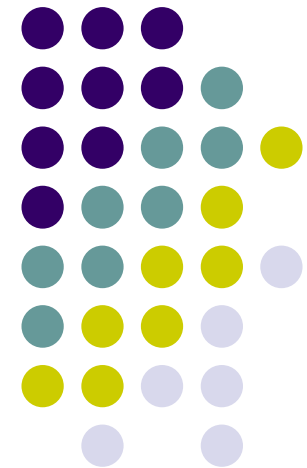


EIA Training Introduction

Module Code : TM1112

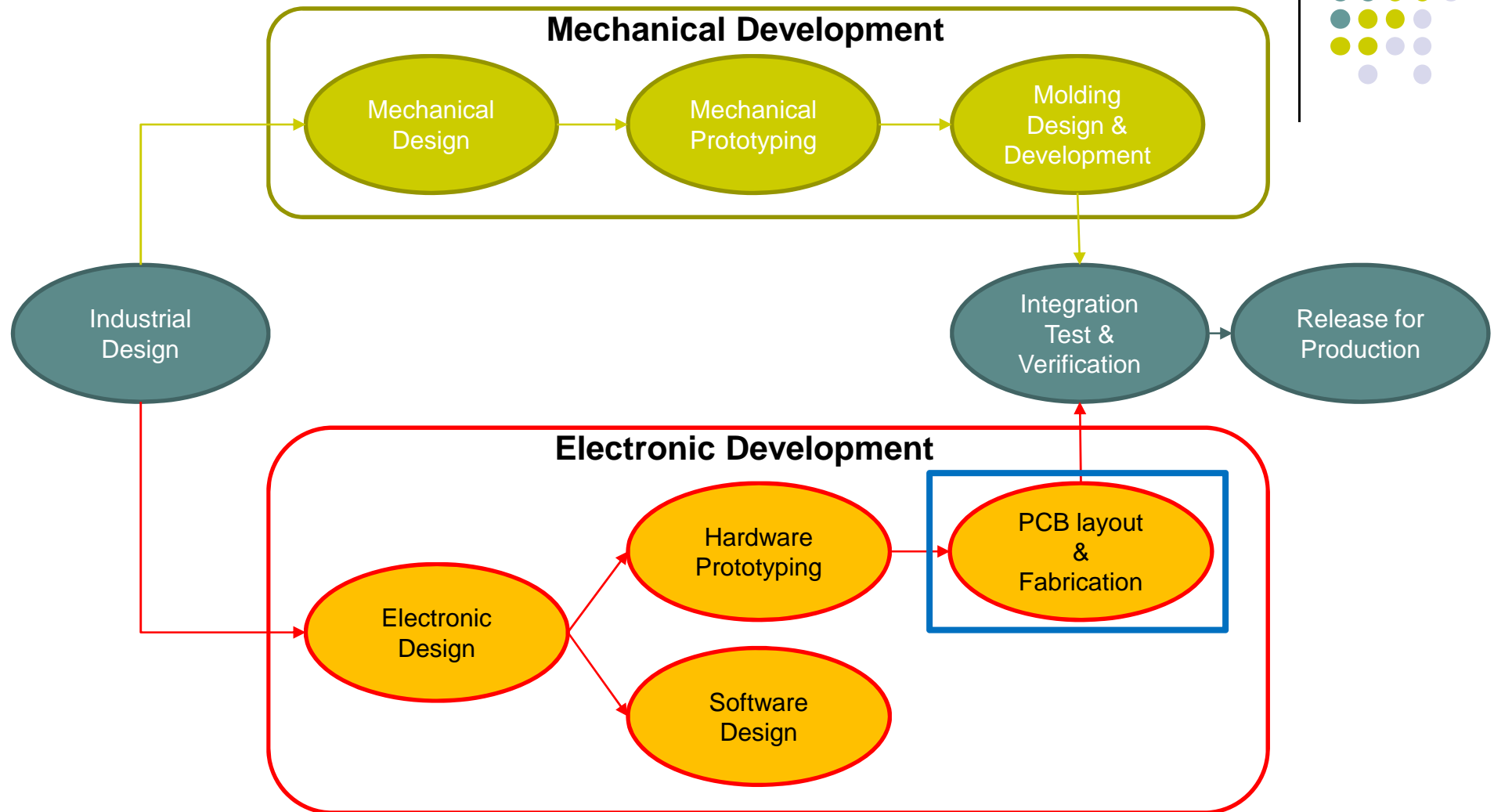
**Module Title : Electronic Circuit
Design Practice**



