

# **S.T.E.S & Co-operative Educational Society Ltd.,**

## **Science Sr.Colege, Shahada**

### **Course outcomes**

#### **Computer science:**

- This under graduate pass course gives a crisp as well as comprehensive idea about the subject in 1<sup>st</sup> year which includes general concepts about computer hardware, application software etc. Computer architecture and organization, digital logic design, operating system.
- In the 2<sup>nd</sup> year this course generates the idea about algorithm and Data structure which have a big application in many subjects to compare the system based on completely.
- This course also generates the idea about software engineering, going through this course. A student understands easily the industry standards models of software, software requirements and specification, software maintenance etc.
- Apart from theory there is equal emphasis or weightage given on practical which includes 'DATABASE MANAGEMENT SYSTEM' and C, C++ programming language primarily through practical sessions, along with theoretical classes which have a direct application in the software industry.
- In 3<sup>rd</sup> year this course contains communications and computer networks which gives the idea about the analog and digital communication, transmission medias, communication system, architecture of ICs, OSI, TCP/IP, LAN internet and token ring topology the internet, E-mail architecture & services etc.
- In the 3<sup>rd</sup> year practical students learn about programming JAVA, multitasking and multithreading applications, objects, events, functions, procedure and method front end development for database.
- Lastly there is a PHP, .NET, SQL primarily through practical sessions.

After completion of this course students having like mathematics/Statistics honors can draw perceptible tangible benefits from this course. They may come-up with flying colors as academicians.

## **Chemistry:**

- Three years undergraduate course in chemistry prepares students for career as professionals or researches in the field of chemistry by developing knowledge base in theory as well as expertise in laboratory works.
- The main objectives of this course is to increase the employability quotient of the students by preparing them with the technical and theoretical aspects of this continuously evolving subject.
- The principles of physical chemistry and how to apply in it experimental procedure of general chemistry will be understand after the end of the three years course. Special emphasis to be given to thermodynamics electrochemistry and chemical kinetics.
- The chemistry of elements which make-up all the material world will be understood from the perspective of the periodic table.
- The students will have an awareness of green chemistry and ecologically sustainable chemical procedures.
- Students will have a strong foundation in the fundamental and application of current organic chemistry.
- Students becomes able to use spectroscopic methods in identification of complicated molecules.

Students pursuing this stream of study are specially equipped with know how and training required to find jobs in industry and health care sections.

- The basic principles of physical organic and inorganic chemistry are understand by the students.
- Chemical equations representing both inorganic and organic reactions could be framed and understand by the students.
- Chemical formulate of household chemical like naphthalene will be known.
- The basis tenets of environmental chemistry involving carbon-cycle, phosphorous cycle and nitrogen cycle will be understood.
- Understanding of bio molecules like amino acid and carbohydrates.

## **Biotechnology**

- After the completion of this course agricultural biotechnology student getting knowledge about the environmental issues and how can solve the such issues and problems student gives developed techniques himself.
- Student studied organic farming during this course and advanced knowledge obtained about soil testing and their parameters measures as well as conservation. He give another information for major environmental issues like global warming and their control measures.
- Students aware about sustainable agriculture & their development.
- Students also getting additional knowledge about their genes, DNA and have can protein synthesis takes places in the body also help for understanding modern generation therapy.
- Third year students implements their views and ideas about treatment of industrial as well as domestic waste water.
- Student can help of aware for society's people about vaccination and health awareness.
- Green house, ploy house techniques can improve in student knowledge.
- Third year student aware about clone techniques of animal and maximum support his for soil management and garden design.

It is all above the outcomes of student after compilation of biotechnology course.

### **Mechanism of Outcomes:**

The program outcomes are measured over a period of time through the performance of the students in the role they play in the various activities they get involved in. Students of the college are involved in curricular, co-curricular and extracurricular activities through their departments, NSS and different committees, student organize a variety of programme in their departments. In the course of the year including exhibitions, fresher's day, different competitions, farewell function etc on behalf of their departments in the programs organized by the college. Departments also engage in social out rich activities on these occasions students display their social skills, communication skills, creative skills, leadership skills, spirits of team work etc. Programme specific outcomes are measured through both academic and non academic performances of the students. The participation in class activities role in departmental activities are same of the means by which program specific outcomes are measured. Students are also encouraged to take part in competitions, seminars, research competitions etc. Their performance within and outside the college in the various academic events provides another index of their learning- levels course outcomes are measured through the performance of the students in the class, practicals, internal evaluation and external evaluations, students are measured continuously based on their regularity. Their receptiveness, participation in class discussions, their answers to questions asked by the teacher and the overall quality of their conduct. Their performance in the internal examinations provides the initial indication of their learning outcome. Teachers provide critical inputs to the students on the basis of the performance. Thus they are helped to improve their performance in the external examination. Our college also has a counseling cell, which helps in resolving student's problems, academic psychological etc in order to attain program outcomes on successful completion of the final year of study. There is a reward system through which students are encouraged to excel in life.

### **Methods of attainment of Pos / PSOs:**

The program outcomes and program specific outcomes are assessed through direct and indirect methods.

#### **Direct method:**

Direct assessment is carried out through evaluation of internal and university examination.

Average course outcome attainment by direct method = semester and examination (60%) + Internal examination (40%).

**Indirect method:**

Indirect assessment is carried out by student exit survey, alumni survey and employer survey from feedbacks. The program outcomes are assessed with above mentioned data and program assessment committee concludes the PO attainment level.

Average attainment in indirect method= Average (Alumni survey + employer survey + Graduate exit).

The following scoring function is used to calculate the average attainment of each PO.

Tools and their frequencies for PO attainment.

<b>Assessment Tool</b>	<b>Description</b>
1. Internal sessional / credit examination	The internal exam class average marks of each course are calculated and attainment of course outcome.
2. End semester examination (university exam)	The end semester exam class average marks of each course is calculated for attachment of course is calculated for attainment of course outcome.
3. Alumni survey	In the survey, specific questions are designed to support the assessment of level of attainment of POS.
4. Employer survey	Employer survey is conducted for finding out whether the knowledge skill and attitude learned by the student is adequately satisfying their expectations.
5. Student exit survey	Their graduate student exit survey is conducted from the recent graduate alumni. This survey gives the feedback of their overall satisfaction with their academic experience and professional development quality of mentoring and correct plans.

The target set for the attainment of POS, PSOs and COs in the IQAC meeting was achieved. The college is taking efforts to increase the target level for the attainment of POs, PSOs and COs.