


Shri Shivaji Education Society Amravati's
Science College Pauni, District – Bhandara
Certificate Course

S.N.	Year	Name of Certificate Course	Approving authority
1	2016-17	Certificate Course in 'Formulation of Daily Need Products and Their Application'	UGC Western Regional Office, Pune
2	2018-19	Certificate Course in 'Apiculture'	Department of Lifelong Learning and Extension, RTM Nagpur University, Nagpur
3	2018-19	Certificate Course in 'Sericulture'	Department of Lifelong Learning and Extension, RTM Nagpur University, Nagpur
4	2018-19	Certificate Course in 'Chemical Analysis of Minerals in Water'	Department of Lifelong Learning and Extension, RTM Nagpur University, Nagpur
5	2018-19	Certificate Course in 'Library and Information Science'	Department of Lifelong Learning and Extension, RTM Nagpur University, Nagpur
6	2019-20	Certificate Course in 'Apiculture'	Department of Lifelong Learning and Extension, RTM Nagpur University, Nagpur
7	2019-20	Certificate Course in 'Sericulture'	Department of Lifelong Learning and Extension, RTM Nagpur University, Nagpur
8	2019-20	Certificate Course in 'Library and Information Science'	Department of Lifelong Learning and Extension, RTM Nagpur University, Nagpur
9	2019-20	Certificate Course in 'Mushroom Cultivation'	Department of Lifelong Learning and Extension, RTM Nagpur University, Nagpur


(Dr. V.V. Lapse)
Principal
S. S. E. S. Amravati's
Science College, Pauni
Dist. Bhandara



UNIVERSITY GRANTS COMMISSION
CAREER ORIENTED COURSES
35-FEROZSHAH ROAD
NEW DELHI-110 001

F. No. 4-133/2010 (COC)

March, 2010

The Under Secretary (FD-III)
University Grants Commission
New Delhi-110002

22 MAR 2010

Sub: - Release of Grants-in-aid to Science College, Pauni, Dist. Bhandara, Maharashtra Career Oriented Courses under plan.

Sir,

With reference to the proposal submitted by **Science College, Pauni, Dist. Bhandara, Maharashtra** under the UGC scheme of Career Oriented Courses, I am directed to convey the approval of the University Grants Commission for starting the following Career Oriented Courses in the above mentioned College from the academic year **2010-11**.

Courses Approved	Seed Money (Rs. in lakh)
<u>Sciences</u>	
1. Formulation of Daily Need Products and their Applications	10.00
Total	10.00

*msd
Prashant
for enforcement
of order, Bhand e.
Prashant*

I am also directed to convey the sanction of the University Grants Commission for payment of **Rs. 10,00,000/- (Rupees Ten Lakh only)** to **Science College, Pauni, Dist. Bhandara, Maharashtra** as one time grant (Seed Money) under the scheme of Career Oriented Courses.

The assistance available in the programme is only in the form of a one - time as "**Seed Money**". The amount may be utilized for the purchase of books and journals augmentation of laboratory facilities, equipment and payment of remuneration to the Guest faculty only.

The terms and conditions of the approval and grant released are as per the guidelines of the scheme.

1. The sanctioned amount is dabitale to the major Head **5.(i)** (Career Oriented to Education). The above sanction is valid for payment during the current financial year **2009-10**.
2. The amount of grant shall be drawn by the Joint Director (Drawing and Disbursing Officer), University Grants Commission on the Grants -in -aid bill and shall be disbursed to the credited to the Principal, **Science College, Pauni, Dist. Bhandara, Maharashtra** through Demand Draft/Mail Transfer.
3. The grant is subject to the adjustment on the basis of Utilization Certificate in the prescribed proforma submitted by the University/College/Institution.
4. The University/College shall maintain proper accounts only on approved items of expenditure.
5. The Utilization Certificate to the effect that the grant has been utilized for the purpose for which it was sanctioned shall be furnished to the University Grants Commission as early as possible after the close of the current financial year.
6. The assets acquired wholly or substantially out of the University Grants Commission grant shall not be disposed or encumbered or Utilized for the purposes other than those for which the grant was given, without proper sanction of the University Grants Commission and should, at any time the college ceases to function, such assets shall revert to the University Grants Commission.
7. A Register of Assets acquired wholly or substantially out of the grant shall be maintained by the University in the prescribed form.
8. The grantee institution shall ensure the Utilization of grants-in-aid for which it is being sanctioned/paid. In case non-utilization/part utilization, the simple interest @ 10% per annum as amended from time to time on unutilized amount from the date of drawl to the date of refund as per provisions contained in General Financial Rules of Govt. of India will be charged.
9. **The University/College shall implement the programme from the academic year 2010-11 positively and UGC to be informed in this regard.**

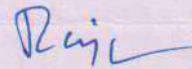
10. The interest earned by the University/College/Institute on this grants in aid shall be treated as additional grant and may be shown in the U.C./Statement of expenditure to be furnished by grantee institutions.
11. The University/College shall follow strictly all the instructions issued by the Govt. of India from time to time with regard to reservation of posts for scheduled Caste and Scheduled Tribes.
12. The University/College shall fully implement the Official Language Policy of Union Govt. and comply with the Official Language Act, 1963 and Official Language (use for officially purpose of the Union) Rules, 1976 etc.
13. The Sanction issues in exercise of the delegation of powers vide Commission office order No. 25/92 dated May.01, 1992.
14. The funds to the extent are available under the scheme and has been noted in BCR for the year **2009-10** at S. No. 244 Page No. 38.

