

CAPE COAST TECHNICAL UNIVERSITY

DEPARTMENT OF BUILDING TECHNOLOGY

Tel Number: +233-42-33090/33205



SCHOOL OF ENGINEERING

BACHELOR OF TECHNOLOGY (B.TECH.) IN BUILDING TECHNOLOGY PROGRAMME

INFORMATION FOR PROGRAMME RE-ACCREDITATION - EXISTING PROGRAMMES

MARCH, 2016

1. Name of Institution:

Cape Coast Technical University

2. Programme Title:

Building Technology

3. Level of Programme (e.g Dip., HND, B-Tech, BA, BSc, MA, MSc, MPhil, PhD):

Bachelor of Technology

4. Date of 1st Accreditation of the Programme by NAB, Ghana:

5. Date of Last Accreditation of the Programme by NAB, Ghana:

1ST NOVEMBER, 2010

6. Name of the Mentoring Institution to which programme is affiliated:

Kwame Nkrumah University of Science and Technology (KNUST)

7. Proof of programme affiliation to the Mentoring Institution:

8. History:

This programme was mounted in the year 2007 by the initiative of The Netherlands and Ghana Government under the project “Capacity building in the Cape Coast and Sunyani Polytechnics to Improve Performance of the Building and Construction Industry in Ghana” (NPT/GHA/047 Project). It was undertaken by the Faculty of Architecture, Building Engineering and Urban Development of the Eindhoven University of Technology in the Netherlands in close collaboration with the Cape Coast and Sunyani Polytechnics now technical universities and the Kwame Nkrumah University of Science and Technology at Kumasi, Ghana.

The programme which has a duration of eighteen month of three semesters is designed to follow the Competency-Based Training approach to teaching and learning. This means the programme is student-centred – learner takes responsibilities (the manager) of his/her own learning while lecturer facilitates; Task-based – learning activities are directed towards performing professional task; Competence-oriented – learning activities are formulated to develop competencies the are needed to perform future professional tasks. The first and third semesters are taught. The second is a 6 month internship on the job.

9. Unit Offering Programme:

- a. *Name of Unit (e.g. School/Faculty/Department etc).*

Department of Building Technology in the School of Engineering

- b. *Name and qualification of the Head*

Dr. Stephen Agyefi-Mensah

- PhD (Sustainable Building Technologies – Lifespan Building), The NL
- MSc. (Construction Management), KNUST, Kumasi
- BSc. (Building Technology), KNUST, Kumasi
- Corporate Member, GIOC

10. Aim and Objectives

Aim

The aim of the programme is to provide competent, practically-oriented professional training in Building Technology for the Ghanaian Construction Industry to meet the increasing demand for higher level Building Technologists. It seeks to produce Building Technologists with the ability to perform professional tasks that meet the needs of the construction industry of Ghana and the world at large. These are broadly in the areas of quantity surveying, construction technology and project management, as well as development control.

Objectives

In order to pursue the goal above the programme seeks to address the following objectives:

- i. To provide opportunities for HND graduates to acquire and develop professional competencies through knowledge acquisition, skills development and formation of attitudes relevant to the construction industry.
- ii. To provide opportunities and facilities for students to develop entrepreneurial and supervisory skills as springboards for going into small scale construction businesses in order to expand and improve the performance of the private sector;
- iii. To develop understanding of the important contribution of science and technology to the construction industry and socio-economic development.
- iv. Provide opportunity and training to equip individuals within the industry (with knowledge, skills and technology) to improve upon their effectiveness and efficiency as middle level supervisory personnel.

- v. Develop the desire in the individual for continued job satisfaction, self-enhancement in order to recognize/appreciate the important role (or need) of continuing learning and professional association.
- vi. Promote international consciousness in the light of increasing global inter-dependence, through appropriate construction technology and practices.
- vii. To create the enabling environment for teaching, learning, research and practical knowledge application of research knowledge in building technology.

