



Progressive Education Society's
Modern College of Arts, Science and Commerce

Ganeshkhind, Pune 411016.

Re-Accredited by NAAC with 'A' grade

- ◆ Affiliated to Savitribai Phule Pune University: PUN / PN / ASC / 089 (1992)
 - ◆ UGC - Recognition No.: F-8-290 /2006(CPP-I)
 - ◆ Best College Award by Savitribai Phule Pune University - 2013
 - ◆ DST-FIST sponsored college
 - ◆ STAR College Scheme sponsored by DBT.
- Tel.: 020 25634021, 25631091
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Website: www.moderncollegegk.org

M/ASC-16/2021-22/410

Date: 06/10/2021

To

The Registrar,

Academic Section, Savitribai Phule Pune University, Pune

Subject: Submission Of feedback about curriculum

Respected Sir,

Our Institution has collected views of the Students/Teacher/Alumni/Employer about current curriculum/syllabus. We are submitting this feedback analysis, hope it will help during the designing of new curriculum in future.

Thanking You

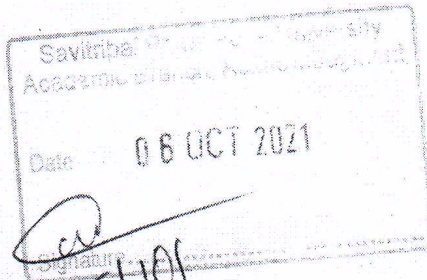
Dr. Mrinalini Bhadane

In Charge Feedback Committee

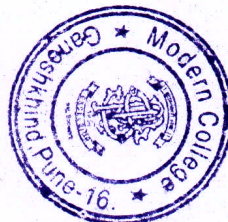
Dr. Mrinalini Bhadane

Dr. Sanjay Kharat
Principal

Dr Sanjay Kharat



Dr. Sanjay Kharat
Principal
Modern College of Arts, Science
& Commerce, Ganeshkhind, Pune





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MCASC-18/2019-20/1777

Date: 28/2/2020

To,

The Chairman

Board of Studies in Physics

Savitribai Phule Pune University

Pune 7

Subject: Regarding syllabus content of F.Y.B.Sc. (Physics) SEM I- Paper II- CBCS pattern

Respected Sir,

We the members of Department of Physics, Modern College, Ganeshkhind would like to suggest some changes in the syllabus content of F.Y.B.Sc. (Physics) SEM I- Paper II (Physics Principles and Applications) - CBCS pattern.

Content which can be removed from the syllabus or added as Revision exercise-

1. Bohr and Other Atomic Models- concept and derivations
2. Electromagnetic waves- History and sources
3. Physics of Molecules-Ionic, covalent, hydrogen and Van der Waal's Bond

Content which can be introduced in the syllabus-

1. Electromagnetic Spectra and its Applications
2. Introduction to Bioelectricity
3. Introduction to Materials
4. Principles of Telecommunication
5. Basics of nanotechnology Or Introduction to nanotechnology

We are attaching herewith some details about what can be included under these topics.

Thanking You.

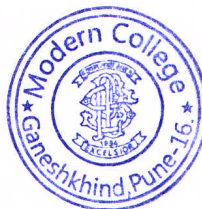
Yoshi
Mrs. Varsha Joshi

Head Department of Physics

Sanjay Kharat
Dr. Sanjay Kharat

Principal

Principal
Principal
Modern College of Arts, Science
& Commerce, Ganeshkhind, Pune-16.



Principal
Principal

Topic Wise content details

Electromagnetic Spectra and its Applications

1. Electromagnetic Spectra
2. Applications of Electromagnetic Spectra
 - a. Solar Cell
 - b. Microwave Oven
 - c. RADAR
 - d. Sonar
 - e. X- Ray Radiography
 - f. Computer Tomography (CT) Scan

Introduction to Bioelectricity

1. Electricity observed in living systems
2. Origin of Bioelectricity
3. Sodium Potassium Transport and Nernst Equation
4. Resting and Action Potential
5. Conduction velocity
6. Neuron structure and function
7. Origin of compound action potentials(ECG, EEG, EMG, ERG, EOG)

Recommended Books-

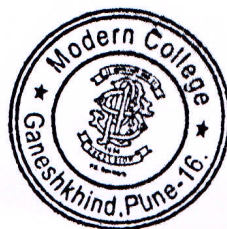
1. From Neuron to Brain, Kuffler and Nicholas, Sinauer Associates, Inc Pub. Sunderland, Masschuetts

Introduction to Materials

1. Phases of materials
2. Properties of materials
3. Classification of Materials

Recommended Books-

1. Elements of materials science and Engineering I.H.Vanvlach (4 th Edition)
2. Materials science and Engineering - V. Raghvan
3. Material Science and Metallurgy by Kodgire- Everest Publishing House
4. Material Science – O.P.Khanna- Dhanpat Rai Publications



S. J. Patil
Principal
Modern College of Arts, Science
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Principles of Telecommunication

1. Basics of communication systems. Block diagram of general communication system.
2. Types of Electronic Communication systems: Simplex, Duplex. Analog/Digital Signals.
3. Noise in communication
4. Definitions and relationship between Bit rate, Baud rate, Bandwidth and signal to noise ratio.
5. Modulation and Demodulation: Need of modulation, Types of modulation: AM, FM: Definition, Basic circuits and working, Waveforms and modulation index.
6. Types of Cables : Twisted Pair, Coaxial cable, Fiber Optic Cable
7. Applications in Modern Communication Systems - Basic principles and functioning of: mobile phone, , Set Top box and Dish TV, Internet and its applications, e-banking, e-learning, ATM Machines

Recommended Books:

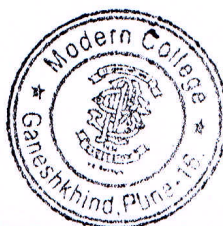
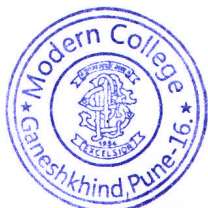
1. Electronic Communication, 2nd edition by Frenzel
2. Basic Communication by Kennedy
3. Communication Electronics, 3rd edition by Dennis Roddy, John Coolen
4. Communication Systems by Miller
5. Electronic Principles by Vishwanathan Thiagarajan


Basics of nanotechnology Or Introduction to nanotechnology

1. Introduction
2. Reduction of dimensions 3D, 2D, 1D, 0D materials.
3. Surface and Interface effect
4. Modelling of quantum size effect
5. Synthesis of nano particles – Bottom Up and Top Down approach
6. Overview of Physical, Chemical and Biological Method of synthesis
7. Naturally occurring nanocrystals

Recommended Books:

1. Nanomaterial- Synthesis, Properties and Applications - Edelstein, Camarata, Institute of Physics Publishing, Bristol and Philadelphia
2. Introduction to Nanotechnology Charles P. Poole Jr, Frank J. Owens John Wiley and Sons publications
3. Physics Education Vol. 14, No. 4, Jan – March 1998
4. Nanotechnology: Principles and Practices S. K. Kulkarni, Capital Publishing Company.




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