



Savitribai Phule Shikshan Prasarak Mandal's

## SKN SINHGAD COLLEGE OF ENGINEERING

(Approved by AICTE, Recognized by DTE (MS) &  
Affiliated to Punyashlok Ahilyadevi Holkar, Solapur University, Solapur)

Accredited 'A+' Grade by NAAC

At Post- Korti, Taluka-Pandharpur, District-Solapur, Pin-413304

### Department of Mechanical Engineering

<b>NAME OF COURSE:</b>	<b>APPLIED THERMODYNAMICS</b>		
<b>COURSE CODE:</b>	MECH PCC- 01	<b>ACADEMIC YEAR :</b>	2024-25
<b>CLASS :</b>	<b>S.Y. B.Tech</b> MECH	<b>NAME OF SUBJECT TEACHER:</b>	NLP

### COURSE OUTCOMES:

<b>CO NO.</b>	<b>Statement of Course Outcomes</b>
MECH PCC- 01.1	Apply mathematics and laws of thermodynamics to solve engineering problems.
MECH PCC- 01.2	Evaluate steam properties and analyze the performance of steam generators using the steam table.
MECH PCC- 01.3	Apply knowledge of basic thermodynamic concepts for the analysis of vapour power cycles
MECH PCC- 01.4	Describe the thermodynamics of steam nozzles and analysis of steam turbine
MECH PCC- 01.5	Explain steam condensers for various applications.
MECH PCC- 01.6	Calculate various performance parameters of reciprocating air compressors & determine lubricant properties.



Savitribai Phule Shikshan Prasarak Mandal's

# SKN SINHGAD COLLEGE OF ENGINEERING

(Approved by AICTE, Recognized by DTE (MS) &  
Affiliated to Punyashlok Ahilyadevi Holkar, Solapur University, Solapur)

Accredited 'A+' Grade by NAAC

At Post- Korti, Taluka-Pandharpur, District-Solapur, Pin-413304

## Department of Mechanical Engineering

<b>NAME OF COURSE:</b>	<b>MECHANICS OF MATERIALS</b>		
<b>COURSE CODE:</b>	MECHPCC- 03	<b>ACADEMIC YEAR :</b>	2024-25
<b>CLASS :</b>	<b>S.Y. B.Tech MECH</b>	<b>NAME OF SUBJECT TEACHER:</b>	SSK/ASK

### COURSE OUTCOMES:

<b>CO NO.</b>	<b>Statement of Course Outcomes</b>
MECHPCC- 03.1	Demonstrate fundamental knowledge of different types stress and loading condition.
MECHPCC- 03.2	Compute the stresses in basic mechanical components under axial, torsional and flexural loading.
MECHPCC- 03.3	Draw and interpret SFD and BMD for different types of loads and support conditions.
MECHPCC- 03.4	Develop shear force and bending moment diagrams to analyze bending and shear stress offered by beam.
MECHPCC- 03.5	Determine slope and deflection of beam under concentrated and uniformly distributed load.



Savitribai Phule Shikshan Prasarak Mandal's

# SKN SINHGAD COLLEGE OF ENGINEERING

(Approved by AICTE, Recognized by DTE (MS) &  
Affiliated to Punyashlok Ahilyadevi Holkar, Solapur University, Solapur)

Accredited 'A+' Grade by NAAC

At Post- Korti, Taluka-Pandharpur, District-Solapur, Pin-413304

## Department of Mechanical Engineering

<b>NAME OF COURSE:</b>	<b>MANUFACTURING PROCESSES</b>		
<b>COURSE CODE:</b>	MECHPCC-02	<b>ACADEMIC YEAR :</b>	2024-25
<b>CLASS :</b>	<b>S.Y. B.Tech MECH</b>	<b>NAME OF SUBJECT TEACHER:</b>	ASK/SCM

### COURSE OUTCOMES:

<b>CO NO.</b>	<b>Statement of Course Outcomes</b>
MECHPCC-02.1	Demonstrate the different types of pattern and explain detailed casting process.
MECHPCC-02.2	Identify appropriate melting and molding technique with classification of different defects in casting.
MECHPCC-02.3	Select and explain in brief about fabrication process for engineering problems.
MECHPCC-02.4	Illustrate and compare the different types of forming processes.
MECHPCC-02.5	Select suitable use of various advanced forming process.
MECHPCC-02.6	Illustrate different rapid prototyping techniques.



Savitribai Phule Shikshan Prasarak Mandal's

# SKN SINHGAD COLLEGE OF ENGINEERING

(Approved by AICTE, Recognized by DTE (MS) &  
Affiliated to Punyashlok Ahilyadevi Holkar, Solapur University, Solapur)

Accredited 'A+' Grade by NAAC

At Post- Korti, Taluka-Pandharpur, District-Solapur, Pin-413304

## Department of Mechanical Engineering

<b>NAME OF COURSE:</b>	<b>MINI-PROJECT ON WORKSHOP PRACTICE</b>		
<b>COURSE CODE:</b>	Semester-III MECHF-01	<b>ACADEMIC YEAR :</b>	2024-25
<b>CLASS :</b>	<b>S.Y. B.Tech MECH</b>	<b>NAME OF SUBJECT TEACHER:</b>	ASK/SCM

### COURSE OUTCOMES:

<b>CO NO.</b>	<b>Statement of Course Outcomes</b>
MECHF-01.01	Demonstrate practical knowledge
MECHF-01.02	Develop manufacturing skills
MECHF-01.3	Enhance drawing understanding skills
MECHF-01.4	Cost and time estimation
MECHF-01.5	Enhance skills of PPC
MECHF-01.6	Do material requirement and planning



Savitribai Phule Shikshan Prasarak Mandal's

# SKN SINHGAD COLLEGE OF ENGINEERING

(Approved by AICTE, Recognized by DTE (MS) &  
Affiliated to Punyashlok Ahilyadevi Holkar, Solapur University, Solapur)

Accredited 'A+' Grade by NAAC

At Post- Korti, Taluka-Pandharpur, District-Solapur, Pin-413304

## Department of Mechanical Engineering

<b>NAME OF COURSE:</b>	<b>MINI-PROJECT ON WORKSHOP PRACTICE</b>		
<b>COURSE CODE:</b>	Semester-III MECHF-01	<b>ACADEMIC YEAR :</b>	2024-25
<b>CLASS :</b>	<b>S.Y. B.Tech MECH</b>	<b>NAME OF SUBJECT TEACHER:</b>	ASK/SCM

### COURSE OUTCOMES:

<b>CO NO.</b>	<b>Statement of Course Outcomes</b>
MECHF-01.01	Demonstrate practical knowledge
MECHF-01.02	Develop manufacturing skills
MECHF-01.3	Enhance drawing understanding skills
MECHF-01.4	Cost and time estimation
MECHF-01.5	Enhance skills of PPC
MECHF-01.6	Do material requirement and planning



Savitribai Phule Shikshan Prasarak Mandal's

# SKN SINHGAD COLLEGE OF ENGINEERING

(Approved by AICTE, Recognized by DTE (MS) &  
Affiliated to Punyashlok Ahilyadevi Holkar, Solapur University, Solapur)

