



**Shahada Taluka Educational Society & Co-operative Educational Society Ltd.,  
Science Senior College, Shahada Dist: Nandurbar**

**Add On Course  
Year 2018-2019**

Our colleges offered plenty of Add On courses where in the students are getting trained well. The students have the option to choose the courses according to their desires. Main purpose of add on courses is to make students better prepared to meet industry demands as well as develop their own interests and aptitudes.

#### Features:-

- Free of Cost.
- More focus on Theory and Practical's
- Students can learn different values of this course in effective manner through practical session
- It offers hands on practice to learners.

#### Objectives

- To provide students an understanding of the expectations of industry.
- To improve employability skills.
- To bridge the skill gaps and make students industry ready.
- To provide an opportunity to students to develop inter-disciplinary skills.

- **Who should participate?**

Admission is open for all stream students as per course its related to its specification.

#### Registration and Admission

Total intake capacity for this course is variable as per students requirement. Admission is given on basis of first come first serve. College appointed Coordinator for this course. Student can contact these coordinator in person or by phone for details.

#### Venue

S.T.Co-op Edu. Society Sr. Sci. College  
Shahada

#### Duration

Duration of course is more than 30 hours. it include some theory and some practical lectures .

#### Course Certification

Those students who complete this course successfully, college will offer certificate to some courses.



S.T.Co-Op Education Society Senior Science  
College ,Shahada  
Dist:Nandurbar

#### Add On Course



Principal

Dr.S.D.Patil [M.sc, PhD, SET ]

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**PRINCIPAL**  
S.T.Co.op Edu. Society's Ltd.  
Science Sr College  
Shahada, Dist.Nandurbar

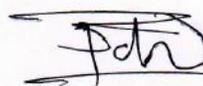


**S.T. Co-Op Education Society's Ltd, Science Sr. College, Shahada**

**Add On Course  
2018-19**

| Srno | Addon Course Name  | Dept             | Coordinator Name                         | Contact Number |
|------|--|------------------|--|----------------|
| 1    | Agriculture  | Botany           | Asst.Prof. Suvarna Suresh Patil          | 9970520105     |
| 2    | Identification of Adultration in food Material               | Botany           | Asst. Prof. Nishiganadha Vasant Vasaikar | 7249133772     |
| 3    | Instrument Handling  | Electronics      | Asst. Prof. Nayana Kulkarni              | 8857015567     |
| 4    | Designing and construction of electronic circuits            | Electronics      | Asst. Prof. Anil R. Jagdale              | 7709320695     |
| 5    | Soldering technique and PCB making                           | Electronics      | Asst. Prof. Anil R. Jagdale              | 7709320695     |
| 6    | Basics of Computer and web design                            | Computer Science | Asst. Prof. Bhagyashri P. Bhangale       | 8668420459     |
| 7    | Web design   | Computer Science | Asst. Prof. Bhagyashri P. Bhangale       | 8668420459     |
| 8    | MS Office  | Computer Science | Asst. Prof. Bhagyashri P. Bhangale       | 8668420459     |
| 9    | Photoshop  | Computer Science | Asst. Prof. Bhagyashri P. Bhangale       | 8668420459     |
| 10   | Computer hardware and Networking                             | Computer Science | Asst. Prof. S. M. Patil                  | 9503132015     |
| 11   | Apiculture   | Zoology          | Dr. A. K. Mahajan                        | 9421570764     |
| 12   | Bird Diversity   | Zoology          | Dr. A. K. Mahajan                        | 9421570764     |
| 13   | Snake handling and awareness                                 | Zoology          | Dr. Deepali M. Gawande                   | 9403986833     |
| 14   | Statistical tools  | Mathematics      | Asst. Prof. P. N. Chaudhari              | 8275007535     |
| 15   | Lab Safety   | Biotechnology    | Asst. Prof. R. J. Valvi                  | 8308082364     |
| 16   | Isolation and identification of more form of Soil/Milk/Water | Biotechnology    | Asst. Prof. B. A. Khedkar                | 8698711180     |

