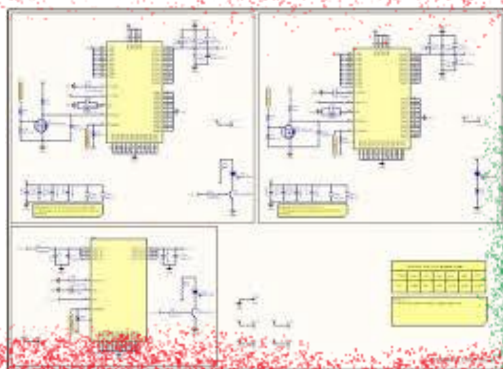


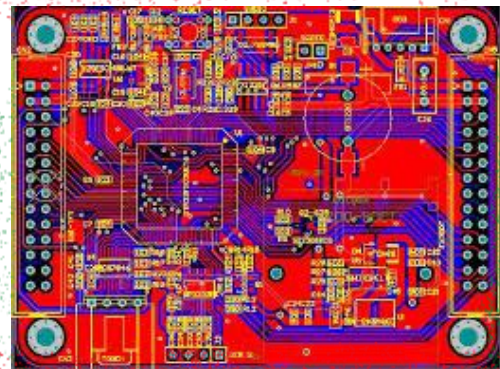
# Printed Circuit Board Assignment

# Process Flow



**Schematic**

**Design Review**



**Layout**

**Layout Review**

Ref	Part	Quantity	Description	Supplier	Notes
1	100-01	1	100-01	100-01	
2	100-02	1	100-02	100-02	
3	100-03	1	100-03	100-03	
4	100-04	1	100-04	100-04	
5	100-05	1	100-05	100-05	
6	100-06	1	100-06	100-06	
7	100-07	1	100-07	100-07	
8	100-08	1	100-08	100-08	
9	100-09	1	100-09	100-09	
10	100-10	1	100-10	100-10	
11	100-11	1	100-11	100-11	
12	100-12	1	100-12	100-12	
13	100-13	1	100-13	100-13	
14	100-14	1	100-14	100-14	
15	100-15	1	100-15	100-15	
16	100-16	1	100-16	100-16	
17	100-17	1	100-17	100-17	
18	100-18	1	100-18	100-18	
19	100-19	1	100-19	100-19	
20	100-20	1	100-20	100-20	
21	100-21	1	100-21	100-21	
22	100-22	1	100-22	100-22	
23	100-23	1	100-23	100-23	
24	100-24	1	100-24	100-24	
25	100-25	1	100-25	100-25	
26	100-26	1	100-26	100-26	
27	100-27	1	100-27	100-27	
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96	100-96	1	100-96	100-96	
97	100-97	1	100-97	100-97	
98	100-98	1	100-98	100-98	
99	100-99	1	100-99	100-99	
100	100-100	1	100-100	100-100	

