## Nanded Education Society's

# Science College, Nanded

Tel: 02462-250 465, 251 648

www.sciencecollegenanded.org

(Affiliated to Swami Ramanand Teerth Marathwada University, Nanded) (Reaccredited with "A" grade by NAAC with (CGPA 3.38) 3rd Cycle, CPE Status, DST-FIST, Best College Award (SRTMUN)







Annual Quality Assurance Report 2022-23

# Criteria- 2

# **Teaching-Learning and Evaluation**

2.3.1 - Student centric methods, such as experiential learning, participative learning and problem solving methodologies are used for enhancing learning experiences

# Additional Information: Criteria: 2.3.1:

Activities organized for the students including workshops, capacity building activities, exhibitions, Competitions, etc.

| Activities organized for the students including workshops, capacity building activities, exhibitions, Competitions, etc. | Total |
|--|-------|
| All the departments  | 08    |

Qualitative Data

| Sr.<br>No. | Name of the activity  | Date          | Details  | No. of students |
|------------|---|---------------|--|-----------------|
| Depa       | <br>rtment of Che mistr   | y and Agro.   | Learning Chem. and Fertilizers, Analy. Chemistry   |                 |
| 1.         | One Day Guest Lecture on topic "Reactions of Metal Complexes" and "Pericyclic Reactions"  | 26/03/2023    | One Day Guest Lecture on topic "Reactions of Metal Complexes" and "Pcricyclic Reactions" by Dr. S. B. Zangade, Assistant Professor, M. P. College, Palam, Dist. Parabhani, organized on D. 26/03/2023.   | 39              |
| Depa       | rtment of Botany, N   | Micro biology | & Biotechnology  |                 |
| 1.         | 'One day Workshop on Shewanti Cultivation and Conservation'                               | 22/08/2022    | One day workshop on "Shevanti Cultivation and Conservation" was organized on 22nd August, 2022 at N. E. S. Science college, Nanded in collaboration with Amravati Garden Club, Amravati and Shri Shivaji Horticulture College, Amravati as a part of MoU signed.   | 42              |
| 2.         | 'National workshop on "Medic inal Plants: Authentication, Cultivation & Future prospects' | 17/02/2023    | 'National workshop on "Medicinal Plants: Authentication, Cultivation & Future prospects' was organized on 17th February, 2023 at N. E. S. Science college, Nanded in collaboration with WARSA: Ethnic Knowledge Heritage Society, Anjangaon Surji, Dist. Amravati as a part of MoU signed.   | 54              |
| Depa       | rtment of Zoology   | and Fishery S | Science  | •               |
| 1.         | Science<br>Exhibition   | 28/02/2023    | Science Exhibition organized on the special occasion was National Science Day on D. 25/02/2023.  | 63              |
| Depa       | rtment of Physics a   | nd Electroni  | cs   |                 |
| 1.         | Guest Lecture on "Physics Opportunities"  | 22/08/2022    | The guest lecture on "Physics Opportunities" had been conducted on August 22, 2022. The speaker was Dr. Vijaykiran Narwade, a postdoctoral researcher from RUSA- Centre for Advanced Sensor Technology, Dr. Babasaheb Ambedkar Marathwada University, Aurangabad. During the talk Dr. Narwade specifies range of career opportunities in Physics and applied branches. | 30              |