Accredited 'A+' Grade by NAAC

At Post- Korti, Taluka-Pandharpur, District-Solapur, Pin-413304

## Department of Mechanical Engineering

<b>NAME OF COURSE:</b>	<b>Fundamentals of Material Science and Engineering</b>		
<b>COURSE CODE:</b>	Semester- IIIMECHMDM-01A	<b>ACADEMIC YEAR :</b>	2024-25
<b>CLASS :</b>	<b>S.Y. B.Tech MECH</b>	<b>NAME OF SUBJECT TEACHER:</b>	ASK/SCM

### COURSE OUTCOMES:

<b>CO NO.</b>	<b>Statement of Course Outcomes</b>
MECHMDM-01A.01	Describe and distinguish between different engineering materials on the basis of their structure.
MECHMDM-01A.02	Select suitable Ferrous material for various Engineering applications.
MECHMDM-01A.3	Select suitable Non-ferrous material for various Engineering applications.
MECHMDM-01A.4	Classify and select different types of Polymer materials for various Engineering applications.
MECHMDM-01A.5	Explain classification, properties and applications of Ceramics materials.
MECHMDM-01A.6	Describe the advantages and limitations of New materials over conventional materials



Savitribai Phule Shikshan Prasarak Mandal's

# SKN SINHGAD COLLEGE OF ENGINEERING

(Approved by AICTE, Recognized by DTE (MS) &  
Affiliated to Punyashlok Ahilyadevi Holkar, Solapur University, Solapur)

Accredited 'A+' Grade by NAAC

At Post- Korti, Taluka-Pandharpur, District-Solapur, Pin-413304

## Department of Mechanical Engineering

<b>NAME OF COURSE:</b>	<b>KINEMATICS AND THEORY OF MACHINE</b>		
<b>COURSE CODE:</b>	Semester- IV MECHPCC-04	<b>ACADEMIC YEAR :</b>	2024-25
<b>CLASS :</b>	<b>S.Y. B.Tech MECH</b>	<b>NAME OF SUBJECT TEACHER:</b>	ASK/SCM

### COURSE OUTCOMES:

<b>CO NO.</b>	<b>Statement of Course Outcomes</b>
MECHPCC-04.01	Select Mechanism for different applications
MECHPCC-04.02	Perform velocity and acceleration analysis of mechanisms
MECHPCC-04.3	Develop cam profile for given set of motion inputs.
MECHPCC-04.4	Select gears and design gear trains for given application
MECHPCC-04.5	Explain types of governors and their characteristics
MECHPCC-04.6	Do balancing of rotary and reciprocating masses



Savitribai Phule Shikshan Prasarak Mandal's

## SKN SINHGAD COLLEGE OF ENGINEERING

(Approved by AICTE, Recognized by DTE (MS) &  
Affiliated to Punyashlok Ahilyadevi Holkar, Solapur University, Solapur)

Accredited 'A+' Grade by NAAC

At Post- Korti, Taluka-Pandharpur, District-Solapur, Pin-413304

### Department of Mechanical Engineering

<b>NAME OF COURSE:</b>	<b>MACHINE DRAWING</b>		
<b>COURSE CODE:</b>	Semester- IV MECHPCC- 05	<b>ACADEMIC YEAR :</b>	2024-25
<b>CLASS :</b>	<b>S.Y. B.Tech MECH</b>	<b>NAME OF SUBJECT TEACHER:</b>	ASK/SCM

### COURSE OUTCOMES:

<b>CO NO.</b>	<b>Statement of Course Outcomes</b>
MECHPCC- 05.01	Apply BIS Convention in drawing mechanical components and assembly drawings
MECHPCC- 05.02	Use geometrical, dimensions, tolerances and symbols in part and assembly drawing.
MECHPCC- 05.3	Draw assembly, details drawing and identify applications of same





Savitribai Phule Shikshan Prasarak Mandal's

# SKN SINHGAD COLLEGE OF ENGINEERING

(Approved by AICTE, Recognized by DTE (MS) &  
Affiliated to Punyashlok Ahilyadevi Holkar, Solapur University, Solapur)

Accredited 'A+' Grade by NAAC

At Post- Korti, Taluka-Pandharpur, District-Solapur, Pin-413304

## Department of Mechanical Engineering

<b>NAME OF COURSE:</b>	<b>FLUID MECHANICS AND FLUID MACHINES</b>		
<b>COURSE CODE:</b>	Semester- IV MECHPCC-06	<b>ACADEMIC YEAR :</b>	2024-25
<b>CLASS :</b>	<b>S.Y. B.Tech MECH</b>	<b>NAME OF SUBJECT TEACHER:</b>	ASK/SCM

### COURSE OUTCOMES:

CO NO.	Statement of Course Outcomes
MECHPCC-06.01	Explain and apply principles of fluid statics to analyze the equilibrium and stability of submerged and floating bodies.
MECHPCC-06.02	Apply mathematical models to describe fluid motion, enabling the analysis of streamlines, potential flow, and velocity components.
MECHPCC-06.3	Illustrate major and minor energy losses in pipe systems using empirical equation
MECHPCC-06.4	Apply dimensional analysis to predict forces on immersed bodies, deriving dimensionless parameters for a comprehensive understanding of fluid properties.
MECHPCC-06.5	Analyze impulse and reaction water turbines.
MECHPCC-06.6	Calculate various parameters of centrifugal Pumps.



Savitribai Phule Shikshan Prasarak Mandal's

# SKN SINHGAD COLLEGE OF ENGINEERING

(Approved by AICTE, Recognized by DTE (MS) &  
Affiliated to Punyashlok Ahilyadevi Holkar, Solapur University, Solapur)

Accredited 'A+' Grade by NAAC

At Post- Korti, Taluka-Pandharpur, District-Solapur, Pin-413304

## Department of Mechanical Engineering

<b>NAME OF COURSE:</b>	<b>ADVANCED LAB ON CAD</b>		
<b>COURSE CODE:</b>	Semester- IV MECHVSC- 01	<b>ACADEMIC YEAR :</b>	2024-25
<b>CLASS :</b>	<b>S.Y. B.Tech MECH</b>	<b>NAME OF SUBJECT TEACHER:</b>	

### COURSE OUTCOMES:

<b>CO NO.</b>	<b>Statement of Course Outcomes</b>
MECHVSC- 01.01	Classify the drafting & modeling techniques.
MECHVSC- 01.02	Use software package for different drafting & modeling requirements of industry.
MECHVSC- 01.3	Perform preliminary steps required while working on high-end CAD/CAM software's.
MECHVSC- 01.4	Develop logical programs required for parametric modeling.

