

Senior Design Project
T307
24 November 2020
Spring Project Plan

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SECTION I: Intro

The workflow provided in the next section takes some of the key concepts learned from the Work Breakdown Structure completed earlier in the semester. Since next semester's plan is still abstract due to the small amount of information provided, it voids the task descriptions and instead focuses on a well-designed balance for effective teamwork.

It is important to note that all course deliverables are planned and expected to be delivered one week ahead of the due dates. In addition, there are the following encodings embedded in the table for organization purposes (Workflow table, Gantt, and Microsoft Teams Tasks):

- “Assignment” encoding: **Course Deliverables (D)** are highlighted in **Blue** and the **Team Implementation Tasks (I)** are highlighted in **Red** as main colors. Additionally, **PARALLEL** workflows where multiple sub-teams work at the same time are highlighted in **Green** and **LINEAR** workflows where everyone works together are highlighted in **Yellow** as sub-colors.
- “Due Date” encoding: **Solid Deadlines** (must have finished) are **Bold** and *Soft Deadlines* (open for discussion, sharing, or team choices) are *Italicized*.
- “Flow” encoding: I/D(“Assignment” Encoding)_P(Week #)_ (Team #) is equivalent to a **PARALLEL** workflow and I/D(“Assignment” Encoding)_L(Week #) is equivalent to a **LINEAR** workflow.

SECTION II: Workflow

Table I: Workflow

Assignment	Working Period	Length (Weeks)	Due Date	Due Week #	Flow
Research In-Out Software	01/06-01/10	5 or 7	Friday January 8	1	I_P1_1
Dr. Brey's Tools Request	01/06-01/08	3 or 7	Friday January 8	1	I_P1_2
Pluto Testbench Set-Up-1 (1 SDR)	01/11-01/17	1	Friday January 17	2	I_P2_1
Hack RF Testbench Set-Up-1 (1 SDR)	01/11-01/17	1	Friday January 17	2	I_P2_2
Updated Risk Assessment	01/11-01/22	2	Friday January 22	3	D_P1_1
Testbench Set-Up-2 (2 SDRs)	01/18-01/24	1	Friday January 22	3	I_P3_1
Design Review 1	01/18-01/29	2	Friday January 29	4	D_P1_2
Trigger Implementation Research (Software)	01/25-01/29	1	Friday January 29	4	I_P4_1
Trigger Implementation Research (Hardware)	01/25-01/29	1	Friday January 29	4	I_P4_2
Trigger Implementation Research (Combination)	01/25-01/29	1	Friday January 29	4	I_P4_3
Implement Trigger-1 (1 SDR)	02/01-02/14	2	Friday February 12	5 or 6	I_L5 or I_L6
Implement Trigger-2 (2 SDR)	02/16-02/21	6 or 7	Friday February 19	7	I_P7_1
DC Power Supply Research	02/22-02/28	1	Friday February 26	8	I_P7_2
Testing and Validation	02/16-02/26	2	Friday February 26	8	D_P2_1
Assemble Initial Complete Design (ICD)	03/01-03/07	1	Friday March 5	9	I_L9
Design Review 2	02/22-03/05	2	Friday March 5	9	D_P2_2
Circular Testing 1 (ICD)	03/08-03/14	1	Friday March 12	10	I_L10
Circular Testing 2 (ICD)	03/15-03/21	1	Friday March 19	11	I_P11_1
CAD 3D Model Generation	03/15-03/21	1	Friday March 19	11	I_P11_2
Scholarship in Practice	03/08-03/19	2	Friday March 19	11	D_L3_1
Circular Testing 3 (ICD)	03/22-03/28	1	Friday March 26	12	I_P12_1
Final 3D Model to Machine Shop	03/22-03/28	1	Friday March 26	12	I_P12_2
Test ICD with MagLab Equipment	03/22-03/28	1	Friday March 26	12	I_P12_3
Assemble Final Complete Design (FCD)	03/29-04/04	1	Friday April 2	13	I_L13
Operation Manual	03/22-04/02	2	Friday April 2	13	D_P4_1
Test FCD with MagLab Equipment	04/05-04/11	1	Friday April 9	14	I_P14_1
Final Demo Preparation	04/05-04/11	1	Friday April 9	14	I_P14_2
Final Presentation	04/05-04/09	2	Friday April 9	14	D_P4_2
Prototype Demonstration	04/05-04/12	1	Monday April 12	15	D_P4_3
Engineering Design Day	04/05-04/11	1	TBD	15	D_L15
Final Report	03/29-04/19	3	Monday April 19	16	D_P4_ALL
Final Exams	04/19-04/23	1	N/A	16	D_L16
Graduation Day	04/19-04/23	1	Friday April 23	16	D_L16

