



# HOLY CROSS COLLEGE

Accredited by NAAC with 'A+' Grade

## REPORT ON

### ADD ON Course on Mushroom Cultivation: A Potential Economic Approach

ORGANISED BY

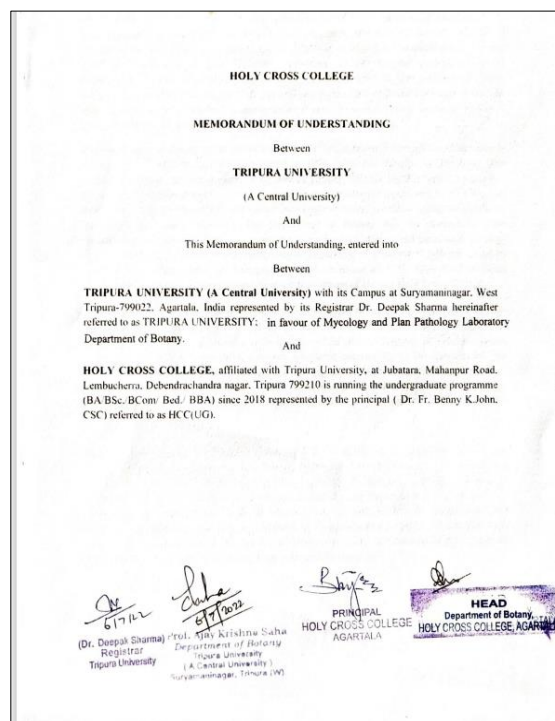
Department Of Botany, Holy Cross College, Agartala

One Add on Course named Mushroom Cultivation – A Potential Economic Approach has been started by Department of Botany, Holy Cross College, Agartala, in Collaboration with Mycology and Plant Pathology Department of Botany, Tripura University.

One MoU has been signed between Department of Botany, Holy Cross College and Department of Botany, Tripura University. A total of 17 students are registered for this add on course. It has been inaugurated by Prof. Ajay Krishna Saha, Prof. Ajay Krishna Saha Professor, Department of Botany, Director, Research and Development Cell, Tripura University on 17.05.2023.

#### Faculty Members from Department of Botany, Holy Cross College, Agartala

1. Dr. Dipanwita Chaudhuri Sil
2. Dr. Debasree Lodh
3. Dr. Somnath Kar
4. Dr. Sudipta Sinha Nag





# HOLY CROSS COLLEGE

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**HOLY CROSS COLLEGE, AGARTALA**  
 Affiliated to Tripura University (A Central University)  
 Accredited by NAAC with 'A+' grade

ADD ON COURSE ON  
**MUSHROOM CULTIVATION – A POTENTIAL ECONOMIC APPROACH**  
 Offered by  
 Department of Botany, Holy Cross College, Agartala  
 In Collaboration with  
 Department of Botany, Tripura University (A Central University)

Admission forms are available in the Department of Botany, Holy Cross College, Agartala.  
 Registration starts from 26.11.2022 and the last date for registration is 02.12.2022  
 Seats are available on first come first basis for eligible candidates

This course aims to provide Knowledge about

- Types of different Mushrooms
- Mushroom Farm Set Up
- Commercial Mushroom Cultivation
- Farming Oyster Mushrooms
- Edible and Poisonous Mushrooms
- Mushroom Marketing
- Health Benefits of Mushrooms

Course Fee Rs. 500/-  
 For Registration Contact Details: 8131045207, 9774418204, 8791331932

**HOLY CROSS COLLEGE, AGARTALA**  
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INAUGURATION OF ADD ON COURSE ON  
**MUSHROOM CULTIVATION – A POTENTIAL ECONOMIC APPROACH**  
 Offered by  
 Department of Botany, Holy Cross College, Agartala  
 In Collaboration with  
 Department of Botany, Tripura University (A Central University)

Chief Guest  
 Prof. Ajay Krishna Saha  
 Professor, Department of Botany  
 Director, Research and Development Cell  
 Tripura University  
 Date: 17-05-2023

**HOLY CROSS COLLEGE**

GPS Map Camera

Debendrachandranagar, Tripura, India  
 W89C+5MR, Mahanpur Road, Lembucherra,  
 Debendrachandranagar, Tripura 799210, India  
 Lat 23.917728°  
 Long 91.321475°  
 17/05/23 01:02 PM GMT +05:30

**HOLY CROSS COLLEGE**

GPS Map Camera

Debendrachandranagar, Tripura, India  
 W89C+5MR, Mahanpur Road, Lembucherra,  
 Debendrachandranagar, Tripura 799210, India  
 Lat 23.91773°  
 Long 91.321482°  
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GPS Map Camera