Savitribai Phule Shikshan Prasarak Mandal's

# SKN SINHGAD COLLEGE OF ENGINEERING

*(Approved by AICTE, Recognized by DTE (MS) &  
Affiliated to Punyashlok Ahilyadevi Holkar, Solapur University, Solapur)*

**Accredited 'A+' Grade by NAAC**

At Post- Korti, Taluka-Pandharpur, District-Solapur, Pin-413304



Savitribai Phule Shikshan Prasarak Mandal's

# SKN SINHGAD COLLEGE OF ENGINEERING

*(Approved by AICTE, Recognized by DTE (MS) &  
Affiliated to Punyashlok Ahilyadevi Holkar, Solapur University, Solapur)*

**Accredited 'A+' Grade by NAAC**

At Post- Korti, Taluka-Pandharpur, District-Solapur, Pin-413304





Savitribai Phule Shikshan Prasarak Mandal's

# SKN SINHGAD COLLEGE OF ENGINEERING

(Approved by AICTE, Recognized by DTE (MS) &  
Affiliated to Punyashlok Ahilyadevi Holkar, Solapur University, Solapur)

Accredited 'A+' Grade by NAAC

At Post- Korti, Taluka-Pandharpur, District-Solapur, Pin-413304

## Department of Mechanical Engineering

<b>NAME OF COURSE:</b>	<b>MACHINE DRAWING &amp; CAD</b>		
<b>COURSE CODE:</b>	<b>ME-214</b>	<b>ACADEMIC YEAR :</b>	<b>2024-25</b>
<b>CLASS :</b>	<b>S.Y. B.Tech MECH</b>	<b>NAME OF SUBJECT TEACHER:</b>	<b>HSD/ADJ</b>

## COURSE OUTCOMES:

<b>NO.</b>	<b>COURSE OUTCOMES</b>
<b>CO-1</b>	Apply BIS Convention in drawing mechanical components and assembly drawings.
<b>CO-2</b>	Use geometrical, dimensions, tolerances and symbols in part and assembly drawing.
<b>CO-3</b>	Draw assembly, details drawing and identify applications of same.
<b>CO-4</b>	Prepare 2D drawing and 3Dof machine components using drafting software.



Savitribai Phule Shikshan Prasarak Mandal's

# SKN SINHGAD COLLEGE OF ENGINEERING

(Approved by AICTE, Recognized by DTE (MS) &  
Affiliated to Punyashlok Ahilyadevi Holkar, Solapur University, Solapur)

Accredited 'A+' Grade by NAAC

At Post- Korti, Taluka-Pandharpur, District-Solapur, Pin-413304

## Department of Mechanical Engineering

<b>NAME OF COURSE:</b>	<b>INTERNAL COMBUSTION ENGINES</b>		
<b>COURSE CODE:</b>	<b>ME-2152</b>	<b>ACADEMIC YEAR :</b>	<b>2024-25</b>
<b>CLASS :</b>	<b>S.Y. B.Tech MECH</b>	<b>NAME OF SUBJECT TEACHER:</b>	<b>RKS</b>

## COURSE OUTCOMES:

<b>NO.</b>	<b>COURSE OUTCOMES</b>
<b>CO-1</b>	Recognize and understand the reasons for differences in the construction of different types of internal combustion engines.
<b>CO-2</b>	Evaluate differences among operating characteristics of different engine types and designs.
<b>CO-3</b>	Select the appropriate engine for a given application.
<b>CO-4</b>	Conduct performance tests on engines and Compare experimental results with Theoretical predictions.
<b>CO-5</b>	Compare experimental results with theoretical predictions and make proper justifications.



# SKN SINHGAD COLLEGE OF ENGINEERING

(Approved by AICTE, Recognized by DTE (MS) &  
Affiliated to Punyashlok Ahilyadevi Holkar, Solapur University, Solapur)

Accredited 'A+' Grade by NAAC

At Post- Korti, Taluka-Pandharpur, District-Solapur, Pin-413304

## Department of Mechanical Engineering

<b>NAME OF COURSE:</b>	<b>Advanced Mathematics &amp; Statistics</b>		
<b>COURSE CODE:</b>	<b>OE-01A</b>	<b>ACADEMIC YEAR :</b>	<b>2024-25</b>
<b>CLASS :</b>	<b>Second Year B.TECH. MECH</b>	<b>NAME OF SUBJECT TEACHER:</b>	SVB

### COURSE OUTCOMES:

<b>CO NO.</b>	<b>Statement of Course Outcomes</b>
OE-01A.1	Compute Higher Order Linear Differential equations.
OE-01A.2	Determine the solution of Partial Differential equation.
OE-01A.3	Compute Mean, Mode, Median and Standard Deviations of given data.
OE-01A.4	Solve problems by Binomial, Poisson and Normal distribution.
OE-01A.5	Compute relationship between variables.
OE-01A.6	Use large sample test for testing hypotheses concerning two population means and chi-square test is used to compare observed results with expected results.



# SKN SINHGAD COLLEGE OF ENGINEERING

(Approved by AICTE, Recognized by DTE (MS) &  
Affiliated to Punyashlok Ahilyadevi Holkar, Solapur University, Solapur)

Accredited 'A+' Grade by NAAC

At Post- Korti, Taluka-Pandharpur, District-Solapur, Pin-413304

## Department of Mechanical Engineering

<b>NAME OF COURSE:</b>	<b>Fluid Mechanics and Fluid Machines</b>		
<b>COURSE CODE:</b>	<b>ME-223</b>	<b>ACADEMIC YEAR :</b>	<b>2024-25</b>
<b>CLASS :</b>	<b>Second Year B.TECH. MECH</b>	<b>NAME OF SUBJECT TEACHER:</b>	

### COURSE OUTCOMES:

<b>NO.</b>	<b>COURSE OUTCOMES</b>
<b>CO-1</b>	Solve issues related to fluid statics, kinematics & dynamics.
<b>CO-2</b>	Apply Bernoulli's theorem and continuity equation in real world situations
<b>CO-3</b>	Measure and calculate Head loss of fluid
<b>CO-4</b>	Perform dimensional analysis for research problems in fluid mechanics
<b>CO-5</b>	Explain construction and working of different types of turbines, centrifugal pump
<b>CO-6</b>	Analyze the performance of water turbines and centrifugal pumps for a given conditions.





# SKN SINHGAD COLLEGE OF ENGINEERING

(Approved by AICTE, Recognized by DTE (MS) &  
Affiliated to Punyashlok Ahilyadevi Holkar, Solapur University, Solapur)

Accredited 'A+' Grade by NAAC

At Post- Korti, Taluka-Pandharpur, District-Solapur, Pin-413304

## Department of Mechanical Engineering

<b>NAME OF COURSE:</b>	<b>Kinematics and Theory of Machines</b>		
<b>COURSE CODE:</b>	<b>ME-224</b>	<b>ACADEMIC YEAR :</b>	<b>2024-25</b>
<b>CLASS :</b>	<b>Second Year B.TECH. MECH</b>	<b>NAME OF SUBJECT TEACHER:</b>	

## COURSE OUTCOMES:

<b>NO.</b>	<b>COURSE OUTCOMES</b>
<b>CO-1</b>	Select mechanism for different applications
<b>CO-2</b>	Perform velocity and acceleration analysis of mechanisms
<b>CO-3</b>	Develop cam profile for given set of motion inputs.
<b>CO-4</b>	Select gears and design gear trains for given application
<b>CO-5</b>	Explain types of governors and their characteristics
<b>CO-6</b>	Do balancing of rotary and reciprocating masses.