|    |  |               |                              |            |
|----|--|---------------|------------------------------|------------|
| 17 | Physico-Chemical<br>Parameter of<br>Ground water | Biotechnology | Asst. Prof. R. J. Valvi      | 8308082364 |
| 18 | Blood Group<br>detection                         | Biotechnology | Asst. Prof. B. A. Khedkar    | 8698711180 |
| 19 | Soil sampling and<br>analysis                    | Biotechnology | Asst. Prof. S. R. Maulapatel | 9834793607 |
| 20 | Water, Soil<br>Analysis                          | Biotechnology | Dr. S. A. Marathe            | 8484979796 |
| 21 | Synthesis of<br>Materials                        | Chemistry     | Asst. Prof. Lalita A. Patil  | 9359249321 |
| 22 | Laboratory<br>Science                            | Chemistry     | Asst. Prof. Irfan R. Pathan  | 8668401912 |
| 23 | Labrotary Safety                                 | Chemistry     | Asst. Prof. Irfan R. Pathan  | 8668401912 |




**PRINCIPAL**  
S.T.Co.op.Edu.Society's Ltd.  
Science Sr.College  
Shahada, Dist. Nandurbar

**College Name:** S.T. Co-Op Education Society's Ltd, Science Sr. College, Shahada

**Year:** 2018-2019

**Course Name:** Agriculture

**Co-ordinator Name:** Asst. Prof. Suvarna Suresh Patil

**Department Name:** Botany

**Intake Capacity:** 20

**Admitted Student:** 17

**Duration of Course:** 29 Days

**Syllabus:** Theory 12 Lectures and Practical 18.

1) Introduction to agriculture 2) Introduction to apiculture 3) Bee Keeping equipments and Bee products 4) Bee and Agriculture 5) Bee Disease

**Outcome:** In shahada tehsil promegent cultivation is extensively done. Flowering is the important fact to grow fruit so that honey bee pollination can induce more and more fruit. Therefore agriculture study is important to study so that student could get practical knowledge how to grow and maintain honey bee.

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**College Name:** S.T. Co-Op Education Society's Ltd, Science Sr. College, Shahada

**Year:** 2018-2019

**Course Name:** Identification of Adultration in food Material.

**Co-ordinator Name:** Asst. Prof. Nishiganadha Vasant Vasaikar

**Department Name:** Botany

**Intake Capacity:** 20

**Admitted Student:** 17

**Duration of Course:** 30 Days

**Syllabus:** Theory 12 Lectures and Practical 18.

1) Introduction 2) Food Adultration 3) Food Safety 4) Consume Protection

**Outcome:** It can be concluded from finding of the study that students was low and it is be found that after implementing educational programme was very effective to increase the awareness regarding food adultration.

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**College Name:** S.T. Co-Op Education Society's Ltd, Science Sr. College, Shahada

**Year:** 2018-2019

**Course Name:** Instrument Handling

**Co-ordinator Name:** Asst. Prof. Nayana Kulkarni

**Asst. Co-ordinator Name:** Asst. Prof. Anil R. Jagdale

**Department Name:** Electronics

**Intake Capacity:** 20

**Admitted Student:** 16

**Duration of Course:** 30 Days

**Syllabus:** Theory 14 Lectures and Practical 16.

- 1) Brief revision of different physical quantities in electronics
- 2) Difference between AC and DC
- 3) Constructional Details and principle of working

**Outcome:** While studying electronics there are many instruments which will be handled by students, although students were not much aware about them. Also there is instrument like DMM which may be show its applicably in daily life and as student of electronics student may aware use of DMM.

