

**Savitribai Phule Pune University**



**Skill Development Centre**

**Bachelor of Vocation (B.Voc.)  
in  
Renewable Energy**

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**Structure of Syllabus**

Savitribai Phule Pune University  
Skill Development Centre  
**Bachelor of Vocation (B.Voc.) in Renewable Energy**  
Academic Year:-2016-2017

**Course Structure (First Year)**

Course Code	Course Title	Credit
<b>SEMESTER - I</b>		
	<b>Theory Component</b>	
RET-1-1	Introduction to Renewable Energy Sources	4
RET-1-2	Basics Electronics	4
RET-1-3	Basic Mechanical Engineering	4
	<b>Skill Component</b>	
REP-1-4	Practical – I (Life Skills and Software Tools)	6
REP-1-5	Practical – II (Based on Theory)	6
REP-1-6	Practical – III (Based on Theory)	6
<b>SEMESTER - II</b>		
	<b>Theory Component</b>	
RET-2-1	Sustainable Development and Energy	4
RET-2-2	Applications of Solar Energy	4
RET-2-3	Bio-Energy	4
	<b>Skill Component</b>	
REP-2-4	Practical – IV (Based on Theory)	6
REP-2-5	Practical – V (Based on Theory)	6
REP-2-6	Practical – VI ( Industrial training & Field Work)	6
	<b>Total Credits</b>	<b>60</b>

\*RET-1-1 = Renewable Energy Theory- Sem-I – Course 1, \*REP-1-4 = Renewable Energy Practical- Sem-I – Course 4

<b>STRUCTURE FOR SEMESTER</b>			
Title	Credits	Hrs	Marks
Total No. of Theory courses = 3	12 (4 Credits each)	180	300
Total No. of Skill based courses = 3	18 (6 Credits each)	270	450
	<b>30</b>	<b>450</b>	<b>750</b>

<b>STRUCTURE FOR YEAR</b>			
Title	Credits	Hrs	Marks
Total No. of Theory courses = 6	24 (4 Credits each)	360	600
Total No. of Skill based courses = 6	36 (6 Credits each)	540	900
	<b>60</b>	<b>900</b>	<b>1500</b>

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**Course Structure (Second Year)**

Course Code	Course Title	Credit
<b>SEMESTER - III</b>		
	<b>Theory Component</b>	
RET-3-1	Soft Skills and Communications	4
RET-3-2	Wind Energy	4
RET-3-3	Solar Cell Technology & its applications	4
	<b>Skill Component</b>	
REP-3-4	Practical – V (Based on Soft Skills and Communication)	6
REP-3-5	Practical – VI (Based on Theory)	12
<b>SEMESTER - IV</b>		
	<b>Theory Component</b>	
RET-4-1	Components of Photovoltaic Systems	4
RET-4-2	Solar Photovoltaic Systems: Design & Integration	4
RET-4-3	Solar Photovoltaic Systems: Installation & Maintenance	4
	<b>Skill Component</b>	
REP-4-4	Practical – VII (Industrial training & Field Work)	6
REP-4-5	Practical – VIII (Based on Theory)	12
	<b>Total Credits</b>	<b>60</b>

\*RET-1-1 = Renewable Energy Theory- Sem-I – Course 1, \*REP-1-4 = Renewable Energy Practical- Sem-I – Course 4

<b>STRUCTURE FOR SEMESTER</b>			
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**Eligibility:** 10+2, Diploma, NSQF Level 4 (MSVC Pattern)

**Objectives of the course:**

- To create awareness of available Energy Sources
- To create understanding of Renewable Energy and its need.
- To create awareness and understanding of solar energy & its applications.
- To create skilled and knowledgeable manpower to handle solar equipments.

**Methodology:** Lectures supplemented with case study that may include visits to industry and different institutes.

**Assessment:** Examination will be conducted by the Department where B.Voc. Course is present and the assessment will be based on 50:50 weightage of Continuous Internal Assessment (CIA) and Semester End Examination (SEE).

## **Useful Links**

<https://www.youtube.com/watch?v=EyxWu2RVQYo>

<https://www.youtube.com/watch?v=1gta2ICarDw>

<https://www.youtube.com/watch?v=umvd4183vZE>

[https://www.youtube.com/watch?v=nabM5MGq\\_NY](https://www.youtube.com/watch?v=nabM5MGq_NY)

<https://www.youtube.com/watch?v=w4qcoEXYqK0>

<https://www.youtube.com/watch?v=2AX0qvnjSnM>

<https://www.youtube.com/watch?v=ELzY8zt0IX4>

[https://www.youtube.com/watch?v=qSWm\\_nprfqE](https://www.youtube.com/watch?v=qSWm_nprfqE)

<https://www.youtube.com/watch?v=3UafRz3QeO8>

<https://www.youtube.com/watch?v=bPE2pBUPjKA>

<https://www.youtube.com/watch?v=5FM3WPBd4Bk>

<https://www.youtube.com/watch?v=umvd4183vZE>

[https://www.youtube.com/watch?v=IB1fc\\_hVYwg](https://www.youtube.com/watch?v=IB1fc_hVYwg)

<https://www.youtube.com/watch?v=28b5JrWvftg>

<https://www.youtube.com/watch?v=NYJK9NhSSCA>

<https://www.youtube.com/watch?v=JO0rI-MoSf8>

<https://www.youtube.com/watch?v=PKXn5xFFpB4>