

**[NTC MEMORANDUM CIRCULAR NO. 16-11-2004,
November 09, 2004]**

**RULES AND REGULATIONS GOVERNING RADIO TRAINING
SCHOOLS (RTS) OFFERING COMMUNICATIONS TECHNICIAN
COURSE (CTC)**

Pursuant to Act 3846, as amended, E.O. No. 546, Department Order No. 7 and 23, the National Telecommunications Commission (NTC) hereby promulgates the following rules and regulations governing RTS offering Communications Technician Course.

I. General Provisions

- 1.1 No person, firm, association or corporation shall offer a two-year Communications Technician Course without first securing a Certificate of Accreditation from the NTC.
- 1.2 All certificates or diplomas issued by a non-accredited RTS shall not be honored by the NTC.

II. Requirements for Accreditation

2.1 Administrative Requirements

- 2.1.1 Letter of Intent
- 2.1.2 Duly accomplished information sheets of the Board of Directors if corporation
- 2.1.3 Feasibility study identifying the required capitalization in opening up an RTS
- 2.1.4 Proof of financial capability
- 2.1.5 Ownership
 - Corporation-Articles of Incorporation issued by Securities and Exchange Commission (SEC)
 - Single-Proprietor-Registration of business by the Department of Trade and Industry (DTI)
- 2.1.6 Business Permit
- 2.1.7 Proposed Course Curriculum
- 2.1.8 Class Programs/Timetables
- 2.1.9 List of Instructors and corresponding application for Permit to Teach
- 2.1.10 Proof of Ownership of lot and building or valid lease

contract

2.2 Technical Requirements

- 2.2.1 Laboratory and Test Equipment
- 2.2.2 Textbooks and magazines
- 2.2.3 Permit to Purchase
- 2.2.4 Permit to Possess
- 2.2.5 Construction Permit
- 2.2.6 Radio Station License
- 2.2.7 Accreditation Certificate

III. Course

The Course shall be a two (2) year Communication Technician Course. Graduates of this course may qualify to take the First Class Radiotelephone Operator's examination conducted by the Commission.

IV. Subjects

The subject matter to be taken up under the Communications Technician Course shall include the following minimum requirements:

- 4.1 Knowledge on the elementary principles of electricity.
- 4.2 Detailed knowledge on the practical operation, adjustment and repairs of radiotelephone, broadcast and telecommunications equipment.
- 4.3 Knowledge in the operation of apparatus used for direct-finding bearings, as well as the general knowledge of the principles of operation of other apparatus generally used for radio navigation.
- 4.4 Knowledge in the installation, calibration of equipment and apparatus used in telecommunications facilities.
- 4.5 Detailed knowledge on radio laws and regulations, both local and international.
- 4.6 Knowledge on the basic tools commonly used in radio, broadcast and telecommunications equipment.
- 4.7 Detailed knowledge on antenna fundamental as well as its type, classes and applications.
- 4.8 Knowledge on computer fundamentals specifically on basic computer concepts and familiarization of the common computer peripherals.
- 4.9 Knowledge on the basic operations of radio communications equipment specifically on portable, mobile and point-to-point radio.
- 4.10 Knowledge in the analysis and operations of different transmission media, used in communication.

- 4.11 Knowledge in the elementary principles of electronics, semiconductor devices and electrical performance of the circuit and signal processing.
- 4.12 At least 240 hours "on the job training" to expose students to actual works in the chosen field of specialization, i.e. telecommunications, broadcast, radio.

V. Entry Standards

- 5.1 At least high school graduate
- 5.2 Good moral character.

VI. Course Intake Limitations

- 6.1 The class must not exceed 35 students for lecture instructions.
- 6.2 There shall be a maximum of 6 students in a group for practical training or laboratory work.

VII. Teaching Facilities and Equipment

- 7.1 Classrooms shall be at least 42 square meters for 35 students and equipped with necessary and required facilities.
- 7.2 Classroom facilities shall include a whiteboard/blackboard or flipchart and an overhead projector. Audiovisual materials such as videos, slides, tape recorders, etc. shall be available when needed.
- 7.3 For the practical training, adequate working space is required. The space must accommodate the following equipment:
 - a. Oscilloscope (3)
 - b. Signal Generator (3)
 - c. Multi-tester (7)
 - d. Soldering Iron (7)
 - e. Pliers (7)
 - f. Breadboard (7)
 - g. AC/DC variable power supply (7)
 - h. Spectrum analyzer (3)
 - i. Computer sets (3)
 - j. AM/FM, SSB, DSB trainer kit (1)
 - k. Telephone trainer kit (1)
 - l. Antenna trainer kit (1)
 - m. Telecommunications switchboard (1)
 - n. Frequency filter trainer kit (1)

- o. PAM, PCM, TDM trainer kit (1)
- p. Signal tracer (1)
- q. Tone generator (1)

VIII. Teaching Aids and Textbooks

The required teaching aids and textbooks shall be provided by the school and shall cover thoroughly the subject matter prescribed under this Circular.

XI. Course Certificate or Diploma

A certificate or diploma attesting to the fact that a student has successfully completed the course shall be issued by the RTS to a student after completion of the course program.

X. Faculty Requirements

An individual who possesses any of the qualifications provided below shall be qualified to teach in radio training schools:

- 10.1 Graduate of electrical, electronics or radio engineering courses from universities or schools of good standing.
- 10.2 Holders of the degree of Bachelor of Science in Education with at least two (2) years of specialized knowledge and training related to the course.
- 10.3 Duly licensed first/second class radiotelephone/radiotelegraph operators who have at least five (5) years satisfactorily service as radio operators in any private or government institutions.
- 10.4 Persons who have been in the government service with at least three (3) years experience as technical inspector.

XI. Delivery of Instructions

Instructors shall follow the prescribed course timetable, detailed teaching syllabus and lesson plan or instructor's guide for the course program.

XII. Submission of Report

All duly accredited RTS shall at the end of each semester, furnish the Commission with the names of students who have enrolled during the semester and the names of those who have successfully completed.

XIII. Issuance of Certificate of Accreditation

- 13.1 RTS shall be granted a Certificate of Accreditation after complying the necessary requirements provided in this