



**ATMIYA  
UNIVERSITY**

NAAC – Cycle – 1  
AISHE: U-0967

Criterion 3

RI & E

KI 3.1

M 3.1.1

## Skill Center: Sarjan

- Waste Recycling and Decorative Article Preparation
- Value Added Course: Wealth from Waste
- Earn While Learn

'Swami shreeji'



**ATMIYA UNIVERSITY**

(Established under the Gujarat Private University Act 11, 2018)

Yogidham Gurukul, Kalawad Road, Rajkot - 360005, Gujarat (INDIA)



**VALUE ADDED COURSE (VAC)**

**WEALTH FROM WASTE**

Registrar  
Atmiya University  
Rajkot





Course Content	Hours
<b>Module-I: Waste Material: Collection and Treatment</b>	6 hrs
<ul style="list-style-type: none"> <li>Survey of available/generated waste.</li> <li>Collection of waste materials: Bio waste, Cloth waste, E-waste and Plastic waste.</li> <li>Processing of waste material: Dying with natural color, painting, designing etc...</li> <li>Hardening of material: drying/ironing.</li> </ul>	
<b>Module-II: Product Preparation using waste materials</b>	10hrs
<ul style="list-style-type: none"> <li>Procedure of flower preparation from different waste.</li> <li>Procedure for the preparation of different decorative items from collected waste.</li> <li>Procedure for the preparation of different household items from collected waste.</li> </ul>	
<b>Module-III: Use of products for different purposes</b>	13hrs
<ul style="list-style-type: none"> <li><b>Products from Bio waste:</b> Different flower arrangements including small and large handy bouquet, table bouquet, Photo frames, Flower vase, Wall Hangings; Garlands and Ornaments.</li> <li><b>Products from Cloth waste:</b> Carpets, Doormat, Purses, Bags, Hangings, Decorative items etc..</li> <li><b>Products from E-waste:</b> Containers, Stationary items, Home decorative items and household items.</li> <li><b>Products from Plastic waste:</b> Containers for terrace gardening, Containers to hold different items, Home decorative items and household items.</li> </ul>	

<b>Module-IV: Marketing</b>	8 hrs
<ul style="list-style-type: none"> <li>Need analysis, pricing and basic marketing strategies.</li> <li>Preparation and designing of price list; Methods of advertisement.</li> <li>Packaging of products; Exhibition cum sale.</li> <li>Survey for the need of Product and its supply to the market.</li> </ul>	
<b>Module-V: Project: Innovative Creation through Reuse and Recycling of Waste</b>	3 hrs





## Objective Of The Course:

- 1. To develop Sustainable Orderliness, Enhanced Ecological Balance, Beauty, Productivity and Dignity in the society and nature.
- 2. To develop the ability to critically think and creatively use the unused natural resources.
- 3. To sensitize the students regarding environmental concerns and social responsibility.
- 4. To explore market opportunities for the recovered and recycling materials among the students.
- 5. To provide platform for business model through experiential learning.

## Sustainable Development Goals

**8 DECENT WORK AND ECONOMIC GROWTH**

**HEALTHY POPULATION = MORE PRODUCTIVE WORKFORCE**

Investment in human capital can dramatically strengthen a country's competitiveness. Vaccinated, healthy children grow into a productive workforce and become strong contributors to the economy. In addition, healthy children free up parents' time so they are able to work. In Gavi-supported countries, every US\$ 1 spent on immunisation generates US\$ 54 in broader societal benefits of people living longer and healthier lives.

**9 INDUSTRY, INNOVATION AND INFRASTRUCTURE**

**HEALTHY VACCINE MARKET = INNOVATION**

Gavi makes vaccine markets work better by attracting more suppliers, dramatically reducing vaccine prices and ensuring more equitable and sustainable access to vaccines and other innovative products that meet developing countries' needs. Since our inception in 2000, we have contributed to a significant increase in new manufacturers supplying vaccines for Gavi and the majority of the vaccine doses we procure are manufactured in developing countries.

**11 SUSTAINABLE CITIES AND COMMUNITIES**

**HEALTHIER CITIES**

of the global living in urban areas or has also grown to whom lack services. immunisation them against the use outbreaks and being integrated to urban and cities.