Table 1: Workflow elements contained in this figure

SECTION III: Gantt Chart

The following is for overview purposes of the Spring Project Plan created, using TeamGantt (free online software).

Figure I: Gantt Chart (January)

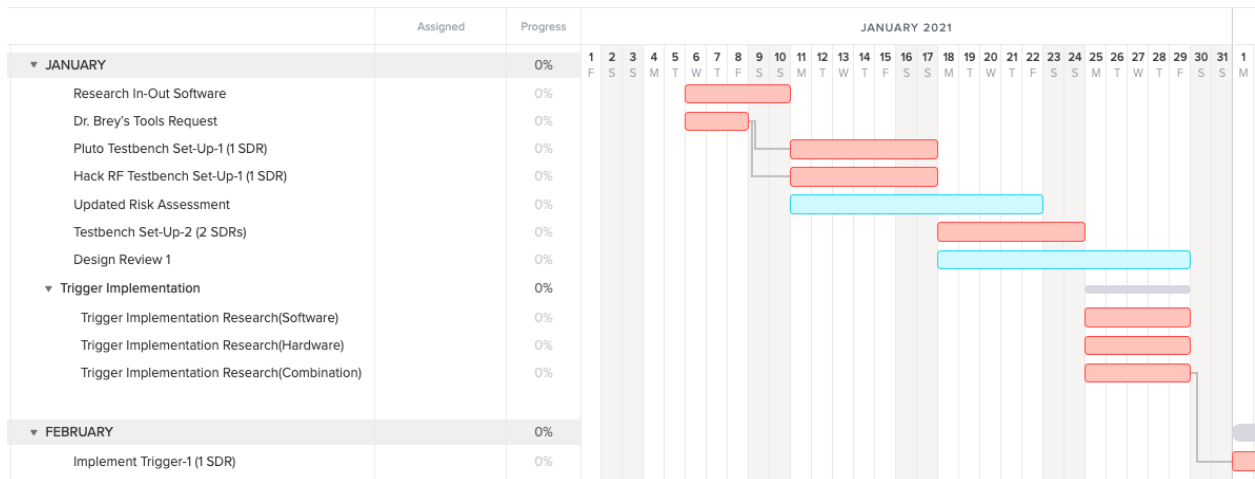


Figure 2: Gantt Chart elements contained in this figure

Figure II: Gantt Chart (February)

