The University's Student Affairs Office supports students in adjusting to university life and advises on issues such as finance, regulations, legal matters, accommodation, transportation, disabilities and career guidance. Opportunities are also provided for students to participate in various extra-curricular activities.

The Student Council is also an important source of support and guidance.

The University has a Student Fund which considers applications on a case by case basis.

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11.A ASSESSMENT of LEARNING OUTCOMES (Degree)

KEY: F = Formative assessment S = Summative assessment FS = Formative AND Summative assessment

Upon completion of the program, students will be able to: **REQUIRED COURSES:**	ENGL101	PHYS1001	ISLM101	ENGL102	MATH2001	ENGR201	ENGR322	ENGR1001	CVEN2001	CVEN2002	CNMN3003	CNMN3004	CNMN3007	CNMN3008	CNMN3009	MNGT313	SURV201	SURV202	SURV301	SURV302	SURV303	SURV403	SURV404	ENGR4001	CNMN3002	CNMN3003	CNMN3004	CNMN3005	CNMN3009	CNMN4001	CNMN4002	CNMN4004	CNMN4005	CNMN4007	SURV4007	CVEN4007	ENEN4001	SURV4005	SURV4006	ENEN4002	COEN5087	PHIL2001
KNOWLEDGE AND UNDERSTANDING																																										
(a) Demonstrate systematic knowledge and understanding of the principles; concepts and theories underpinning the discipline of quantity surveying and commercial management.	F	F		F	FS	FS	F	FS	FS	FS	FS	FS	FS	FS	FS	FS	FS	FS	FS	FS	FS	FS	FS	FS	FS	FS	FS	FS	FS	FS	FS	FS	FS	FS	FS	FS	FS	FS	FS	FS	FS
(b) Demonstrate thorough knowledge and understanding of the contractual environment in which design, construction, operation and maintenance of major infrastructure							F		S		FS	FS	FS	FS	FS				S		FS	FS	FS		FS	FS	FS	FS	FS	FS				FS		FS	FS	FS		FS		

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projects is undertaken.																																										
(c) Demonstrate knowledge and understanding of cost management systems, procurement strategies and project management techniques as applied to construction projects;							F		FS				FS	FS			FS	FS	FS	FS	FS	FS	FS		FS	FS	FS	FS	FS		FS			FS		FS	FS	FS		FS		
(d) Manage the financial aspects of design and development of a construction project to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.		F					F		FS				FS	FS	S	FS	FS	FS	FS	FS	FS	FS	FS	FS	FS	FS	FS	FS	FS		FS	FS		FS		FS	FS	FS	FS	FS		FS
SUBJECT-SPECIFIC INTELLECTUAL SKILLS																																										
(a) Estimate the anticipated development costs of a project during the planning stages and advise a client accordingly					FS	S	F		FS				FS	FS	S	S	FS	FS	FS	FS	FS	FS	FS		FS	FS	FS	FS	S	FS	S	FS	S	FS	S	FS	FS	FS	FS	FS	S	S
(b) Prepare bills of		F			FS	F	F		S				FS	FS	S		S	FS	S	FS	FS	FS	S	FS	FS	FS				FS		FS		FS			FS	FS	FS			

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quantities using the Standard Method of Measurement and the Civil Engineering Standard Method of Measurement;																																										
(c) Apply the knowledge of construction technology, construction equipment and construction safety to plan and manage delivery of construction projects effectively and efficiently;		F			F	FS	F	FS		FS	FS	FS	FS	FS	FS	FS							FS			FS	FS			FS		FS	FS	FS	FS	FS	FS	FS	FS	FS	FS	FS	FS
(d) Apply the principles of construction cost estimating, and construction finance to prepare and evaluate tenders;					F	FS	F	FS	FS							FS	FS	FS	FS	FS	FS	FS	FS			FS			FS		FS		FS	FS	FS			FS			FS	
(e) Value construction work in progress, completed buildings and infrastructure;							F		FS								FS		FS							FS		FS	FS	FS		FS		FS					FS	FS		S	
(f) Apply the principles of construction law and contract administration to avoid or resolve disputes on construction projects;						FS	F					FS					S	FS		FS			FS		F	F	FS	FS					FS	FS		FS	S	FS		FS	FS	FS
(g) Demonstrate an awareness of digital technologies and Building Information						FS	F				FS						FS				FS											FS							FS			FS	