# SKN SINHGAD COLLEGE OF ENGINEERING

(Approved by AICTE, Recognized by DTE (MS) &  
Affiliated to Punyashlok Ahilyadevi Holkar, Solapur University, Solapur)

Accredited 'A+' Grade by NAAC

At Post- Korti, Taluka-Pandharpur, District-Solapur, Pin-413304

## Department of Mechanical Engineering

<b>NAME OF COURSE:</b>	<b>Mechatronic Systems</b>		
<b>COURSE CODE:</b>	<b>ME2251</b>	<b>ACADEMIC YEAR :</b>	<b>2024-25</b>
<b>CLASS :</b>	<b>Second Year B.TECH. MECH</b>	<b>NAME OF SUBJECT TEACHER:</b>	

## COURSE OUTCOMES:

<b>NO.</b>	<b>COURSE OUTCOMES</b>
<b>CO-1</b>	Explain types and applications of sensors and actuators in mechatronic systems.
<b>CO-2</b>	Explain computer networks and their applications.
<b>CO-3</b>	Program microcontrollers in assembly/and or C/C++/Python/Java to demonstrate interfacing with sensors and actuators
<b>CO-4</b>	Program PLCs using ladder logic (both on simulators and actual hardware).
<b>CO-5</b>	Explain what is interfacing and how to do it.
<b>CO-6</b>	Build and program a mechatronic system which will accept data from input and sensors and control an output/actuator using any microprocessor/ microcontroller board (Arduino or Raspberry Pi can also be used)



# SKN SINHGAD COLLEGE OF ENGINEERING

(Approved by AICTE, Recognized by DTE (MS) &  
Affiliated to Punyashlok Ahilyadevi Holkar, Solapur University, Solapur)

Accredited 'A+' Grade by NAAC

At Post- Korti, Taluka-Pandharpur, District-Solapur, Pin-413304

## Department of Mechanical Engineering

<b>NAME OF COURSE:</b>	<b>Power Plant and Energy Engineering</b>		
<b>COURSE CODE:</b>	<b>ME2252</b>	<b>ACADEMIC YEAR :</b>	<b>2024-25</b>
<b>CLASS :</b>	<b>Second Year B.TECH. MECH</b>	<b>NAME OF SUBJECT TEACHER:</b>	

### COURSE OUTCOMES:

<b>NO.</b>	<b>COURSE OUTCOMES</b>
<b>CO-1</b>	Describe forms of energy source and their impact on environment.
<b>CO-2</b>	Calculate performance parameters related to power plant.
<b>CO-3</b>	Explain the economics of power plant & categorize power plant as base load & peak load plant.
<b>CO-4</b>	Compare various renewable energy sources with their features.
<b>CO-5</b>	Recognize energy conservation opportunities and explain energy audit concept.



# SKN SINHGAD COLLEGE OF ENGINEERING

(Approved by AICTE, Recognized by DTE (MS) &  
Affiliated to Punyashlok Ahilyadevi Holkar, Solapur University, Solapur)

Accredited 'A+' Grade by NAAC

At Post- Korti, Taluka-Pandharpur, District-Solapur, Pin-413304

## Department of Mechanical Engineering

<b>NAME OF COURSE:</b>	<b>Solid Mechanics</b>		
<b>COURSE CODE:</b>	<b>ME2253</b>	<b>ACADEMIC YEAR :</b>	<b>2024-25</b>
<b>CLASS :</b>	<b>Second Year B.TECH. MECH</b>	<b>NAME OF SUBJECT TEACHER:</b>	

## COURSE OUTCOMES:

<b>NO.</b>	<b>COURSE OUTCOMES</b>
<b>CO-1</b>	To analyse the principal stresses and thermal stresses
<b>CO-2</b>	To Investigate the distribution of the two dimensional stresses using Airy stress function.
<b>CO-3</b>	To analyse the stresses in rotating disks and pressurized cylinders.
<b>CO-4</b>	To locate the shear centre in design of thin open cross sections subjected to the transverse loading.
<b>CO-5</b>	To analyse the crippling load in the design of columns.
<b>CO-6</b>	To use the energy methods based on application.



# SKN SINHGAD COLLEGE OF ENGINEERING

(Approved by AICTE, Recognized by DTE (MS) &  
Affiliated to Punyashlok Ahilyadevi Holkar, Solapur University, Solapur)

Accredited 'A+' Grade by NAAC

At Post- Korti, Taluka-Pandharpur, District-Solapur, Pin-413304

## Department of Mechanical Engineering

<b>NAME OF COURSE:</b>	<b>MECHANICAL WORKSHOP-I</b>		
<b>COURSE CODE:</b>	<b>ME 226</b>	<b>ACADEMIC YEAR :</b>	<b>2024-25</b>
<b>CLASS :</b>	<b>Second Year B.TECH. MECH</b>	<b>NAME OF SUBJECT TEACHER:</b>	

## COURSE OUTCOMES:

<b>NO.</b>	<b>COURSE OUTCOMES</b>
<b>CO-1</b>	To operate different machine tools such as grinders, lathes, drilling machines etc.
<b>CO-2</b>	To machine the component as per specified dimensions.
<b>CO-3</b>	To develop the skills necessary for engineering practices like joining and forming processes.
<b>CO-4</b>	To Choose and apply the appropriate methods for pattern making & sheet metal working I. Preparation of Wooden pattern (single piece) for a simple component:



# SKN SINHGAD COLLEGE OF ENGINEERING

(Approved by AICTE, Recognized by DTE (MS) &  
Affiliated to Punyashlok Ahilyadevi Holkar, Solapur University, Solapur)

Accredited 'A+' Grade by NAAC

At Post- Korti, Taluka-Pandharpur, District-Solapur, Pin-413304

## Department of Mechanical Engineering

<b>NAME OF COURSE:</b>	<b>Electrical Technology</b>		
<b>COURSE CODE:</b>	<b>ME227</b>	<b>ACADEMIC YEAR :</b>	<b>2024-25</b>
<b>CLASS :</b>	<b>Second Year B.TECH. MECH</b>	<b>NAME OF SUBJECT TEACHER:</b>	

## COURSE OUTCOMES:

<b>NO.</b>	<b>COURSE OUTCOMES</b>
<b>CO-1</b>	Identify and select suitable DC motor /AC motor/induction motor and its speed control method for given industrial application.
<b>CO-2</b>	Calculate performance parameters of DC motor/ single phase induction motor/three phase induction motor through load test.
<b>CO-3</b>	Explain interfacing and write basic program using microprocessors 8085 trainer/ microcontrollers 8051/simulator.
<b>CO-4</b>	Interface sensor with Arduino Uno microcontroller board.
<b>CO-5</b>	Interface and control Electrical motors with Arduino Uno board



Savitribai Phule Shikshan Prasarak Mandal's

# SKN SINHGAD COLLEGE OF ENGINEERING

(Approved by AICTE, Recognized by DTE (MS) &  
Affiliated to Punyashlok Ahilyadevi Holkar, Solapur University, Solapur)

Accredited 'A' Grade by NAAC

At Post- Korti, Taluka-Pandharpur, District-Solapur, Pin-413304

## Department of Mechanical Engineering

Outward No. : SKNSCOE/MECH /

Date:

<b>NAME OF COURSE:</b>	CAD-CAM-CAE		
<b>COURSE CODE:</b>	ME-312	<b>ACADEMIC YEAR :</b>	2024-25
<b>CLASS :</b>	T.Y. B.Tech MECH	<b>NAME OF SUBJECT TEACHER:</b>	USG

NO.	COURSE OUTCOMES
CO-1	Solve CAD related problems from industries.
CO-2	Elaborate the concept of geometric modelling
CO-3	Create solid model in CAD/CAM/CAE environment according to predefined parameters
CO-4	Analyze Geometric transformations and FEA applications to mechanical component.
CO-5	Solve CAM related problems of manufacturing industries.
CO-6	Develop CNC part programming to operate CNC milling & turning machine to manufacture a Mechanical part.