Yours faithfully,

(Dr. (Mrs.) H.K. Chauhan)
Joint Director

Copy forwarded for information and necessary action to:

1. The Principal, **Science College, Pauni, Dist. Bhandara, Maharashtra** to intimate the receipt of the letter as well as the receipt of the sanction grant.
2. The Secretary to the Government of **Maharashtra**, Deptt. of Education, **Mumbai**.
3. The Registrar, **R.T.M. Nagpur University, Nagpur**.
4. Joint Secretary/ Joint Director, Western Region Office, Ganeshkhind, Pune University Campus, Pune-411007 (M.S.)
5. Office of Director, General, Audit General Revenues, AGCR Bldg., I.P. Estate, New Delhi.
6. Guard File, UGC, New Delhi.


(Raj Kumari)
Under Secretary



RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY

Established by Government of Central Provinces Education Department by No. Notification No.513 dated the 1st of August 1923 & presently a State University governed by M.U. Act 1994

BOARD OF COLLEGE AND UNIVERSITY DEVELOPMENT

Mahatma Jyotiba Fule Education Campus, Amravati Road, Nagpur-440 033 (INDIA)

Dr. A. D. Choudhary
Director

Tel No. office-2500736

Fax No.0712 2500736

Resi.2520335

No.BCUD/P/2011/ 502

Date: 30th May, 2011.

0/4/8

To
The Principal,
Science College,
Pauni/Dist. Bhandara

Subject: Syllabus and Scheme of examination for conducting Certificate Course, under UGC Sponsored Career Oriented Programme.

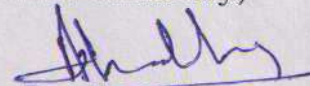
Sir,

With reference to the above cited subject, It is to inform you that syllabi of UGC Career Oriented Programmes Certificate Course/, submitted by you, have been approved by Board of Study in Chemistry.

Please take necessary action to implement the COP in "Certificate Course in Formulation of daily need products and their Applications.

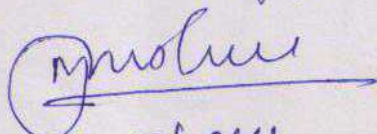
Thanking you,

Yours faithfully,


(A. D. Choudhary)
Director

For information of Dr. B.D. Choudhary

Formulation of daily need product
& their application etc


9/6/11

To
The Chairman,
Board of Studies in Chemistry,
RTM Nagpur University Nagpur.



Subject :- for approval of UGC sponsored " Formulation of Daily Need
Products and Their Application.

R/Sir,

06 Find enclosed here with syllabus for the "Formulation of Daily Need
Products and Their Application. Which is related to Chemistry Subject.

UGC has granted fund for this course. College has to run the above
course from the session 2010-2011 and hence to run the course required
approval from University for the syllabus.

Hence prayer is that please approve this syllabus.

Thanking You

Your's Faithfully

Principal
Science College Pauni
Dist. Bhandara

Encl.

27/12/10
अधिक लिपिक
समस्त तुळशी महाराज
नामूर विद्यापीठ, नागूर

Paper II :- Chemistry & Technology of soaps, Detergents & Biodiesel.

- Unit I :-** Types of soaps., Chemistry of soap making Raw materials for soaps, Various processes of soap making such as cold process, semibioled and Full boiled process. Soaps from fatty acids, Byproducts of soap industries specializing soaps such as Transparent soaps, Germicidal soaps, shaving soaps, liquid soaps etc.
- Unit II :-** Analasis of soaps for total fatty, mathe, pH, Moisture and presence of water insoluble materials salts and filler I.S.I specifications for soaps.
- Unit III :-** Types of Detergents, Chemistry of Surfactants, Manufacture Raw materials For Liquid, powder & cake detergents, specialing detergents such as bars and Cleaning powder for utencils, metals and glass. Anlysis of detergents for active material, foam height & cleaning ability.
- Unit IV :-** Theory & Mechanism of cleaning by soaps, detergents Biodegradability of detergents, Polymeric Surfactants, Additives for Detergents, Modern development as detetgents.
- Unit V :-** Raw materials for Biodiesel such as Various oils line Neem, sal, Mahuwa, Karanja zetropa their collections & Processing chemistry & Technology of Biodiesel manufacture. Analysis & standardization of Biodiesel.
- Unit VI :-** Herbal products for soap & detergents industry such as Neem, Haldi, Tulsi, Alovera and Formulation of Soaps on these products.

Practical

- 1) Determination of Acid Value of oil.
- 2) Determination of Saponification Value of Oil.
- 3) Determination of Iodine Value of Oil.
- 4) Determination of Peroxide Value of Oil.
- 5) Determination of Hydroxyl Value of Oil.
- 6) Adultration detection Tests.
 - a) For Sesame Oil.
 - b) For Mineral Oil.
 - c) For Cottonseed Oil.
 - d) For Groundnut Oil balier Test.
- 7) Kadhai Soap Manufacture.
- 8) Liquid Soap Manufacture.
- 9) Shampoo Formulation.
- 10) Detergent Formulation.
- 11) Specialing Soaps.
- 12) Testing of Soaps for
 - a) Moisture Control.
 - b) Total Fatty Mathe.
 - c) Foam.
 - d) Surface Tension at different Concentration.
 - e) Detergening Evalution.
- 13) Testing of Detergents
 - a) Total active mathe.
 - b) Moisture.
 - c) Alcohol Soluble.
 - d) Water insoluble.
- 14) Preparation and Analysis of Biodiesel.
- 15) Preparation and Analysis of Lubricating Grease.