Madhupur, Tripura, India  
 2nd Floor, Academic Building-11, Tripura University,  
 Suryamani Nagar, Madhupur, Tripura 799022, India  
 Lat 23.764318°  
 Long 91.260648°  
 20/05/23 11:04 AM GMT +05:30

GPS Map Camera

Madhupur, Tripura, India  
 2nd Floor, Academic Building-11, Tripura University,  
 Suryamani Nagar, Madhupur, Tripura 799022, India  
 Lat 23.764317°  
 Long 91.260649°  
 20/05/23 11:04 AM GMT +05:30

2/06/23  
 HEAD  
 Department of Botany,  
 HOLY CROSS COLLEGE, AGARTALA

## NOTICE

This is to inform all concerned that the following members will prepare/frame the syllabus for the add-on course on 'Mushroom cultivation: A potential economic approach' from the department of Botany:

1. Dr. Dipanwita Chaudhuri Sil, Assistant Professor, Department of Botany, HCC.
2. Dr. Debasree Lodh, Assistant Professor, Department of Botany, HCC
3. Dr. Somnath Kar, Assistant Professor, Department of Botany, HCC.
4. Dr. Sudipta Sinha, Assistant Professor, Department of Botany, HCC.

The syllabus will be sent to the Tripura University as a matter for approval. The said course is a part of the MoU signed between Tripura University and Holy Cross College, Agartala.

*Dr. Dipanwita Chaudhuri Sil*  
28.04.2023

**HEAD**  
**Department of Botany,**  
**HOLY CROSS COLLEGE, AGARTALA**



**MUSHROOM BIOLOGY AND FARMING**  
**(Add-on Course as a Skill Programme)**  
**Theory and Practical Syllabus**  
**Total Marks: 100 (Cradi-4)**

**Theory:**

**L1:** Mushroom Morphology: Different parts of a typical Mushroom and variations in mushroom morphology, key to morphometric identifications of Mushrooms. Identification of Edible and Poisonous mushrooms.

**L2:** Mushroom growth and reproduction (asexual and sexual) with process of perennation. Diseases of Mushrooms.

**L3:** Studies of Nutraceutical properties of Mushrooms.

**L4:** Records of cultivable mushrooms of India. Cultivation techniques of Oyster mushroom/Paddy straw mushroom.

**Practical:**

**P1:** Identification of edible and poisonous mushrooms & Methods of preservation of mushrooms.

**P2:** Evaluation of medicinal properties (Antioxidant and Antimicrobial).

**P3:** Spawn production and cultivation technique of mushroom.

**Prepared by**

1. Rahul Saha, Senior Research Fellow, Dept. of Botany, Tripura University
2. Dr. Dipanwita Chaudhuri Sil, HOD, Assistant Professor, Department of Botany Holy Cross College, Agartala
3. Dr. Debasree Lodh, Assistant Professor, Department of Botany Holy Cross College, Agartala
4. Dr. Somnath Kar, Assistant Professor, Department of Botany Holy Cross College, Agartala
5. Dr. Sudipta Sinha, Assistant Professor, Department of Botany Holy Cross College, Agartala



Department of Botany

Received,

*[Signature]*

01/05/2023



TRIPURA UNIVERSITY

Practical Marks

Department Name: Botany

Name of the Exam: Add-On Course


YEAR: 2023

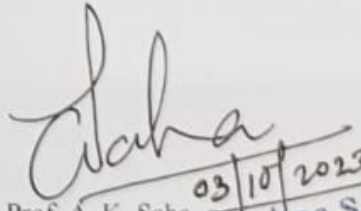
Paper Name : (Mushroom Biology and Farming)

Paper Code: ADMB01

Full Marks: 100

Sl No.	Roll	Name	Theory Marks 35	Practical Marks 35	Internal Marks (15+15)=30	Total Marks- 100
1.	2115000951	Neha Sinha	32	33	28	93
2.	221500952	Susmita Sutrasdar	27	30	27	84
3.	221500953	Susmita Debbarma	26	32	25	83
4.	2014000475	Naimur Nahar	29	30	28	87
5.	2017000567	Niharika Begam	26	30	27	83
6.	221500900	Amrita Debbarma	26	32	26	84
7.	221500924	Jagriti Dhar	27	30	24	81
8.	221500929	Neha Debnath	27	30	25	82
9.	2015000882	Prajna Debbarma	26	30	27	83
10.	2014000485	Bocholong Debbarma	26	30	27	83
11.	2014000480	Siyari Jamatia	25	30	27	82
12.	2014000491	Sapratik Debbarma	22	32	26	80
13.	2014000482	Tanuja Tripura	28	32	27	87

  
3/10/2023  
Head Department  
Botany, Tripura University  
বনবিজ্ঞান বিভাগ  
DEPARTMENT OF BOTANY  
ত্রিপুরা বিশ্ববিদ্যালয়  
TRIPURA UNIVERSITY

  
03/10/2023  
Prof. A. K. Saha  
Course Coordinator  
Department of Botany  
Tripura University  
(A Central University)  
Suryamaninagar, Tripura (W).