**13 CLIMATE ACTION**

**VACCINES = MITIGATION OF CLIMATE CHANGE IMPACT**

The impact of climate change cuts across health and well-being, livelihood, and security of people, particularly for the poorest and most vulnerable communities, such as people on the move. Immunisation is critical to building people's and systems' resilience to and reducing the risk of outbreaks due to climate-sensitive diseases, such as yellow fever, cholera and Ebola, particularly in urban, fragile and post-disaster settings.





## **Target Skills (Course Outcomes): The Students Will Be Able To Develop**

- 1. Critical Thinking
- 2. Creativity
- 3. Collaboration & Team Work
- 4. Communication & Presentation
- 5. Recognize, Build & Appraise the trash as recourse for eco friendly Sustainable Solution.







**BENEFITS**

**T  
O  
S  
T  
U  
D  
E  
N  
T  
S**



• Can prepare gifts for friends and associates by their own



• Able to market their product and understand marketing strategies



• Can become future entrepreneur

**T  
O  
C  
O  
L  
L  
E  
G  
E**



**Wealth from Bio waste**

100 Kg corn per month  
60 Kg waste material (Husk)  
40 Kg used to make food

**Success Story**



Products prepared by students





**Step : I** Boiling The Water, Add Some Food Colour

**Step : II** Now Add The Raw Maize Leaves, Mix It Very Well



**Step : III**

After The Boiling Process  
Let The Maize Leaves To Dry

Dry process :  
One whole night





**Step : IV iron process**

iron to the maize leaves using iron and newspaper



**Step : V cut the leaves shapes, making flowers using cutting leaves or a petals**







**Step : VI** you can make your own creativity  
1: flower bouquet, 2 : card making, 3 : flower vase

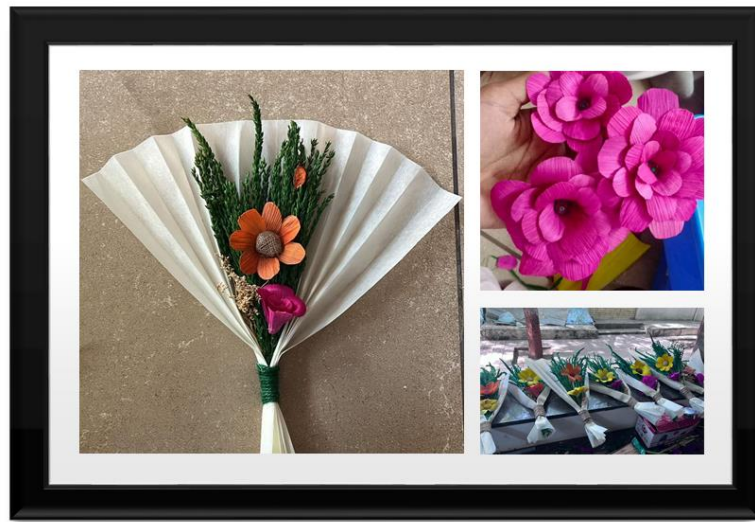






## Handy Bouquet

- Paper canvas
- Maize flower
- Maize / wheat leaves
- Jute threads
- Glue gun
- Some decorative elements



## Jute badges





**Registrar**  
Atmiya University, Rajkot-Gujarat-India  
**Atmiya University**  
**Rajkot**





**ATMIYA UNIVERSITY**

**Department of Biotechnology**

**Part III**

**Skill Enhancement Course (SEC) – I - Value Added Course (VAC)**

For the students admitted from A.Y. 2021-2022 & onwards

Offered by: Department of Biotechnology, Faculty of Science	Offered to: (Please mark <input checked="" type="checkbox"/> as applicable)	
	<input type="checkbox"/> Students across the University <b>other than</b> the offering department.	
	<input checked="" type="checkbox"/> Students across the University <b>including</b> the offering department. (The course should not be a part of regular curriculum of the offering department.)	
<b>Semester : II –V (3 year programs) / VII (4 year programs)</b>		
Course Code	Course Title	Course Credit and Hours
	<b>Wealth from Waste</b>	<b>1 Credit - 4 hrs / wk</b>

**Objective of the course:**

1. To develop Sustainable Orderliness, Enhanced Ecological Balance, Beauty, Productivity and Dignity in the society and nature.
2. To develop the ability to critically think and creatively use the unused natural resources.
3. To sensitize the students regarding environmental concerns and social responsibility
4. To explore market opportunities for the recovered and recycling materials among the students
5. To provide platform for business model through experiential learning.