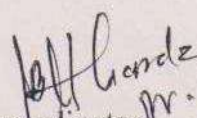
Rashtrasant Tukadoji Maharaj Nagpur University Nagpur.

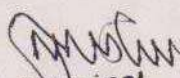
UGC carrier oriented programmer ("Certificate course in Formulation of daily need products and their Applications")

A study group of following members have prepared the syllabus for the certificate course in Formulation of daily need products and their Applications.

- | | |
|---------------------|--|
| 1. Dr. R. D. Raut | Chairman, Board of Studies Chemisty RTM Nagpur
University Nagpur Deptt. Of Chemistry J. B. Science
college Wardha. |
| 2. Dr. B. D. Gharde | Head, deptt. Of Chemistry Science College Pauni |
| 3. Dr. B. B. Gogate | Reader, Laxminarayan Institute of Technology Nagpur |
| 4. Dr. A. D. Gharde | Reader, Nutan Adarsha College Umred. |
| 5. Dr. P. V. Patil | Emeritus Professors & Ex. Director Laxminarayan Institute
of Technology Nagpur |

The same as being submitted to Rashtrasant Tukadoji Maharaj Nagpur University Nagpur. For its approval.


Co-coordinator
UGC Carrier Oriented Programme
S.S.E.S Science College, Pauni,
Distt. Bhandara
**Head
Deptt. of Chemistry
Science College, Pauni,
Distt. Bhandara**


Principal
Science College, Pauni
Science College Pauni
Distt. Bhandara

Certificate Course in
"Formulation of daily need products and their Application"

Technology of Oils, Soaps, Detergents & Biodisel.
(Duration :- Six Months)

Aims and Objectives :-

- 1) To give basic idea of Chemistry of vegetable oils, Soaps and Surfactants to students who have a background in chemistry and coming from rural area. The idea is to promote small scale enterpreniures at village level.
- 2) To Educate the students in analysis, testing and Quality control of oils, Soaps & Detergents.
- 3) To Educate students in rural area for value added products from Neem, Zetropa, Karanja, Alovera, Haldi and other Herbal products.
- 4) The course will also be suitable for working as lab chemist or Supervisor in major oil & Surfactant Industry. This will open new avanues for employment of rural areas.
- 5) To Promote Enterprenership among village level students. They can start some business attached to their farming business.

Theory Papers :-

Paper I :- Chemistry & Technology of Oils , Fats and related products.

Unit I :- Nomenclature, Occurance, Global distributical of Oils , fats & fatty acids. Classifications of oils and fats. Present challenges of oil & fat industry in India.

Unit II :- Chemical modificatial of oils by various chemical reaction like Saponification , Hydrolysis, Esterification, Interesterification , Sulphonation & Sulphation , Epoxidation, Hydrogenation Degamming.

Unit III :- Refining , Bleaching & Deodourigation of Vegetable oils.

Unit IV :- Analytical Techniques and theory of Physico Chemical Constants of oils & fats like Acid Value, Saponification value, Peroxide Value, Iodine Value and use of U.V. & I.R. and G.I.C. for fat analysis.

Unit V :- Manufacture of Industrial products such as Butter, Margarine, Ghee, Lubricating Greases, Hydrogenated Oils, Cutting oil, Core Oil and Such Specialing products as Emulsifiers, FoamBooster etc.

Unit VI :- Nutritional functions of fats, Fats and Human Healts. Nutraceutical products from oil Industry. Special Dietary fats, Biosynthesis of fatty acids, Modern developments in Tech. of Oils & fats.



To,
The Principal
Science College,
Pauni, Dist Bhandara.

No.DOLLE/ 12/18
Dated : 6.4. 2018

**Subject : Sanction for Conducting Short Term Courses under
Jeevan Shikshan Abhiyan on No Grant Basis.**



Sir/Madam,

With reference to your proposal for conducting Short Term courses indicated below under Jeevan Shikshan Abhiyan of this Department, I am to inform you that your proposal has been accepted by the Department and your College has been granted permission to conduct the course on the following conditions:

Details of the Course

Sr. No.	Name of the Course	Duration	No. of Candidates to be admitted	Fees to be Charged per Student	Fees to be Deposited With the Deptt.
1	Certificate Course in Apiculture	3 Months	25	1000/-	10%
2	Certificate Course in Sericulture	3 Months	25	1000/-	10%
3	Certificate Course in Chemical Analysis of Minerals in water	3 Months	30	1000/-	10%
4	Certificate Course in Library & Information Science	3 Months	30	800/-	10%

Rules & Regulations of this Department regarding these courses should be strictly followed.

1. This sanction is valid for this particular Batch only.
2. Fees for the course should be charged as per the norms prescribed.
3. Expenditure on the course should be incurred as per norms .
4. Course should be started within a Month from the date of sanction.
Please communicate your acceptance within a month and submit Initial Report
Along with list of students admitted.

Your's faithfully,

Noted
Date 12/01/18



Shri Shivaji Education Society Amravati's
Science College, Pauni

Dist. BHANDARA (M.S.)