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**College Name:** S.T. Co-Op Education Society's Ltd, Science Sr. College, Shahada

**Year:** 2018-2019

**Course Name:** Designing and construction of electronic circuits

**Co-ordinator Name:** Asst. Prof. Anil R. Jagdale

**Asst. Co-ordinator Name:** Asst. Prof. Bhushan P. Nikam

**Department Name:** Electronics

**Intake Capacity:** 20

**Admitted Student:** 14

**Duration of Course:** 30 Days

**Syllabus:** Theory 14 Lectures and Practical 16.

- 1) Introduction to resister, capacitor, transformer etc.
- 2) Assembling of simple circuits
- 3) Testing and troubleshooting of circuits

**Outcome:** This course aimed to enhance the curiosity about the electronics and aware students about use of concepts studied in class room in real life. After completion of the course students tried to build simple electronic circuits that will be useful in daily life like water level indicator.

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**College Name:** S.T. Co-Op Education Society's Ltd, Science Sr. College, Shahada

**Year:** 2018-2019

**Course Name:** Soldering technique and PCB making

**Co-ordinator Name:** Asst. Prof. Anil R. Jagdale

**Asst. Co-ordinator Name:** Asst. Prof. Ulhas S. Sonwane

**Department Name:** Electronics

**Intake Capacity:** 20

**Admitted Student:** 15

**Duration of Course:** 30 Days

**Syllabus:** Theory 15 Lectures and Practical 15.

1) PCB 2) Types of PCB 3) What is soldering 4) Basic metals 5) Soldering mechanism 6) De soldering with warm and soldering paste 7) Lead free soldering 8) Types of soldering bits

**Outcome:** This course will be useful in enhancing the PCB making and soldering skill of student.

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**College Name:** S.T. Co-Op Education Society's Ltd, Science Sr. College, Shahada

**Year:** 2018-2019

**Course Name:** Basics of Computer and web design

**Co-ordinator Name:** Asst. Prof. Bhagyashri P. Bhangale

**Asst. Co-ordinator Name:** Asst. Prof. Mayuri V. Patil

**Department Name:** Computer Science

**Intake Capacity:** 20

**Admitted Student:** 13

**Duration of Course:** 30 Days

**Syllabus:** Theory 16 Lectures and Practical 14.

1) Basic of Computer 2) Memory: RAM, ROM, PROM etc. 3) Input devices, output devices and printers 4) Computer network

**Outcome:** student will able to know computers part, access internet, email sending, hardware components etc. Student will know the operating system.

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**College Name:** S.T. Co-Op Education Society's Ltd, Science Sr. College, Shahada

**Year:** 2018-2019

**Course Name:** Web design

**Co-ordinator Name:** Asst. Prof. Bhagyashri P. Bhangale

**Asst. Co-ordinator Name:** Asst. Prof. Mayuri V. Patil

**Department Name:** Computer Science

**Intake Capacity:** 20

**Admitted Student:** 14

**Duration of Course:** 30 Days

**Syllabus:** Theory 16 Lectures and Practical 14.

1) HTML tags 2) Image tags and table creation 3) Frames 4) Style sheets

**Outcome:** Student will implement interactive web pages using HTML. Student can design web pages.

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**College Name:** S.T. Co-Op Education Society's Ltd, Science Sr. College, Shahada

**Year:** 2018-2019

**Course Name:** MS Office

**Co-ordinator Name:** Asst. Prof. Bhagyshri P. Bhangale

**Asst. Co-ordinator Name:** Asst. Prof. Mayuri V. Patil

**Department Name:** Computer Science

**Intake Capacity:** 20

**Admitted Student:** 14

**Duration of Course:** 30 Days

**Syllabus:** Theory 18 Lectures and Practical 12.

1) MS Word 2) MS Excel 3) MS Power point

**Outcome:** Students will create documents that demonstrate proficiency in the use of word processing, spreadsheet and presentation applications. Student will create, edit, save and print documents to include documents with list and tables.

