



NILASAILA INSTITUTE OF SCIENCE & TECHNOLOGY
SERGARH-756060, BALASORE (ODISHA)
(Approved by AICTE& affiliated to SCTE&VT, Odisha)



LESSON PLAN

SUBJECT: TH -1 (Production Technology)


Name Of The Faculty: - Er. Subhrajyoti Rout
Branch :-Automobile Engineering
Session :- 2024-25

Semester:-3rd
Examination :- 2024(w)

CHAPTER WISE DISTRIBUTION OF PERIODS

| Sl.No. | Name of the chapter as per the Syllabus | No. of Periods as per the Syllabus | No. of periods actually needed |
|--------|---|------------------------------------|--------------------------------|
| 1 | Metal Forming Processes | 07 | 07 |
| 2 | Welding | 16 | 16 |
| 3 | Casting | 16 | 16 |
| 4 | Powder Metallurgy | 07 | 07 |
| 5 | Press Work | 07 | 07 |
| 6 | Jigs and fixtures | 07 | 07 |
| TOTAL | | 60 | 60 |


Sign of Faculty 29/06/24


Sign of H.O.D 29/06/24

| Discipline: MECHANICAL ENGG. | Semester: 3 rd | Name of the Teaching Faculty :Er. Subhrajyoti Rout | |
|------------------------------------|------------------------------|---|-----------------------|
| | | Session : 2024-25 | Examination : 2024(w) |
| Week | Class Day | Topics to be covered | |
| 1 st | 1 st | 1.1 Extrusion :Definition &Classification | |
| | 2 nd | 1.2Explainindirect,indirect and impact extrusion process. | |
| | 3 rd | 1.2Explainindirect,indirect and impact extrusion process. | |
| | 4 th | 1.3 Define rolling .Classify it | |
| 2 nd | 1 st | 1.3 Define rolling .Classify it | |
| | 2 nd | 1.4Differentiatebetween cold rolling and hot rolling process. | |
| | 3 rd | 1.5Listthedifferent types of rolling mills used in Rolling process. | |
| | 4 th | 2.1Defineweldingandclassifyvariouswelding process. | |
| 3 rd | 1 st | 2.2Explainfluxesusedin welding. | |
| | 2 nd | 2.3ExplainOxy-acetyleneweldingprocess. | |
| | 3 rd | 2.4ExplainvarioustypesofflamesusedinOxy-acetylenewelding process | |
| | 4 th | 2.4ExplainvarioustypesofflamesusedinOxy-acetylenewelding process | |
| 4 th | 1 st | 2.5ExplainArcwelding process. | |
| | 2 nd | 2.5ExplainArcwelding process. | |
| | 3 rd | 2.5ExplainArcwelding process. | |
| | 4 th | 2.6 Specify arc welding electrodes. | |
| 5 th | 1 st | 2.7Defineresistanceweldingandclassifyit. | |
| | 2 nd | 2.7Defineresistanceweldingandclassifyit. | |
| | 3 rd | 2.8Describevariousresistanceweldingprocessessuchasbuttwelding,spot welding, flash welding, projection welding and seam welding. | |
| | 4 th | 2.8Describevariousresistanceweldingprocessessuchasbuttwelding,spot welding, flash welding, projection welding and seam welding. | |
| 6 th | 1 st | 2.8Describevariousresistanceweldingprocessessuchasbuttwelding,spot welding, flash welding, projection welding and seam welding. | |
| | 2 nd | 2.9 Explain TIG and MIG welding process | |
| | 3 rd | 2.9 Explain TIG and MIG welding process | |
| | 4 th | 2.10Statedifferentweldingdefectswith causes and remedies. | |
| 7 th | 1 st | 3.1Definecastingandclassifythevariouscastingprocesses. | |
| | 2 nd | 3.1Definecastingandclassifythevariouscastingprocesses. | |
| | 3 rd | 3.2Explaintheprocedure of Sand mould casting | |
| | 4 th | 3.2Explaintheprocedure of Sand mould casting | |

| Week | Class Day | Topics to be covered |
|------------------|-----------------|---|
| 8 th | 1 st | 3.3 Explain different type of molding sands with their composition and properties. |
| | 2 nd | 3.3 Explain different types of molding sands with their composition and properties.. |
| | 3 rd | 3.4 Classify different pattern and state various pattern allowances |
| | 4 th | 3.4 Classify different pattern and state various pattern allowances |
| 9 th | 1 st | 3.5 Classify core |
| | 2 nd | 3.7 Explain die casting method. |
| | 3 rd | 3.7 Explain die casting method. |
| | 4 th | 3.8 Explain centrifugal castings such as true centrifugal casting, |
| 10 th | 1 st | 3.8 Explain centrifugal castings such as true centrifugal casting, centrifuging with advantages, limitation and area of application |
| | 2 nd | 3.9 Explain various casting defects with their causes and remedies. |
| | 3 rd | INTERNAL ASSESMENT |
| | 4 th | INTERNAL ASSESMENT |
| 11 th | 1 st | 4.1 Define powder metallurgy process |
| | 2 nd | 4.2 State advantages of powder metallurgy technology technique |
| | 3 rd | 4.3 Describe the methods of producing components by powder metallurgy technique |
| | 4 th | 4.4 Explain sintering. |
| 12 th | 1 st | 4.4 Explain sintering. |
| | 2 nd | 4.5 Economics of powder metallurgy. |
| | 3 rd | 4.6 Describe press works, blanking, piercing and trimming. |
| | 4 th | 4.6 Describe press works, blanking, piercing and trimming. |
| 13 th | 1 st | 5.3 Explain simple, Compound & Progressive dies |
| | 2 nd | 5.3 Explain simple, Compound & Progressive dies |
| | 3 rd | 5.4 Describe the various advantages & disadvantages of above dies |
| | 4 th | 5.4 Describe the various advantages & disadvantages of above dies |
| 14 th | 1 st | 6.1 Define jigs and fixtures |
| | 2 nd | 6.2 State advantages of using jigs and fixtures |
| | 3 rd | 6.2 State advantages of using jigs and fixtures |
| | 4 th | 6.3 State the principle of locations |

| Week | Class Day | Topics to be covered |
|------------------|-----------------|--|
| 15 th | 1 st | 6.4 Describe the methods of location with respect to 3-2-1 point location of rectangular jig |
| | 2 nd | 6.4 Describe the methods of location with respect to 3-2-1 point location of rectangular jig |
| | 3 rd | 6.5 List various types of jig and fixtures |
| | 4 th | 6.5 List various types of jig and fixtures |

Sign Of Faculty

Sign Of H.O.D.