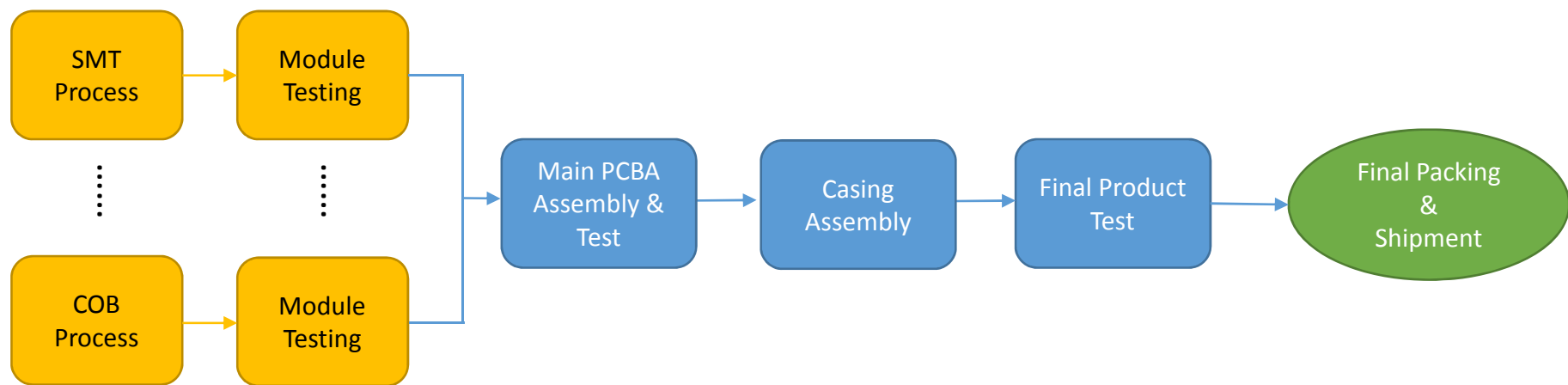


Contact

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Product Development Flow



Product Production Flow

Module Code : TM1112

Module Title : Electronic Circuit Design Practice



Objectives:

This module aims at developing students' understanding on the

- Apply electronic tools and equipment for electronic testing
- Design electronic circuit on printed wiring board with EDA tool
- Fabricate prototype electronic circuit on printed wiring board for experimentation, demonstration and development purposes

Module Code : TM1112

Module Title : Electronic Circuit Design Practice



Teaching and Learning Approach :

The module will be conducted on project basis with theoretical supplement. The general principles, techniques and related technologies will be presented to students.

Students will learn the required skills through practical exercises and case studies.

Their technical skills will be strengthen through working on the individual projects. In a simulated industrial environment, it helps students to integrate their knowledge and techniques, and apply it in the real situation, and thus their problem solving skills will be developed and improved.

Module Code : TM1112

Module Title : Electronic Circuit Design Practice

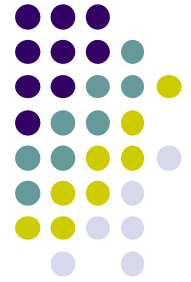


Lesson summary:

Lesson	Objective
1	Introduction to EDA and PADS Logic software
2	Finish schematic capture
3	Introduction to PADS Layout
4	PCB Layout Design Practice
5	Finish PCB layout. Introduction to CAM output.
6	CAM Output. Exit test.

Module Code : TM1112

Module Title : Electronic Circuit Design Practice

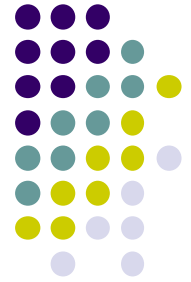


Lesson 1:

- Introduction to electronic design automation (EDA) software
- Explain simple design flow from schematic capture to PADS Logic
- Practice on PADS Logic basic operation and draw the assignment circuit diagram. (TM1112 music box)

Module Code : TM1112

Module Title : Electronic Circuit Design Practice



Lesson 2:

- Introduction to parts library and design rule entry
- Practice on create part type
- Link up the part library and generate the netlist for PCB layout

Module Code : TM1112

Module Title : Electronic Circuit Design Practice



Lesson 3:

- Introduction to PADS Layout
- Practice on PCB Decal
- Create board outline, import netlist and prepare for component placement.

Module Code : TM1112

Module Title : Electronic Circuit Design Practice



Lesson 4:

- PCB Layout guideline, component placement
- Traces Routing
- Practice on PADS Layout, draw the assignment PCB layout

Module Code : TM1112

Module Title : Electronic Circuit Design Practice



Lesson 5

- Practice on PADS Layout, draw the assignment PCB layout. (continue)
- Introduction to CAM output files, NC drilling and gerber files
- Gerber file printing demonstration
- CAM output Practice

Module Code : TM1112

Module Title : Electronic Circuit Design Practice



Lesson 6:

- CAM output Practice (continue)
- NC Drill demonstration (optional)
- Finalise design and submit your assignment
- Exit test

Module Code : TM1112

Module Title : Electronic Workshop Practice



Classwork submission :

1. Schematic file
2. PCB layout file
3. A set of Gerber file and Excellon file

Module Code : TM1112

Module Title : Electronic Workshop Practice



Technical Writing:

1. A professional engineer should see report writing as a routine task during the training. Students need to develop the skills associated with report writing to communicate effectively to meet the demand of the public or their future employment.
2. It can include matters of technical importance such as procedures, processes, industrial safety, machine tools and equipment, factors affecting the choice of processes and design.

Module Code : TM1112

Module Title : Electronic Workshop Practice



Dishonesty/Plagiarism

- Dishonesty and plagiarism in examination or coursework is a serious misconduct.
- Penalties ranging from disqualification and expulsion may be imposed in a proven case.
- All assessments should be your own work.
- Your training will be failed for any copying or being copied on assignments, workshop reports or logbooks.

Module Code : TM1112

Module Title : Electronic Workshop Practice



Method of Assessment :

- Assignments 30%
 - Test 30%
 - Report 40%
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Continuous Assessment 100%.