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**College Name:** S.T. Co-Op Education Society's Ltd, Science Sr. College, Shahada

**Year:** 2018-2019

**Course Name:** Photoshop

**Co-ordinator Name:** Asst. Prof. Bhagyshri P. Bhangale

**Asst. Co-ordinator Name:** Asst. Prof. Mayuri V. Patil

**Department Name:** Computer Science

**Intake Capacity:** 20

**Admitted Student:** 15

**Duration of Course:** 30 Days

**Syllabus:** Theory 12 Lectures and Practical 18.

1) Photoshop tools 2) Brushes, creating new images 3) Applying Filters

**Outcome:** Students will familiar to work with photoshop workspace. Students will transform images. Students will editing images.

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**College Name:** S.T. Co-Op Education Society's Ltd, Science Sr. College, Shahada

**Year:** 2018-2019

**Course Name:** Computer hardware and Networking

**Co-ordinator Name:** Asst. Prof. S. M. Patil

**Asst. Co-ordinator Name:** Asst. Prof. K. C. Patil

**Department Name:** Computer Science

**Intake Capacity:** 22

**Admitted Student:** 25

**Duration of Course:** 30 Days

**Syllabus:** Theory 19 Lectures and Practical 16.

1) Introduction about computer 2) Basic networking concepts 3) Introduction to various networking devices 4) Inside the PC 5) Network basic and configuration 6) Introduction to servers and network security

**Outcome:** Students know all the basic of hardware of computer. Student knows the structure of IC's. Student knows the concept of broadband, router, modem etc.

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**College Name:** S.T. Co-Op Education Society's Ltd, Science Sr. College, Shahada

**Year:** 2018-2019

**Course Name:** Apiculture

**Co-ordinator Name:** Dr. A. K. Mahajan

**Asst. Co-ordinator Name:** Asst. Prof.

**Department Name:** Zoology

**Intake Capacity:** 20

**Admitted Student:** 16

**Duration of Course:** 30 Days

**Syllabus:** Theory 12 Lectures and Practical 18.

1) Introduction to apiculture and systematic position of bee species 2) Morphology and anatomy of bee 3) Colony organization and life cycle 4) Bee keeping equipments and apiary management

**Outcome:** Students will identify different species of honey bees. Students will get the knowledge of morphology and anatomy of bees. Students will know the cast of bees.

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**College Name:** S.T. Co-Op Education Society's Ltd, Science Sr. College, Shahada

**Year:** 2018-2019

**Course Name:** Bird Diversity

**Co-ordinator Name:** Dr. A. K. Mahajan

**Asst. Co-ordinator Name:** Asst. Prof.

**Department Name:** Zoology

**Intake Capacity:** 20

**Admitted Student:** 16

**Duration of Course:** 30 Days

**Syllabus:** Theory 12 Lectures and Practical 18.

1) Introduction 2) Avian diversity and classification 3) Feathers and plumages 4) Identification key of birds 5) Nesting of birds 6) Bird conversation

**Outcome:** Students will be exposed to the diversity of bird life on earth. Students will get knowledge of behavior of birds. They will identify the local birds.

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**College Name:** S.T. Co-Op Education Society's Ltd, Science Sr. College, Shahada

**Year:** 2018-2019

**Course Name:** Snake handling and awareness

**Co-ordinator Name:** Dr. Deepali M. Gawande

**Asst. Co-ordinator Name:** Asst. Prof.

**Department Name:** Zoology

**Intake Capacity:** 20

**Admitted Student:** 13

**Duration of Course:** 30 Days

**Syllabus:** Theory 12 Lectures and Practical 18.

1) Study of habitat snakes 2) Morphology of snakes 3) Poisonous and non poisonous snakes 4) Snake bite and its mechanism 5) effect of snake venom on human

**Outcome:** Student will learn the habit and habitat snake. They will learn about the tools used to handle the snake. Student will identify the type and morphology of snake.