Savitribai Phule Shikshan Prasarak Mandal's

# SKN SINHGAD COLLEGE OF ENGINEERING

(Approved by AICTE, Recognized by DTE (MS) &  
Affiliated to Punyashlok Ahilyadevi Holkar, Solapur University, Solapur)

Accredited 'A' Grade by NAAC

At Post- Korti, Taluka-Pandharpur, District-Solapur, Pin-413304

## Department of Mechanical Engineering

<b>NAME OF COURSE:</b>	Advanced Programming Concepts – I (Python)		
<b>COURSE CODE:</b>	ME-316	<b>ACADEMIC YEAR :</b>	2024-25
<b>CLASS :</b>	T.Y. B.Tech MECH	<b>NAME OF SUBJECT TEACHER:</b>	JKH/AAM

NO.	COURSE OUTCOMES
CO-1	Describe basic concepts in Python programming
CO-2	Write python script using procedure-oriented approach
CO-3	Use Python standard library modules in writing Python scripts for problem solving
CO-4	Write Python scripts in object-oriented approach.
CO-5	Apply file handling options available in Python in programming
CO-6	Exhibit ability to use python to provide solution to a given problem.





Savitribai Phule Shikshan Prasarak Mandal's

# SKN SINHGAD COLLEGE OF ENGINEERING

(Approved by AICTE, Recognized by DTE (MS) &  
Affiliated to Punyashlok Ahilyadevi Holkar, Solapur University, Solapur)

Accredited 'A' Grade by NAAC

At Post- Korti, Taluka-Pandharpur, District-Solapur, Pin-413304

## Department of Mechanical Engineering

<b>NAME OF COURSE:</b>	Design of Machine Elements		
<b>COURSE CODE:</b>	ME-311	<b>ACADEMIC YEAR :</b>	2024-25
<b>CLASS :</b>	T.Y. B.Tech MECH	<b>NAME OF SUBJECT TEACHER:</b>	PPK

NO.	COURSE OUTCOMES
CO-1	Design the machine elements subjected to axial loads
CO-2	Design mechanical component subjected to fluctuating loads
CO-3	Implement standardization in design of machine elements
CO-4	Design the machine elements subjected to twisting and bending moments.
CO-5	Develop practical and theoretical approaches to different mechanical component designs.
CO-6	Analyse and design mechanical components on the basis of different design aspects



Savitribai Phule Shikshan Prasarak Mandal's

# SKN SINHGAD COLLEGE OF ENGINEERING

(Approved by AICTE, Recognized by DTE (MS) &  
Affiliated to Punyashlok Ahilyadevi Holkar, Solapur University, Solapur)

Accredited 'A' Grade by NAAC

At Post- Korti, Taluka-Pandharpur, District-Solapur, Pin-413304

## Department of Mechanical Engineering

<b>NAME OF COURSE:</b>	Industrial Engineering		
<b>COURSE CODE:</b>	ME-313	<b>ACADEMIC YEAR :</b>	2024-25
<b>CLASS :</b>	T.Y. B.Tech MECH	<b>NAME OF SUBJECT TEACHER:</b>	ASA

NO.	COURSE OUTCOMES
CO-1	Analyze & measure productivity.
CO-2	Perform method study
CO-3	Apply knowledge of ergonomics and industrial safety
CO-4	Perform work measurement'
CO-5	Select facility location and design plant layout
CO-6	Apply knowledge of job evaluation and merit rating



Savitribai Phule Shikshan Prasarak Mandal's

# SKN SINHGAD COLLEGE OF ENGINEERING

(Approved by AICTE, Recognized by DTE (MS) &  
Affiliated to Punyashlok Ahilyadevi Holkar, Solapur University, Solapur)

Accredited 'A' Grade by NAAC

At Post- Korti, Taluka-Pandharpur, District-Solapur, Pin-413304

## Department of Mechanical Engineering

<b>NAME OF COURSE:</b>	Industrial Hydraulics & Pneumatics		
<b>COURSE CODE:</b>	ME-315	<b>ACADEMIC YEAR</b> :	2024-25
<b>CLASS :</b>	T.Y. B.Tech MECH	<b>NAME OF SUBJECT TEACHER:</b>	DRG

NO.	COURSE OUTCOMES
CO-1	Choose hydraulic & pneumatic systems for proper applications
CO-2	Explain construction & working of hydraulic & pneumatic system components/ devices
CO-3	Select appropriate actuators for a particular application
CO-4	Draw symbols of hydraulic & pneumatic system components/ devices
CO-5	Prepare hydraulic & pneumatic circuits for various applications
CO-6	Identify process flow on a hydraulics or pneumatic schematic



Savitribai Phule Shikshan Prasarak Mandal's

# SKN SINHGAD COLLEGE OF ENGINEERING

(Approved by AICTE, Recognized by DTE (MS) &  
Affiliated to Punyashlok Ahilyadevi Holkar, Solapur University, Solapur)

Accredited 'A' Grade by NAAC

At Post- Korti, Taluka-Pandharpur, District-Solapur, Pin-413304

## Department of Mechanical Engineering

<b>NAME OF COURSE:</b>	<b>METALLURGY</b>		
<b>COURSE CODE:</b>	ME-314	<b>ACADEMIC YEAR :</b>	2024-25
<b>CLASS :</b>	T.Y. B.Tech MECH	<b>NAME OF SUBJECT TEACHER:</b>	HSK

NO.	COURSE OUTCOMES
CO-1	Select ferrous alloys for engineering applications.
CO-2	Demonstrate the significance of heat treatment processes for engineering applications
CO-3	Apply powder metallurgy for manufacturing of products.
CO-4	Establish the characteristics of non-ferrous alloys
CO-5	Select suitable non-destructive testing method for products.
CO-6	Establish the characteristics of composite materials.



Savitribai Phule Shikshan Prasarak Mandal's

# SKN SINHGAD COLLEGE OF ENGINEERING

(Approved by AICTE, Recognized by DTE (MS) &  
Affiliated to Punyashlok Ahilyadevi Holkar, Solapur University, Solapur)

Accredited 'A' Grade by NAAC

At Post- Korti, Taluka-Pandharpur, District-Solapur, Pin-413304

## Department of Mechanical Engineering

<b>NAME OF COURSE:</b>	Metrology		
<b>COURSE CODE:</b>	ME-318	<b>ACADEMIC YEAR :</b>	2024-25
<b>CLASS :</b>	T.Y. B.Tech MECH	<b>NAME OF SUBJECT TEACHER:</b>	SRK

NO.	COURSE OUTCOMES
CO-1	Calibrate the instruments like vernier calliper and micrometer.
CO-2	Perform angle measurement using a sine bar
CO-3	Measure various gear tooth elements using gear tooth vernier caliper.
CO-4	Use dial indicator to check Lathe machine parameters like parallelism, squareness, alignment etc.
CO-5	Measure effective diameter of a screw thread
CO-6	Select adequate limits and fits for various applications.