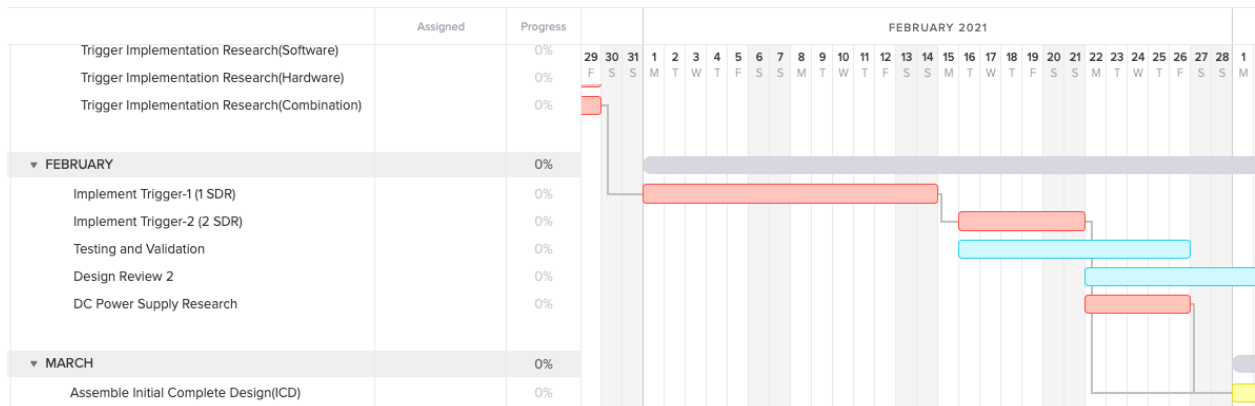


Figure 2: Gantt Chart elements contained in this figure

Figure III: Gantt Chart (March)

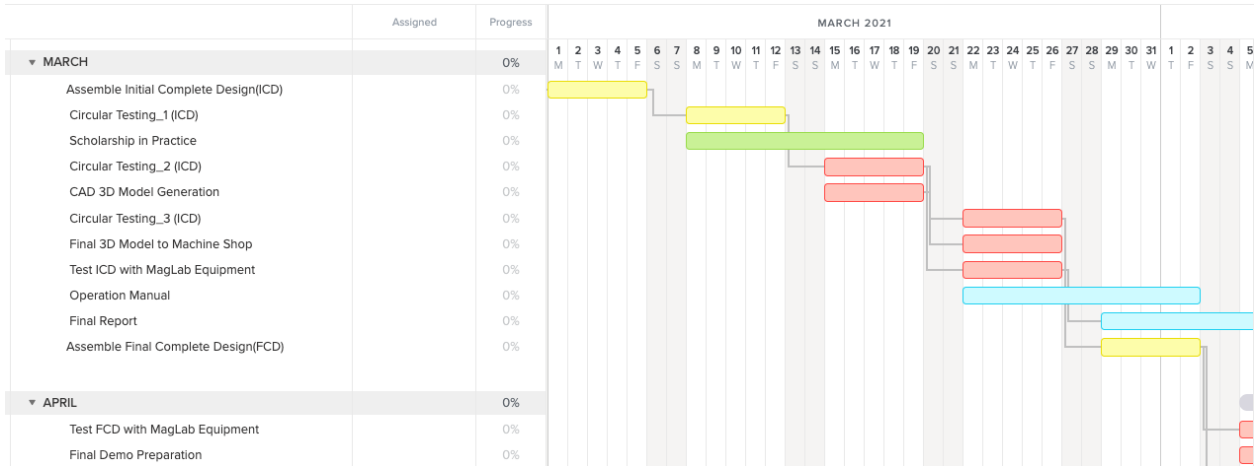


Figure 3: Gantt Chart elements contained in this figure

Figure IV: Gantt Chart (April)