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**College Name:** S.T. Co-Op Education Society's Ltd, Science Sr. College, Shahada

**Year:** 2018-2019

**Course Name:** Statistical tools

**Co-ordinator Name:** Asst. Prof. P. N. Chaudhari

**Asst. Co-ordinator Name:** Asst. Prof. Y. D. Patil

**Department Name:** Mathematics

**Intake Capacity:** 20

**Admitted Student:** 20

**Duration of Course:** 30 Days

**Syllabus:** Theory 14 Lectures and Practical 16.

- 1) Introduction to data
- 2) Examining numerical data
- 3) Examining categorical data
- 4) Probability
- 5) Distributions of random variables

**Outcome:** Student known all basic statistical data, mostly students understood or identify the variables, data collection, numerical methods and also related terms.

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**College Name:** S.T. Co-Op Education Society's Ltd, Science Sr. College, Shahada

**Year:** 2018-2019

**Course Name:** Lab Safety

**Co-ordinator Name:** Asst. Prof. R. J. Valvi

**Asst. Co-ordinator Name:** Asst. Prof. A. A. Khedkar

**Department Name:** Biotechnology

**Intake Capacity:** 20

**Admitted Student:** 09

**Duration of Course:** 30 Days

**Syllabus:** Theory 12 Lectures and Practical 18.

1) Introduction To Lab 2) Lab Safety 3) Personal Protection and preservation of food 4) Types of Hazard 5) Spoilage and waste disposal 6) Toxic Material 7) Care and handling of glassware 8) handling of equipment

**Outcome:** Students introduced to lab. Students are identify and isolate micro organism and handle toxic material

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**College Name:** S.T. Co-Op Education Society's Ltd, Science Sr. College, Shahada

**Year:** 2018-2019

**Course Name:** Isolation and identification of more form of Soil/Milk/Water

**Co-ordinator Name:** Asst. Prof. B. A. Khedkar

**Asst. Co-ordinator Name:** Asst. Prof. A. A. Khedkar

**Department Name:** Biotechnology

**Intake Capacity:** 20

**Admitted Student:** 14

**Duration of Course:** 30 Days

**Syllabus:** Theory 12 Lectures and Practical 18.

1) Basic Technique of microbiology 2) Serial Dilution method 3) Gram positive and gram negative microorganism 4) Study of virus 5) handling instruments 6) Principal of Laminar air flow 7) Staining technique

**Outcome:** Students can be isolated the different types of microbes and identify them. Students also study all isolation technique of micro organism from soil/water/milk.

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**College Name:** S.T. Co-Op Education Society's Ltd, Science Sr. College, Shahada

**Year:** 2018-2019

**Course Name:** Physico-Chemical Parameter of Ground water

**Co-ordinator Name:** Asst. Prof. R. J. Valvi

**Asst. Co-ordinator Name:** Asst. Prof. S. R. Patil

**Department Name:** Biotechnology

**Intake Capacity:** 20

**Admitted Student:** 10

**Duration of Course:** 30 Days

**Syllabus:** Theory 12 Lectures and Practical 18.

1) Basic Concept of H<sub>2</sub>O 2) Improvement of water quality 3) Physiochemical parameter 4) Water Sampling 5) COD and BOD 6) Significance of water

**Outcome:** Improve water quality. Study about heavy metals of water

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**College Name:** S.T. Co-Op Education Society's Ltd, Science Sr. College, Shahada

**Year:** 2018-2019

**Course Name:** Blood Group detection

**Co-ordinator Name:** Asst. Prof. B. A. Khedkar

**Asst. Co-ordinator Name:** Asst. Prof. A. A. Khedkar

**Department Name:** Biotechnology

**Intake Capacity:** 20

**Admitted Student:** 15

**Duration of Course:** 30 Days

**Syllabus:** Theory 12 Lectures and Practical 18.

1) Introduction of blood 2) Definition of blood 3) Types of blood cells 4) Blood grouping 5) Antigen antibody interaction 6) Donor and acceptor of blood 7) Ph of blood 8) application of blood cells

