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|---------------------------------------------|---------------------------|
| Name of the Program                         | <b>B.Sc. Physics</b>      |
| Name of the Program Co-ordinator            | <b>Dr. Tina Sebastian</b> |
| Expected Achievement Level for PO, PSO & CO | <b>3</b>                  |

### Analysis of CO Attainment

| <i>Course No</i> | <i>Course Code</i>      | <i>Course Name</i>                                                          | <i>Course Attainment Value</i> |
|------------------|-------------------------|-----------------------------------------------------------------------------|--------------------------------|
| Course 1         | EN1CC01                 | FINE-TUNE YOUR ENGLISH                                                      | 3.00                           |
| Course 2         | EN1CC02                 | PEARLS FROM THE DEEP                                                        | 3.00                           |
| Course 3         | ML1CCT01/<br>HN 1 CCT01 | കഥാസാഹിത്യം/ PROSE & ONE ACT<br>PLAYS                                       | 3.00                           |
| Course 4         | PH1CRT01                | METHODOLOGY AND PERSPECTIVES OF<br>PHYSICS                                  | 3.00                           |
| Course 5         | MM1CMT01                | PARTIAL DIFFERENTIATION, MATRICES,<br>TRIGONOMETRY AND NUMERICAL<br>METHODS | 3.00                           |
| Course 6         | CH1CMT01                | BASIC THEORETICAL AND ANALYTICAL<br>CHEMISTRY                               | 3.00                           |
| Course 7         | PH2CRP01                | Mechanics and Properties of Matter                                          | 3.00                           |
| Course 8         | EN2CC03                 | ISSUES THAT MATTER                                                          | 3.00                           |
| Course 9         | EN2CC04                 | SAVORING THE CLASSICS                                                       | 3.00                           |
| Course 10        | ML2CCT02/<br>HN2CCT02   | കവിത/ Short stories and Novel                                               | 3.00                           |
| Course 11        | PH2CRT02                | MECHANICS AND PROPERTIES OF<br>MATTER                                       | 3.00                           |
| Course 12        | MM2CMT01                | INTEGRAL CALCULUS AND DIFFERENTIAL<br>EQUATIONS                             | 2.75                           |
| Course 13        | CH2CMT02                | BASIC ORGANIC CHEMISTRY                                                     | 3.00                           |
| Course 14        | CH2CMP01                | VOLUMETRIC ANALYSIS                                                         | 3.00                           |
| Course 15        | EN3CC05                 | LITERATURE AND/AS IDENTITY                                                  | 3.00                           |



|           |                        |                                                                            |      |
|-----------|------------------------|----------------------------------------------------------------------------|------|
| Course 16 | CML3CCT03/<br>HN3CCT03 | ദ്യശ്യകലാസാഹിത്യം/Poetry, Grammar and Translation                          | 3.00 |
| Course 17 | PH3CRT03               | OPTICS, LASER AND FIBER OPTICS                                             | 3.00 |
| Course 18 | MM3CMT01               | VECTOR CALCULUS, ANALYTIC GEOMETRY AND ABSTRACT ALGEBRA                    | 3.00 |
| Course 19 | CH3CMT03               | PHYSICAL CHEMISTRY – I                                                     | 3.00 |
| Course 20 | PH4CRP02               | Core Practical 02: Optics and Semiconductor Physics                        | 3.00 |
| Course 21 | EN4CC06                | ILLUMINATIONS                                                              | 2.75 |
| Course 22 | ML4CCT04/<br>HN4CCT041 | മലയാളഗദ്യരചനകൾ/ Drama and Long Poem                                        | 3.00 |
| Course 23 | PH4CRT04               | Semiconductor Physics                                                      | 2.71 |
| Course 24 | MM4CMT-01              | FOURIER SERIES, LAPLACE TRANSFORM AND COMPLEX ANALYSIS                     | 2.75 |
| Course 25 | CH4CMT05               | PHYSICAL CHEMISTRY – II                                                    | 3.00 |
| Course 26 | CH4CMP02               | PHYSICAL CHEMISTRY PRACTICALS                                              | 3.00 |
| Course 27 | PH5CRT05               | ELECTRICITY AND ELECTRODYNAMICS                                            | 3.00 |
| Course 28 | PH5CRT06               | CLASSICAL AND QUANTUM MECHANICS                                            | 3.00 |
| Course 29 | PH5CRT07               | DIGITAL ELECTRONICS AND PROGRAMMING                                        | 3.00 |
| Course 30 | PH5CRT08               | ENVIRONMENTAL PHYSICS AND HUMAN RIGHTS                                     | 3.00 |
| Course 31 | PH5OPT01               | OPEN COURSE: Our Universe                                                  | 3.00 |
| Course 32 | PH6CRP03               | Core Practical 03: Electricity, Magnetism and LASER                        | 3.00 |
| Course 33 | PH6CRP04               | Core Practical 04: Digital Electronics                                     | 3.00 |
| Course 34 | PH6CRP05               | Core Practical 05: Thermal Physics, Spectroscopy and C++ Programming       | 3.00 |
| Course 35 | PH6CRP06               | Core Practical 06: Acoustics, Photonics and Advanced Semiconductor Physics | 3.00 |
| Course 36 | PH6CRT09               | Thermal and Statistical Physics                                            | 2.83 |
| Course 37 | PH6CRT10               | RELATIVITY AND SPECTROSCOPY                                                | 3.00 |
| Course 38 | PH6CRT09               | Nuclear, Particle Physics and Astrophysics                                 | 3.00 |
| Course 39 | PH6CRT12               | SOLID STATE PHYSICS                                                        | 3.00 |