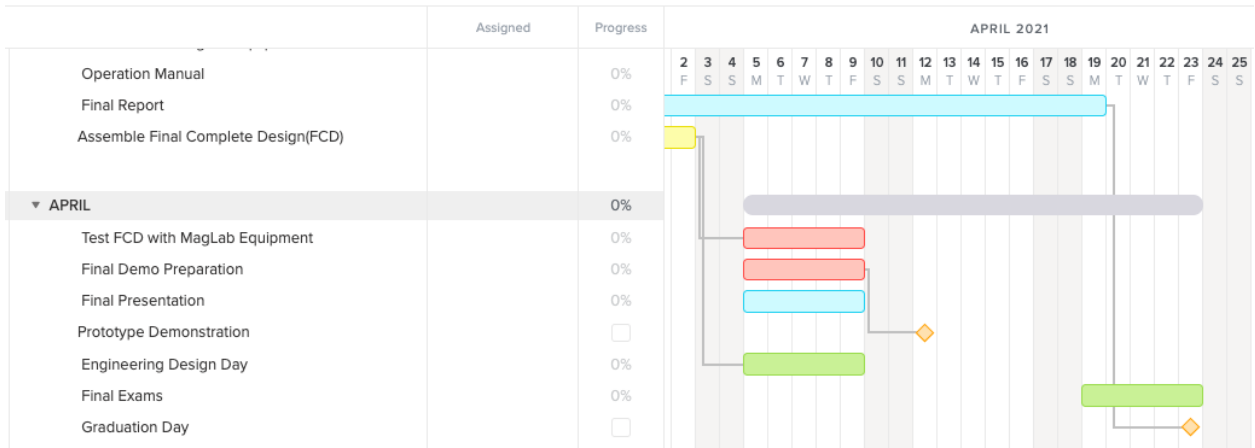


Figure 4: Gantt Chart elements contained in this figure

SECTION IV: Monthly Overview

The following is for overview purposes of the Spring Project Plan created, using MS Teams Planner.

Figure V: Monthly Overview (January)

