

UNIVERSITY OF EDUCATION, WINNEBA-KUMASI
FACULTY OF TECHNOLOGY EDUCATION
DEPARTMENT OF EDUCATION OF TECHNOLOGY

COURSE OUTLINES

COURSE TITLE: WOODWORK MATERIALS
COURSE CODE: DTE 114
CREDITS 2
LEVEL 100
SEMESTER: ONE
COURSE LECTURER: STEPHEN JOBSON MITCHUAL

COURSE OBJECTIVE

Solid woods Veneer and plywood's are no longer the only material used in woodworking. Plastics, metals, glass. Ceramics, leather etc are all currently included as industrial materials for wood works. This course is designed to create an in-depth understanding of physical and working properties of wood and wood related material as well as the way these properties influence selection and usage. This awareness is of prime importance to the designer (students) in this ability to identify and select the right types of material for project in woodworks.

AREAS OF COVERAGE

- i. Forest and Forest Trees
- ii. Hardwood and softwood
- iii. Gross features of wood
- iv. Identification of some commercial tropical timbers, their physical; and strength properties
- v. Moisture in wood
- vi. Density of wood and it\s practical significance
- vii. Seasoning and preservation of wood
- viii. Defect in timber and its effect on wood utilization
- ix. Manufactured Boards
- x. Wood related materials(Plastics, Fasteners, Adhesives Glass and Ceramics etc
- xi. Wood Adhesives

METHODOLOGY

This course is practical biased and will be taught through problem solving activities. A variety of methods shall therefore be used to teach the course.

These include:

- Lecture
- Demonstration
- Discussion
- Group presentation
- Educational visit
- Practical activities

MODE OF ASSESSMENT

The assessment shall be in the form of end of semester examination and continuous assessment. The end of semester examination will attract 60% whilst the continuous assessment will constitute 40% of the total marks.

REFERENCES

- Bolt W. (1996) **Basic engineering, educational and professional.** Publishing Ltd. London.
- Bruce, J.B. (1991) **Work shop processes practices and materials.** Edward Arnold Publishers.
- Clifton, R.H. (1971) **Principles of planned maintenance.**
- Desch, H.E. and J.M. Dinwoodie (1993) **Timber, Its structure properties and utilization** Macmillan Press Ltd.
- Fierer, J.L. and G.R. Hutchings (1986) **Carpentry and building construction** Macmillan Press Ltd.
- Kollmann, F.P. and W.A Cote, Jr (1967) **Principle of Wood Science and Technology.** Springer-Verlay Berlin Heidelberg. New York.
- Krar. S.F. and Oswald (1990) **Technology of Machine Tools.** MacGrawn Hill Inc.
- Okai R, Mitchual, S.J. and Frimpong-Mensah (2006) **Optimization techniques for minimizing saw teeth deflection and lumber thickness variation.** Journal of precision engineering. NY. USA Vol.30.pp 39-46
- Voisey, N.S. (1987) **Wood Machining. (A complete Guide to Effective and Safe Working Practices)** Stobart &Son Ltd. London.

COURSE OUTLINE: **WOODWORK TOOLS AND PROCESSES**
COURSE CODE: **DTE 122**
CREDIT HOURS: **2**
LEVEL/; **100**
SEMESTER: **TWO**
COURSE LECTURER: **STEPHEN JOBSON MITCHUAL**

COURSE OBJECTIVE

The use of hand tools to create wood product play vital role in woodworks. The understanding of the interaction between woodwork tools and the solid wood is also important. This course will introduce student to the safe and correct use as well as the application and maintenance of traditional and modern woodworking hand tools. The course will also cover woodwork joints. Students will complete a variety of hands on shop project using these tools and joints.

AREAS OF COVERAGE

A woodwork hand tools

Holding and supporting tools

Bench clamps, bench vices, bench stop, bench hooks miter boards etc

Geometric tools

Measuring tools, marking out tools, and setting out tools.