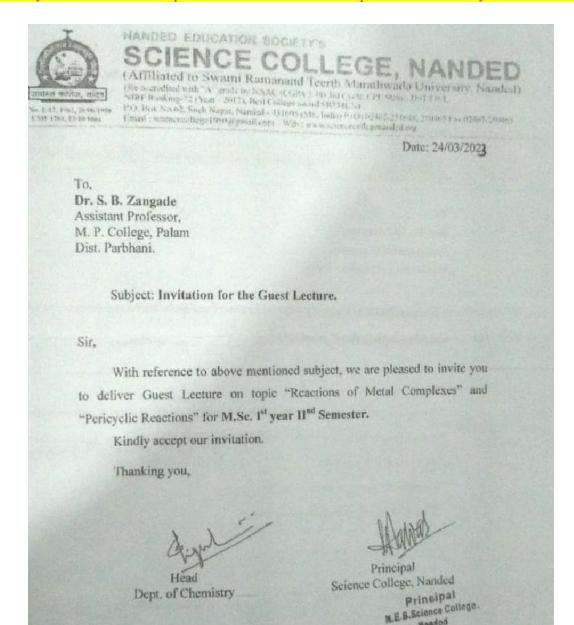
| De | partment of Mathema   | tics                      |   |    |
|----|---|---------------------------|---|----|
| 1. | One week National Workshop on "Preparation of NET/SET Examinations in Mathematics"                            | 06/02/2023-<br>11/02/2023 | One week National Workshop on "Preparation of NET/SET Examinations in Mathematics", organized by Department of Mathematics and Applied Mathematics, N.E.S. Science College Nanded, during 06-11 Feb, 2023.  | 51 |
| 2. | Guest Lecture on "Applications of MATLAB Software"  | 05/04/2023                | Guest Lecture on "Applications of MATLAB Software" organized by Department of Mathematics and Applied Mathematics, N.E.S. Science College, Nanded on D. 05/04/2023. The resource person of the programme was Dr. Yogesh Muley, Assi. Professor, Shivaji College, Devni, Dist., Latur                        | 46 |
| De | partment of Statistics  | and Comput                | er Science  |    |
| 1. | Two Days Workshop<br>on "Personality<br>Development<br>Programme and Life<br>Skills Orientation<br>Programme" | 19/09/2022                | Two Days Workshop on "Personality Development Programme and Life Skills Orientation Programme" organized by Department of Computer Science on D. 19/09/2022. The resource person of this capacity building workshop was Mr. Giriraj Jambkar, Subject Matter Expert / Trainer, Out-of- The Box, Mumbai, (MH) | 80 |
| 2. | A State Level Case<br>Study and 'C/C++'<br>Programming<br>Competition   | 02/05/2023                | TechnoCase 2023- "A State Level Case Study and 'C/C++' Programming Competition" held at ATSS's Institute of Industrial and Computer Management and Research (IICMR-MCA), Nigdi, Pune. This Code Battle Competition organized on D. 2 <sup>nd</sup> May, 2023.   | 12 |
| De | partment of Geology   |                           |   |    |
| 1. | Educational<br>Informative Study<br>Tour  | 03/02/2023                | Department of Geology has arranged Study Tour to Sahastrakund and Kinwat region on dated 03/02/2023. All geology students from 1st year, 2nd year and 3rd year were benefited by geological exposures in the region.  | 19 |
| De | partment of Language  | S                         |   |    |
| 1. | Essay Writing, Poetry Writing   | 04/09/2022-<br>12/09/2022 | Organization of essay writing and poetry writing competition by Hindi Department from 4th September to 12th September 2022 on the occasion of Hindi Diwas   | 31 |
| 2. | One Day Workshop on<br>"Ethical Values"   | 08/08/2022                | One Day Workshop on "Ethical Values" organized by department of Languages on D. 08/08/2022. The resource person of the programme was Anand Purusharthi, Preacher Hoshangabad, Madhya Pradesh  | 64 |



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### **Photographs**

One Day Guest Lecture on topic "Reactions of Metal Complexes" and "Pericyclic Reactions"





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'One day Workshop on Shewanti Cultivation and Conservation'









'National workshop on

"Medicinal Plants: Authentication, Cultivation & Future prospects'







