

**DAYANANDA SAGAR UNIVERSITY**  
Shavige Malleshwara Hills, Kumaraswamy Layout,  
Bengaluru - 560078, Karnataka.

**SCHOOL OF ENGINEERING**



**SCHEME & SYLLABUS  
FOR  
BACHELOR OF VOCATION**

**SPECIALIZATION: MECHATRONICS**

**(With Effect from 2018-19)**

**SEMESTER - 1**

<b>GENERAL EDUCATION COMPONENTS: 12 CREDITS, 180H</b>				
<b>SL. NO.</b>	<b>COURSE CODE</b>	<b>COURSE TITLE</b>	<b>CREDITS</b>	<b>HOURS</b>
1	18VM101	ENGLISH-I	2	30
2	18VM102	MATHEMATICS-I	3	45
3	18VM103	APPLIED SCIENCE	2	30
4	18VM104	ELECTRONICS - I	3	45
5	18VM105	BASICS OF COMPUTER - I	2	30

  

<b>SKILL COMPONENTS: 18 CREDITS, 270H</b>				
6	18VM106	APPLIED SCIENCE LAB	3	45
7	18VM107	BASICS OF COMPUTERS LAB	3	45
8	18VM108	ELECTRONICS LAB - I	4	60
9	18VM109	WORKSHOP PRACTICE - I	4	60
10	18VM110	ENGINEERING DRAWING	4	60

**SEMESTER - 2**

<b>GENERAL EDUCATION COMPONENTS: 12 CREDITS, 180H</b>				
<b>SL. NO.</b>	<b>COURSE CODE</b>	<b>COURSE TITLE</b>	<b>CREDITS</b>	<b>HOURS</b>
1	18VM201	ENGLISH-II	2	30
2	18VM202	MATHEMATICS-II	2	30
3	18VM203	ELECTRONICS - II	2	30
4	18VM204	ELECTRICAL ENGINEERING SCIENCE	2	30
5	18VM205	MECHANICAL ENGINEERING	2	30
6	18VM206	METROLOGY	2	30

  

<b>SKILL COMPONENTS: 18 CREDITS, 270H</b>				
7	18VM207	CADD	5	75
8	18VM208	WORKSHOP PRACTICE - II	5	75
9	18VM209	ELECTRICAL LAB	4	60
10	18VM210	ELECTRONICS LAB-II	4	60

**SEMESTER - 3**

<b>GENERAL EDUCATION COMPONENTS: 12 CREDITS, 180H</b>				
<b>SL. NO.</b>	<b>COURSE CODE</b>	<b>COURSE TITLE</b>	<b>CREDITS</b>	<b>HOURS</b>
1	18VM301	DIGITAL ELECTRONICS	3	45
2	18VM303	COMPUTER PROGRAMMING – C,C++	3	45
3	18VM311	CONTROL SYSTEMS	2	30
4	18VM312	INDUSTRIAL ELECTRONICS	2	30
5	18VM313	MECHANICS OF MACHINES	2	30
6	19AU0009	ENVIRONMENTAL STUDIES	AUDIT	

**SKILL COMPONENTS: 18 CREDITS, 270H**

7	18VM306	COMPUTER PROGRAMMING – C,C++ LAB	5	75
8	18VM308	PCB DESIGN AND FABRICATION LAB	4	60
9	18VM310	DIGITAL ELECTRONICS LAB	5	75
10	18VM314	INDUSTRIAL ELECTRONICS LAB	4	60

**SEMESTER - 4**

<b>GENERAL EDUCATION COMPONENTS: 12 CREDITS, 180 H</b>				
<b>SL. NO.</b>	<b>COURSE CODE</b>	<b>COURSE TITLE</b>	<b>CREDITS</b>	<b>HOURS</b>
1	18VM401	MICRO CONTROLLER & APPLICATIONS	2	30
2	18VM404	MEMS	3	45
3	18VM411	PYTHON PROGRAMMING	3	45
4	18VM412	PLC	2	30
5	18VM413	MEASUREMENT SYSTEMS	2	30
6	19AU0004	CONSTITUTION OF INDIA AND PROFESSIONAL ETHICS	AUDIT	

**SKILL COMPONENTS: 18 CREDITS, 270H**

7	18VM410	MICRO CONTROLLER & APPLICATIONS LAB	5	75
8	18VM414	PYTHON PROGRAMMING LAB	5	75
9	18VM415	PLC LAB	4	60
10	18VM416	MEASUREMENT AND INSTRUMENTATION LAB	4	60

**SEMESTER - 5**

<b>GENERAL EDUCATION COMPONENTS: 12 CREDITS, 180H</b>				
<b>SL. NO.</b>	<b>COURSE CODE</b>	<b>COURSE TITLE</b>	<b>CREDITS</b>	<b>HOURS</b>
1	18VM513	EMBEDDED SYSTEM AND IOT	3	45
2	18VM514	PRODUCT DESIGN AND DEVELOPMENT	2	30
3	18VM515	CNC TECHNOLOGY	2	30
4	18VM516	ROBOTICS	2	30
5	18VM5XX	ELECTIVE - I	3	45
6	19AU0020	KANNADA KALI - I	AUDIT	*

  

<b>SKILL COMPONENTS :18 CREDITS,270H</b>				
7	18VM517	EMBEDDED SYSTEM LAB	3	4 5
8	18VM518	CNC TECHNOLOGY LAB	3	4 5
9	18VM519	ADVANCED PLC LAB	3	4 5
10	18VM520	ROBOTICS LAB	3	4 5
11	18VM521	PROJECT PHASE - I	6	9 0

**SEMESTER - 6**

<b>GENERAL EDUCATION COMPONENTS: 12 CREDITS, 180H</b>				
<b>SL. NO.</b>	<b>COURSE CODE</b>	<b>COURSE TITLE</b>	<b>CREDITS</b>	<b>HOURS</b>
1	18VM608	INDUSTRIAL MANAGEMENT	3	45
2	18VM609	INDUSTRIAL EQUIPMENT MAINTENANCE	3	45
3	18VM610	ADDITIVE MANUFACTURING	3	45
4	18VM6XX	ELECTIVE II	3	45

  

<b>SKILL COMPONENTS: 18 CREDITS, 270H</b>				
5	18VM611	AUTOMOTIVE ELECTRONICS LAB	4	60
6	18VM612	PROJECT PHASE II	8	210

**LIST OF ELECTIVES - I**

<b>SL</b>	<b>COURSE CODE</b>	<b>COURSE TITLE</b>
1	18VM522	ADVANCED PLC
2	18VM523	PROCESS CONTROL

**LIST OF ELECTIVES - II**

<b>SL</b>	<b>COURSE CODE</b>	<b>COURSE TITLE</b>
1	18VM613	AUTOMOTIVE ELECTRONICS
2	18VM614	ADVANCED MICROCONTROLLERS