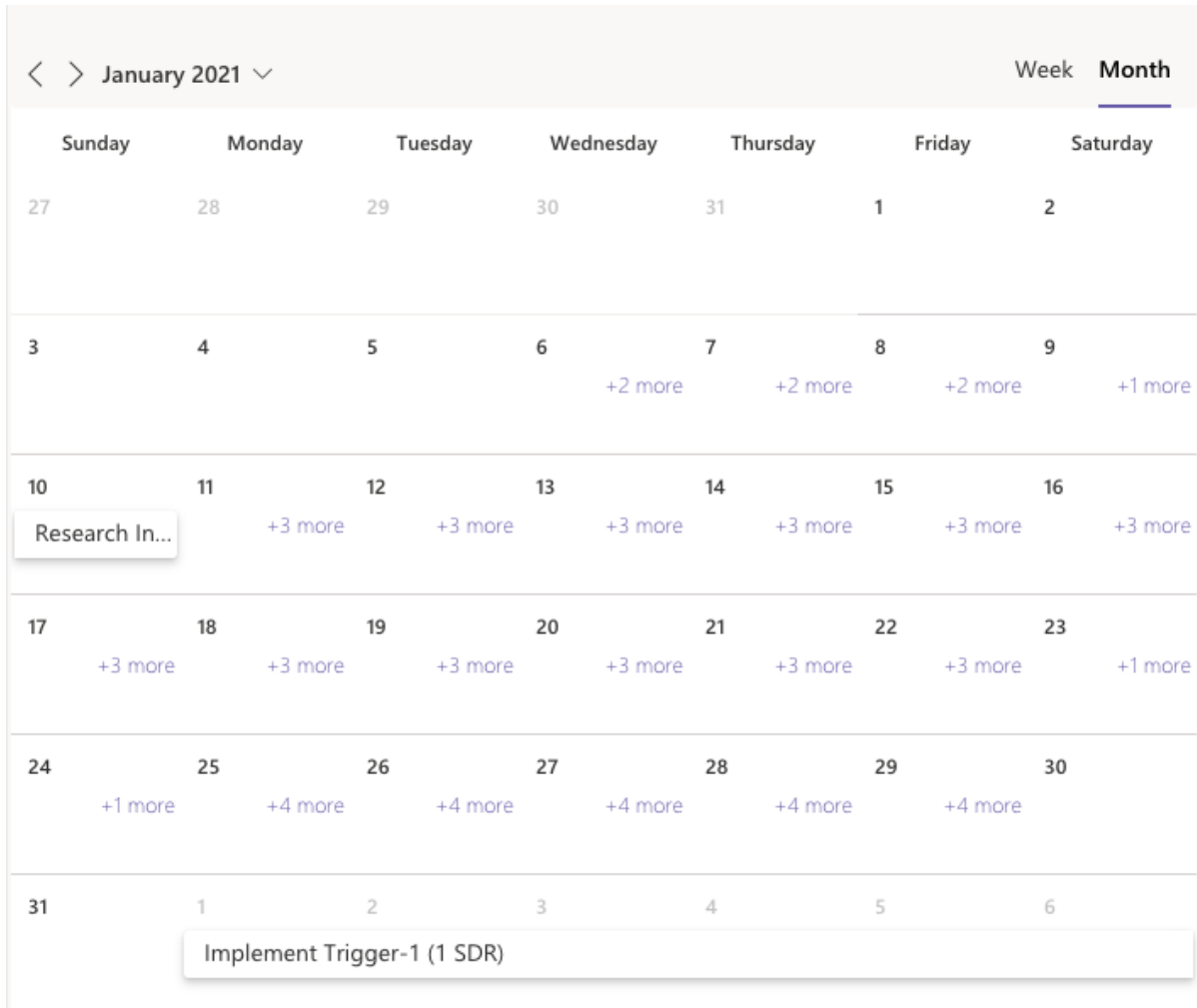


Figure 5: Monthly Overview elements contained in this figure

Figure VI: Monthly Overview (February)

< > February 2021 ▾							Week	Month	
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday			
31	1	2	3	4	5	6			
	Implement Trigger-1 (1 SDR)								
7	8	9	10	11	12	13			
	Implement Trigger-1 (1 SDR)								
14	15	16	17	18	19	20			
		+2 more	+2 more	+2 more	+2 more	+2 more		+2 more	
21	22	23	24	25	26	27			
+2 more	+4 more	+4 more	+4 more	+4 more	+4 more	+4 more		+1 more	
28	1	2	3	4	5	6			
+1 more	+2 more	+2 more	+2 more	+2 more	+2 more	+2 more			
7	8	9	10	11	12	13			
		+2 more	+2 more	+2 more	+2 more	+2 more		+1 more	

Figure 6: Monthly Overview elements contained in this figure

Figure VII: Monthly Overview (March)

< > March 2021 ▾							Week	Month
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday		
28 +1 more	1 +2 more	2 +2 more	3 +2 more	4 +2 more	5 +2 more	6 +2 more		
7	8 +2 more	9 +2 more	10 +2 more	11 +2 more	12 +2 more	13 +1 more		
14 +1 more	15 +3 more	16 +3 more	17 +3 more	18 +3 more	19 +3 more	20 +3 more		
21	22 +4 more	23 +4 more	24 +4 more	25 +4 more	26 +4 more	27 +1 more		
28 +1 more	29 +3 more	30 +3 more	31 +3 more	1 +3 more	2 +3 more	3 +1 more		
4 +1 more	5 +6 more	6 +6 more	7 +6 more	8 +6 more	9 +6 more	10 +2 more		

Figure 7: Monthly Overview elements contained in this figure

Figure VIII: Monthly Overview (April)

< > April 2021 ∨							Week	Month
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday		
28 +1 more	29 +3 more	30 +3 more	31 +3 more	1 +3 more	2 +3 more	3 +3 more		
4 +1 more	5 +6 more	6 +6 more	7 +6 more	8 +6 more	9 +6 more	10 +6 more		+2 more
11 +2 more	12 +2 more	13 +1 more	14 +1 more	15 +1 more	16 +1 more	17 +1 more		+1 more
18 +1 more	19 +3 more	20 +2 more	21 +2 more	22 +2 more	23 +2 more	24 +2 more		
25	26	27	28	29	30	1		
2	3	4	5	6	7	8		

Figure 8: Monthly Overview elements contained in this figure

SECTION V: Weekly Overview

The following is for (weekly) overview purposes of the Spring Project Plan created, using MS Teams Planner.