Cutting and Boring tools Saws, planes, chisels planes

Percussion and impelling tools

- Woodworking Joints
- Widening Joints and their construction
- Framing Joint and their construction
- Lengthening Joints
- Angle Joints

METHODOLOGY

This course will be taught through practical problem solving activities. It should not be taught as an isolated theory.

- Lecture
- Discussion
- Demonstration
- Fieldstrips
- Brain storming

MODE OF ASSESSMENT

The assessment shall be in the form of end of semester examination and continuous assessment. The end of semester examination will attract 60% whilst the continuous assessment will constitute 40% of the total marks.

REFERANCES:

- Bates, D.R. (1982) Carpentry and joinery. Longman publications London
- David J. (1983) The craft of furniture making. B.T. Batford London.
- Fierer, J.L. (1999) Beginning Woodwork. Macmillan USA
- Jackson A. and D Day. (1991) Woodworkers Manual. Harper Collins. London
- Sackey, J.K.N. etal (1991) Woodwork for Senior Secondary Schools MOE Ghana
- Wagner, W.H. & C.E Kick lighter. (1991) Modern Wood working.
The Goodheart-Willox Company Inc

COURSE TITLE:	WOOD MACHINING
COURSE CODE:	DTE 234
CREDITS HOURS	2
LEVEL	200
SEMESTER	THREE
COURSE LECTURER	STEPHEN JOBSON MITCHUAL

COURSE OBJECTIVE

This course is designed to equip students with the knowledge and skills involve ion the use of Woodwork machines. The courses will also emphasis the need to observe workshop safety measures when using the machines.

AREAS OF COVERAGE

- Circular saw
- Band saw
- Surface Planer
- Thicknesser
- Spindle moulder
- Wood lathe
- Mortise
- Portable machine tools

TEACHING METHOD

This course is practical biased and will be taught through practical activites. A variety of teaching methods will be adopted These includes;

- Lecture
- Demonstration
- Group project work
- Group
- Presentation/discussion
- Industrial visit

MODE OF ASSESSMENT

Both continuous assessment and end of semester examination will be used to evaluate /asses student's performance.

Continuous assessment - 40%

End of semester - 60%

Any student(or a group of students who fails to participate in or submit his/her project work will be given incomplete results Student are advised to submit their cutting list to the workshop assistants by the end of 5th week of the semester

REFERENCES:

Bates D.R. (2003) **Carpentry and Joinery 1**. Singapore; Pearson Education.

Bates D.R. (2003) **Carpentry and Joinery 2**. Singapore; Pearson Education.

Fierer, J, L (1994) **Wood: Technology and Processes**. NY: Glencoe/McGrawn-Hill

Fierer, J, L (1988) **Cabinetmaking and Millwork**. California: McGrawn-Hill

Jackson et. Al (1997) **Wood worker's Manual**. London: Harper Collins.

Martensson A. (1995). **The woodworker's Bible**. London: A and C Black

CURRICULUM VITAE

Name: Stephen Jobson Mitchual
Nationality: Ghanaian
Sex: Male
Marital Status: Married
Date of Birth: 30th December 1968
Postal address: P.O. Box 1277, Kumasi
Email address: smitchual@yahoo.com
Telephone number: 024-4248327 / 020-5111915

EDUCATIONAL BACKGROUND

INSTITUTION	COURSE	CERT	DATE
Kwame Nkrumah University of Science and Technology	Wood Technology & Management	M.Sc	June 2002
CCASSIG	ACCA	ACCA Level 1 & Part of Certificate Level	2001
University Cape Coast	Postgraduate Diploma in Education	Postgraduate Diploma in Education	1997- 1998
Kwame Nkrumah University of Science and Technology	Agricultural Engineering	B.Sc (HONS)	1989- 1993
Fijai Secondary School	Physics Chemistry Mathematics	School Certificate 'A' Level	1985 1987

JOB EXPERIENCE

Five years lectureship at the University of Education, Winneba (Kumasi Campus)