**Outcome:** To know whole knowledge about blood and blood factors. Detection of prothrombin. To know donar and acceptor of blood group

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**College Name:** S.T. Co-Op Education Society's Ltd, Science Sr. College, Shahada

**Year:** 2018-2019

**Course Name:** Soil sampling and analysis

**Co-ordinator Name:** Asst. Prof. S. R. Patil

**Asst. Co-ordinator Name:** Asst. Prof. A. A. Khedkar

**Department Name:** Biotechnology

**Intake Capacity:** 20

**Admitted Student:** 16

**Duration of Course:** 30 Days

**Syllabus:** Theory 12 Lectures and Practical 18.

1) Introduction of soil sampling and analysis 2) AAS 3) Flame photometer 4) UV-Visible spectrophotometer 5) PH meter 6) Conductivity meter

**Outcome:** Students are able to sample, process and analysis the soil for some important of micronutrient. To analysis micro and macro nutrients.

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**College Name:** S.T. Co-Op Education Society's Ltd, Science Sr. College, Shahada

**Year:** 2018-2019

**Course Name:** Water, Soil Analysis

**Co-ordinator Name:** Dr. S. A. Marathe

**Asst. Co-ordinator Name:** Asst. Prof. B. A. Khedkar

**Department Name:** Biotechnology

**Intake Capacity:** 20

**Admitted Student:** 15

**Duration of Course:** 30 Days

**Syllabus:** Theory 12 Lectures and Practical 18.

1) Concept of water and soil 2) Types of water and soil 3) Water treatment 4) Domestic water treatment

**Outcome:** To study physical and chemical parameters of water, soil and to control water, soil pollution. To study domestic waste water treatment.

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**College Name:** S.T. Co-Op Education Society's Ltd, Science Sr. College, Shahada

**Year:** 2018-2019

**Course Name:** Synthesis of Materials

**Co-ordinator Name:** Asst. Prof. Lalita A. Patil

**Asst. Co-ordinator Name:** Asst. Prof.

**Department Name:** Chemistry

**Intake Capacity:** 20

**Admitted Student:** 14

**Duration of Course:** 30 Days

**Syllabus:** Theory 22 Lectures and Practical 8.

1) Introduction to material Synthesis 2) Types of compounds 3) Application of Material synthesis.

**Outcome:** Students will understand the different materials and different routes for their synthesis in lab.

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**College Name:** S.T. Co-Op Education Society's Ltd, Science Sr. College, Shahada

**Year:** 2018-2019

**Course Name:** Laboratory Science

**Co-ordinator Name:** Asst. Prof. Sachin P. Patil

**Asst. Co-ordinator Name:** Asst. Prof.

**Department Name:** Chemistry

**Intake Capacity:** 20

**Admitted Student:** 15

**Duration of Course:** 30 Days

**Syllabus:** Theory 22 Lectures and Practical 8.

1) Introduction to laboratory science 2) Lab safety 3) Preparation chemistry

**Outcome:** They become skillful about the different techniques in lab. Able to synthesize compounds using green chemistry.

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**College Name:** S.T. Co-Op Education Society's Ltd, Science Sr. College, Shahada

**Year:** 2018-2019

**Course Name:** Laboratory Safety

**Co-ordinator Name:** Asst. Prof. Irfan R. Pathan

**Asst. Co-ordinator Name:** Asst. Prof.

**Department Name:** Chemistry

**Intake Capacity:** 20

**Admitted Student:** 17

**Duration of Course:** 30 Days

**Syllabus:** Theory 22 Lectures and Practical 8.

1) General introduction to laboratory 2) Lab safety 3) How to handle chemicals 4) How to handle toxic chemicals

**Outcome:** Students are able to understand the importance of lab safety. They are able to handle the instruments and chemicals carefully.

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