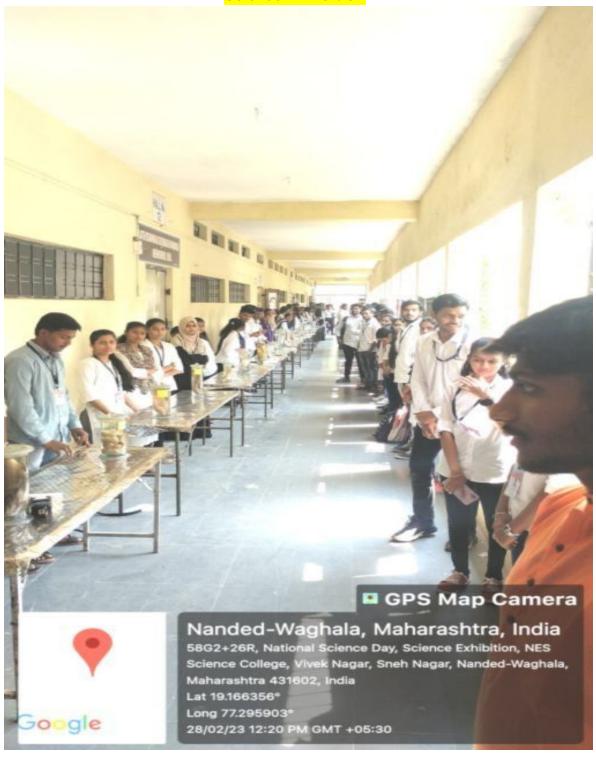
Inauguration of Science Exhibition and Book Publication Ceremony







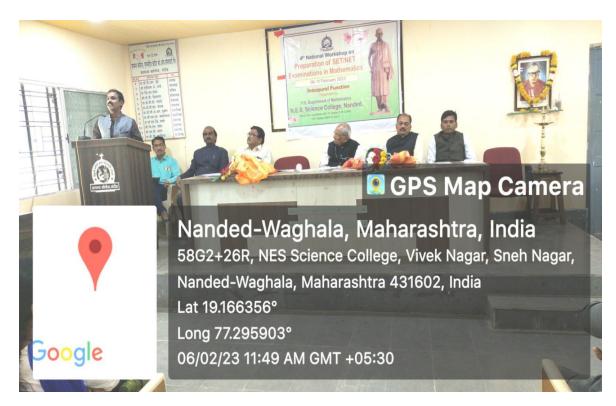
### Science Exhibition







### One week National Workshop on "Preparation of NET/SET Examinations in Mathematics"









# Guest Lecture on "Applications of MATLAB Software"









# Two Days Workshop on "Personality Development Programme and Life Skills Orientation Programme"









### A State Level Case Study and 'C/C++' Programming Competition

#### Audyogik Tantra Shikshan Sanstha's Institute of Industrial & Computer Management & Research Nigdi, Pune 411044



Approved by AICTE, New Delhi, Affiliated to SPPU, Reaccredited by NAAC, "Best ICT B-School"



### TechnoCase 2023

"A State Level Case Study & 'C/C++' Programming Competition"

# Certificate

This is to certify that Mr. /Ms Subodh Paikrao of N. E. S. Science College, Nanded

has participated in TechnoCase 2023 'C/C++'Programming Competition held at ATSS's Institute of Industrial & Computer Management & Research(IICMR-MCA), Nigdi on  $2^{nd}$  May 2023.











Audyogik Tantra Shikshan Sanstha's Institute of Industrial & Computer Management & Research

Nigdi, Pune 411044



Approved by AICTE, New Delhi, Affiliated to SPPU, Reaccredited by NAAC, "Best ICT B-School"



#### Student Branch

# TechnoCase 2023

"A State Level Case Study & 'C/C++' Programming Competition"

# Certificate

This is to certify that Mr./Ms Maroti vishvanath kokane of N. E. S. Science College, Nanded

has participated in TechnoCase 2023 'C/C++'Programming Competition held at ATSS's Institute of Industrial & Computer Management & Research(IICMR-MCA), Nigdi on 2<sup>nd</sup> May 2023.







