

SLO Presentation

PMT

Date: 09/11/2019

TECHNOLOGY
PMT
Composite Inspection--Degree <ul style="list-style-type: none">• Student demonstrate safe work habits around plastics machinery.• Student utilize non-destructive procedures to inspect the quality of a manufactured part.• Students communicate clear technical instructions.• Students differentiate between the various types of plastic.• Students identify by visual inspection the quality of a manufactured part.• Students use percentages to mix resins, fillers, and colors.• Students use physical testing to validate the strength of a manufactured part.• Students utilize ratios and fractions to mix materials.
Composite Manufacturing--Degree <ul style="list-style-type: none">• Student demonstrate safe work habits around plastics machinery.• Students communicate clear technical instructions.• Students differentiate between the various types of plastic.• Students employ shop drawings to produce plastic parts to drawing specifications.• Students identify the specific applications of plastic resin systems.• Students recognize the process for manufacturing various plastic parts.• Students use percentages to mix resins, fillers, and colors.• Students utilize ratios and fractions to mix materials.
Plastics Manufacturing--Degree <ul style="list-style-type: none">• Student demonstrate safe work habits around plastics machinery.• Student recognize various types of equipment used for manufacturing plastic parts.• Students communicate clear technical instructions.• Students differentiate between the various types of plastic.• Students fabricate plastic components and utilize finishing techniques.• Students identify different plastic manufacturing processes.• Students use percentages to mix resins, fillers, and colors.• Students utilize ratios and fractions to mix materials.
Plastics/Composite Tool Design--Degree <ul style="list-style-type: none">• Student demonstrate safe work habits around plastics machinery.• Students communicate clear technical instructions.• Students differentiate between the various types of plastic.• Students identify the strength and integrity of a mold through visual and physical inspection.• Students recognize the production process for various molds.• Students recognize the temperature range of the plastics material for molding.• Students use computer generated engineering data to analyze proper tooling techniques.• Students use percentages to mix resins, fillers, and colors.

- Students utilize ratios and fractions to mix materials.

Plastics/Composites Manufacturing Technology--Cert

- Students communicate clear technical instructions.
- Students use percentages to mix resins, fillers, and colors.
- Students utilize ratios and fractions to mix materials.
- Student demonstrate safe work habits around plastics machinery.
- Students differentiate between the various types of plastic.

CSLO

PMT51 - Composites Fabrication

- Students will be able to identify (2) methods for fabricating a composite part during examination.
- Students will be able to describe safe handling procedures or composite fabrication during examination.
- Students will be able to distinguish between various composite reinforcement materials utilized in fabrication during examination.
- Students recognize composite structure materials utilized in fabrication during examination.

PMT53 - Composites Repair

- Students will be able to recognize two (2) typical composite repair methods during examination.
- Students will be able to distinguish between three (3) composite reinforcement materials typically utilized in composite repair methods during examination.
- Students will be able to describe safe handling procedures of two (2) common tools utilized during composite repair methods during examination.
- Students will be able to recognize two (2) composite honeycomb sandwich materials typically utilized in repair of flat panels during examination.

PMT59 - Injection Molding I

- Students will be able to produce a part following industry standardized practices during examination.
- Students will be able to distinguish between (3) major thermoplastic materials used in industry during examination.
- Students will be able to visually inspect (3) parts for defects such as shrinkage, warp and inclusions during evaluation.
- Students will be able to describe methods to increase manufacturing production rate in molding during examination.

PMT61 - Fiberglass Technology

- Students will be able to identify four (4) types of fiberglass materials during examination.
- Students will be able to perform the Barcol hardness test on four (4) flat fiberglass panels during examination.
- Students will be able to identify (3) fiberglass fabrication methods during examination.

PMT63L - Specialty Plastics Lab

- Students will be able to plan and create a polymer-based product during examination.
- Students will be able to describe safe shop practices of equipment and materials handling during examination.
- Students will be able to demonstrate acquired skills in the area of a plastic manufacturing method during examination.

PMT67 - Fiberglass Production

- Students will be able to describe how to produce a part following industry standardized practices during examination.
- Student will be able to distinguish between (3) major reinforcement materials used in industry during examination.
- Student will be able to analyze resin systems by performing Gel Time Test during examination.
- Students will be able to describe methods to increase manufacturing production rate in laminating during examination.

PMT68 - Plastic Materials and Process

- Students will be able to identify (3) mechanical testing methods to determine properties of thermoplastic, thermoset, and elastomeric plastics during examination.
- Students will be able to identify (4) standard processes used for molding/fabricating plastics during examination.
- Students will be able to identify and explain the role ASTM has on the testing of plastic materials during examination.

- Students to identify and explain (2) major testing methods utilized on plastic materials for processing good parts during examination.

PMT70 - Composites Technology

- Students will be able to produce a composite part with (2) composite materials while using safe material handling techniques during examination.
- Students will be able to identify (2) methods for producing a composite part during examination.
- Students will be able to describe (2) major safe handling procedures to produce a composite fabricated part during examination.
- Students will be able to distinguish and identify (2) composite cure processing methods utilized in fabrication during examination.

PMT72 - Tooling for Plastics

- Students will be able to identify (3) materials and processes used to create standard types of tooling for plastics during examination.
- Students will be able to identify (2) tooling methods and safe handling practices used in the plastic industry during examination.
- Students will be able to identify (2) methods for producing a part for tooling during examination.
- Students will be able to recognize (3) typical hand tools utilized in the making of tools/molds during examination.

PMT76 - Vacuum Infusion Process (VIP)/Resin Transfer Molding (RTM)

- Students will be able to demonstrate the basic knowledge in RTM fabrication techniques by identifying four (4) materials utilized in producing an infusion molded part during examination.
- Students will be able to demonstrate competency in safe handling of two (2) materials utilized in the RTM process during examination.
- Students will be able to identify two (2) tooling methods and safe handling practices used in the VIP and RTM industry during examination.
- Students will be able to identify and differentiate the processing method utilized to mold four (4) different plastic parts during examination.

PMT100 - Plastics Technology

- Students will be able to identify (4) basic plastics processing methods during examination.
- Students will be able to demonstrate proficiency at identifying (2) plastic material and part recycling methods found in industry today during examination.
- Students will be able to demonstrate proficiency in identifying (4) plastic materials during examination.
- Students will be able to identify and differentiate between thermoplastics and thermosetting materials during examination.

PMT221 - Modelmaking

- Students will be able to identify (4) basic modelmaking materials for producing models during examination.
- Students will be able to identify and differentiate between thermoplastics and thermosetting modelmaking materials during examination.
- Students will be able to identify safe material handling techniques and industrial modelmaking practices during examination.
- Students will be able to select (2) modelmaking methods during examination.