11. Components of the programme:

(a) Core course (s);

There are no Core Courses

(b) Elective course (s)

There are no Electives

(c) Mandatory course(s)

All Courses are Mandatory

(d) Research component

<i>Components/Elements</i>	<i>No. of Courses</i>	<i>Credits</i>
Research Methods	1	2
Final Project	1	5

(e) Competence-Based Training(CBT) component

ALL COURSES FOLLOW THE COMPETENCY-BASED TRAINING METHODOLOGY

(f) Problem-Based Learning(PBL) component

Learning tasks are designed to be problem based

(g) Practical training, industrial attachment, internship, clinical experience, etc.,

<i>Component/Elements</i>	<i>No. of Courses</i>	<i>Credits</i>
Internship	1	15

(h) Structure of the programme (Semester-by-semester schedule/structure of course, showing the credit value of each course).

Year 1 Semester 1 (First Semester)

COURSE CODE	COURSE TITLE	THEORY	PRACTICALS	CREDIT
BBT 401	STATISTICAL METHODS	2	0	2
BBT 403	COMPUTER APPLICATION	1	4	3
BBT 405	RESEARCH METHODS	2	0	2
BBT 407	BUILDING DRAWING	1	4	3
BBT 409	LABORATORY/WORKSHOP PRACTICE	0	6	3
BBT 411	MEASUREMENT OF CIVIL WORKS	2	2	3
BBT 413	INTEGRATED PROJECT WORK	0	8	4
BBT 415	CIVIL ENGINEERING DESIGN 1	1	2	2
BBT 417	CIVIL ENGINEERING DESIGN 2	2	2	3
	TOTAL CREDIT			25

Year 1 Semester 2 (Second Semester)

COURSE CODE	COURSE TITLE	THEORY	PRACTICALS	CREDIT
BBT 402	INTERNSHIP/INDUSTRIAL TRAINING	0	30	15
	TOTAL CREDIT			15

Year 2 Semester 1 (Third Semester)

COURSE CODE	COURSE TITLE	THEORY	PRACTICALS	CREDIT
BBT 501	CONSTRUCTION RESOURCE MANagements	3	0	3
BBT 503	PROJECT COST MANAGMENT	2	2	3
BBT 505	MANAGEMENT SCIENCE	2	2	3
BBT 507	CONTRACT ADMINISTRATION AND PROFESSIONAL PRACTICE	2	2	3
BBT 509	PROJECT PLANNING AND CONTROL	2	2	3

BBT 511	PROJECT WORK	0	10	5
	TOTAL CREDIT			20

GRAND TOTAL CREDITS - **60**

12. Description of Courses

First Semester First Year

BBT 401 STATISTICALMETHOD (2, 0, 2)

Aim

This course provides students with knowledge of key statistical concepts necessary for the design and execution of a scientific research. The course is designed to cover the following topics:

- Presentation and Description of Data
- Probability and Decision Trees
- Probability Distributions (Normal, Binomial, Poisson)
- Sampling and Sampling Distributions
- Estimating and Hypothesis Testing
- Single and Two Sample Tests
- Goodness of Fit
- Regression and Correlation
- Multiple Regressions
- Analysis of Variance

Reading Materials

See List of Books

BBT 403 COMPUTER APPLICATIONS (1, 4, 3)

Aim

This course will enable the students to apply the various computer techniques available for the different phases of the building process. The various topics to be covered under this course are as follows:

- General Introduction to computers: types of computers, hardware and software
- Networking and Introduction to the used of the internet, viruses software
- General Applications (Word, Excel, Power Point etc)
- Special Applications (e.g. MS Project, Computer Aided Design, etc)
- Operating Systems
- Computer applications in the construction industry: e.g. cost planning, human resource

BBT 405 RESEARCH METHODS (2, 0, 2)

Aim

This course will help the students to be able to set up and execute a good research work. The course is designed to cover the following topics:

- Different Types of Research
- Structuring of Research
- Defining a Research Problem and Questions
- Research Methods and Instruments
- Selection of Appropriate Research Methods
- Instruments for Data Collection – design
- Presentation and Analysis of Data
- Conclusion – Recommendations
- The Research Proposal Writing
- Planning and Monitoring of Research

