

**Format for syllabus development of
Skill development course**

Title of course	<i>Vermicompost technology</i>
Nodal Department of JHEI to run course	
Broad Area /Sector	<i>Agriculture</i>
Sub Sector	<i>Sustainable Agriculture</i>
Nature of course - Independent / progressive	<i>Independent</i>
Name of suggestive sector Skill Council	<i>Agriculture Skill Council of India</i>
Aliened NSQF Level	<i>3</i>
Expected fees of the course - Free /paid	
Stipend to student expected from industry	<i>.....</i>
Number of Seats	
Course Code	<i>Credits- 03 (1 Theory, 2 Practical)</i>
Max Marks-100 Minimum marks	
Name of proposed skill Partner (please specify, Name of Industry, Company etc for Practical /Training /Internship /OJT	
Job prospects - Expected fields of occupation where student will be able to get job after completing this course in (Please specify name /type of industry, company etc.)	<p>Types of Job prospects: Following are some of the job roles of a Vermicompost producer</p> <ul style="list-style-type: none"> • A Vermicompost Producer is responsible to produce good quality vermicompost by using correct species of worms and techniques in an area. • They try to produce compost which would offer long-term soil fertility. <p>Vermicompost producer in Farming</p> <ul style="list-style-type: none"> • The compost produced by treatment of worms is a natural source for farming and it acts as the fertilizer for the soil. • They help to produce compost through the activity of aerobic (oxygen requiring) microorganisms. • They analyse the nutrition value of compost which would retain the fertility of the soil. <p>Top Recruiting Organizations for a Vermicompost producer</p> <ul style="list-style-type: none"> • A candidate with a certificate in vermicompost technology can expect a job role in the following sectors/ organizations. • Agriculture Crop Production • ICAR- Veterinary Research Institute • High scope for self-employment & business

Title of course: Certificate course in Vermicomposting technology

Duration of course: One Semester

Course structure: 1. Paper I: Theory
2. Paper II: Practical

Aims & Objective:

- Focusing on to recycle solid waste organic matter from homes and fields in to fertile soil.
- Making student aware with decomposing process in limited space
- The students will get the knowledge of techniques of Vermicomposting.
- Making Students employable by developing skill
- They can generate employments also.
- They will also turn towards organic farming
- Improving soil quality by promoting bio fertilizers
- Will get the knowledge of biodiversity of local earthworm.

Syllabus

Number of lecture 15 Paper I- Theory

Unit	Topic	No of lecture
I	Introduction and Importance of Vermicompost <ul style="list-style-type: none">• Introduction, history, economic and scope of Vermicomposting.• Objective of Vermicomposting.• Requirement for vermicomposting unit.	02
II	Biology of Earthworms <ul style="list-style-type: none">• Identification, Types, and classification of earthworms.• Life history of earthworms.	03
III	Methods of Vermicomposting <ul style="list-style-type: none">• Methods of vermicompost productions. Aerobic method (bed formation)• Anaerobic method (pit formation)• Small scale for home gardens.• Establishment of vermicomposting unit.• Pest and diseases of earthworms• Precautions while Vermicomposting• Nutrient content of vermicompost and their role in agriculture• Physico-chemical properties of vermicompost	07
IV	Marketing of Vermicompost <ul style="list-style-type: none">• Harvesting of vermicompost products• Benefits of Vermicompost• Packaging and storage of vermicompost• Marketing of vermicompost• Problems and prospects in India	03

Number of lecture 60 Paper II - Practical		
Unit	Topic	No of lecture
I	Study of external morphology of Earthworm Study of digestive system – how it adds to soil fertility Study of reproductive system – how it multiplies in soil beds	04
II	Preparation of vermicomposting unit Pit method (Anaerobic)	04
III	Preparation of vermicomposting unit Bed method (Aerobic)	04
IV	Preparation of home unit of vermicomposting	08
V	Vermicompost collection, earthworm separation	04
VI	Vermiwash collection and processing	04
VII	Air drying of vermicompost	06
VIII	Sieving of vermicompost	04
IX	Vermicompost production, harvesting and packaging	04
X	Study of cocoon and vermicast	04
XI	Study of Pests and diseases of Earthworm	04
XII	Visit to vermicompost farms	10

Course outcomes:

After completing the course, the student will be able to:

- Learn interaction of human with environment.
- Gain in-depth knowledge about different methods of Vermicompost
- After successful completion of training students will have a good knowledge of vermicomposting and may produce good quality vermicompost.
- Practical skills about analyses of primary production of Vermicompost.
- Learn to prepare the report.