* E-mail : sciencecollegepauni@gmail.com * Website : www.pauniscience.org

Founder President

**Dr. Panjabrao alias
Bhausaheb Deshmukh**

M.A., D. Phil., LL.B., Bar-at-Law

Principal

Dr. V. V. Lapse

President

Hon. Shri. Harshwardhan P. Deshmukh
Shri Shivaji Education Society,
Amravati

L.No.SCP :- 645/B/2018

Date : 16/11/2018

To

Dr B. S. Rahile


Associate Professor,
Department of Zoology
Science College, Pauni
Dist. Bhandara

Subject: Appointment as a Coordinator for the Certificate Course in Apiculture

Reference: Official letter from Department of Lifelong Learning and Extension, RTM Nagpur University, Nagpur, No. DOLLE/12/18, Dated 06.04.2018

With reference to the above cited subject I am pleased to inform you appointed as a Coordinator for the short term Certificate Course in Apiculture. The short term course has been initiated by department of Zoology.

You are informed to coordinate all the related work of admission of certificate course, distribution of the workload, paper setting and examination.


Dr. V.V. Lapse
Principal
S. S. E. S. Amravati's
Science College, Pauni
Dist. Bhandara

Copy to:

1. IQAC Coordinator, Science College, Pauni, Dist. Bhandara
2. Dr. K.B. Nagarnaik, Head, Department of Zoology, Science College Bhandara



Shri Shivaji Education Society Amravati's

Science College, Pauni

Dist. BHANDARA (M.S.)

Office - (S.T.D 07185) ☎ 255310 / 255568, Resident - 255174



E-mail : shivaji030101@shivajiedusocamt.org • Website : www.pauniscience.org

Founder President
Dr. Panjabrao alias
Bhausaheb Deshmukh
M.A., D. Phil., LL.B., Bar-at-Law

Off. Principal
Dr. V. V. Lepse

President
Hon. Shri. Harshwardhan P. Deshmukh
Shri Shivaji Education Society,
Amravati

L.No.SCP :- 622/18

Date : 24.10.2018

To,

The Director

Life long learning & Extension

R.T.M. Nagpur University, Nagpur

Subject:- Submission of Short Term Courses enrolment fee (10%)

Respected sir

With respect of above mentioned subject we have been sanctioned the following courses and submission of 10% amount as follows.

S.N.	Course	Nos of students	Fee	10%
	Amount			
1.	Certificate course in Apiculture	14	1000	1400
2.	Certificate course in Sericulture	23	1000	2300
3.	Certificate course in library & Information Science	30	800	2400
			Total Amount	6100

So I am kindly requesting you to submit the DD of Rs 6100/-

Thanking you Sir!

Date:-

Place:-



[Signature]
Officiating Principal
S.S.E.S. Am's Science College
Pauni, Dist. Bhandara

**Shri Shivaji Education Society Amravati's
Science College Pauni Dist Bhandara
Certificate Course in Apiculture**

Duration of Course :3 Months

Intake Capacity :25 Students

Eligibility : XII th pass from recognized Institute with Biology Subjects

Maximum marks weightage:

a. Theory	:50
b. Internal Assessment	:10
c. Practical	: 40
Total	:100

Syllabus

Theory

Unit I

History and Importance of Beekeeping, Types of Honeybees, Biology of Honey bees, Beekeeping Equipments

Unit II

Establishment of Apiary, Bee Pasture, Management of Honey bees, Migration of Honeybees

Unit III

Mass Rearing of Queen, Use of bees for pollination, Diseases of Honeybees, Pests of Honeybees


Unit IV

Bee Products, Pesticide toxicity of Honey bees, Beekeeping as rural enterprise

Practical

1. Types of Bees
2. Diseases and Pests of Honeybees
3. Bee products
4. Beekeeping equipments
5. Project report on apiary development
6. Project report on Role of bees in pollination


Co-ordinator
Certificate In Apiculture


Head of Department,
Dept. of Zoology,
S. S. A's Science College
Pauni, Dist. Bhandara



Shri Shivaji Education Society Amravati's
Science College, Pauni

Dist. BHANDARA (M.S.)



* E-mail : sciencecollegepauni@gmail.com * Website : www.pauniscience.org

Founder President

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Principal

Dr. V. V. Lapse

President

Hon. Shri. Harshwardhan P. Deshmukh
Shri Shivaji Education Society,
Amravati

L.No.SCP :- 645/B/2018

Date : 16.11.2018

To

Dr B. S. Rahile

Associate Professor,
Department of Zoology
Science College, Pauni
Dist. Bhandara

Subject: Appointment as a Coordinator for the Certificate Course in Sericulture.


Reference: Official letter from Department of Lifelong Learning and Extension, RTM Nagpur University, Nagpur, No. DOLLE/12/18, Dated 06.04.2018

With reference to the above cited subject I am pleased to inform you appointed as a Coordinator for the short term Certificate Course in Sericulture. The short term course has been initiated by department of Zoology.

You are informed to coordinate all the related work of admission of certificate course, distribution of the workload, paper setting and examination.