Specific activities

- Lecturing of Woodworks at Level 100, 200, and 300; 4year B.Ed. Technology Education.
- Lecturing of woodwork at level 300 and 400; 2year B.Ed Voctec Education.
- Supervising of student project work.
- Supervising of student on teaching practice.
- Eight year teaching experience with Ghana Education Service.
- Six months industrial attachment at Fabi Timber Ltd. 2000
- Six weeks industrial attachment at wiafe Brothers Furniture Ltd. 1999
- Six weeks industrial at Forest Inspection Department. 1999
- Six weeks vacation training on maintenance, repairs and operation of farm machinery at Kpong farms.1991
- Two year job experience with primary health care team, Central Region 1987-1989

PUBLICATION

Journal and Articles

Okai R, Mitchual S.J.K Frimpong-Mensah. (2006) Optimization techniques of saw teeth deflection and lumber thickness variation. Journal of precision engineering, Vol 30.pp 39-46

Conference and Seminar Paper

Mitchual S.J. Okai R.K. Frimpong-Mensah (2007) Optimizing lumber production through improved accuracy of side clearance of band saw teeth and quality control measures 5th Inter-faculty seminar, College of technology Education, Kumasi.

Okai R Mitchual S.J.K Frimpong-Mensah (2001) Sawing accuracy of satellite-tipped and swage-set bandsaw blade when sawing a tropical hardwood at a Ghanaian sawmill. Proceedings of the 15th international wood machining seminar. Woo machining institute Berkeley C.A USA 229-238PP

Unpublished Books and Papers

Mitchual S.J Banahene N.O, F. Donkor (unpublished) Relationship between teacher's self-efficacy and length of teaching experience for professional and non-professional teachers.

Wood work Technology I- TVET Distance learning manual (Submitted for publication)

Wood work Technology IV- TVET Distance learning manual (Submitted for publication)

Dissertations

Performance of a bandsaw blade used in rip-sawing Wawa (Triplochiton scleroxylon) at a Ghanaian sawmills. (2002) Unpublished dissertation at Institute of Renewable Natural Resources, KNUST)

Performance of students in physics- A case study of Winneba and Achimota secondary school (1998) Unpublished dissertation at school of graduate studies UCC).

A survey of irrigation cost in Ghana. (1993) Unpublished dissertation at school of engineering, KNUST).

WORKSHOP ATTENDED

Workshop on Open and Distance Learning administration for UEW TVET tutors and support staff. Organized by Department of Technology Education 16th -18th November 2007.

Workshop for teaching basic Wiki editing skills for teachers & educators Organized by Commonwealth of Learning at IEDE 26th February – 2nd March 2007

Workshop for teaching basic Wiki editing skills for teachers & educators Organized by Commonwealth of Learning at IEDE 22nd -26th January 2007.

One week workshop on editing of distance learning materials. Organized by Department of Technology Education December 2005.

One week workshop on international research management. Organized by the society of Research Administrators International at IEDE 14th – 18th March 2005.

One week workshop on teaching if distance learning education. Organized by IEDE, UEW-Winneba November 2004.

Four days ICT workshop on the designed of website and a multimedia with power point from 2nd -6th February

Three days entrepreneurship seminar organized by NBSSL. 15th -17th July 1993.

RESEARCH INTEREST

The use of lesser used timber species (LUS) for structural development

- Wood machining
- Timber mechanics
- Issues in Technology Education

ON-GOING RESEARCH

Poverty reduction in rural communities in Ghana through application of lesser used timber species (LUS) for development of structures.

Characterisation of durability properties of stem wood and branch of some tropical hardwood p Species.

Teacher's self-efficacy and length of service for professional and non-professional teachers.