Ms. Renu Mathew







# **Educational Informative Study Tour**



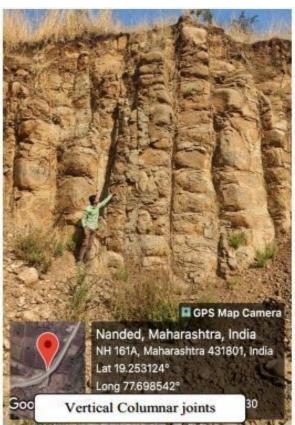


Group photo at Sahastrakund waterfal along with faculty Dr. Sumeet Chavhan, Mr. Harshal Dakore, and Kartik Patki, Date: 3/2/2023













# **Computer-Assisted Information**





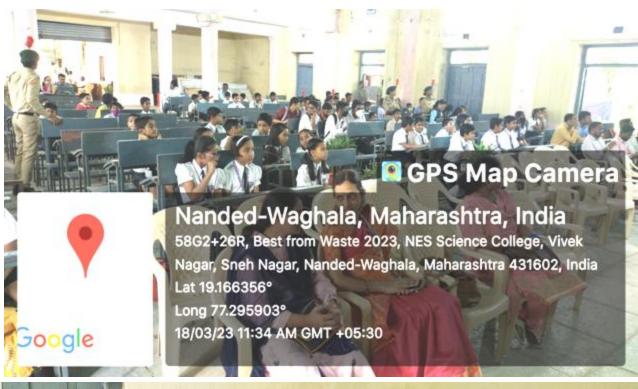
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# Lab to Field



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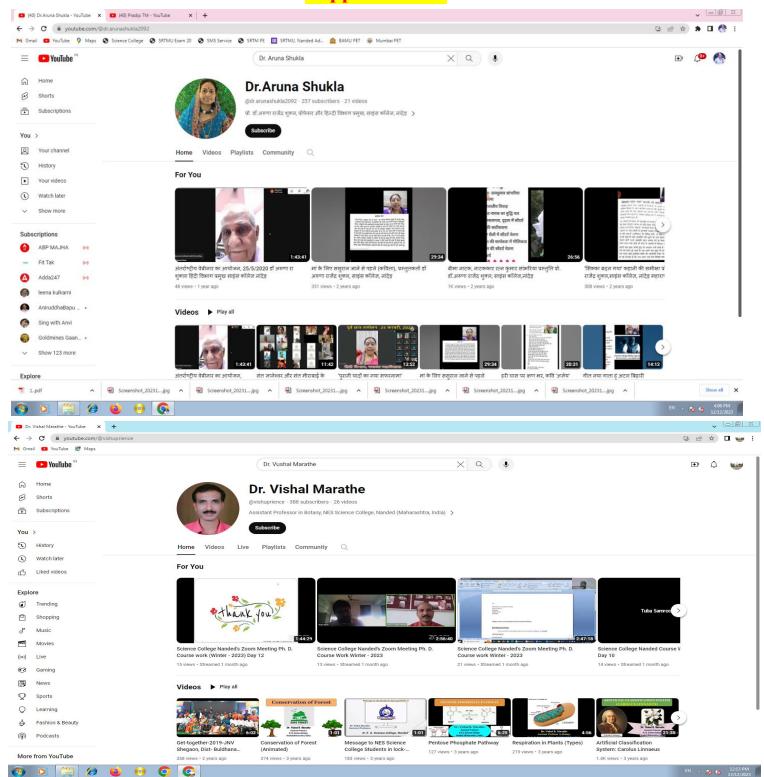
### **Best from Waste**