Savitribai Phule Shikshan Prasarak Mandal's

# SKN SINHGAD COLLEGE OF ENGINEERING

(Approved by AICTE, Recognized by DTE (MS) &  
Affiliated to Punyashlok Ahilyadevi Holkar, Solapur University, Solapur)

Accredited 'A' Grade by NAAC

At Post- Korti, Taluka-Pandharpur, District-Solapur, Pin-413304

## Department of Mechanical Engineering

<b>NAME OF COURSE:</b>	Transmission System Design		
<b>COURSE CODE:</b>	ME-321	<b>ACADEMIC YEAR :</b>	2024-25
<b>CLASS :</b>	Third Year B.TECH. MECH	<b>NAME OF SUBJECT TEACHER:</b>	

### COURSE OUTCOMES:

NO.	COURSE OUTCOMES
CO-1	Design the spur gear considering criterion of bending and wear for particular application.
CO-2	Design the helical gear considering criterion of bending and wear as per required application.
CO-3	Design the Bevel gear considering criterion of bending and wear at particular location.
CO-4	Design the worm gear considering criterion of strength, wear and thermal as per requirement.
CO-5	Select the bearing from manufacturer's catalogue and to use for suitable application.
CO-6	Calculate of dimensions of clutches and brakes required for an application



Savitribai Phule Shikshan Prasarak Mandal's

# SKN SINHGAD COLLEGE OF ENGINEERING

(Approved by AICTE, Recognized by DTE (MS) &  
Affiliated to Punyashlok Ahilyadevi Holkar, Solapur University, Solapur)

Accredited 'A' Grade by NAAC

At Post- Korti, Taluka-Pandharpur, District-Solapur, Pin-413304

## Department of Mechanical Engineering

<b>NAME OF COURSE:</b>	<b>Instrumentation and Control Engineering</b>		
<b>COURSE CODE:</b>	<b>ME-322</b>	<b>ACADEMIC YEAR :</b>	2024-25
<b>CLASS :</b>	<b>Third Year B.TECH. MECH</b>	<b>NAME OF SUBJECT TEACHER:</b>	

### COURSE OUTCOMES:

NO.	COURSE OUTCOMES
CO-1	Analyse the generalised measurement system, identify various static & dynamic characteristics of instruments, make use of various measuring instruments for measurement Of temperature, pressure and vacuum.
CO-2	Use various measuring instruments for measurement of displacement, speed and flow.
CO-3	Use various measuring instruments for measurement of Force, torque and strain.
CO-4	Identify manual & automatic control systems, open and closed loop systems, various modes of control, to apply block diagram algebra to determine transfer function of a given control system
CO-5	Construct Root Locus for a given control system and comment on system stability.
CO-6	Construct Bode Plots for a given control system and comment on system stability.



Savitribai Phule Shikshan Prasarak Mandal's

# SKN SINHGAD COLLEGE OF ENGINEERING

(Approved by AICTE, Recognized by DTE (MS) &  
Affiliated to Punyashlok Ahilyadevi Holkar, Solapur University, Solapur)

Accredited 'A' Grade by NAAC

At Post- Korti, Taluka-Pandharpur, District-Solapur, Pin-413304

## Department of Mechanical Engineering

NAME OF COURSE:	Heat Transfer		
COURSE CODE:	ME-323	ACADEMIC YEAR :	2024-25
CLASS :	Third Year B.TECH. MECH	NAME OF SUBJECT TEACHER:	

### COURSE OUTCOMES:

NO.	COURSE OUTCOMES
CO-1	Compare and distinguish the Modes of heat transfer.
CO-2	Apply the laws of conduction heat transfer to the analysis
CO-3	Apply the different laws to the radiation heat transfer.
CO-4	Analyze heat transfer in case of natural & forced convection
CO-5	Explain heat transfer in boiling & condensation.
CO-6	Analyze the effectiveness, rating of heat exchangers.





Savitribai Phule Shikshan Prasarak Mandal's

# SKN SINHGAD COLLEGE OF ENGINEERING

(Approved by AICTE, Recognized by DTE (MS) &  
Affiliated to Punyashlok Ahilyadevi Holkar, Solapur University, Solapur)

Accredited 'A' Grade by NAAC

At Post- Korti, Taluka-Pandharpur, District-Solapur, Pin-413304

## Department of Mechanical Engineering

<b>NAME OF COURSE:</b>	<b>Industrial &amp; Quality Management</b>		
<b>COURSE CODE:</b>	<b>ME-324</b>	<b>ACADEMIC YEAR :</b>	2024-25
<b>CLASS :</b>	<b>Third Year B.TECH. MECH</b>	<b>NAME OF SUBJECT TEACHER:</b>	

### COURSE OUTCOMES:

<b>NO.</b>	<b>COURSE OUTCOMES</b>
<b>CO-1</b>	Understand basics of Industrial Management and their functions.
<b>CO-2</b>	Discuss and demonstrate management functions to various organisations.
<b>CO-3</b>	Explain and apply various quality control/statistical tools for industrial / organizational problems.
<b>CO-4</b>	Understand working of various departments in industry
<b>CO-5</b>	Understand various tools and techniques of total quality management used in industry



Savitribai Phule Shikshan Prasarak Mandal's

# SKN SINHGAD COLLEGE OF ENGINEERING

(Approved by AICTE, Recognized by DTE (MS) &  
Affiliated to Punyashlok Ahilyadevi Holkar, Solapur University, Solapur)

Accredited 'A' Grade by NAAC

At Post- Korti, Taluka-Pandharpur, District-Solapur, Pin-413304

## Department of Mechanical Engineering

<b>NAME OF COURSE:</b>	<b>Plastic Engineering (Professional Elective – IV)</b>		
<b>COURSE CODE:</b>	<b>ME-325 C</b>	<b>ACADEMIC YEAR :</b>	2024-25
<b>CLASS :</b>	<b>Third Year B.TECH. MECH</b>	<b>NAME OF SUBJECT TEACHER:</b>	

### COURSE OUTCOMES:

<b>NO.</b>	<b>COURSE OUTCOMES</b>
<b>CO-1</b>	Predict the structure and properties of different kind of plastic material and select the plastic materials for particular end user application.
<b>CO-2</b>	Know the processing of different plastic material based on the end user requirement..
<b>CO-3</b>	Design the plastic products
<b>CO-4</b>	Design compression and transfer molds
<b>CO-5</b>	Design Injection Moulds
<b>CO-6</b>	Design plastic injection mould for cooling



Savitribai Phule Shikshan Prasarak Mandal's

# SKN SINHGAD COLLEGE OF ENGINEERING

(Approved by AICTE, Recognized by DTE (MS) &  
Affiliated to Punyashlok Ahilyadevi Holkar, Solapur University, Solapur)

Accredited 'A' Grade by NAAC

At Post- Korti, Taluka-Pandharpur, District-Solapur, Pin-413304

## Department of Mechanical Engineering

NAME OF COURSE:	Advanced Programming Concepts – II (Java)		
COURSE CODE:	ME-327	ACADEMIC YEAR :	2024-25
CLASS :	Third Year B.TECH. MECH	NAME OF SUBJECT TEACHER:	

### COURSE OUTCOMES:

NO.	COURSE OUTCOMES
CO-1	Install JAVA IDE & develop simple applications using JAVA.
CO-2	Read from and write to text files and debug errors.
CO-3	Write Java code using advanced Java feature
CO-4	Write JAVA applet for windows based applications such as Word & Excel and JAVA scripts for CAD software such as CATIA & AutoCAD.
CO-5	Develop a small JRE based application or Applet for a mechanical engineering subject.
CO-6	Use the syntax and semantics of java programming language and basic concepts of OOP



Savitribai Phule Shikshan Prasarak Mandal's

# SKN SINHGAD COLLEGE OF ENGINEERING

(Approved by AICTE, Recognized by DTE (MS) &  
Affiliated to Punyashlok Ahilyadevi Holkar, Solapur University, Solapur)

Accredited 'A' Grade by NAAC

At Post- Korti, Taluka-Pandharpur, District-Solapur, Pin-413304

## Department of Mechanical Engineering

NAME OF COURSE:	Mechanical Workshop – III		
COURSE CODE:	ME-327	ACADEMIC YEAR :	2024-25
CLASS :	Third Year B.TECH. MECH	NAME OF SUBJECT TEACHER:	

### COURSE OUTCOMES:

NO.	COURSE OUTCOMES
CO-1	Understand the working of various machines
CO-2	Operate various machine tools.
CO-3	Perform various machining operations.
CO-4	Selection of operational and process parameters during machining operations.
CO-5	Manufacture a small assembly of components.
CO-6	Understand various attachments on various machines.



