

## KARPAGAM ACADEMY OF HIGHER EDUCATION

(Deemed to be University)

(Established Under Section 3 of UGC Act, 1956)

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This is to certify that the enclosed pages (1 to 39) consist of photos for various student centric methods used for enhancing learning experiences.

REGISTRAR

Karpagam Academy of Higher Education (Deemed to be University Under Section 3 of UGC Act 1956) Pollachi Main Road, Eachanari Post, Coimbatore - 641 021.



# ACADEMY OF HIGHER EDUCATION

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#### 1. EXPERIENTIAL LEARNING

#### **Experiential Learning on Solar Cell**





The students of Department of Electrical and Electronics Engineering identifying the parameters of solar cell models





The respective faculty in-charge evaluating the students' performance and assessed the parameter identification effectively

#### **Description:**

Photovoltaics are best known as a method for generating electric power by using solar cells to convert energy from the sun into a flow of electrons by the photovoltaic effect. Solar cells produce direct current electricity from sunlight which can be used to power equipment or to recharge a battery. The aim of the work done by the students is to identify the main parameters that are used to characterise the performance of solar cells. These are the peak power  $P_{max}$ , the short-circuit current density  $J_{sc}$ , the open circuit voltage  $V_{oc}$ , and the fill factor FF. The conversion efficiency  $\eta$  can be determined from these parameters as an end result and it have been evaluated by their mentors.

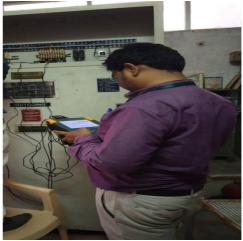
#### SKILL BASED TRAINING ON POWER QUALITY METER





The students of Department Electrical and Electronics Engineering working on power quality problems





A training program is conducted to train the students in the power quality analysis. A faculty member prechecking on power quality meter

#### **Description:**

As Energy needs increases, the power transmission and distribution systems are being reinforced or upgraded. New types of loads, such as power electronic-interfaced air conditioners and appliances, are being introduced to the power distribution network. Such scenario creates new challenges in power distribution, namely power quality problems. These problem vary from Harmonics, Unbalance, Reactive power demand, Dips and Swells. Therefore, it is important to empower the students of Electrical and Electronics Engineering in this domain. In order to train the students in the power quality analysis, a training program is conducted by the Electrical and Electronics Engineering department of Karpagam Academy of Higher Education. The following devices are used in this training program: (i) state of the art power quality measurement meter - Fluke 438-II; (ii) current clamp i410; and (iii) current clamp i55.

#### **FOOD SAFETY AND SECURITY - TRAINING**



The students of B.Tech-Food Technology having hands on experiencing on Food Safety and Security

#### **Description:**

The foods staffs which are free from causing any danger or harm to the members of any given community. FOOD SECURITY - this refers to a situation when the community has sufficient/ enough healthy food staffs for all its members. So food safety and security refers to access to healthy and sufficient amount of nutritious food that can sustain life and promote good health. The students of B.Tech - Food Technology experienced about Foodborne diseases, Steps of ensuring food safety and security and challenges dealt by Food handlers and consumers.

#### HANDS-ON TRAINING ON BIOTECHNOLOGICAL TECHNIQUES



A mentor of this training programme is briefing the bio-technological techniques to make or modify products, to improve plants or to develop microorganisms for specific uses.



Students are implementing the techniques instructed by the mentor

#### **Description:**

Biotechnology is the use of an organism, or a component of an organism or other biological system, to make a product or process. Biotechnology inventions can raise new practical concerns and ethical questions that must be addressed with informed input from all of society. This training has focused to cover the methods for transgenic, Identification of traits and genes that can contribute to national and global goals for agriculture. The three important techniques of biotechnology are discussed in this forum: Recombinant DNA Technology (Genetic Engineering), Plant Tissue Culture and Transgenic (Genetically Modified Organisms).

#### **BIOINSTRUMENTATION TRAINING**



Students are experiencing on testing of a bio-instrument

#### **Description:**

The training programme covered the repair, maintenance and operation of Bio-instrument electronic equipment. This programme is also aimed to introduce student about basic biomedical engineering technology and introduce different biological signals, their acquisition, measurements and related constraints.