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Modelling in delivery of construction projects;																																										
(h) Apply cost modelling techniques to construction projects.					F				FS								FS	FS	FS	FS	FS	FS	FS														S	FS				
PROFESSIONAL / PRACTICAL SKILLS																																										
(a) Recognize the roles of other professionals and parties associated with the design and delivery of construction projects;		F			F		F	S	S			FS	FS	FS	S	S	S		S		FS	FS	S		FS	FS	S	S	S	FS	S			FS	S	FS	FS	FS		FS		S
(b) Demonstrate an awareness of the legal and regulatory frameworks impacting on the design and construction of buildings;			F				F						FS	FS		FS					FS	FS	S	FS	FS	FS	FS	FS	FS	FS	FS	FS		FS		FS	FS	FS	FS	FS		FS
(c) Explain concepts in management, business, public policy, and leadership as applied in the construction industry;	F		F	F		S										FS	S				FS		S	FS			FS	FS	FS		FS	FS	S	FS		FS			FS	FS	S	FS
(d) Recognize the importance of professional ethics, their impact on the operation of the profession and their influence on society;			F				F				FS					FS		FS		FS				FS			FS	FS	FS		FS	FS		FS			S	S	FS			FS
(e) Explain the importance of professional registration.							F									FS										F	FS	FS			FS											FS

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TRANSFERABLE SKILLS (INCLUDING FOR EMPLOYABILITY)																																										
ommunication (a) Develop and apply good oral and written Communication skills with a range of stakeholders including colleagues, team members and the general public.	FS			FS		S	F	S			FS	FS	FS	FS		S	S	FS		FS	FS	FS		FS	FS	FS	S	S	S		S		S	FS	S	FS	FS	FS		FS	S	S
Teamwork and interpersonal skills (a) Create and share learning and knowledge and to contribute effectively to teamwork.	F	F	F	F		FS	F	S		FS			FS	FS		S	S	FS		FS	FS	FS		FS	FS	FS	S	S	S		S		FS	FS		FS	FS	FS		FS	FS	S
Information literacy and study skills (a) Apply contemporary theory and critical thinking to real-time issues faced in delivering construction projects; (b) Demonstrate competence in using information technology for quantity surveying and commercial management practice.	F	F		F	F		F	S	S		FS	FS	FS	FS		S	S	FS	S	FS	FS	FS	S	FS	FS	FS	S	S	S		S	FS		FS	S	FS	FS	FS			S
Numeracy (a) Apply numerical and					F		F	S					FS	FS		S	S	FS		FS	FS	FS		FS		FS			S		S	FS		FS	S			FS	FS		S	

quantitative techniques appropriate in quantity surveying and commercial management practice.																																										
Leadership and entrepreneurship (a) Apply leadership principles for effective control, employee empowerment and motivation in delivering construction projects.	F		F	F		S	F	S					FS	FS		S		FS		FS	FS	FS		FS	FS	FS	S	S	S		S	FS	S	FS	S		FS	FS	FS			S

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4. PROGRAM STRUCTURE DIAGRAM (Bachelor of Science in Quantity Surveying and Commercial Management (131 Credit Hours)

Year 1		Year 2		Year 3		Year 4		Year 5
FALL	**SPRING**	**FALL**	**SPRING**	**FALL**	**SPRING**	**FALL**	**SPRING**	**FALL**
ENGL101 English Communication Skills I 3 CR	ENGR201 Engineering Drawing 3CR	MATH2001 Mathematics 4CR	CNMN3008 Construction Technology II 4CR Pre-R CNMN3007	CNMN3002 Construction Safety 4CR	CNMN4005 Building Information Modelling 4CR Pre-R ENGR2002	CNMN4004 Construction Accounting and Finance 4CR Pre-R MATH2001	CNMN4001 Research Project 4CR	CNMN4001 Research Project 4CR
PHYS1001 Physics I 4CR	ENGL102 English Communication Skills II 3CR Pre-R: ENGL101	ENGR202 Technical Writing and Presentation 3CR Pre-R: ENGL102	SURV202 Standard Method of Measurement 3CR	CNMN3003 Construction Equipment 4CR	CNMN4007 Sustainable Construction 4CR Pre-R CVEN2002	ENGR4001 Engineering Economics 4CR	CNMN4002 Mechanical and Electrical Systems 4CR	SURV404 Construction Commercial Management 3CR
ISLM101 Islamic Civilization 3CR	CVEN2001 Construction Surveying 4CR	SURV201 Design Economics and Cost Planning 3CR	CNMN3005 Contract Administration 4CR	SURV301 Quantification and Costing I 3CR Pre-R: SURV202	SURV302 Civil Engineering Standard Method of Measurement 3CR	SURV303 Procurement and Tendering 3CR	SURV403 Quantification and Costing II 3CR Pre-R SURV301	ENGR4002 Engineering Project Management 4CR
CVEN2002 Civil Engineering Materials 4CR	ENGR1001 Mechanics of Materials 4CR Pre-R: PHYS1001	CNMN3007 Construction Technology I 4CR Pre-R: CVEN2002	CNMN3009 Construction Site Planning and Control 4CR	MNGT313 Entrepreneurship 3CR	CNMN3004 Construction Law 4CR	Quantity Surveying and Commercial Management Elective 4CR	Quantity Surveying and Commercial Management Elective 4CR	Quantity Surveying and Commercial Management Elective 4CR
					ENGR322 Summer Internship 0CR		SURV4007 Risk and Value Management 4CR	