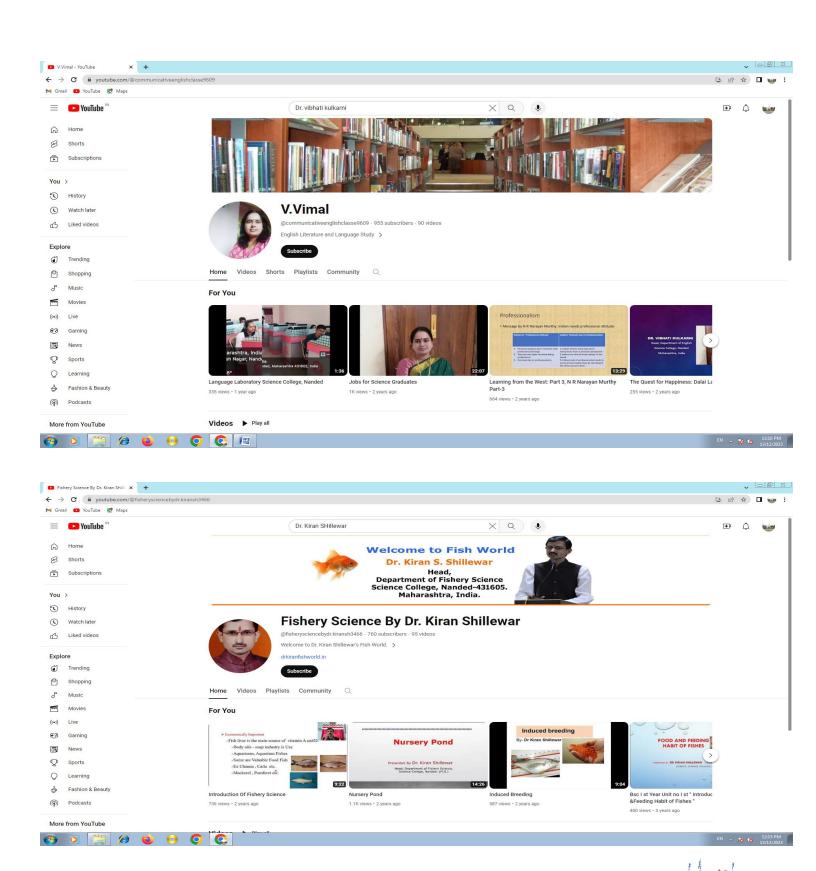


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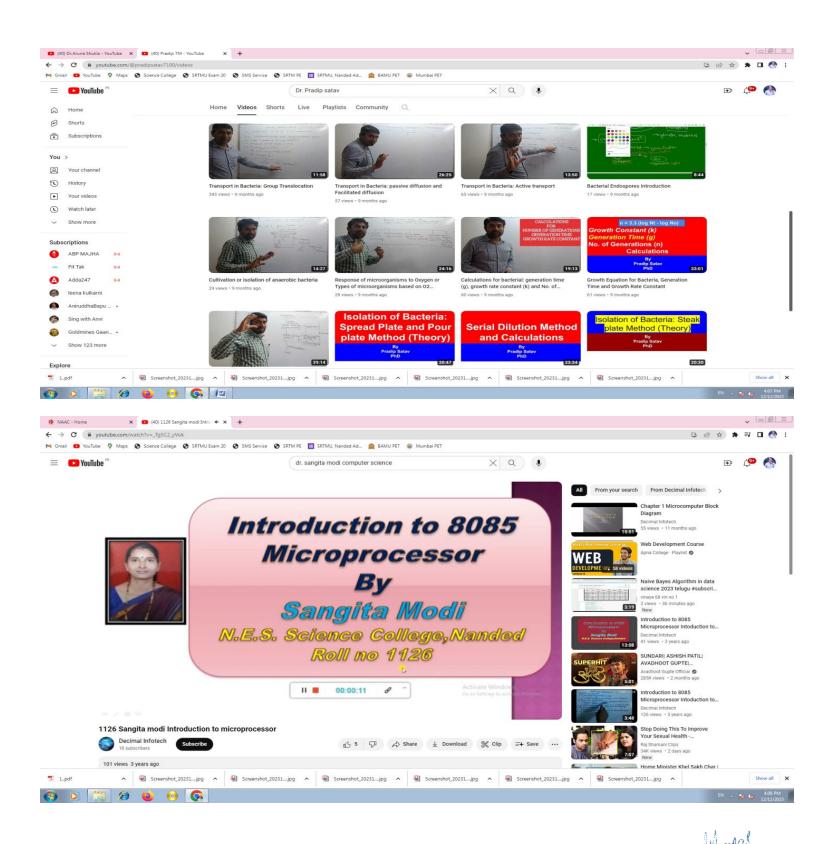
### Flipped Classes