Savitribai Phule Shikshan Prasarak Mandal's

# SKN SINHGAD COLLEGE OF ENGINEERING

(Approved by AICTE, Recognized by DTE (MS) &  
Affiliated to Punyashlok Ahilyadevi Holkar, Solapur University, Solapur)

Accredited 'A' Grade by NAAC

At Post- Korti, Taluka-Pandharpur, District-Solapur, Pin-413304

## Department of Mechanical Engineering

<b>NAME OF COURSE:</b>	<b>Mini Project</b>		
<b>COURSE CODE:</b>	<b>ME-328</b>	<b>ACADEMIC YEAR :</b>	2024-25
<b>CLASS :</b>	<b>Third Year B.TECH. MECH</b>	<b>NAME OF SUBJECT TEACHER:</b>	

### COURSE OUTCOMES:

<b>NO.</b>	<b>COURSE OUTCOMES</b>
<b>CO-1</b>	Identify and analyze the potential technical problems.
<b>CO-2</b>	Carry out research about the selected topic
<b>CO-3</b>	Seek suggestions from subject experts
<b>CO-4</b>	Carry out planning and its execution with teammates
<b>CO-5</b>	Develop solution for a set of requirements for the problem identified.
<b>CO-6</b>	Write a report with all the contents in logical order and do Quality Presentation



Savitribai Phule Shikshan Prasarak Mandal's

# SKN SINHGAD COLLEGE OF ENGINEERING

(Approved by AICTE, Recognized by DTE (MS) &  
Affiliated to Punyashlok Ahilyadevi Holkar, Solapur University, Solapur)

Accredited 'A' Grade by NAAC

At Post- Korti, Taluka-Pandharpur, District-Solapur, Pin-413304

## Department of Mechanical Engineering

Outward No. : SKNSCOE/MECH /

Date:

<b>NAME OF COURSE:</b>	Automobile Engineering		
<b>COURSE CODE:</b>	ME-412	<b>ACADEMIC YEAR :</b>	2024-25
<b>CLASS :</b>	Final Year B.Tech MECH	<b>NAME OF SUBJECT TEACHER:</b>	PPK

NO.	COURSE OUTCOMES
CO-1	Demonstrate various systems in an automobile
CO-2	Describe importance and features of different elements like axle, differential, brakes, steering, suspension, wheel balancing, electrical systems etc
CO-3	Explain principle of operation, construction and applications of various sensors used in modern automobiles



Savitribai Phule Shikshan Prasarak Mandal's

# SKN SINHGAD COLLEGE OF ENGINEERING

(Approved by AICTE, Recognized by DTE (MS) &  
Affiliated to Punyashlok Ahilyadevi Holkar, Solapur University, Solapur)

Accredited 'A' Grade by NAAC

At Post- Korti, Taluka-Pandharpur, District-Solapur, Pin-413304

## Department of Mechanical Engineering

<b>NAME OF COURSE:</b>	Refrigeration and Air Conditioning		
<b>COURSE CODE:</b>	ME-411	<b>ACADEMIC YEAR :</b>	2024-25
<b>CLASS :</b>	Final Year B.Tech MECH	<b>NAME OF SUBJECT TEACHER:</b>	DRG

NO.	COURSE OUTCOMES
CO-1	Evaluate performance of various types of refrigeration systems.
CO-2	Select appropriate refrigerant considering necessary properties
CO-3	Use Psychrometric chart and tables and analyze psychrometric process for obtaining required air conditions
CO-4	Describe comfort chart and compare duct design methods.



Savitribai Phule Shikshan Prasarak Mandal's

# SKN SINHGAD COLLEGE OF ENGINEERING

(Approved by AICTE, Recognized by DTE (MS) &  
Affiliated to Punyashlok Ahilyadevi Holkar, Solapur University, Solapur)

Accredited 'A' Grade by NAAC

At Post- Korti, Taluka-Pandharpur, District-Solapur, Pin-413304

## Department of Mechanical Engineering

<b>NAME OF COURSE:</b>	Robotics and Artificial Intelligence		
<b>COURSE CODE:</b>	ME-413	<b>ACADEMIC YEAR :</b>	2024-25
<b>CLASS :</b>	Final Year B.Tech MECH	<b>NAME OF SUBJECT TEACHER:</b>	USG

NO.	COURSE OUTCOMES
CO-1	. Explain construction and applications of different types of robots
CO-2	. Explain types of sensors and actuators and end effectors used in the construction of robots.
CO-3	Solve simple forward and inverse kinematics problems for jointed arm robots
CO-4	Define Artificial Intelligence and explain concepts such as searching, reasoning and other associated terminology
CO-5	Explain fuzzy logic, ANN, GAs, and their applications





Savitribai Phule Shikshan Prasarak Mandal's

# SKN SINHGAD COLLEGE OF ENGINEERING

(Approved by AICTE, Recognized by DTE (MS) &  
Affiliated to Punyashlok Ahilyadevi Holkar, Solapur University, Solapur)

Accredited 'A' Grade by NAAC

At Post- Korti, Taluka-Pandharpur, District-Solapur, Pin-413304

## Department of Mechanical Engineering

<b>NAME OF COURSE:</b>	Production and Operations Management		
<b>COURSE CODE:</b>	ME-4141	<b>ACADEMIC YEAR</b> :	2024-25
<b>CLASS :</b>	Final Year B.Tech MECH	<b>NAME OF SUBJECT TEACHER:</b>	

NO.	COURSE OUTCOMES
CO-1	Explain importance, scope and need of production and operation management
CO-2	Evaluate the future demands using different forecasting methods
CO-3	Apply the concept of capacity planning and aggregate planning to various types of manufacturing systems
CO-4	Explain the importance of production planning and control, and inventory management in production process and its elements
CO-5	Apply the concept of plant maintenance
CO-6	To get acquainted with various advanced techniques such as Lean manufacturing ,value engineering, six sigma, Kanban, Supply chain management



Savitribai Phule Shikshan Prasarak Mandal's

# SKN SINHGAD COLLEGE OF ENGINEERING

(Approved by AICTE, Recognized by DTE (MS) &  
Affiliated to Punyashlok Ahilyadevi Holkar, Solapur University, Solapur)

Accredited 'A' Grade by NAAC

At Post- Korti, Taluka-Pandharpur, District-Solapur, Pin-413304

## Department of Mechanical Engineering

<b>NAME OF COURSE:</b>	Computational Fluid Dynamics		
<b>COURSE CODE:</b>	ME-4142	<b>ACADEMIC YEAR :</b>	2024-25
<b>CLASS :</b>	Final Year B.Tech MECH	<b>NAME OF SUBJECT TEACHER:</b>	