The use of rubber tree planted in Ghana as a raw material for furniture production

SERVICE TO COMMUNITY

- Patron, Brong Ahafo Student Union (BASU). UEW-Kumasi Campus. 2006 to date.
- Patron, Assemblies of God Campus Ministry UEW-Kumasi 2005 to date.
- Chairman of a committee to investigate an alleged copying of long essay to two students. 2006
- Chairman of a committee to vet document of first year student. 2006
- A member of a committee to evaluate the faculty of Technology Education 2006
- A member of Faculty of Technology Education, project proposal writing committee 2005 to date.
- Academic counselor tech 2a 2006-2007
- Academic counselor tech 2a 2005-2006
- Academic counselor Voctech 1 &11 2004-2005
- Coordinator woodworks units 2004-2007
- Chairman, committee of enquiry into an alleged financial malfeasance by GNATOC chairman, college of Technology of Education UEW. 2004.
- A member of a committee of enquiry into an alleged examination malpractice.2004

- Representative of Technology Education on Business Education Department Board 2003-2004
- Secretary to welfare association of the Technology Education Department. 2004

OTHER POSITION HELD

- National president, Ghana National association of Teachers on Campuses 1999-2000.
- Secretary, staff welfare association, Winneba Secondary School 1996-1998
- Secretary, men's ministry, Assemblies of God church Winneba 1995-1998
- Financial secretary of Unity Hall KNUST, Kumasi 1992-1993.
- A member of the planning committee of Unity Hall KNUST, Silver Jubilee 1993
- Financial secretary of Agricultural Engineering students Association, KNUST 1991-1992.
- Organizing secretary, village evangelism wing of Inter Halls Christian Fellowship

REFREES

Prof Steve Sobotie
Principal
College of Technology Education
University of Education Winneba
Kumasi Campus- Ghana

Prof Reynolds Okai
Dean
Faculty of Technology Education
University of Education, Winneba
Kumasi Campus-Ghana.

Mrs. Martha Danso
Head of Department
Department of Technology Education
Faculty of Technology Education
University of Education, Winneba
Kumasi Campus - Ghana

The University of Education Winneba (UEW) hereby invites applications from suitably qualified for admission into various programmes at the University of Education Winneba, UEW for the 2021/2022 academic year. This page is updated automatically immediately the University of Education Winneba Admission Releases its Admission Form or Admission Related News Updates. Subscribe to our website to stay in touch all the time. University of Education, Winneba is in the top 42% of universities in the world, ranking 7th in Ghana and 6984th globally. Ranks 1st among universities in Winneba with an acceptance rate of 55%. Academic structure. Faculty of Business Education Faculty of Agriculture Education Faculty of Science and Environment Education Faculty of Technical and Vocational Education Faculty of Education and Communication Sciences School of Creative Arts Faculty of Educational Studies Faculty of Languages Education Faculty of Science Education Faculty of Social Science Education Institute for Educational Development and Extension School of Graduate Studies. University of education, winneba-kumasi faculty of technology education. Department of education of technology. Course outlines. Course title: course code: credits level semester: course lecturer. Representative of Technology Education on Business Education Department Board 2003-2004. Secretary to welfare association of the Technology Education Department. 2004. Other position held. National president, Ghana National association of Teachers on Campuses 1999-2000. Secretary, staff welfare association, Winneba Secondary School 1996-1998. Secretary, men's ministry, Assemblies of God church Winneba 1995-1998. The University of Education, Winneba (UEW) has commissioned several projects UEW-ITECPD Trains Tutors of Affiliate Colleges of Education on Subject Based Manuals. The Institute for Teacher Education and Continuing Professional Development (UEW Confers Honorary Doctorate Degrees on Two Illustrious Personalities. The University of Education, Winneba (UEW), has conferred honorary doctorate UEW News. UEW Signs MoU with T-TEL. Authoring over 100 books in just three years might come to many as a far-fetched phenomenon but a Lecturer at the Faculty of TechTalk Holds IT Career Seminar. TechTalk, an initiative of the Information and Communication Technology Students' Society (Infocess), of the Department of ICT MPhil construction technology College of technology education- Kumasi. Mphil Ghanaian language studies Winneba campus. M.B.A marketing College of technology education. M.B.A accounting College of technology education-Kumasi. M.B.A finance College of technology education. Master of education in physical education Winneba campus. Master of arts in educational leadership Winneba campus. Every distance learner should enroll to the University of Education Winneba since it offers quality education it is simply the names of successfully admitted applicants offered provincial admission into the University of Education Winneba, and admissions lists are usually released by the institutions after the conduct of admission screening exercise.