CSIF YOUTH EMPOWERMENT PROGRM

THROUGH SOLAR ENGINEERING

ACTIVITY PLAN FROM JANUARY TO DECEMBER

(COURSE CODE SL 002):

MATERIALS NEEDED FOR THE PROGRAM INCLUDE:

- **SOLAR LABORATORY**
- **SOLAR PANELS**
- **INVERTER**
- **BATTERIES LAPTOPS**
- **CHARGE CONTROLLER ETC:**

THIS PROGRAM IS 60% PRACTICAL AND 40% THEORY.

AIMS

- AT THE END OF THE PROGRAM;
- STUDENTS WILL BE ABLE TO DO SOLAR INSTALLATION WITHOUT SUPERVISION.
- STUDENTS WILL ALSO DESIGN ELECTRONICS CIRCUIT THAT PATTERN TO SOLAR ELECTRICITY.
- STUDENTS WILL ABLE TO ANALYSE SOME BASIC ELECTRONICS CIRCUIT THAT HAS TO DO WITH SOLAR ELECTRICITY.
- AT THE END THEY WILL BE ABLE TO TEACH OTHER STUDENTS ABOUT SOLAR ELECTRICITY AND INSTALLATION.

MONTH	WEEK1
JANUARY	WEEK !-WEEK 4 INTRODUCTION TO SOLAR TECHNOLOGY; NATERIALS FOR SOLAR ELECTRICITY GENENERATION; SOLAR BATTERY TECHNOLOGY; THINGS BORN IN MIND BEFORE EMBARKING ON SOLAR TECHNOLIGY: ONE WEEK PRACTICAL AT THE END OF JANUARY.
FEBRUARY	WK1-WK4: INTRODUCTION TO SOLAR PANELS; VARIANTS OF SOLAR PANELS; SOLAR PANELS MANUCTURE AND THE MATERIALS INVOLVED IN THEIR PRODUCTION: LECTURE ON HOW TO USE SOLAR TOOLS IN SOLAR ELECTRICITY TECHNOLOGY. ONE WEEK PRACTICAL AT THE END OD FEBRUARY.
MARCH	WEEK1-WEEK2 :INTRODUCTION TO SOLAR INVERTERS; DESIGN OF SOLAR INVERTERS; CIRCUIT BUILDING TOPOLOGIES OF SOLAR INVERTERS/ CHARGE CONTROLLERS: ONE WEEK PRACTICAL AT THE END MARCH.
APRIL	WEEK 1-WEEK 4: HOW TO SIZE SOLAR PANELS/WIRING: INVERTERS/WIRING TECHNIQUES: BATTERIES/ WIRING TECHNIQUES: ONE WEEK PRACTICAL AT THE END APRIL.
MAY	WEEK 1-WEEK4: TRANSFORMER DESIGN/WINDING/WIRING. ONE WEEK PRACTICAL AT THE END OF MAY.
JUNE	WEEK1-WEEK4: SOLAR INSTALLATION ANALYSIS/CALCULATIONS TO FORESTALL INSTALLATION

	ERRORS/FAULTS/ FIRST EXAMINATION. ONE WEEK PRACTICAL AT THE END OF JUNE.
JULY	WEEK1-WEEK4: STEP BY STEP GUIDE TO SOLAR INSTALLATION (PRACTICAL). ONE WEEK PRACTICAL AT THE END OF JULY.
AUGUST	PRACTICALS (WEEK1-WEEK4). ONE WEEK PRACTICAL AT THE END OF AUGUST.
SEPTEMBER	PRACTICALS (WEEK 1-WEEK 4). ONE WEEK PRACTICAL AT THE END OF SEPTEMBER.
OCTOBER	STUDENTS PRACTICAL APPRAISAL. ONE WEEK PRACTICAL AT THE END OF OCTOBER.
NOVEMBER	REVISION AND FINAL EXAMINATIONS ON THE COURSE. ONE WEEK PRACTICAL AT THE END OF NOVEMBER.
DECEMBER	GRADUATION.

OBJECTIVES:

At the end of this training students can handle solar installations without supervision; they will be able design and build solar inverters on their own without any assistance. Also at juncture students will be awarded graduation certificate as a proof.

REFERENCE: HOW DO SOLAR PANELS WORK BY RICHARD HANDULA: SCIENCE AND CURRICULUMCONSULTANT: DEBRA VOEGE, M, A.

INSTALL YOUR OWN SOLAR PANELS BY JOSEPHBURDIC, JOSEPH SCHMIDT.

EXPECTATIONS:

1. At the end of the course, the students will be able to:
2. Develop a global vision of the drivers influencing PV business.
3. Anticipate the coming changes and identify business opportunities.
4. Analyze all the necessary steps to carry out the development of a PV project.

HOW OUR STUDENTS WILL LEARN:

During the twelve months, the students will find a series of activities that offer a complete introduction guided by CSIF Lecturers. They will be introduced to online pdfdrive link for tutorials and other online free textbooks that will offer related documents which they can download for further details.

Finally, there are quizzes; review activities and a final test to enable the students check their acquired knowledge.

We encourage students to take part in group work and to share their views, by so doing their experience will be enriched.

The students always can count on the support of our facilitators.

Access to tests: Quarterly the students will be accessed on their performance especially in field work and during practical's in CSIF SOLAR LABORATORY.

A CERTIFICATE OF ACHIEVEMENT:

To enable the students demonstrate their learning, they will at the end receive a Certificate of Achievement they become eligible.