**Bill of Material (BOM)**

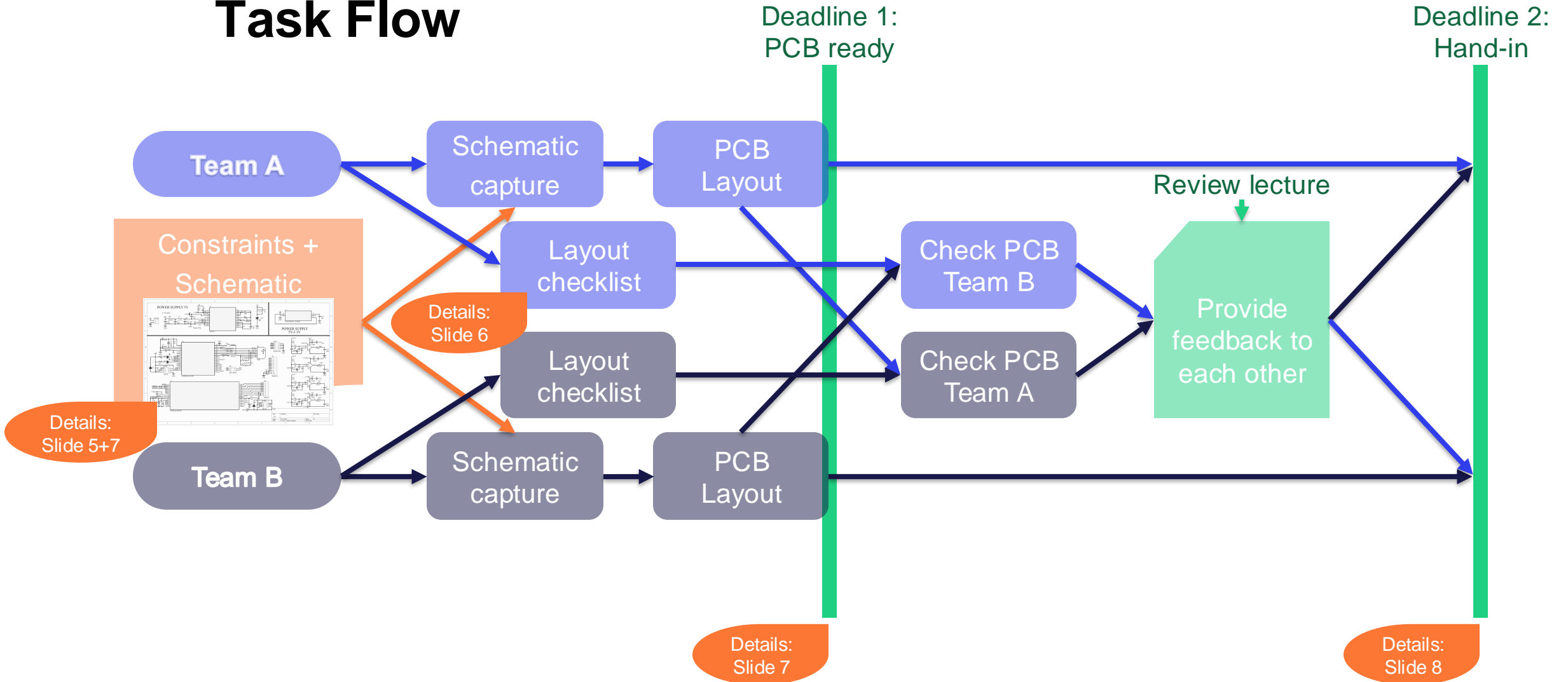


**PCB Order**

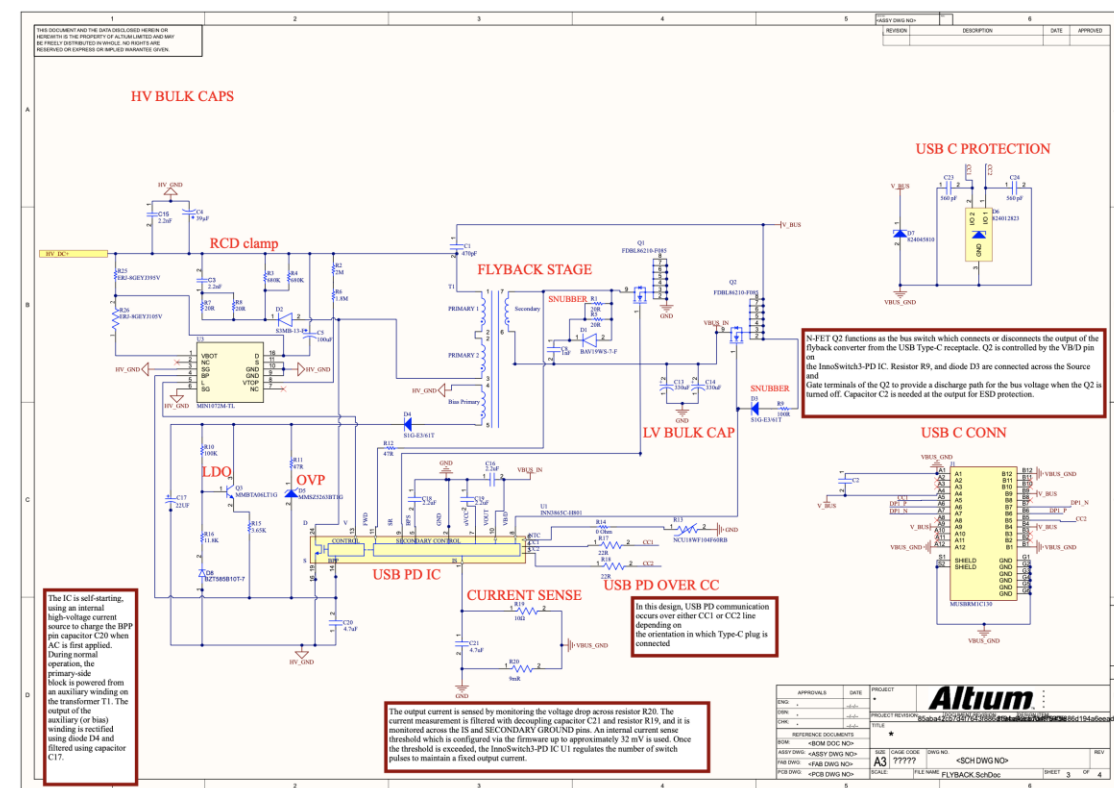
input to assignment

part of assignment

# Task Flow



## Power Supply



# Layout Review

- Make a “PCB Design Review Checklist” (inspiration on the internet) and review another group
- Major topics:
  - Part placement
  - Routing (signal / power; analog/digital)
  - Mechanical (dimensions / mounting)
  - Electromagnetic compatibility
  - Production
  - Bill of Material
  - ...

# Design Constraints

- Analyze and describe the different functions of the circuit
- Put a layout strategy in place, add necessary filter components for electromagnetic compatibility
- Design for Electromagnetic Compatibility (EMC) by shortening loops and avoiding coupling.
- Use passive components with SMD footprints or packages
- Maximum 4 layers PCB
- Minimize size of the PCB, and height of PCB (if 3D model of components are available)
- Minimize the price of the PCB  
(here's an online calculator: <https://www.pcbway.com/orderonline.aspx> )
- Prepare for mounting in a chassis

# Hand-in

- Description (max 1 page):
  - Address the design constraints
- Layout review (max 2 pages):
  - Attach the PCB design review, that you got from your reviewer group (not part of your evaluation)
  - Create a to-do list with necessary improvements based on this checklist
- Design files (1 page per layer):
  - Component placement (for the used layers) including silkscreen annotation
  - Routing layers
  - Bill of material incl. values, packages, price, voltage/power ratings, etc.