**SACRED HEART COLLEGE, TIRUPATTUR, VELLORE DISTRICT**

**REPORT ON THE EXTERNAL AUDIT OF**

**THE PHYSICS DEPARTMENT**

 The following is the report of the Committee of External Audit, which visited the Department of Physics, Sacred Heart College, Tirupattur, on December 4, 2004. The following assessment was made after going through the documents submitted to the undersigned committee members and also based on their direct interaction with the students and staff members and HOD of the Department of Physics. The report deals with various positive initiatives taken by the Department and suggests recommendations to improve the quality of education offered to the students and welfare measures to be initiated for the staff members of the Department.

**I Positive Aspects**

 The Committee has noted several positive actions taken towards improving the quality of education. Some important aspects are given below:

 1. Bridge course in Physics in the first semester

 2. Seminar by the students, “in English” during 5th and 6th semester

 3. Course evaluation by the present set of students

 4. Preparation of Lab Manuals and Career Guidance Booklet for the students

**II Suggestions for improvement**

***Staff Members***

1. Most of the staff members expressed a keen interest to carry out research in and outside college. It is recommended that research facility in the department shall be built in the areas where there is common interest among the staff members. Towards implementing such activity, seed money must be provided.

2. Books and Journals related to research activity in the area of common interest shall be made available. the selection of the books and journals shall be decided based on the suggestion from the staff members and experts in the area.

3. Computer with internet connectivity in the department itself, for free and unlimited use of staff.

4. LCD projector exclusively for the use of Physics department.

5. Encouragement for participating seminars, conferences etc, in the form of grant of O.D and financial support for Registration fees, T.A. etc. As a general rule, each member may be permitted to attend a conference / seminar at least twice in a year.

6. Evening college remuneration shall be split into two parts: remuneration and allowances, so that allowance part is not taxed.

7. Increase in salary for Management Staff.

8. Vacation salary for all management staff, who have put in one academic year (10 calendar moths) of service.

9. When Management Staff are requested to be present in the department meetings even when the matter discussed has no relevance to them, their views are also to be sought after. They must be made to feel that they are also important, by soliciting their views.

***Students***

1. For selecting students for the Remedial Course, a common test at the beginning of the course may be better than the present mode of identifying such students.

2. Arrear examination must be conducted in the following semester itself to reduce the burden of accumulation of arrears.

3. Supplementary examination for the final year B.Sc and M.Sc students must be considered at least once in two years, of not regularly.

4. Browsing centre is to be equipped with more computers and be available for students for more hours.

5. Certificate course on “TV Maintenance and Repair” needs better-qualified staff.

6. A “Book Bank” shall be organized with a view to help students to use the books till all the exams are over. As of now, students are asked to return the books before the examinations begin. A suitable mechanism may be evolved to collect back the books after the completion of examination.

7. Presently different question paper patterns are followed for different subjects. Also, with the open choice “Answer ANY THREE” out of FIVE questions given, students tend to omit about 40% of the syllabus and concentrate only on the remaining portions. Therefore, “Built-in Choice” with either or type questions, one for each unit is suggested, which will force the students to study all the units of the syllabus.

8. Course evaluation is to be done by the past students also in addition to the current set of students.

**III General Suggestions:**

1. Different question paper patterns are followed for different papers. This is likely to create confusion in the minds of students (and staff). It is suggested that same question paper pattern is followed for all the papers.

2. Subject codes shall have the year of implementation of the particular syllabus as a prefix.

3. The following papers may be offered as Extra-Credit papers:

 a) Bio-Physics

 b) Household Electrical Appliances

 c) Physics for the Layman or Everyday Physics

4. In the report submitted to us, the department has mentioned that neighbouring schools are helped in learning Physics. It will be better to support this point with documents.

**IV Suggestion Regarding the Syllabus**

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| --- | --- | --- | --- | --- |
| **Page No\*** | **Code** | **Title** | **Unit** | **Suggestions** |
| 5 | AP101 | Allied Physics – I | 5 | Same |
| 6 | P207 | Heat & Thermodynamics | 1 |
| 6 | P207 | Heat & Thermodynamics | 3,4&5 | Limited portions |
| 11 | P308 | Properties of Matter | 5 | Replace with more modern topics in Solid State Physics |
| 12 | P309 | Electricity & Magnetism | 5 | LCR-Series or parallel or both-specify |
| 14 | AOP301 | Principles of Electronics | All units | Heavy |
| 17 | P407 | Classical Mechanics & Statistical Physics | Why (subjective) elective? Why not core paper? |
| 22 | AOP401 | Adv. Physics | All units heavy. Replace Unit 3 |
| 25 | P520 | Optics | 2 | This unit alone is presented elaborately |
| 30 | Without “Digital Electronics” students are taught “ Microprocessors” |
| 43 | P620 | Appl. Electronics | Overlaps with “Communication Systems” |
| 44 | GPH601 | Electronic Comm. Systems | What is the different between general and subject electives? |
| 19 | P407 | - ditto- |

\* in the Syllabus Book

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