Reading Material

1. Cargill, M. & O' Connor, P. (2009). *Writing scientific Research Articles: Strategy and Steps*. Wiley-Blackwell: John Wiley and Sons: UK
2. Kumar, R. (1999). *Research Methodology: A step by step guide for beginners*. Sage Publications. New Delhi
3. Sanders, M., Lewis, P. & Thornhill, A. (1997). *Research Methods for Business Students*. Financial Times Pitman Publishing. London
4. Articles from the following journals on Department Laboratory Computers from 2000-2013
 - *Construction Management and Economics*
 - *Architectural Review*
 - *Design Studies*
 - *Journal of Environmental Psychology*
 - *Habitat International*
 - *Building Research and Information*
 - *Requirement Engineering*
 - *Journal of Housing and the Built Environment*
 - *Journal of Architecture*
 - *Open House International*

BBT 407 BUILDING DRAWING (1, 4, 3)

Aim

This course is designed to equip students with graphic communication and representation techniques to enable them undertake basic engineering drawing and to interpret building plans and working drawings. The course is designed to cover the following topics:

- Construction Detailing (Exploded Views)
- Scheduling in Construction Documentation
- Material Representation
- Measured Drawings
- Specification Writing

Reading Materials

1. Architects' Data, 2nd English Edition, by Ernst Neufert, 1998
2. The Architects' Hand Book, by Quentin Pickard, 2003
3. Metric Handbook, Planning and Design Data, 3rd Edition by D. Littlefield, 2008
4. National Building Regulations, L.I. 1630, 1996
5. See also Library Reference List
6. *Introduction to AutoCAD 2008* by Alf Yarwood, 2007
7. *Microsoft Project 2007 Bible* by Elaine Marmel, 2007
8. *Autodesk Revit Architecture 2011, No Experience Required*, By Eric Wing, 2010

BBT 409 LABORATORY/WORKSHOP PRACTICE (0,6,3)

Aim

This course is designed to provide students with hands – on experience of some of the key techniques involved in the building process. The course is designed to cover the following topics:

Site work technique

Planning of the site, hutment, etc; Use of models; visit to construction site; setting out; using builder's methods, 3-4-5 and optical method; temporary works; scaffolding, hoarding, formwork.

Brick work

Bonding – English bonds, Flemish bond, stretcher, header bond, Dutch bond, etc; Pointing and jointing; Arch construction; Moulding of blocks.

Block work

Moulding of blocks, mixing of mortar for blockwork, testing of strength of blocks; Construction of straight walls and curved walls, treatment of openings.

Concrete production

Batching of materials; Hand-mixing; Machine mixing; Curing

Material Testing

Testing on Aggregate: Silt Test, Grading Test, Test on cement; Tests on concrete; Workability tests: Slump test and compacting factor test; Strength Tests: Cube test, Flexural Test, Tensile tests. Measurement of bar diameter; steel Bend: Arrangement of steel bars for concrete works, use of spacer bars, laps bends and hooks

Steel works

Connection of steel sections

Carpentry/Joinery

Identify workshop tools and equipment; Preparation of formwork for floors columns, beams and lintels, walls, arches, etc; Erecting of timber scaffolds; Roofing; Joinery: Doors and window frames; Construction of doors;

Basic Plumbing works

Identify basic plumbing tools; Bending, Joinery and Laying of Pipes;

Block Electrical Works

Identify basic tools and equipments; surface wiring and conduit wiring, etc, Painting; Identify basic tools and equipment; Mixing of paints and Applications.

