

1.0 General Introduction

1.1 National Goals of Education

The overall education policy goal of the Government of Kenya is to achieve the Millennium Development Goals (MDGs) and Education for all (EFA) goals by 2015 in tandem with the national and international commitments. The vision of the Ministry of Education, is “to have a globally competitive education, training and research for Kenya’s sustainable development” while the mission is “to provide, promote, coordinate the provision of quality education, training and research for the empowerment of individuals to become responsible and competent citizens who value education as a lifelong process” as envisaged by Kenya Vision 2030. The national goals of education are given below:

i) Foster nationalism, patriotism and promote national unity

Kenya’s people belong to different ethnic groups, races and religions, but these differences need not divide them. They must be able to live and interact as Kenyans. It is a paramount duty of education to help the youth acquire this sense of nationhood, by removing conflicts and by promoting positive attitudes of mutual respect, which enable them to live together in harmony, and foster patriotism in order to make a positive contribution to the life of the Nation.

ii) Promote the social economic, technological and industrial needs for national development

Education should prepare the youth of the country to play an effective and productive role in the life of the nation.

■ **Social Needs**

Education in Kenya must prepare children for the changes in attitudes and relationships, which are necessary for the smooth process of a rapidly developing modern economy. There is bound to be a silent social revolution following in the wake of rapid modernization. Education should assist our youth to adapt to this change.

■ **Economic Needs**

Education in Kenya should produce citizens with skills, knowledge, expertise and personal qualities that are required to support a growing economy. Kenya is building up a modern and independent economy, which is in need of adequate domestic manpower.

■ **Technological and Industrial Needs**

Education in Kenya should provide the learners with the necessary skills and attitudes for Industrial development. Kenya recognizes the rapid industrial and technological changes taking place, especially in the developed world. We can only be part of this development if our education system deliberately focused on knowledge, skills and attitudes that will prepare the youth for these changing global trends.

iii) Promote individual development and self-fulfilment

Education should provide opportunities for the fullest development of individual talents and personality. It should help children to develop their potential, interests and abilities. A vital aspect of individual development is character building.

iv) Promote sound moral and religious values

Education should provide for the development of knowledge, skills and attitudes that will enhance acquisition of sound moral values and help children to grow up into self-disciplined, self-reliant and integrated citizens.

v) Promote social equality and responsibility

Education should promote social equality and foster a sense of social responsibility within an education system, which provides equal education opportunities for all. It should give all children varied and challenging opportunities for collective activities and corporate social service, irrespective of gender, ability or geographical environment.

vi) Promote respect for and development of Kenya's rich and varied cultures

Education should instil in the youth of Kenya an understanding of past and present cultures and their valid place in contemporary society. The children should be able to blend the best of traditional values with the changed requirements that, must follow rapid development in order to build a stable and modern society.

vii) Promote international consciousness and foster positive attitudes towards other nations

Kenya is part of the international community. It is part of the complicated and interdependent network of peoples and nations. Education should, therefore, lead the youth of the country to accept membership in this international community with all the obligations and responsibilities, rights and benefits that this membership entails.

viii) Promote positive attitudes towards good health and environmental protection

Education should inculcate in the youth the value for good health in order to avoid indulging in activities that will lead to physical or mental ill health. It should foster positive attitudes towards environmental development and conservation. It should lead the youth to appreciate the need for a healthy environment.

1.2 National Aims of Technical Training Programmes

The aims of the technical training at both post primary and post secondary levels should be to:

- a) provide training opportunities for the increasing number of school leavers to enable them to be self-supporting
- b) develop practical skills and attitudes which will lead to income generating activities in the urban and rural areas through self-employment
- c) provide practical education and training skills which are responsive and relevant to Kenya's agricultural, industrial, commercial and economic needs

- d) provide the technical knowledge and vocational skills necessary to enhance the pace of this nation's development
- e) encourage self-employment while at the same time producing skilled artisans, technicians and technologists for both formal and informal sectors at the ratio of one technologist to five technicians to 30 craftsmen/artisans (1:5:30).