**Target Skills (Course outcomes) :**  
The students will be able to develop

1. Critical Thinking
2. Creativity
3. Collaboration & Team Work
4. Communication & Presentation
5. Recognize, Build & Appraise the trash as recourse for eco friendly Sustainable Solution.







**Justification and references for the course (Mapping with NSDC/NSQF/Sector Skill Council/Regional needs/any other) :**

Our ATMIYA University is working with the mission of nurturing the creative thinkers and leaders through transformative learning and core value like Co-existential thinking and Green - thinking. To fulfill the same, this course has been proposed since 2016. This course was designed to nurture our core value of “harmony with nature” and Sustainable development. The various discarded resources of the campus generated everyday are used as raw material to prepare variety of useful creative products.

**Reference:**

**Course Description:**

The course is skill based where students will learn to identify different unused natural resources and convert them into creative and useful products. The course also provides knowledge of marketing like product packaging, labelling, branding, costing etc.. The course addresses SDG- 8,9,11,12 and 13: Decent Work and Economic Growth, Industry, Innovation and Infrastructure, Sustainable Cities and Communities, Responsible Production & Consumption and Climate Action.

Course Content	Hours
<b>Module-I: Waste Material: Collection and Treatment</b>	6 hrs
<ul style="list-style-type: none"> <li>• Survey of available/generated waste</li> <li>• Collection of waste materials: Bio waste, Cloth waste, E-waste and Plastic waste</li> <li>• Processing of waste material: Dying with natural color, painting, designing etc...</li> <li>• Hardening of material: drying/ironing</li> </ul>	
<b>Module-II : Product Preparation using waste materials</b>	10 hrs
<ul style="list-style-type: none"> <li>• Procedure of flower preparation from different waste</li> <li>• Procedure for the preparation of different decorative items from collected waste</li> <li>• Procedure for the preparation of different household items from collected waste</li> </ul>	
<b>Module-III : Use of products for different purposes</b>	13 hrs
<ul style="list-style-type: none"> <li>• <b>Products from Bio waste :</b> Different flower arrangements including small and large handy bouquet, table bouquet, Photo frames, Flower vase, Wall Hangings; Garlands and Ornaments</li> <li>• <b>Products from Cloth waste:</b> Carpets, Doormat, Purses, Bags, Hangings, Decorative items etc..</li> <li>• <b>Products from E-waste:</b> Containers, Stationary items, Home decorative items and household items</li> <li>• <b>Products from Plastic waste:</b> Containers for terrace gardening, Containers to hold different items, Home decorative items and household items</li> </ul>	





<b>Module-IV : Marketing</b>	8 hrs
<ul style="list-style-type: none"><li>• Need analysis, pricing and basic marketing strategies</li><li>• Preparation and designing of price list; Methods of advertisement</li><li>• Packaging of products; Exhibition cum sale</li><li>• Survey for the need of Product and its supply to the market</li></ul>	
<b>Module-V : Project: Innovative Creation through Reuse and Recycling of Waste</b>	3 hrs

**Suggested laboratory experiments / other activities:**

1. Improving the Self life of the product
2. Marketing through pamphlet designing
3. Exhibition cum sale

**Pedagogic tools:**

1. Videos
2. Oral Discussion
3. Live Demonstrations
4. Hands on training
5. Assignment

**Reference Books:**

1. Susan Wasinger, Eco Craft: Recycle, Recraft, Restyle, Lark Books, 4 Division of Sterling Publishing co., 2009
2. Maria Noble, How to make 100 Paper Flowers, Creative Publishing International, 2013

**Suggested reading / E-resources**

1. <https://books.google.co.in/books?id=RzJ59JWEBs0C&printsec=frontcover&dq=eco+crafft&hl=en&sa=X&ved=0ahUKEwjxufe76q7aAhXMri8KHcuEAFwQ6AEIKDAA#v=onepage&q=eco%20craft&f=false>
2. <https://books.google.co.in/books?id=3Uv0AwAAQBAJ&printsec=frontcover&dq=DIY+crafft+for+flowers&hl=en&sa=X&ved=0ahUKEwi4pf2Q6a7aAhVCqo8KHRPeAH8Q6wEIOzAD#v=onepage&q&f=false>

**Suggested MOOCs:**

1. <https://www.classcentral.com/course/from-waste-to-value-20611>
2. <https://www.classcentral.com/course/edx-solid-waste-management-18989>
3. <http://www.basel.int/Implementation/TechnicalAssistance/MOOC/tabid/4966/Default.aspx>