Copy to:

1. IQAC Coordinator, Science College, Pauni, Dist. Bhandara
2. Dr. K.B. Nagarnaik, Head, Department of Zoology, Science College Bhandara


Principal
(Dr. V.V. Lapse)
Principal
S. S. E. S. Amravati's
Science College, Pauni
Dist. Bhandara

**Shri Shivaji Education Society Amravati's
Science College Pauni Dist Bhandara
Certificate Course in Sericulture**

Duration of Course : 3 Months

Intake Capacity : 25 Students

Eligibility : XII th pass from recognized Institute with Biology Subjects

Maximum marks weightage:

d. Theory	:50
e. Internal Assessment	:10
f. Practical	: 40
Total	:100

Syllabus

Theory

Unit I

History and Importance of Sericulture, Types of Silkworm, Biology of Silkworm,

Unit II

Preparation of Land, Establishment of Mulberry Garden, Management of Mulberry Garden,

Unit III

Silkworm Rearing House, Rearing Equipments, Chawki Rearing and Its Management, Late age Rearing-types and management


Unit IV

Diseases of Mulberry, Pests of Mulberry, Diseases of Silkworm, Pests of Silkworm. Post cocoon Operations.

Practical

1. Types of Silkworms
2. Diseases and Pests of Mulberry
3. Diseases and Pests of Silkworm
4. Rearing Houses Models
5. Rearing equipments
6. Project report on Chawki Rearing
7. Project report on Late age Rearing


**Co-ordinator
Certificate In Sericulture**


**Head of Department
Dept. of Zoology
S. B. S. A's Science College
Pauni, Dist Bhandara**



Shri Shivaji Education Society Amravati's

Science College, Pauni

Dist. BHANDARA (M.S.)



* E-mail : sciencecollegepauni@gmail.com * Website : www.pauniscience.org

Founder President

Principal

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**Dr. Panjabrao alias
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M.A., D. Phil., LL.B., Bar-at-Law

Dr. V. V. Lepse

Hon. Shri. Harshwardhan P. Deshmukh
Shri Shivaji Education Society,
Amravati

L.No.SCP :- 645/B/2018

Date : 16.11.2018

To

Dr Sanjay D Raibole

Librarian (Associate Grade),

Department of Library

Science College, Pauni

Dist. Bhandara

Subject: Appointment as a Coordinator for the Certificate Course in **Library and Information Science**


Reference: Official letter from Department of Lifelong Learning and Extension, RTM Nagpur University, Nagpur, No. DOLLE/12/18, Dated 06.04.2018

With reference to the above cited subject I am pleased to inform you appointed as a Coordinator for the short term Certificate Course in **Library and Information Science**. The short term course has been initiated by department of Library

You are informed to coordinate all the related work of admission of certificate course, distribution of the workload, paper setting and examination.

Copy to:

1. IQAC Coordinator, Science College, Pauni, Dist. Bhandara


(Dr. V.V. Lepse)
Principal
S. S. E. S. Amravati's
Science College, Pauni
Dist. Bhandara

S.S.E.S. Amravati's Science College Pauni, Dist. Bhandara
Department of Library & Information Science
Certificate Course in Library & Information Science

Duration of Course: 15Weeks
Intake Capacity: 30 Students
Eligibility: 12th Passed candidates from any recognized institute.
Maximum marks weightage:

a. Theory	:	50
b. Internal assessment	:	10
c. Practical	:	40
Total	:	100

Syllabus: The syllabus for the prescribed skill based course is unitized and the topics are included so as to complete the entire curriculum within the stipulated time period of 15 Weeks.

Theory Paper: Library & Information Science

Unit-I: Introduction to Library and Information Science.

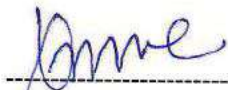
Unit-II : Reference Service

Unit-III : Library Function

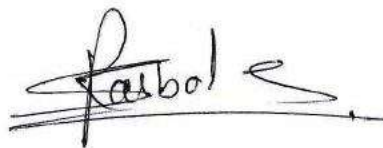
Unit-IV : Types of library.

Practical's:

- 1) DDC Classification.
- 2) Cataloging of Books
- 3) OPEC.
- 4) Library Software Functioning.
- 5) Reference book services



Signature & Seal of the
Principal/Head of Department
(Dr. V.V. Lepse)
Principal
S. S. E. S. Amravati's
Science College, Pauni
Dist. Bhandara



Signature & Seal of the
Course coordinator



Coordinator



Shri Shivaji Education Society Amravati's

Science College, Pauni

Dist. BHANDARA (M.S.)

Office - (S.T.D 07185) ☎ 255310 / 255568, Resident - 255174



E-mail : shivaji030101@shivajiedusocamj.org • Website : www.pauiscience.org

Founder President

Dr. Panjabrao alias

Bhauasaheb Deshmukh

M.A., D. Phil., LL.B., Bar-at-Law

Principal

Dr. V. V. Lapse

President

Hon. Shri. Harshwardhan P. Deshmukh

Shri Shivaji Education Society,

Amravati

L.No.SCP : 432/A/18

Date : 21/04/2018

To

Shri A. B. Sahare

Assistant Professor,

Department of Chemistry

Science College, Pauni


Dist. Bhandara

Subject: Appointment as a Coordinator for the Certificate Course in Chemical Analysis of Minerals in Water

Reference: Official letter from Department of Lifelong Learning and Extension, RTM Nagpur University, Nagpur, No. DOLLE/12/18, Dated 06.04.2018

With reference to the above cited subject I am pleased to inform you that you have been appointed as a Coordinator for the short term Certificate Course in Chemical Analysis of Minerals in Water. The short term course has been initiated by the Department of Chemistry.