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## Orientation Programmes





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# **Learning by doing**



# Students using E-resources in Library



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# **Debate Competitions**





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# Skill-based Skill Enhancement Course (SEC)

### Analytical Chemistry

### B. Sc. Third Year (Semester V & VI)

#### Total credits semester V and VI: 12

| Sem. | Paper No.  | Name of the<br>Course  | Instruction<br>Hrs/ week | Total<br>period        | Internal<br>Evaluation | Marks of<br>Semester | Total<br>Marks | Credit   |
|------|--|--|--------------------------|------------------------|------------------------|----------------------|----------------|----------|
| 8    | DSEAC -V<br>(Section A)                                      | Modern Techniques of<br>Chemical Analysis<br>-l (P-XII)                                      | 03                       | 45                     | 10                     | 40                   | 50             | 02       |
|      | DECCAC- V<br>(Section B)                                     | Applied Analytical Chemistry –I (P-XIII) OR Fundamental concepts of Analytical Chemistry (P- | 03                       | 45<br>45               | 10                     | 40                   | 50             | 62       |
| v    | DSEAC P -IV<br>(DECCAC V<br>& VI) (Section A)                | XIII) (Elective)  Practical's based on P- XII & P-XIV (P-XVI)                                | 04                       | Practicals<br>08<br>08 | 05<br>05               | 20<br>20             | 25<br>25       | 01<br>01 |
|      | & VI) (Section A)  | Practical's based on P- XIII<br>(Elective)   | 04                       | Practicals 08          | 05                     | 20                   | 25             | 35.      |
|      | DSEAC -III SEC<br>AC III                                     | SEC AC- III Pharmaceutical Chemistry   | 02 + 01 =<br>03          | 45                     | 25                     | 25                   | 50             | (02)*    |
|      | DSEAC -VI  | Modem Techniques<br>of Chemical<br>Analysis-II (P-XIV)<br>OR                                 | 03                       | 45                     | 10                     | 40                   | 50             | 02       |
| VI   | (Section A)  | Physical Methods in<br>Analytical Chemistry<br>(P-XIV) (Elective)                            | 03                       | 45                     | 10                     | 40                   | 50             |          |
|      | DSEAC -VI<br>(Section b)                                     | Applied Analytical<br>Chemistry –II (P-XV)   | 03                       | 45                     | 10                     | 40                   | 50             | 02       |
|      | DSEAC P -V<br>(Section B)<br>(DSEAC -V & X<br>VI (section B) | Practical's based on P- III &<br>P-XV (P-XVII)   | 04                       | Practicals<br>08<br>08 | 05<br>05               | 20<br>20             | 25<br>25       | 01<br>01 |
|      |  | Practical's based on P-<br>XIII & P-XV (P-XVII)<br>(Elective)                                | 04                       | 08                     | 05                     | 20                   | 25             | 5        |
|      | DSEAC -IV SEC<br>AC - IV                                     | SEC AC- IV<br>PESTICIDE<br>CHEMISTRY   | 02 + 01 =<br>03          | 45                     | 25                     | 25                   | 50             | (02)*    |

DSEAC: Discipline Subject Elective in Analytical Chemistry, DSEAC P: Discipline Subject Elective in Analytical Chemistry Practical, ESE: End of Semester Examination,

CA: Continuous Assessment, SECAC: Skill Enhancement Course in Analytical Chemistry. Distribution of Credits: 80% of the total Marks for ESE and 20% for CA.