सत्यमेव जयते

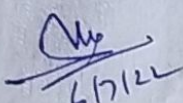
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Government of Tripura

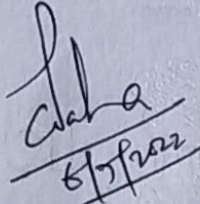
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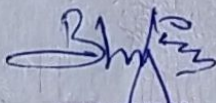
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Property Description : NA  
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6/5/22  
**(Dr. Deepak Sharma)**  
Registrar  
Tripura University

  
6/5/22  
**Prof. Ajay Krishna Saha**  
Department of Botany  
Tripura University  
(A Central University)  
Suryamaninagar, Tripura (W).

  
**PRINCIPAL**  
HOLY CROSS COLLEGE  
AGARTALA

  
**HEAD**  
Department of Botany,  
HOLY CROSS COLLEGE, AGARTALA  
PU  
HOLC000148300

Statutory Alert

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2. It is advised to check the legitimacy of the users of the certificate.
3. In case of any discrepancy please inform the Competent Authority.

**HOLY CROSS COLLEGE**

**MEMORANDUM OF UNDERSTANDING**

Between

**TRIPURA UNIVERSITY**

(A Central University)

And

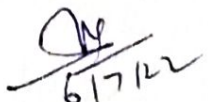
This Memorandum of Understanding, entered into


Between

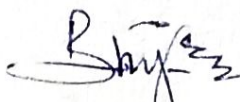
**TRIPURA UNIVERSITY (A Central University)** with its Campus at Suryamaninagar, West Tripura-799022, Agartala, India represented by its Registrar Dr. Deepak Sharma hereinafter referred to as TRIPURA UNIVERSITY; in favour of Mycology and Plant Pathology Laboratory Department of Botany.


And

**HOLY CROSS COLLEGE**, affiliated with Tripura University, at Jubatara, Mahanpur Road, Lembucherra, Debendrachandra nagar, Tripura 799210 is running the undergraduate programme (BA/BSc./BCom/ Bed./ BBA) since 2018 represented by the principal ( Dr. Fr. Benny K. John, CSC) referred to as HCC(UG).

  
6/7/22  
(Dr. Deepak Sharma)  
Registrar  
Tripura University

  
6/7/2022  
Prof. Ajay Krishna Saha  
Department of Botany  
Tripura University  
(A Central University)  
Suryamaninagar, Tripura (W)

  
PRINCIPAL  
HOLY CROSS COLLEGE  
AGARTALA

  
HEAD  
Department of Botany,  
HOLY CROSS COLLEGE, AGARTALA

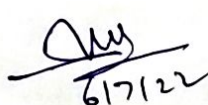
## WITNESSETH


**WHEREAS, TRIPURA UNIVERSITY** with its cryptic motto 'pursuit of excellence' has dedicated itself to this noble task ever since it had been launched on October 02.1987. It epitomizes the aspiration of the state's people of academic excellence at the highest level and quest for knowledge. Tripura University provides Masters Degree programme in 44 Departments. Twenty One general and Seventeen technical colleges, five professional degree colleges, four applied Arts degree Colleges and two Agriculture and allied colleges within the state are affiliated with Tripura University which is now the veritable nerve center of the state's higher education, enjoying the highest possible autonomy in all matters.


The Department of Botany came into existence on 12<sup>th</sup> of June, 2007 through the trifurcation of the Department of Life Science, established in 1976, with the objective of providing post graduate qualification to the students of the state of Tripura. With the humble beginning as a part of the then PG Centre of the University of Calcutta, the Department has moved ahead with time. A number of major research projects funded by various National Scientific Agencies have being undertaken by Faculty Members. The Department of Botany runs the courses on three specialized papers such as Plant Taxonomy and Biodiversity; Cytology and Genetics; Mycology and Plant Pathology. Add on course on "Biology and Farming of Mushroom" will jointly run by Mycology and Plant Pathology Laboratory (Under guidance of Prof. Ajay Krishna Saha) Department of Botany of Tripura University and Department of Botany Holy Cross College.

**WHEREAS, HCC(UG)** the Department of Botany came into existence in July 2018 through the trifurcation of the Department of Biological Sciences with the objective of providing proper knowledge about the Subject Botany to the students of the state of Tripura. Already, a research project funded by DBT New Delhi has been completed successfully by the Department. The major thrust areas of study of the Department are Agronomy, Cytology, Plant breeding, Plant Physiology, Taxonomy, Economic Botany Forestry, Gymnosperm, phycology, Mycology, Palynology and Molecular biology. The Department is headed by Dr. Dipanwita Chaudhuri Sil.