You are informed to coordinate all the related work of admission of the students in the certificate course, distribution of the workload, paper setting and conduction of the examination.


Principal

Copy to: 1. IQAC Coordinator, Science College, Pauni, Dist. Bhandara

2. Dr. B.D. Gharde, Head, Department of Chemistry, Science College, Pauni, Dist. Bhandara

S.S.E.S. Amravati's Science College Pauni, Dist. Bhandara
Department of Chemistry
Certificate Course in Chemical Analysis of Minerals in Water

Duration of Course: 3 Months

Intake Capacity: 30 Students

Eligibility: 12th Passed candidates from any recognized Institute with Chemistry Subject.

Maximum marks weightage:

a. Theory	:	50
b. Internal assessment	:	10
c. Practical	:	40
Total	:	100

Syllabus: The syllabus for the prescribed skill based course is unitized and the topics are included so as to complete the entire curriculum within the stipulated time period of three months.

Unit-I : Water as natural resource, Sources of water: surface water and ground water, Introduction to water distribution schemes.


Unit-II : Water quality parameters: temperature, colour, turbidity, pH, acidity/ alkalinity, TS, TSS, TDS, conductivity, dissolved oxygen, hardness, chloride, sodium, potassium, COD & BOD

Unit-III : Water Pollution, sources of water pollution: natural and man-made sources. Control over water pollution.

Unit-IV : Water Treatment Process: preprimary, primary, secondary and tertiary treatment. Theory: sedimentation, coagulation, flocculation, filtration and disinfection. Standards of water quality of drinking water.

Practical of Chemical Analysis of Minerals in Water:

- 1) To determine pH and electrical conductivity of water.
- 2) Analysis of acidity/ alkalinity of drinking water.
- 3) Determination of Hardness of water.
- 4) To determine TS, TSS and TDS in water sample.
- 5) Determination of Dissolved Oxygen (DO) of given water sample.
- 6) Determination of Chlorides in given water sample.


(Mr. Atulkumar B. Sahare)

Assistant Professor
Department of Chemistry
Science College, Pauni Dist. Bhandara



Shri Shivaji Education Society Amravati's
Science College, Pauni



Dist. BHANDARA (M.S.)

Office - (S.T.D 07185) ☎ 255310 / 255568, Resident - 255174

E-mail : shivaji030101@shivajiedusocamt.org • Website : www.pauniscience.org

Founder President

**Dr. Panjabrao alias
Bhausaheb Deshmukh**

M.A., D. Phil., LL.B., Bar-at-Law

Principal

Dr. V. V. Lapse

President

Hon. Shri. Harshwardhan P. Deshmukh

Shri Shivaji Education Society,
Amravati

L.No.SCP :- 325/19

Date : 25/09/2019

To

The Director,
Department of Lifelong Learning and Extension,
R. T. M. Nagpur University Nagpur

Subject: To grant the permission for Certificate courses

Respected Sir,

With reference to above said subject, your department had sanctioned the certificate courses to Science College Pauni Dist Bhandara for the session 2018-19. We are willing to continue the said certificate courses for the session 2019-20 by following your guidelines.

Kindly grant the permission for following certificate courses.

S. N	Name of Course	Intake Capacity	Fee in Rs.	Department	Name of Coordinator
1	Certificate Course in Apiculture	30	800/-	Zoology	Dr. B S Rahile
2	Certificate Course in Sericulture	30	800/-	Zoology	Dr. B S Rahile
3	Certificate Course in Library and Information Science	40 (40)	800/-	Library & Information Science	Dr. S D Raibole
4	Certificate Course in Mushroom Cultivation	30	800/-	Botany	Dr. S. I. Ghugal



[Signature]
2/11/19

[Signature]
Yours

Principal
S. S. E. S. Amravati's
Science College, Pauni
Dist. Bhandara (M.S.)

**Shri Shivaji Educatio Society Amravati's
Science College Pauni Dist Bhandara
Certificate Course in Apiculture**

Duration of Course :3 Months

Intake Capacity :25 Students

Eligibility : XII th pass from recognized Institute with Biology Subjects

Aims and Objective of Course

1. To generate practical based skill among students for catering job opportunities as well as self employment.
2. To create self confidence and manage small business enterprise.
3. To identify business opportunities in Apiculture and beekeeping sector.
4. To identify the areas of investigation for further endeavor.


**Co-ordinator
Certificate In Apiculture**


**Head of Department,
S. S. A'S Science College
Pauni, Dist Bhandara**

**Shri Shivaji Education Society Amravati's
Science College Pauni Dist Bhandara
Certificate Course in Apiculture**

Duration of Course :3 Months

Intake Capacity :25 Students

Eligibility : XII th pass from recognized Institute with Biology Subjects

Maximum marks weightage:

a. Theory	:50
b. Internal Assessment	:10
c. Practical	: 40
Total	:100

Syllabus

Theory

Unit I

History and Importance of Beekeeping, Types of Honeybees, Biology of Honey bees, Beekeeping Equipments

Unit II

Establishment of Apiary, Bee Pasture, Management of Honey bees, Migration of Honeybees

Unit III

Mass Rearing of Queen, Use of bees for pollination, Diseases of Honeybees, Pests of Honeybees


Unit IV

Bee Products, Pesticide toxicity of Honey bees, Beekeeping as rural enterprise

Practical

1. Types of Bees
2. Diseases and Pests of Honeybees
3. Bee products
4. Beekeeping equipments
5. Project report on apiary development
6. Project report on Role of bees in pollination


Co-ordinator
Certificate In Apiculture


Head of Department,
Dept. of Zoology,
S. S. A's Science College
Pauni, Dist. Bhandara



Shri Shivaji Education Society Amravati's

Science College, Pauni

Dist. BHANDARA (M.S.)