Basic Mechanical Systems

AC installation; Mechanical Conveyors

Reading materials

1. Chadderton, D.V. (1991). *Building Services Engineering*. London: E & FN Spon
2. Hall, F. (1992). *Building Services and Equipment*. UK: Longman Scientific and Technical
3. Burberry, P. (1992). *Environment and Services*. 7th Edition. Great Britain: Longman Scientific and Technical
4. The Construction of Buildings, Vol. 5, by R. Barry, 2000
5. Building Services Handbook, 6th edition by Fred Hall & Roger Greeno, 2011
6. Building Design and Construction Hand Book, 6th Edition By F. S. Merritt & J. T. Ricketts, 2001
7. Plumbing Mechanical services Book two, fourth edition, by G.J Blower
8. Plumbing, heating and Gas installations; second edition, R.D Treloar

BBT 411 MEASUREMENT OF CIVIL WORKS (2,2,3)

Aim

The aim of this course is to equip the B-Tech graduate with the principles of Advanced Measurements. The course is designed to cover the following topics:

- Road works – major road works
- Steel work
- Alteration and renovation
- Railways
- Hydrolic structures
- Bridges, Culverts, Large drains and their measurement

Reading Materials

- Standard Method of Measurement of Building Works - Seventh Edition Revised 1998 (SMM7)

- Civil Engineering Standard Method of Measurement – Third Edition (CESMM3) by Thomas Telford (1999)
- Willis Elements of Quantity Surveying (Tenth Edition) By Sandra Lee, William Trench and Andrew Willis
- Civil Engineering Quantity (Sixth Edition) By Ivor H. Seeley and George P. Murray.
- Estimating and Tendering for Construction Works. (Third Edition) By Martin Brook.
- Ashworth, A. and Hearth, B.C. (1983). *Advanced Quantity Surveying*. Great Britain: Butterworth
- Seeley, I.H. (1993). *Building Quantities Explained*. Macmillan Press: London

BBT 413 INTEGRATED PROJECT WORK (0,8,4)

Aim

The aim of this course is to provide the opportunity for students to appreciate group learning and to solve problems through peer discussions.

Student will be required in groups to provide in the form of drawings, oral and written reports, models solutions to problems identified on real life building projects. It shall involve for example the preparation of measured drawings, structural drawings from architectural designs, tender documents etc. It shall be so designed by the Department to ensure the acquisition of knowledge of the execution of construction project and to offer the opportunity to acquire relevant competencies detailed out in this programme.

BBT 415 CIVIL ENGINEERING DESIGN I (1, 2, 3)

Aim

The aim of this course is to equip students to understand the principles underlying the design of advanced civil engineering structures. The course is designed to cover the following topics:

- Foundation of building and structures in loose and water-logged areas
- Bridge constructions
- History of Bridge construction trends
- Structural arrangements of substructures
- Superstructures of bridged
- Calculation principles of road and railway bridges
- Fundamentals of Road construction
- Flexible pavement and rigid pavement

Reading Materials

1. Engineering materials, Michael F. Ashby, 1986
2. Structural of materials, Edwin L. Thomas, 1998
3. Design and construction of concrete floors G. Garber, 1991
4. Foundation and structural steel design of construction, J.C. Smith, 1993
5. Theory of elasticity-third edition, S.P. Timoshenko, 1970

6. Advanced strength and applied stress analysis-second edition Richard G. Budynas, 1999
7. Fundamental structural analysis, Kenneth M. Leet, 2002
8. Plant-cast and pre-stress concrete -third edition David a. Sheppanl &William R. Philips, 1989
9. Engineering properties of soils and their measurement -fourth edition Joseph E. Browels,1992

BBT 417 CIVIL ENGINEERING DESIGN II (2, 2, 3)

Aim

The aim of this course is to equip students to understand the principles underlying the design of advanced civil engineering structures. The course is designed to cover the following topics:

Foundation Design

Pad Footings; combined footings; strip foundation; Raft foundation; Pile foundation; Design of Pile caps

Water Retaining structures and Retaining walls

- Water-retaining structures
- Joints in water-retaining structures
- Reinforcement details
- Design methods
- Retaining walls

Pre-stressed Concrete

- Principles and Methods of pre-stressing
- Analysis of concrete sections under working loads
- Design for the serviceability limit state
- Analysis and design at the Ultimate Limit State