 CA of Marks 10: 10 Marks for test. - CA of 25 Marks: 15 Marks for Seminar & 10 Marks for test. Suggestions: The end examination of Skill Enhancement Course should be conducted on the separate day by

> PRINCIPAL Science College, Mendie

#### Swami Ramanand Teerth Marathwada University, Nanded Choice Base Credit System (CBCS) Course Structure Faculty of Science and Technology

#### B.Sc. Third Year Fifth Semester Biotechnology Syllabus Effective from June 2021

| Semester     |                              |  |         | Type of<br>Course | Credit    | Marks |     |       |
|--------------|------------------------------|--|---------|-------------------|-----------|-------|-----|-------|
|              | Code                         | Title of the Course                          | Hr/Week |                   |           | ESA   | CIA | Total |
|              |                              | Environmental Studies                        | 4       |                   |           |       | 9 8 |       |
|              | CCBT-1E                      | r-DNA Technology                             | 4       | CC                | 4         | 75    | 25  | 100   |
|              | CCBT-2E                      | Developmental Biology                        | 4       | CC                | 4         | 75    | 25  | 100   |
|              | CCBT-3E                      | Bioprocess Technology                        | 4       | CC                | 4         | 75    | 25  | 100   |
| v            | DSEBT-4E                     | Advanced Bioinformatics                      | 4       | DSE               | 4         | 75    | 25  | 100   |
|              | (Select any one)             | II) Medical Biotechnology                    |         |                   |           |       |     |       |
|              | Lab Course IX                | Practicals based on CCBT 1E+<br>2E           | 4       | PR                | 4         | 100   |     | 100   |
|              | Lab Course X                 | Practicals based on CCBT3E+<br>DSEBT4E       | 4       | PR                | 4         | 100   |     | 100   |
|              |                              |  |         |                   | 24        | 500   | 100 | 600   |
| 92701 (1780) | Code                         | AND STREET AND STREET                        | Hr/Week | Type of<br>Course | CONTRACTO | Marks |     |       |
| Semester     |                              | Title of the Course                          |         |                   | Credit    | ESA   | CIA | Total |
|              | CCBT-1F                      | Pharmaceutical Biotechnology                 | 4       | CC                | 4         | 75    | 25  | 100   |
|              | CCBT-2F                      | Industrial Biotechnology                     | 4       | CC                | 4         | 75    | 25  | 100   |
|              | CCBT-3F                      | Environmental Biotechnology                  | 4       | CC                | 4         | 75    | 25  | 100   |
| VI           |                              | I) Agriculture Biotechnology                 |         | DSE               | 4         |       |     |       |
|              | DSEBT-4F<br>(Select any one) | II) Animal Biotechnology                     | 4       |                   |           | 75    | 25  | 100   |
|              | Lab Course XI                | Practicals based on CCBT<br>1F+2F            | 3+3     | PR                | 4         | 100   |     | 100   |
|              | Lab Course<br>XII            | Practicals based on CCBT<br>3F+4F            | 3+3     | PR                | 4         | 100   |     | 100   |
|              | Lab Course<br>XIII           | Dissertation/ Project<br>Work/Review writing | 3       | PR                | 2         | 50    |     | 50    |
|              | :                            | E  |         | 2                 | 26        | 550   | 100 | 650   |

CC- Core Course, DSE- Discipline Specific Elective, AEC- Ability Enhancement Course, ESA- End Semester Assessment, CIA- Continuous Internal Assessment, PR- Practical, SEC-Skill Enhancement Course

Total credits (Sem I+ II+III+IV+V+VI) = 24+24+26+26+24+26= 150

PRINCIPAL Science College, Number



#### SWAMI RAMANAND TEERTH MARATHWADA UNIVERSITY, NANDED

Semester Pattern Curriculum Under CBCS For Faculty of Science & Technology, Under Graduate (UG) Programmes CLASS: B.Sc. THIRD YEAR, SUBJECT: BOTANY