#### **VARIOUS EXPERIMENTAL PROCESSES IN CHEMICAL ENGINEERING**





Students of B.Tech-Chemical Engineering conducting experimental work on chemical analysis





Students of B.Tech-Chemical Engineering are getting trained for conducting chemical tests and its characteristics

#### **Description:**

The Students of B.Tech-Chemical Engineering practiced with the substances available at the laboratory for conducting chemical characterization and to find the application of useful substances or energy.

#### TRAINING ON WELDING TECHNIQUES



Instructions and welding methods are explained by the faculty in-charge



Students are getting practiced to weld on various weld booths

#### **Description:**

The students of Department of Mechanical Engineering experienced to make a weld as per the guidelines and instructions offered by the trainer. The training program conducted to initiate and improve the individual skill levels, from the beginner to the advanced welder. This program helped the student to understand the basic principles of welding. It introduced the various welding processes and techniques which will help the student to aware about the welding technology.

#### 2. PARTICIPATIVE LEARNING

#### **ITALY-MILAN (International Study Tour)**





Students of Architecture visited ITALY – MILAN, a global capital of fashion and design

#### **Description:**

Italy is known for its considerable architectural achievements, such as the construction of aqueducts, temples and similar structures. The Architecture students of Karpagam Academy of Higher Education enjoyed the very broad and diverse architectural style of Italy.

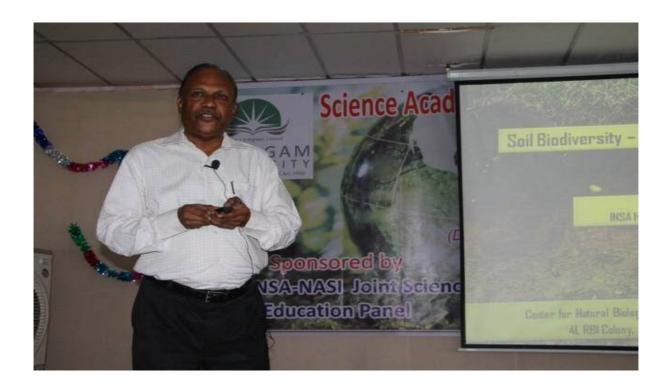
#### PHYTO-PHARMACEUTICALS – RECENT ADVANCEMENTS



Students of Biotechnology are participating in testing along with the instructor



Eminent Speaker delivered about "Biodiversity and Bioremediation" and students have participated and the talk has gone effectively with interaction and discussion

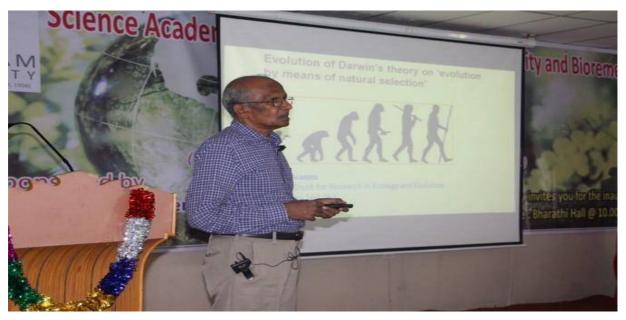


an eminent Speaker delivered his talk on "Biological diversity & Bio-prospection: a priority agenda for sustainable utilization of bio- resources of India". The students of Biotechnology are focused to participated in



the event.

An eminent Speaker delivered his lecture session on "Soil Biodiversity" for Biotechnology students.



Biodiversity as a tool box for Bioremediation –Economic, Environmental, and Societal benefits: a talk by an eminent speaker to the participators of the event.