Composite Construct

- The Design procedure
- Design of the steel beam for conditions

Reading Materials

1. Engineering materials, Michael F. Ashby, 1986
2. Structural of materials, Edwin L. Thomas, 1998
3. Design and construction of concrete floors G. Garber, 1991
4. Foundation and structural steel design of construction, J.C. Smith, 1993
5. Theory of elasticity-third edition, S.P. Timoshenko, 1970
6. Advanced strength and applied stress analysis-second edition Richard G. Budynas, 1999
7. Fundamental structural analysis, Kenneth M. Leet, 2002
8. Plant-cast and pre-stress concrete -third edition David a. Sheppanl &William R. Philips, 1989
9. Engineering properties of soils and their measurement -fourth edition Joseph E. Browels,1992

First Year Semester 2

BBT 402 INTERNSHIP/INDUSTRIAL TRAINING (0,30,15)

Aim

This course is designed to offer students the opportunity to apply the acquired knowledge and skills in real practice as trainee in an enterprise or institute and to prepare to write their final B-Tech Thesis.

The purpose of the internship is to provide opportunity to the students to be familiar with the occupational environment of the construction industry. The duration will normally be not less than six months and the training shall be completed before the commencement of the third semester of the programme.

Students are expected to collect information to develop knowledge and skills for construction. The students are expected to document their experiences by keeping records of attendance and activities by means of a specially designed log book.

At the end of the internship period each student will write a formal report which will be submitted to the Department of assessment. The course evaluation will be based on the assessment of the report of the student and the assessment provided by the industry of internship.

Second Year Semester 1

BBT 501 CONSTRUCTION RESOURCES MANAGEMENT (3, 0, 3)

Aim

The aim of this course is to provide students the opportunity to be abreast with best practices regarding construction site management. The course is designed to cover the following topics:

Plant Management

- Contractors plant policy and organization
- Plant maintenance policies

Materials Management

- Objectives of materials management
- Economics of materials management
- Inventory management
- Procurement process
- Quality assurance

Human Resource Management

- Work study
- Negotiating skills
- Trade unionism
- Conditions of employment

Reading Materials

1. Harris, F and McCaffer, R.C. (1991). *Management of Construction Equipment*. 2nd Edition, London: Macmillan Education Limited.
2. Harris, F. & McCaffer, R. (2005). *Modern Construction Management* (5thed.). Blackwell Publishing
3. Pilcher, R. (1992). *Principles of Construction Management* (3rded.). Berkshire: McGraw-Hill Book Company Europe.
4. Ashworth, A. (1996). *Contractual Procedures in the Construction Industry*. England: Pearson Educational Limited.
5. Clough, R.H. and Sears, G.A. (1994). *Construction Contracting*. 6th Edition. USA: John Wiley & Sons
6. Cole, G.A. (2004). *Management Theory and Practice*. 6th Edition. London: BookPower
7. Oxley, R.C. and Poskitt, J. (1986). *Management Techniques Applied to Construction Industry*. London: BSP Professional
8. Foster, G. (1994). *Construction Site Studies: Production, Administration and Personal*. 5th Edition. London: Longman Group Limited.

BBT 503 PROJECT COST MANAGEMENT (2, 2, 3)

Aim

The aim of this course is to assist students to understand the principles and importance of project cost control and management to achieve best values for money and other resources in the construction field. The course is designed to cover the following topics:

- Establishment of budget and means of monitoring cost
- Bidding strategy and related theories
- Client's need for payment forecasts
- Cash flows forecasts for professional offices
- Contractor's need for cash flow management
- Preparation and analysis of financial statement-income statement, balance sheet and cash flow statement
- The life of building and the concept of total cost of a building
- Techniques of cost in use calculations/economic appraisal of design alternatives – the concept of time value of money, valuation tables, and economic appraisal of building facilities

Reading Materials

See List Below as well as Journal Sources

BBT 505 MANAGEMENT SCIENCE (2, 2, 3)

Aim

This course is designed to provide students with an understanding of relevant tools required for management decision making. 2

- Linear programming
- Network analysis
- Transportation problems
- Assignment problems
- Decision theory

Reading materials

See Attached List

BBT 507 CONTRACT ADMIN. & PROFESSIONAL PRACTICE (2, 2, 3)