1.3 Objectives of the Craft Training Programmes

The general objectives of the craft training programmes are to:

- a) develop skills which will be responsive and relevant to the country's human resources required at the middle level
- b) prepare the trainees so that they can enter the world of work with confidence for either salaried employment or self-employment
- c) impart adequate skills which will enable the trainee to operate either as a craftsman or perform middle level supervisory functions.

2.0 Introduction to the Course

The Craft Certificate in Automotive Technology course is designed for Kenya Certificate of Education graduates (or equivalent qualifications), to provide trainees with skills, knowledge and attitudes that will enable them diagnose, repair and service vehicles.

The course is in modular form and it is designed to enable trainees acquire adequate competencies for formal and informal employment and at the same time prepare them for further training.

The course is in two modules. Each module prepares the trainee to perform specific tasks whose total value combined will impart the desired competencies, that will produce the required graduate by the end of the course.

The course puts emphasis on practical work and competence acquisition. Thus, the trainee is required to spend 20 % of the total hours on theory and 80 % on practical lessons.

The trainers are encouraged to continuously carry out research to establish the emerging trends and issues in each area and integrate them in the teaching. The trainers are further encouraged to take into considerations the interests of persons with disability as prescribed in the Persons with Disability Act of 2003.

2.2 General Objectives of the Course

By the end of the course, the trainee should be able to:

- a) demonstrate the ability to select, use and maintain tools and equipment for the trade
- b) observe environment, health and safety in the workshop and other work places
- c) understand the working principle of motor vehicle components and systems
- d) read and interpret working drawings
- e) service and repair motor vehicles
- f) communicate with others effectively on matters of automotive engineering
- g) Create a firm foundation for further training.

2.3 General Regulations

2.3.1 Approval of the Training Institutions

Institutions offering this course should be recognized and approved by the Ministry responsible for Training.

2.3.2 Duration of the Course

The course is designed to have 1980 hours. 1650 hours shall be spent in the training institutions while 330 hours shall be spent on Industrial Attachment. The course duration shall be as outlined below.

	Institution Time (Hours)	Industrial Attachment Time (Hours)	Total Time (Hours)
Module I	825	330	1155
Module II	825		825
Total	1650	330	1980

2.3.3 Entry Requirements

Trainees entering this course should have any of the following minimum requirements:

- a) Passed Artisan course in Automotive
OR
- b) Passed Kenya Certificate of Secondary Education (KCSE) with a Mean grade of D (D plain)
OR
- c) Passed National Vocational Certificate of Education and Training (NVCET) in Automotive Technology Option II
OR
- d) Equivalent qualifications as shall be determined by Kenya National Examinations Council (KNEC)

2.3.4 Examinable Units

All the units in each module of the course are examinable
The examinations for the following units shall include Theory and Practical phase tests

CODE	MODULE UNIT	Suggested mode of assessment
Module I		
3.1.0	Entrepreneurship Education	Theory and Practice
4.1.0	Information And Communication Technology (ICT)	Theory and Practice
5.1.0	Technical Drawing	Practice
6.1.0	Mathematics I	Theory
7.1.0	Applied Science	Theory and Practice
8.1.0	Workshop Technology	Theory and Practice
9.1.0	Electrical And Electronic Principles I	Theory and Practice
10.1.0	Vehicle Technology	Theory and Practice
11.1.0	Vehicle Body Work	Theory and Practice
Module II		
12.2.0	Communication Skills	Theory
13.2.0	Life Skills	Theory
14.2.0	Technical Drawing II	Practice
15.2.0	Mathematics II	Theory
16.2.0	Vehicle Electrical and Electronic Systems	Theory and Practice
17.2.0	Vehicle Engines Technology	Theory and Practice
18.2.0	Driving skills	Theory and Practice
19.2.0	Workshop Organisation and Management	Theory
20.2.0	Business Plan	Practice
21.2.0	Trade Project	Theory and Practice

Candidates do not have to take all the papers of a module at the same sitting

2.4 Attendance and Course Work Requirements

The candidates are expected to register for training at an institution approved for the course for the theoretical and practical studies.

2.4.1 Coursework Marks

Continuous assessment marks for the course work must be kept by the institution and details must be submitted to the Kenya National Examinations Council (KNEC) in respect of each candidate entered for the examinations at least two weeks before the external examination is taken.