#### An outline:

| Semester/         | Course   | Course Name  | Instruction    | Total Periods  | Mari          | Credits       |                            |
|-------------------|----------|--|----------------|--|---------------|---------------|----------------------------|
| Annual            | No.      |  | Hrs/week       | =======================================                  | (CA)          | (ESE)         | (Marks)                    |
| Semester-V        | DSCB-I   | DSCB-I: Cell and Molecular<br>biology<br>(Theory Paper-XII)  | 03             | 45   | 10            | 40            | Credits 02<br>(Marks: 50)  |
|                   | DECB-I   | DECB-I: Plant Pathology-I (Theory Paper-XIII) OR DECB-I: Systematic Botany-I (Theory Paper-XIII) OR DECB-I: Herbal Technology-I (Theory Paper-XIII)                              | 03             | 45   | 10            | 40            | Credits: 02<br>(Marks: 50) |
|                   | DSCB-II  | DSCB-II: Genetics and Plant<br>breeding<br>(Theory Paper-XIV)  | 03             | 45   | 10            | 40            | Credits: 02<br>(Marks: 50  |
| Semester-VI       | DECB-II  | DECB-II: Plant Pathology-II<br>(Theory Paper-XV)<br>OR<br>DECB-II: Systematic Betany-<br>II<br>(Theory Paper-XV)<br>OR<br>DECB-II: Herbal Technology-<br>II<br>(Theory Paper-XV) | 03             | 45   | 10            | 40            | Credits: 02<br>(Marks: 50) |
| Annual            | DSCBP-1  | DSCBP-1: Practicals based on<br>DSCB-1 & II<br>(Practical Paper-XVI)   | 03             | 16<br>Practicals/Batch/<br>Year                          | 10            | 40            | Credity 02<br>(Marks: 50)  |
| Pattern           | SECB-III | SECB-III: Trichoderma<br>Cultivation Technology<br>OR<br>SEC-III: Medicinal plant<br>product preparation skill   | 03             | 45<br>(Theory<br>periods-21/Year,<br>Practicals-08/year) | 25            | 25            | Credits: 02<br>(Marks: 50  |
|                   | DECBP-I  | DECBP-I: Practicals based on<br>DECB-I & II<br>(Practical Paper-XVII)  | 03             | Practicals/Batch/<br>Year                                | 10            | 40            | Credits: 02<br>(Marks: 50) |
| Annual<br>Pattern | SECB-IV  | SECB-IV: Mushroom<br>Cultivation<br>OR<br>SECB-IV: Herbal drug<br>processing   | 03             | 45<br>(Theory<br>periods-21/Year,<br>Practicals-08/year) | 25            | 25            | Credits: 02<br>(Marks: 50) |
|                   | -        | Total Mark   | & Credits Seme | ster-V and VI  | Marks:<br>110 | Marks:<br>290 | Credits: 16<br>Marks: 400  |

(DSCB: Discipline Specific Course in Botany, DSCBP: Discipline Specific Course in Botany Practicals, DECB: Discipline Elective Course in Botany Practicals, ESE: End of semester examination, CA: Continuous Assessment, SECB: Skill Enhancement Course in Botany, Distribution of credits (80% of the total credits for ESE and 20% for CA): CA of 10 Marks (Theory): US marks for Test and 05 marks for home assignment CA of 10 Marks (Practical): 05 marks for Test and 05 marks for Record book & submissions (Excursion report, collected plant material, keys, models etc.)

CA of 0 Marks (Practical): 05 marks for Test and 05 marks for Record book & submissions (Excursion report, collected plant material, keys, models etc.)

B.Sc. Third Year, Botany Curriculum, M.E.F. Academic Year 2021-2022

Science College.Handed