Figure IX: Weekly Overview (January)

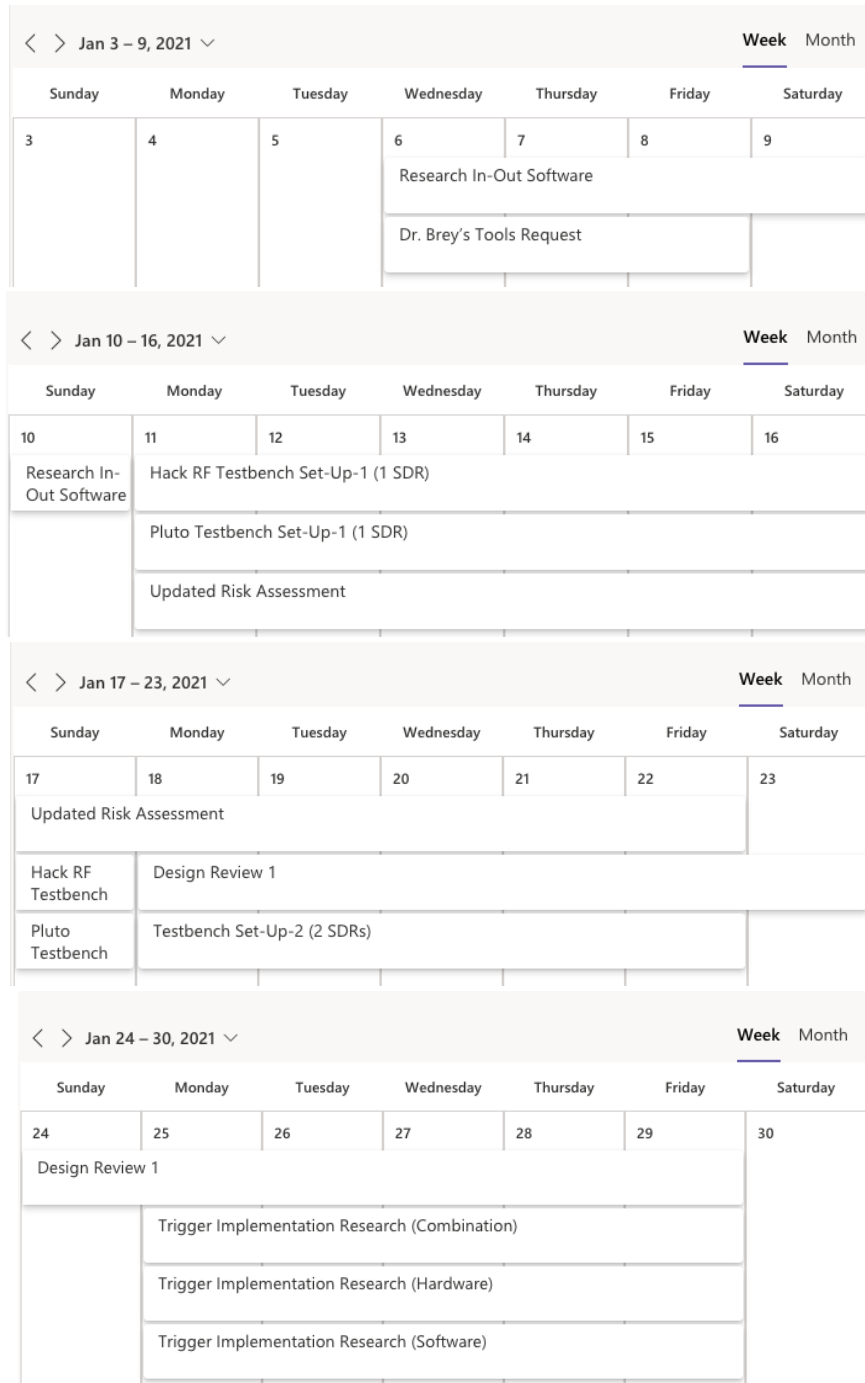


Figure 9: Weekly Overview elements contained in this figure

Figure X: Weekly Overview (February)