* E-mail : sciencecollegepauni@gmail.com * Website : www.pauniscience.org

Founder President

**Dr. Panjabrao alias
Bhausaheb Deshmukh**

M.A., D. Phil., LL.B., Bar-at-Law

Principal

Dr. V. V. Lepse

President

Hon. Shri. Harshwardhan P. Deshmukh
Shri Shivaji Education Society,
Amravati

L.No.SCP :- 645/B/2018

Date : 16.11.2018

To

Dr B. S. Rahile

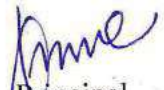
Associate Professor,
Department of Zoology
Science College, Pauni
Dist. Bhandara

Subject: Appointment as a Coordinator for the Certificate Course in Sericulture.

Reference: Official letter from Department of Lifelong Learning and Extension, RTM Nagpur University, Nagpur, No. DOLLE/12/18, Dated 06.04.2018

With reference to the above cited subject I am pleased to inform you appointed as a Coordinator for the short term Certificate Course in Sericulture. The short term course has been initiated by department of Zoology.

You are informed to coordinate all the related work of admission of certificate course, distribution of the workload, paper setting and examination.


Principal
(Dr. V.V. Lepse)
Principal
S. S. E. S. Amravati's
Science College, Pauni
Dist. Bhandara

Copy to:

1. IQAC Coordinator, Science College, Pauni, Dist. Bhandara
2. Dr. K.B. Nagarnaik, Head, Department of Zoology, Science College Bhandara

**Shri Shivaji Educatio Society Amravati's
Science College Pauni Dist Bhandara
Certificate Course in Sericulture**


Duration of Course : 3 Months


Intake Capacity : 25 Students

Eligibility : XII th pass from recognized Institute with Biology Subjects

Aims and Objective of Course

1. To generate practical based skill among students for catering job opportunities as well as self employment.
2. To create self confidence and manage small business enterprise.
3. To identify business opportunities in Sericulture and silk sector.
4. To identify the areas of investigation for further endeavor.


**Co-ordinator
Certificate In Sericulture**


**Head of Institution
Science College
Pauni, Dist. Bhandara**

**Shri Shivaji Education Society Amravati's
Science College Pauni Dist Bhandara
Certificate Course in Sericulture**

Duration of Course : 3 Months

Intake Capacity : 25 Students

Eligibility : XII th pass from recognized Institute with Biology Subjects

Maximum marks weightage:

d. Theory	:50
e. Internal Assessment	:10
f. Practical	: 40
Total	:100

Syllabus

Theory

Unit I

History and Importance of Sericulture, Types of Silkworm, Biology of Silkworm,

Unit II

Preparation of Land, Establishment of Mulberry Garden, Management of Mulberry Garden,

Unit III

Silkworm Rearing House, Rearing Equipments, Chawki Rearing and Its Management, Late age Rearing-types and management

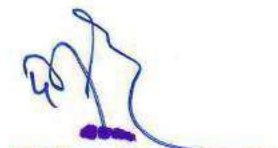
Unit IV

Diseases of Mulberry, Pests of Mulberry, Diseases of Silkworm, Pests of Silkworm. Post cocoon Operations.

Practical

1. Types of Silkworms
2. Diseases and Pests of Mulberry
3. Diseases and Pests of Silkworm
4. Rearing Houses Models
5. Rearing equipments
6. Project report on Chawki Rearing
7. Project report on Late age Rearing


**Co-ordinator
Certificate In Sericulture**


**Head of Department
Dept. of Zoology
S. B. S. A's Science College
Pauni, Dist Bhandara**

S.S.E.S. Amravati's Science College Pauni, Dist. Bhandara
Department of Library & Information Science
Certificate Course in Library & Information Science

Duration of Course: 15Weeks
Intake Capacity: 30 Students
Eligibility: 12th Passed candidates from any recognized institute.
Maximum marks weightage:

a. Theory	:	50
b. Internal assessment	:	10
c. Practical	:	40
Total	:	100

Syllabus: The syllabus for the prescribed skill based course is unitized and the topics are included so as to complete the entire curriculum within the stipulated time period of 15 Weeks.

Theory Paper: Library & Information Science

Unit-I: Introduction to Library and Information Science.

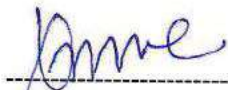
Unit-II : Reference Service

Unit-III : Library Function

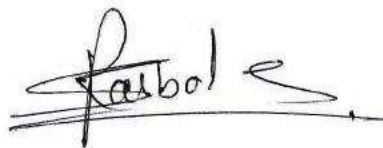
Unit-IV : Types of library.