WHEREAS, TRIPURA UNIVERSITY and HCC (UG) recognize the particular role of each party in advancing and supporting activities related to the Add on the course on "Biology and Farming of Mushroom" which will be jointly run by the Mycology and Plant Pathology Laboratory, Department of Botany of Tripura University and Department of Botany of Holy Cross College, Lembucherra, with an objective to increase sustainable employment and livelihood opportunities, economic development, and environmental benefits, through the course outcome of skill development for farming of Mushroom along with the use of plant waste to produce protein rich food items having huge nutraceutical properties.

  
(Dr. Deepak Sharma)  
Registrar  
Tripura University

  
Prof. Ajay Krishna Saha  
Department of Botany  
Tripura University  
(A Central University)  
Kamamaninagar, Tripura (W).

  
PRINCIPAL  
HOLY CROSS COLLEGE  
AGARTALA

  
HEAD  
Department of Botany  
HOLY CROSS COLLEGE, AGARTALA



**NOW, THEREFORE THIS MOU WITNESSESTH AS UNDER:-**

**Article I**


**Collaboration**


1. The One semester programme (AC) shall be jointly organized by Tripura University and HCC (UG) form Academic Session 2022-2023 onwards.
2. One semester programme (AC) has been prepared by an expert committee constituted for the purpose prepared by Tripura University& HCC (UG).
3. The Course (AC) shall be conducted in 6 months and shall include the theory and practical lectures. Both the institutes (TU& HCC UG) will be involved to conduct the Add-on Course.
4. Both the institutes shall work together for making the course industry-oriented and job oriented and shall be leading towards the recognition of model course for the Mushroom production sector.
5. Whereas both the institutes shall bring expertise to acquire special knowledge by involving other reputed agencies.
6. The financial structure and revenue mechanism shall be prepared jointly by both the institutes depending upon the needs and requirements.


**Article II**


**Amendment to this MoU**

1. Amendment to this MoU shall be made by mutual consent of the writing. No variation in the terms of scope of this MoU shall be valid or binding unless previously expressly agreed upon in writing between the Parties in the form of a letter entitled "Amendment to MoU".

  
6/7/22  
(Dr. Deepak Sharma)  
Registrar  
Tripura University

  
6/7/2022  
Prof. Ajay Krishna Saha  
Department of Botany  
Tripura University  
( A Central University )  
Survamaninagar, Tripura (W).

  
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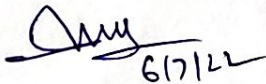
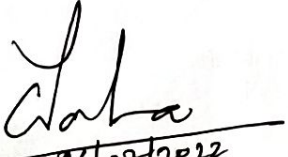
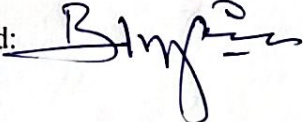
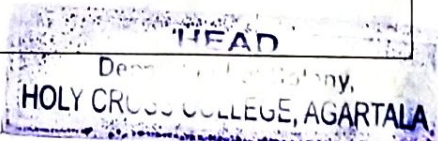
**Article III**  
**Dispute Settlement Mechanism**

1. Both the parties hereby agree that before approaching any court of law, they would enter into discussions regarding any point of conflict through direct negotiations.
2. Both the parties agree that the disputes not settled amicably shall be submitted exclusively to an Arbitrator appointed on mutual agreement. The resulting award by the Arbitrator shall be final and binding on both the parties.

**Article IV**  
**Entry into Force and Term**

1. MoU comes into effect on the date of signing by both the parties. The validity of this MoU shall be for five years with renewal for a similar period based on review necessary modifications and mutual consensus.
2. Each party shall have the right to withdraw from the Agreement on six months notice in writing. Such a termination will, however, not affect activities already approved jointly or under the progress under the terms of this Memorandum.
3. All notices, requests, reports, documents and other information and communication relating to this MoU shall be writing in the English language.

This Memorandum is signed on this day of in two originals in the English language, both texts being equally authentic.

<p>FOR <b>TRIPURA UNIVERASITY</b></p> <p>Signed: </p> <p>Name: <b>(Dr. Deepak Sharma)</b> Registrar Tripura University</p> <p>Title:</p> <p>Date:</p> <p>Co-Signed by:  <u>06/07/2022</u> Prof. Ajay Krishna Saha Department of Botany Tripura University (A Central University) Suryamaninagar, Tripura (W).</p>	<p>FOR <b>HOLY CROSS COLLEGE</b></p> <p>Signed: </p> <p>Name: <b>Dr. Fr. BENNY K. JOHN</b></p> <p>Title: <b>PRINCIPAL</b> HOLY CROSS COLLEGE AGARTALA</p> <p>Date:</p> <p>Co-Signed by: <b>Dr. Dipanwita Choudhury</b></p> <p style="text-align: right;"></p>
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