NO.	COURSE OUTCOMES
CO-1	Express numerical modeling and its role in the field of fluid flow and heat transfer.
CO-2	Apply the various discretization methods, solution procedures and turbulence modeling to solve flow and heat transfer problems
CO-3	Interpret the knowledge, capability of analyzing and solving any concept or problem associated with heat energy dynamics and utilization.
CO-4	Illustrate the working concepts of thermal engineering.
CO-5	Understand the issues that arise in the numerical solution of fluid flow equations



Savitribai Phule Shikshan Prasarak Mandal's

# SKN SINHGAD COLLEGE OF ENGINEERING

(Approved by AICTE, Recognized by DTE (MS) &  
Affiliated to Punyashlok Ahilyadevi Holkar, Solapur University, Solapur)

Accredited 'A' Grade by NAAC

At Post- Korti, Taluka-Pandharpur, District-Solapur, Pin-413304

## Department of Mechanical Engineering

<b>NAME OF COURSE:</b>	<b>Finite Element Method</b>		
<b>COURSE CODE:</b>	ME-4144	<b>ACADEMIC YEAR :</b>	2024-25
<b>CLASS :</b>	Final Year B.Tech MECH	<b>NAME OF SUBJECT TEACHER:</b>	

NO.	COURSE OUTCOMES
CO-1	Implement general procedure of FEA for structural and thermal problems.
CO-2	Write down shape functions for 1D, 2D and 3D elements.
CO-3	Solve 1D, 2D and 3D problems using FEA procedure
CO-4	Solve boundary value problems using variational calculus and weighted residuals methods.
CO-5	Analyze of 1D, 2D and 3D problems for static and dynamic loads in commercial or open source FEA software.



Savitribai Phule Shikshan Prasarak Mandal's

# SKN SINHGAD COLLEGE OF ENGINEERING

(Approved by AICTE, Recognized by DTE (MS) &  
Affiliated to Punyashlok Ahilyadevi Holkar, Solapur University, Solapur)

Accredited 'A' Grade by NAAC

At Post- Korti, Taluka-Pandharpur, District-Solapur, Pin-413304

## Department of Mechanical Engineering

<b>NAME OF COURSE:</b>	<b>Project Work Stage-I Seminar</b>		
<b>COURSE CODE:</b>	ME-416	<b>ACADEMIC YEAR :</b>	2024-25
<b>CLASS :</b>	Final Year B.Tech MECH	<b>NAME OF SUBJECT TEACHER:</b>	

NO.	COURSE OUTCOMES
CO-1	Identify the complex problem which is related to industry or society.
CO-2	Apply basic engineering knowledge for solving the identified problem
CO-3	Carry out state of the art related to the problem identified.
CO-4	Plan the work for solving the problem identified.



Savitribai Phule Shikshan Prasarak Mandal's

# SKN SINHGAD COLLEGE OF ENGINEERING

(Approved by AICTE, Recognized by DTE (MS) &  
Affiliated to Punyashlok Ahilyadevi Holkar, Solapur University, Solapur)

Accredited 'A' Grade by NAAC

At Post- Korti, Taluka-Pandharpur, District-Solapur, Pin-413304

## Department of Mechanical Engineering

<b>NAME OF COURSE:</b>	<b>Industrial Training</b>		
<b>COURSE CODE:</b>	ME-417	<b>ACADEMIC YEAR :</b>	2024-25
<b>CLASS :</b>	Final Year B.Tech MECH	<b>NAME OF SUBJECT TEACHER:</b>	

NO.	COURSE OUTCOMES
CO-1	Write technical report and give presentation.
CO-2	Correlate theoretical knowledge with the practical things in Industry
CO-3	Understand Responsibility and role of Engineer in Industry
CO-4	Understand the Industrial culture & Organizational setup



Savitribai Phule Shikshan Prasarak Mandal's

# SKN SINHGAD COLLEGE OF ENGINEERING

(Approved by AICTE, Recognized by DTE (MS) &  
Affiliated to Punyashlok Ahilyadevi Holkar, Solapur University, Solapur)

Accredited 'A' Grade by NAAC

At Post- Korti, Taluka-Pandharpur, District-Solapur, Pin-413304

## Department of Mechanical Engineering

<b>NAME OF COURSE:</b>	<b>Project Work Stage-II Seminar</b>		
<b>COURSE CODE:</b>	<b>ME-421</b>	<b>ACADEMIC YEAR :</b>	2024-25
<b>CLASS :</b>	<b>Final Year B.TECH. MECH</b>	<b>NAME OF SUBJECT TEACHER:</b>	

### COURSE OUTCOMES:

NO.	COURSE OUTCOMES
CO-1	Communicate with various stakeholders and perform the work in team
CO-2	Find out various dimensions of the various parts of the model.
CO-3	Analyze various types of stresses and failures which will exist in the model using suitable software.
CO-4	Select suitable manufacturing process to fabricate the model.
CO-5	Apply suitable design of experiment technique.
CO-6	Apply suitable statistical technique for analysis of results



Savitribai Phule Shikshan Prasarak Mandal's

# SKN SINHGAD COLLEGE OF ENGINEERING

(Approved by AICTE, Recognized by DTE (MS) &  
Affiliated to Punyashlok Ahilyadevi Holkar, Solapur University, Solapur)

Accredited 'A' Grade by NAAC

At Post- Korti, Taluka-Pandharpur, District-Solapur, Pin-413304

## Department of Mechanical Engineering

<b>NAME OF COURSE:</b>	<b>Project Work Stage-III Seminar</b>		
<b>COURSE CODE:</b>	<b>ME-422</b>	<b>ACADEMIC YEAR :</b>	2024-25
<b>CLASS :</b>	<b>Final Year B.TECH. MECH</b>	<b>NAME OF SUBJECT TEACHER:</b>	

### COURSE OUTCOMES:

NO.	COURSE OUTCOMES
CO-1	Students should complete online audit course on statistical tools used in research with case study.
CO-2	Carry out analysis of results by employing suitable statistical technique.
CO-3	Interpretation/Analysis of the results
CO-4	Report writing and preparing presentation
CO-5	Students should write a technical paper and present it in the conference/journal.
CO-6	Students should be able to commercialize their project in the society.



Savitribai Phule Shikshan Prasarak Mandal's

# SKN SINHGAD COLLEGE OF ENGINEERING

(Approved by AICTE, Recognized by DTE (MS) &  
Affiliated to Punyashlok Ahilyadevi Holkar, Solapur University, Solapur)

Accredited 'A' Grade by NAAC

At Post- Korti, Taluka-Pandharpur, District-Solapur, Pin-413304

## Department of Mechanical Engineering

<b>NAME OF COURSE:</b>	<b>Project Work (Report Submission &amp; Presentation)</b>		
<b>COURSE CODE:</b>	<b>ME-423</b>	<b>ACADEMIC YEAR :</b>	2024-25
<b>CLASS :</b>	<b>Final Year B.TECH. MECH</b>	<b>NAME OF SUBJECT TEACHER:</b>	

### COURSE OUTCOMES:

NO.	COURSE OUTCOMES
CO-1	Students should submit the project report in the prescribed format.
CO-2	Students should prepare the power point presentation and present it in front of examiners.