Aim

The aim of this course is to assist students to understand procurement and valuation processes. The course is designed to cover the following topics:

- Standard forms of construction; COC, FIDIC, JCT, etc
- Procurement of consulting services in the construction industry
- Interim valuation and preparation of certificates
- Construction claims
- Code of conduct and professional ethics
- Procurement act

Reading Materials

1. Hackett, M. & Robinson, I. & Statham, G. (2006). The Aqua Group Guide to Procurement, Tendering & Contract Administration. Wiley-Blackwell
2. Hackett, M. & Robinson, I. (2003). Pre-contract Practice and Contract Administration for the Building Team. The Aqua Group and Blackwell Science
3. Baily, P. & Farmer, D. & Crocker, B. & Jessop, D. & Jones, D. Procurement Principles and Management, (10th ed.). Prentice Hall
4. Ashworth, A. & Hogg, K. (2002). Willis's Practice and Procedure for the Quantity Surveyor. Blackwell Science
5. Brook, M. (2004). Estimating and Tendering for Construction, (3rd ed.). Elsevier Ltd

6. Public Procurement Act 2003 Act 663
7. Public Procurement Act 2003 Act 663 Manual
8. Alternative Dispute Resolution Act 2010 Act 798
9. Skonieczny, M. (2012). *The Basics of Understanding Financial Statements: Learn How to Read Financial Statements by Understanding the Balance Sheet, the Income Statement, and the Cash Flow Statement* (1sted.). Investment Publishing, 2012
10. Ittelson. T.R. (2009). *Financial Statements: A Step-by –Step Guide to Understanding Creating Financial Reports*

BBT 509 PROJECT PLANNING AND CONTROL (2,2,3)

Aim

The aim of this course is to provide students the opportunity to develop further skills of site management and controls in the administration of a construction project with emphasis on the use of computer software where applicable. The course is designed to cover the following topics:

- Construction production planning and control, planning process and application of construction programme techniques eg: Bar Chart, CPM, line-of-balance etc
- Operational analysis of methods, resources and information, sequences and procedure studies and critical path analysis
- Use of project management base software eg:
Bar Chart – CS project professional: Microsoft project, Project commander etc

Network analysis – micro planner expert by Microsoft Planning International
Primavera by Forge Track Ltd
Super Project by Computer Associates etc

Reading Materials

1. Albert, L. (2007). *Planning and Control: Managing Engineering* (5thed.). United Kingdom: Elsevier Ltd.
2. Albert, L. (2003). *Project Planning and Control* (3rded.). United Kingdom: Elsevier Ltd.
3. Harris, F., &McCaffer, R. (2005). *Modern Construction Management* (5thed.). Accra: EPP Books Services.
4. Lewis, J. P. (2005). *Project Planning and Control*. Oxon, OX: Francis and Taylor.
5. Lewis, J. P. (2001). *Project Planning Scheduling and Control* (3rded.). United States: McGraw Hill Companies, Inc.
6. Oxley, R., &Poskitt, J. (1986). *Management Techniques Applied to the Construction Industry* (4thed.). London: William Collins Sons and Co.
7. Pilcher, R. (1992). *Principles of Construction Management* (3rded.). Berkshire: McGraw-Hill Book Company Europe.
8. Lewis, J.P. (2010). *Project Planning, Scheduling, and Control: The Ultimate Hands-On Guide to Bringing Projects in On Time and On Budget*, (5thed.). McGraw Hill Education
9. Haugan, G.T. (2002). *Project Planning and Scheduling*. Management Concepts Inc.
10. Albert, L. (2014). *Project Management, Planning and Control*(5thed.). Elsevier Ltd.

11. Cooke, B. & Williams, P. (2004). Construction Planning, Programming and Control. Blackwell Publishing Limited.
12. Harris, F. & McCaffer, R. (2005). Modern Construction Management (5th ed.). Blackwell Publishing

BBT 511 PROJECT WORK (0, 10, 5)

Aim

This course is designed to give students the opportunity to apply theoretical knowledge acquired in the programme to identify and solve a typical problem for improvement of the construction industry in Ghana. Task assignment of candidates(s) to involve application of research methodology in solving practical real life problem in the construction industry.