2.4.2 Coursework Assessment

Continuous assessment will be given a weighting of 30% and the external examinations by KNEC will be given a weighting of 70% in the determination of the final grade.

2.4.3 Compulsory Industrial Attachment/Internship for Trainees

Before the end of the course, every trainee shall undergo industrial an attachment/internship of 330 hours which shall be taken in one phases. Industrial attachment shall be an integral part of training and its assessment shall form part of the final grade and certification.

The training institutions in collaboration with the organization where the trainee is attached shall supervise the trainee during the Industrial Attachment. The examining body shall provide the modalities of industrial attachment assessment.

2.4.4 Project Work

A project in this context means a research carried out by an individual trainee. It may be practical, mathematical, evaluative, and descriptive or research based project. The project must have well defined Objectives so that the trainee has something definite to aim at, without inhibiting his/her initiative. The aim of the project is to give trainees an opportunity to carry out an independent work. The management and the assessment methods of project work shall be determined by KNEC and the training institutions.

2.5 Examinations and Award of Certificates

2.5.1 Assessment

The assessment of all the modules shall be competency based.

2.5.2 Internal Examinations

The training institutions will conduct course work and/or project work assessments based on the competences acquired during the training. The institutions will offer internal examinations at the end of each module and keep these records for use. By the end of the course to determine the final grade. The course work or project work and/or assessments shall also be used during the re-entry to the course or for the award of credit transfer.

2.5.3 External Examinations

The Kenya National Examinations Council (KNEC) will offer external examinations to trainees in all modules covered during the training.

2.5.4 Eligibility for Candidates Entering Into External Examinations

Candidates for external examinations must at the time of entry to the examinations, have successfully completed the required competencies in each course modules.

2.5.5 Coursework/continuous Assessment

Coursework/continuous Assessment will be prepared and marked by the institutions.

The institutions will issue statement of results while the examining body will award a certificate after completion of the relevant modules.

2.5.6 Examination Results

In order to qualify for the award of Craft certificate in Automotive Technology, the candidate must pass all the modules of the course. Results of the examination as a whole will be issued in five classes and for the individual papers will be in eight grades. Each candidate will receive

all records of performance, giving the result in terms of class and grade.

The relationship between classes and grades is:

- Pass with distinction
- Pass with credit
- Pass
- Referred
- Fail

Candidates, who fail any paper (module unit) in a particular module, will be REFERRED in the failed paper and will be allowed to re-sit three **(3)** times and pass within a period of five **(5)** years after the date of the first sitting. Thereafter the candidate will be discontinued from further re-sitting the paper(s).

2.5.7 Award of Certificate

The KNEC will issue the candidates with result slips for Modules passed and a final certificate in Craft certificate in Automotive technology

2.5.8 General Examination Regulation

In the event of any inconsistency arising between the regulations as set out in this syllabus and the General Regulations published by the examining body, the General Regulations of the KNEC shall prevail

2.6 Course Coding and Time Allocation

Craft in Automotive Technology

CODE	MODULE UNIT	TIME HRS
Module I		
3.1.0	Entrepreneurship Education	66
4.1.0	Information And Communication Technology (ICT)	100
5.1.0	Technical Drawing	66
6.1.0	Mathematics I	44
7.1.0	Applied Science	66
8.1.0	Workshop Technology	99
9.1.0	Electrical And Electronic Principles I	66
10.1.0	Vehicle Technology	180
11.1.0	Vehicle Body Work	138
Industrial attachment		330
Tuition time foe Module I		825
Total time for Module I		1155
Module II		
12.2.0	Communication Skills	66
13.2.0	Life Skills	66
14.2.0	Technical Drawing II	66
15.2.0	Mathematics II	66
16.2.0	Vehicle Electrical and Electronic Systems	210
17.2.0	Vehicle Engines Technology	164
18.2.0	Driving skills	27
19.2.0	Workshop Organisation and Management	66
20.20	Business Plan	44
21.2.0	Trade Project	50
Total Time for Module II		825
TOTAL TIME FOR THE COURSE		1980