Students demonstrated a non-working model related to a conceptual; design of 'GO GREEN'



Student of Biotechnology is presenting on her topic 'Biogenic nanoparticles activities in clinical trials'



Student Presentation on E-waste Management

#### **GOLDEN MANURE TRAINING PROGRAM**



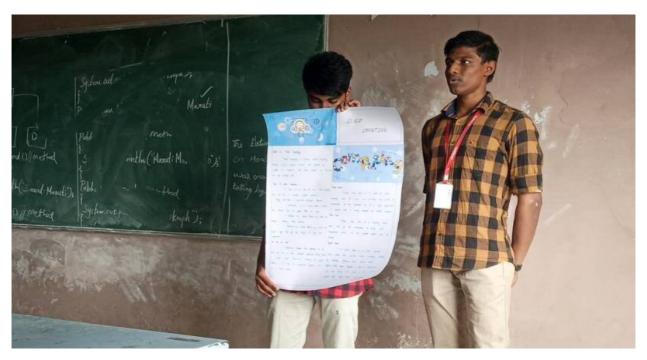




Students' local visit: Mass Production and Application of Bio-Inoculants for Organic Agriculture



#### POSTER PRESENTATION CONDUCTED FOR UG STUDENTS – I Year



I-Year, B.E-CSE —Presenting their innovative ideas through poster presentation



*I-Year, B.E-CSE —Presenting on their topics* 

#### **BIOPHARMACEUTICAL TECHNOLOGY – GROUP DISCUSSION**



Students of B.Tech – Biotechnology involved in group discussion

#### PHYTOCHEMICAL AND HERBAL MEDICINE - GROUP ACTIVITY





Students participated in group activity assigned by their instructor. The activity is given to assess the students' presence of mind while the work assigned on the spot.

#### SKILL DEVELOPMENT PROGRAMME ON 'HOME AUTOMATION ON IOT'



An interactive session had been conducted on recently developing science and technology topics to check the pulse of students' interest towards skill development.





Students were presenting on their own topics at the event 'Advancement in Computational Science'

#### **SMART INDIA HACKATHON CONTEST**





Students were participated and delivered their topics related to 'Advances in Computational Science and Technology'

#### INDUSTRIAL VISIT: Sri Sakthi Auto parts, Coimbatore.



Students of Mechanical Engineering visited Sri Sakthi Auto parts and participated in industrial lecture

#### 3. PROBLEMS SOLVING METHODS

#### **COMPUTATIONAL FLUID DYNAMICS**



During the workshop the trainer asked the students to create the model, mesh and solve the problems

#### TRAINING ON DESIGN AND DRAFTING IN CAD LAB

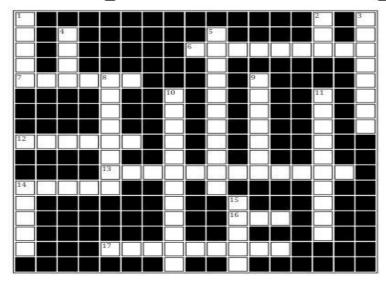


Students were asked to answer for the questions and in meantime the doubts were cleared by the trainer.

#### UNIT OPERATIONS - 'PUZZLE' ON DIMENSIONLESS ANALYSIS



## Convert each of the measurement to the units stated. You must use the cancelation of units method and put work on seperate sheet of paper



#### Across

- 6. 8gal/day to pints/hr.
- 7. 1408oz to gal.
- 12. 90gal/day to pints/day
- 13. \$2/(5lbs) to \$/ton
- 14. 7000mg/mL to kg/liter
- 16. 1760yds to miles
- 17. 3168 square inches to square feet 9. 150mm to cm.

- 1. 1,576,800min to years
- 2. 72in to yds
- 3. 61.6ft/sec to mph
- 4. \$300/hr to \$/min
- 5. 1mph to fpm
- 8. 90fpm to in/sec
- 10. 250lbs to oz.
- 11. 12gal to quarts 14. 20,000tbsp/liter to tsp/ml
- 15. 6,437,376cm to miles

#### MARINE BIOTECHNOLOGY - QUIZ



Students were allowed to form a group and the question prepared by one group will be start rising on another group





Students were asked to solve and answer the question. Quizzes will be conducted often.

### **HOME AUTOMATION ON IOT - DEMONSTRATION**



Students were allowed to automate using smart phones for IOT awareness