13. Requirements for graduation:

To successfully graduate from the programme and qualify for the award of the Bachelor of Technology in Building Technology, candidates must satisfy the following:

- i) Achieved a minimum of 60 credit hours
- ii) Passed all 16 courses
- iii) Have completed and passed the industrial attachment.
- iv) Have completed and passed the final project.
- v) Achieved a Cumulative Weighted Average of 45% or above
- vi) Satisfied all other requirements of the Department, Academic Board, KNUST External Examiner and Assessor.

14. Assessment Regulations:

a. Students' performance and achievement

Student shall be assessed on completion of each course and they shall be evaluated in the programme at the end of each semester.

b. Course Assessment

There are two forms of assessment of students in the courses – formative, continuous and summative. The continuous and summative contributes to the final grade. The continuous assessment provide feedback for learning and contributes to the final grade. It consists of class test, assignment, oral presentation, writing presentation, demonstration, quizzes, and mid semesters. In the adapted form of the CBT approach adopted, this is 60%. The summative focuses on the outcome of the learning experience. This is captured by the End-of-Semester Examination and takes 40%. Thus assessment is done not only at the end of the learning process (i.e. summative assessment) but also during the learning of the student (i.e. formative and continuous assessment). In the assessment, knowledge, skills and attitude are tested in an integrated way.

General, end-of-semester examinations is moderated by external examiners and moderators from KNUST (Building Technology Department) appointed by Cape Coast Polytechnic (Building Technology Department).

c. Hours of examination in each course

The minimum number of hours for an examination in each course is 2 hours.

d. Grading System

Students will be graded as follows:

70-100	-	A	-	Excellent
60-69	-	B	-	Very Good
50-59	-	C	-	Good
40-49	-	D	-	Pass
0-39	-	F	-	Fail
IC	-	Incomplete		

e. Pass Mark

Students have to obtain a pass mark of 40% for each course to deem him/her pass for that course.

- Weighting for Continuous Assessment = 60%
- Weighting for End of Semester Exams = 40%

Because of the Competency Based Training of this programme, more emphasis is placed on practical/continuous Assessment. That is why higher weighting is given to the continuous Assessment.

f. Grace Period

At the end of every semester of the programme, a student must pass in all registered courses and obtain a Weighted Average (WA) of 45% or more to be deemed to have passed and to progress in the programme. However, a student who fails in any course shall be given two chances to re-write the paper. After completion the programme, a student who has any outstanding paper to write has a grace period of three year to so.

g. Classification of Qualification

Cumulative Weighted Average (CWA) of 70% +	-	First Class
Cumulative Weighted Average (CWA) of 60-69	-	Second Class Upper Division
Cumulative Weighted Average (CWA) of 50-59	-	Second Class Lower Division
Cumulative Weighted Average (CWA) of 45-49	-	Pass
Below 45%	-	Fail

h. Students Progression and Graduation

To progress and successfully graduate and qualify for the award of the Bachelor in Building Technology, candidates must satisfy the following:

i. **Progression**

At the end of every semester of the programme, a student must pass in all registered courses and obtain a Weighted Average (WA) of 40% or more to be deemed to have passed and to progress in the programme. However, a student who fails in any course shall be given two chances to re-write the paper.

ii. **Duration** - Have completed 18 months (Three (3) Semester)

iii. **Workload** - Have accumulated a minimum of 60 credit hours

iv. **Field Trips** - Have taken part in all fieldtrips organized by course facilitators/lecturers.

v. **Industrial Attachment** - Have completed and passed 6 months training internship/Industrial Attachment training

vi. **Project work** - Have completed and passed the final project

i. Mode of certification

Affiliation with KNUST

j. The certificate awarding institution

Kwame Nkrumah University of Science and Technology (KNUST)

15. Changes in Curriculum/Delivery:

While there has been no change in the content of the curriculum. However staff capacity has improved which contributes to improvement in the mode of delivery.