Practical's:

- 1) DDC Classification.
- 2) Cataloging of Books
- 3) OPEC.
- 4) Library Software Functioning.
- 5) Reference book services



Signature & Seal of the
Principal/Head of Department
(Dr. V.V. Lepse)
Principal
S. S. E. S. Amravati's
Science College, Pauni
Dist. Bhandara



Signature & Seal of the
Course coordinator



Coordinator



Shri Shivaji Education Society Amravati's
Science College, Pauni



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Founder President

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M.A., D. Phil., LL.B., Bar-at-Law

Principal

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Hon. Shri. Harshwardhan P. Deshmukh

Shri Shivaji Education Society,
Amravati

L.No.SCP :- 325/19

Date : 25/09/2019

To

The Director,
Department of Lifelong Learning and Extension,
R. T. M. Nagpur University Nagpur

Subject: To grant the permission for Certificate courses

Respected Sir,

With reference to above said subject, your department had sanctioned the certificate courses to Science College Pauni Dist Bhandara for the session 2018-19. We are willing to continue the said certificate courses for the session 2019-20 by following your guidelines.

Kindly grant the permission for following certificate courses.

S. N	Name of Course	Intake Capacity	Fee in Rs.	Department	Name of Coordinator
1	Certificate Course in Apiculture	30	800/-	Zoology	Dr. B S Rahile
2	Certificate Course in Sericulture	30	800/-	Zoology	Dr. B S Rahile
3	Certificate Course in Library and Information Science	40 (40)	800/-	Library & Information Science	Dr. S D Raibole
4	Certificate Course in Mushroom Cultivation	30	800/-	Botany	Dr. S. I. Ghugal



Yours

Principal

**S. S. E. S. Amravati's
Science College, Pauni**



Shri Shivaji Education Society Amravati's
Science College, Pauni

Dist. BHANDARA (M.S.)



* E-mail : sciencecollegepauni@gmail.com * Website : www.pauniscience.org

Founder President

**Dr. Panjabrao alias
Bhausaheb Deshmukh**

M.A., D. Phil., LL.B., Bar-at-Law

Principal

Dr. V. V. Lapse

President

Hon. Shri. Harshwardhan P. Deshmukh
Shri Shivaji Education Society,
Amravati

L.No.SCP :- 330/A/19

Date : 18/11/19

To,

Dr. S. I. Ghugal

(Associate Professor)

Department of Botany

Science College Pauni,


Dist. Bhandara.

**Subject: Appointment as a Coordinator for the Certificate Course in 'Mushroom
Cultivation'.**

Reference: Official letter from Department of Lifelong Learning and Extension, RTM Nagpur University, Nagpur,

With reference to the above cited subject I am pleased to inform that you had appointed as a Coordinator for the short term Certificate Course in 'Mushroom Cultivation'. The short term course has been initiated by department of Botany.

You are informed to coordinate all the related work of admission of certificate course, distribution of the workload, paper setting and examination.


(Dr. V. V. Lapse)
Principal
S. S. E. S. Amravati's
Science College, Pauni
Dist. Bhandara

Copy to:

1. Dr. A.K. Aney, Head & IQAC Coordinator & Head, Department of Botany, Science College, Pauni, Dist. Bhandara

SSES Amt's Science College Pauni, Dist.- Bhandara

Department of Botany


Certificate Course in Mushroom Cultivation

Duration of Course: 3 months

Intake Capacity: 25 Students

Aims and Objectives of Course:

1. To generate practical based skill among the students for catering job opportunities as well as self-employment.
2. To create self confidence and manage small business enterprise.
3. To identify business opportunities in Mushroom Cultivation sector, marketing and selling of products.
4. To identify the areas of investigation for future endeavor.


DR. AVINASH K. ANEY
M.Sc., M.Phil., Ph.D.
Associate Professor and Head
Department of Botany
Science College, Pauni, Dist. Bhandara

SSES Amt's Science College Pauni, Dist.- Bhandara

Department of Botany

Certificate Course in Mushroom Cultivation

Duration of Course: 3 months

Intake Capacity: 25 Students

Eligibility: 12th Passed candidates from any recognized institute with Biology Subject.

Maximum marks weightage:

a. Theory	: 50
b. Internal assessment	: 10
c. Practical	: 40
Total	: 100

Syllabus: The syllabus for the prescribed skill based course is unitized and the topics are included so as to complete the entire curriculum within the stipulated time period of three months.

Unit-I : Introduction to Mushroom, Importance and history, Classification of Mushroom, Morphology of Mushroom.

Unit-II : Identification of edible and non-edible Mushroom, Basic requirement of Mushroom cultivation, establishment of culture room, Controlling of Temperature, Light, Humidity, etc. in the process of growth of Mushroom.


Unit-III : Introduction to Button and Oyster Mushroom, Cultivation technique of Button and Oyster Mushroom, Substrate preparation, Spawning and Casing, Crop management and Harvesting.


Unit-IV: Yield of harvest and Drying, Grading, Packing and Storage, Marketing and Transportation, Nutritional and medicinal value of Mushroom.

Practical of Mushroom Cultivation:

- 1) Working and functioning of culture room equipments required in the process of Mushroom Cultivation.
- 2) Problems in Mushroom cultivation (contaminants) and control measures and treatments.
- 3) Sterilization of substrate used in mushroom cultivation.
- 4) Spawning and casing process in mushroom cultivation.
- 5) Process of harvesting, grading, drying, packing and storage.

Note: visit to two well established mushroom cultivation plants.


(Dr. S. S. Ghugul)


DR. AVINASH K. ANEY
M.Sc., M.Phil., Ph.D.
Associate Professor and Head