|           |          |                            |      |
|-----------|----------|----------------------------|------|
| Course 40 | PH6CBT05 | Astronomy and Astrophysics | 3.00 |
| Course 41 | PH6PRO01 | PROJECT                    | 3.00 |

**Recommendations:**

- Additional support to be given for Mathematics paper.
- More problem solving sessions to be conducted in case of core papers.

### Analysis of PSO Attainment

| <i>PSO No</i> | <i>PSO</i>                                                                                                                 | <i>PSO Attainment Value</i> |
|---------------|----------------------------------------------------------------------------------------------------------------------------|-----------------------------|
| PSO1          | Discuss the Methodology of Physics and explain the basic principles of general physics. (Understand)                       | 2.97                        |
| PSO2          | Solve the problems related to general physics using mathematical tools and principles of basic chemistry. (Apply)          | 2.96                        |
| PSO3          | Experiment the theories related to basic physics in lab and using computer programming. (Analyze)                          | 3                           |
| PSO4          | Develop communication skill to improve scientific temper and awareness of environment and human values in society (Apply)  | 2.97                        |
| PSO5          | Combine fundamental theoretical concepts and extrapolate the available data to propose and validate new concepts. (Create) | 3                           |

**Recommendations:**

- Problem solving skills may be improved by introducing study groups where intensive problem solving training may be imparted.
- PSO attainment is almost met. Here also the attainment level bench mark criteria may be raised.



## Analysis of PO Attainment

| <i>PO No</i> | <i>PO's</i>                                                                        | <i>PO Attainment Value</i> |
|--------------|------------------------------------------------------------------------------------|----------------------------|
| PO1          | Acquire Domain Knowledge                                                           | 2.98                       |
| PO2          | Develop Critical Thinking and Problem-Solving Ability                              | 2.97                       |
| PO3          | Lifelong Learning Capability in the Socio-Cultural and Technological Sphere        | 2.97                       |
| PO4          | Develop Practical Skills in the area of study                                      | 3.00                       |
| PO5          | Enhance Leadership Skills, Technical Expertise and Entrepreneurship Aptitude       | 2.99                       |
| PO6          | Develop Communication skills and Interpersonal Skills                              | 2.97                       |
| PO7          | Create a drive for Social and Scientific Innovation                                | 2.99                       |
| PO8          | Develop Values and Ethical Outlook for Responsible Citizenship                     | 2.97                       |
| PO9          | Develop Positive Attitude toward Environmental Sustainability and Inclusive Growth | 2.97                       |
| PO10         | Improve Employability of Students through Application Oriented learning            | 2.98                       |

### Recommendations:

- PO's are nearly achieved. Here the attainment level bench mark criteria may be raised.

Report Prepared by : Dr. Tina Sebastian (Program Co-ordinator)

Verified by : Mr. Jerry Joseph (OBE Core Committee Member)



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