

Engineering Design:
A Creative Activity that Requires Planning and Execution
(CARPE)

IC Design Project Flow:

Project Start

Needs and Problem Analysis, Criteria for Success

Concept Development and Concept Design

Study and Research

Requirements Analysis

Project Plan and Preliminary Floor Plan

Requirements Specification, Test Plan

Preliminary Design for System Specification

Initial Floor Plan

System Design – System Partitions or Decomposition

System Capture - Block Diagram, maybe simulations

Module Specifications

Module Schematics

Module Layouts

Revise Floorplan

Verification of Modules

Integration of Modules into System Based Schematic (with Symbols)

Integration of Module layouts into Final Floorplan

Final Verification

Tape Out and Foundry Submission Procedures

Preliminary Design is done during a Requirements Analysis.

System Design → Minor interplay between Behavior and Structure

Detail Design → Major interplay between Behavior and Structure.