

PROF. KHAJA ALTHAF HUSSAIN
I/c REGISTRAR



KAKATIYA UNIVERSITY
VIDYARANYAPURI
WARANGAL – 506 009

Grams: KAKATIYA Fax: 0870 – 2438800 E-mail: kakatiya@ap.nic.in Phones: Off: 0870 –2438866;

No. 707 /B2/KU/2016

Date: 25-06-2016

The Principals of University and Affiliated
Colleges offering M.Sc. Chemistry course
KAKATIYA UNIVERSITY

Sub:- SYLLABUS - Sending of syllabus of open elective of M.Sc.
Chemistry under Choice Based Credit System with effect
from 2015-2016 and onwards - Regarding.

Ref:- Lr. No. Nil, dated 11th January, 2016 of the Chairperson, Board
of Studies in Chemistry, KU.

Sir,

I am to inform you that in pursuance of the decision taken by the Standing Committee of the Academic Senate at its 1st meeting held on 23rd June, 2016, the Vice-Chancellor has accorded approval to implement syllabus of open elective of M.Sc. Chemistry under the Choice Based Credit System from the academic year 2015-2016 and onwards. The Dean, Faculty of Science forwarded the same for implementation.

A copy of the syllabus is available at the University Website www.kakatiya.ac.in. The same may be brought to the notice of the students and the staff concerned.

Yours faithfully,


REGISTRAR

Encl.: As stated.

Copy to:

1. The Dean, Faculty of Science, KU
2. The Chairperson, Board of Studies in Chemistry, KU
3. The Controller/Addl. Controller of Examinations (PG/Confdl.), KU
4. The Director, Campus Network/Website, KU with a request to place the revised syllabi on the website.
5. The Secretary to the Vice-Chancellor, KU
6. The P.A. to Registrar, KU
7. The SF.

CHEMISTRY IN DAY TO DAY LIFE

UNIT – I: Chemistry of life

Origin of life, water-the force and fundamental substance of life, carbohydrates – the energy molecules, proteins –the vital function bio-molecules, lipids – the large oily molecules, nucleic acids-the threads of life and vitamins, minerals and hormones - sources - applications and diseases due to deficiency.

UNIT – II: Chemistry in medicine and health care

Drugs - Classification on the basis of drug action, molecular targets, chemical structure and pharmacological action. Drug-target interactions: enzymes as drug targets, catalytic action of enzymes, drug-enzyme interaction, Receptors as drug targets. Therapeutic action of different classes of drugs: Analgesics, antipyretics, tranquilizers, antiseptics, disinfectants, antimicrobials, and antibiotics, antacids, antihistamines, food preservatives & artificial sweeteners.

UNIT – III: Industrial chemicals

Plastics- Polymers-bakelite and celluloid, polyethylene, polyvinyl chloride, polystyrene, polypropylene.

Dyes - classification based on mode of application and structure - paints - ingredients - drying - pigments - types and properties - varnish.

UNIT – IV: Chemistry and consumer products

Chemistry in computers and electronics, chemistry in recreation, Jewellery and ornaments, Electroplating, chemistry and fireworks, chemistry of batteries/cells, sand and chemistry, safety matches, wax candles, shoe polish, mosquito coils, Portland cement, glass-varieties and their uses, Soaps and detergents classification - ingredients - solids and liquids - disinfectants (phenyl, dettol type) - perfumes - raw materials - perfumes used in soaps

UNIT – V: Energy and Chemistry

Fuel, fossil fuel-petroleum and oil, coal-natural gas, nuclear energy, water energy, wind energy, energy from biomass and garbage, Solar Energy - Fuel from sunlight-splitting of water-hydrogen from sunlight-hydrogen economy-fuel cells-batteries-photovoltaics-stealing the sun. Nuclear energy- nuclear fission and fusion-production of electricity by nuclear reactor-radioactivity and the hazards of radioactivity-living with nuclear power

Text book:

Chemistry in daily life – Kirpal Singh., PHI Pvt.Ltd., New Delhi, 3rd edition, 2012

K. S. Reddy
 Professor & Head
 Department of Chemistry
 University College
 KAKATIYA UNIVERSITY