Suggested reading

1. Textbook of Vermicompost: Vermiwash and Biopesticides by Dr Keshav Singh *et al* Publisher: Biotech Books.
2. Hand Book Of Biofertilizers & Vermiculture Publisher: Engineers India Research Institute ISBN 9788189765019; 9788189765019:Page 332
3. Text Book of Applied Zoology: Vermiculture, Apiculture, Sericulture, Lac Culture, agricultural pests and their controls pradij Jabde, Publisher; discovery publishing house.
4. Commercial Vermiculture: How to Build a Thriving Business in Redworms: Peter Bogdanov
5. Worm Farming: Setup A Sustainable Vermiculture Earthworm Composting Ranch: Brian Grant Publisher: Sparrow Publications
6. Operation Manual for production of Vermicompost- rural agricultural work experience programme (2013-14): S.R. Sharma Department of soil science and Agriculture chemistry, SKN Agricultural university JOBNER, Rajasthan.
7. Yadav, A.K. (2015). *Organic Agriculture (Concept, Scenario, Principles and Practices)*, National Centre of Organic Farming Department of Agriculture and Cooperation, Ministry of Agriculture, Govt of India, CGO-II, Kamla Nehru Nagar, Ghaziabad, 201 001, Uttar Pradesh.

8. केंचुआ खाद ; राष्ट्रीय त्रैविकि खेती केन्द्र कृषि मंत्रालय, भारत सरकार सी बी आई अकेडमी के पास, हापुड रोड कपला नेहरू नगर गाजिदाबाद (उ प्र)
9. Vermicompost- Samanvayak Dr. Pavan Kumar Chauhan Rastriya Mukta Vidyalaya Shiksha Sansthan (In Hindi)

Suggested Digital Platforms/web links for reading –

- [Fascinated By Earthworms, UP Girl Starts Vermicomposting, Earns Rs 1 Cr Revenue - The Better India](#)
- [Vermicompost Kaise Banaye\(Hindi\) | केंचुआ खाद | वर्मिकम्पोस्ट का उत्पादन- इसके फायदे | वर्मिकल्चर - YouTube](#)
- [how to make vermicompost at home in hindi/urdu - Bing video](#)
- [How to make vermicompost in hindi - YouTube](#)
- [How to Prepare Vermi Compost using Vermi Bed in Hindi - Bing video](#)

Suggested OJT/Internship /Training /Skill partner

- [Organic Farming Practices and Certification - Course \(swayam2.ac.in\)](#)

Suggested Continuous Evaluation Methods

- Internal Assessment: Every month will have one or two graded Test / Quiz / practical test / Seminar on the bases of theory and practical syllabus.
- Best 3 Test / Quiz / practical test / Seminar marks will be considered for Internal Marks and carry 30 % for overall Result.
- End Term Exam will have 40 theory (Objective Type) +60 skill test plus report assessment marks on vermi unit visit and will carry 70% of overall Result.
- All students, who obtain 40% marks in internal assessment and 40% marks in end-term, will be eligible for certificate and credit transfer.
- Course learners who qualify the end course examination can get a passing certificate and a mark sheet for credit transfer.
- Course learners can get participation certificate after completion of the course for their participation in the course.

Course Pre – requisites:

- No Pre – requisites required, open to all
To study this course, a student must have the subject - Science or any stream in class /12th /certificate/diploma

Suggested equivalent online courses: None

Any remarks/suggestion: None

Notes:

- Number of units in Theory /Practical may vary as per need.
- Total credits/semester-3(it can be more credits, but students will get only 3 credit/semester or 6 credits /year)
- Credits for Theory -01(Teaching Hours -15)
Credits for Internship /OJT/ Training /Practical -02(Training Hours 60)