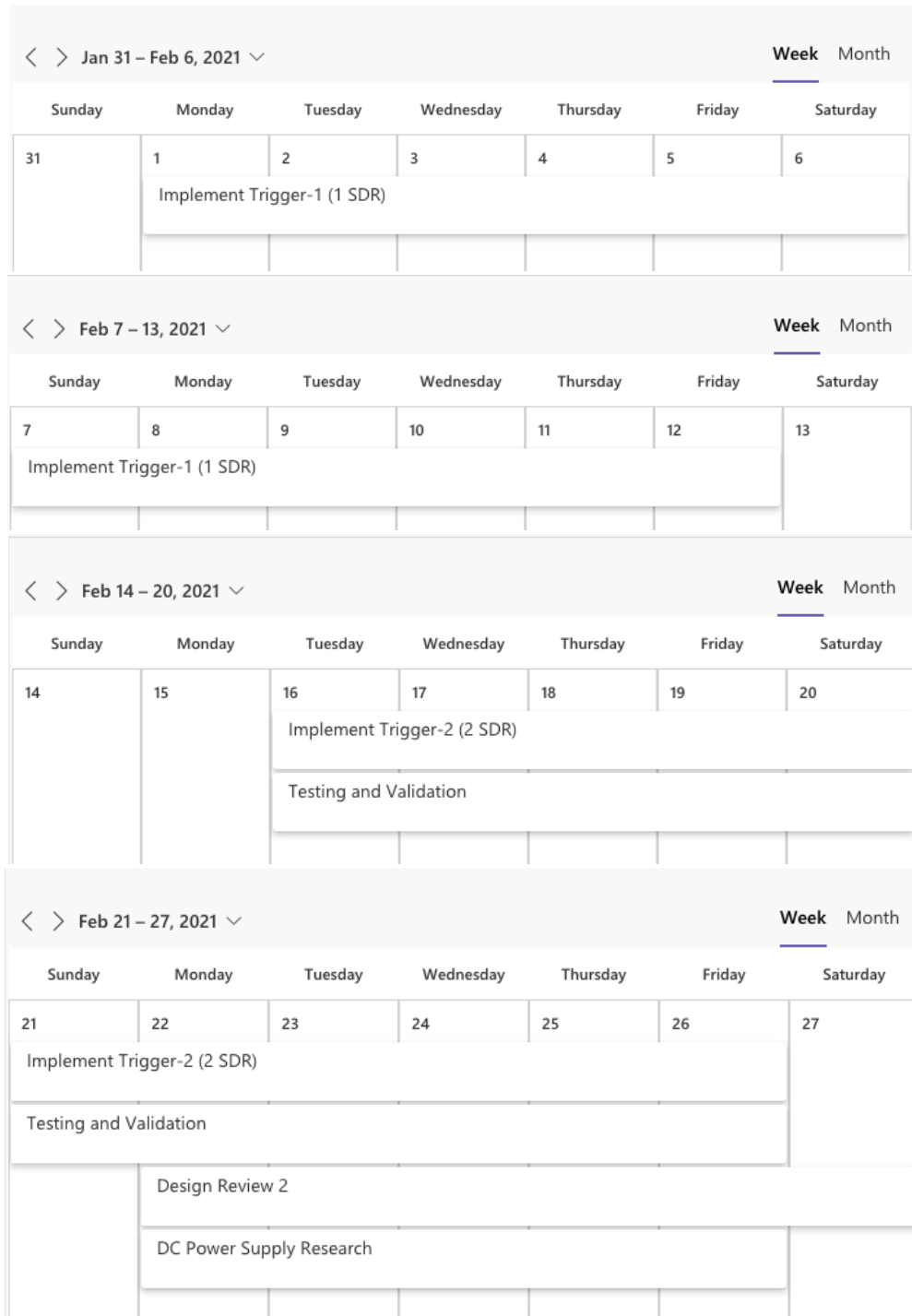


Figure 10: Weekly Overview elements contained in this figure

Figure XI: Weekly Overview (March)

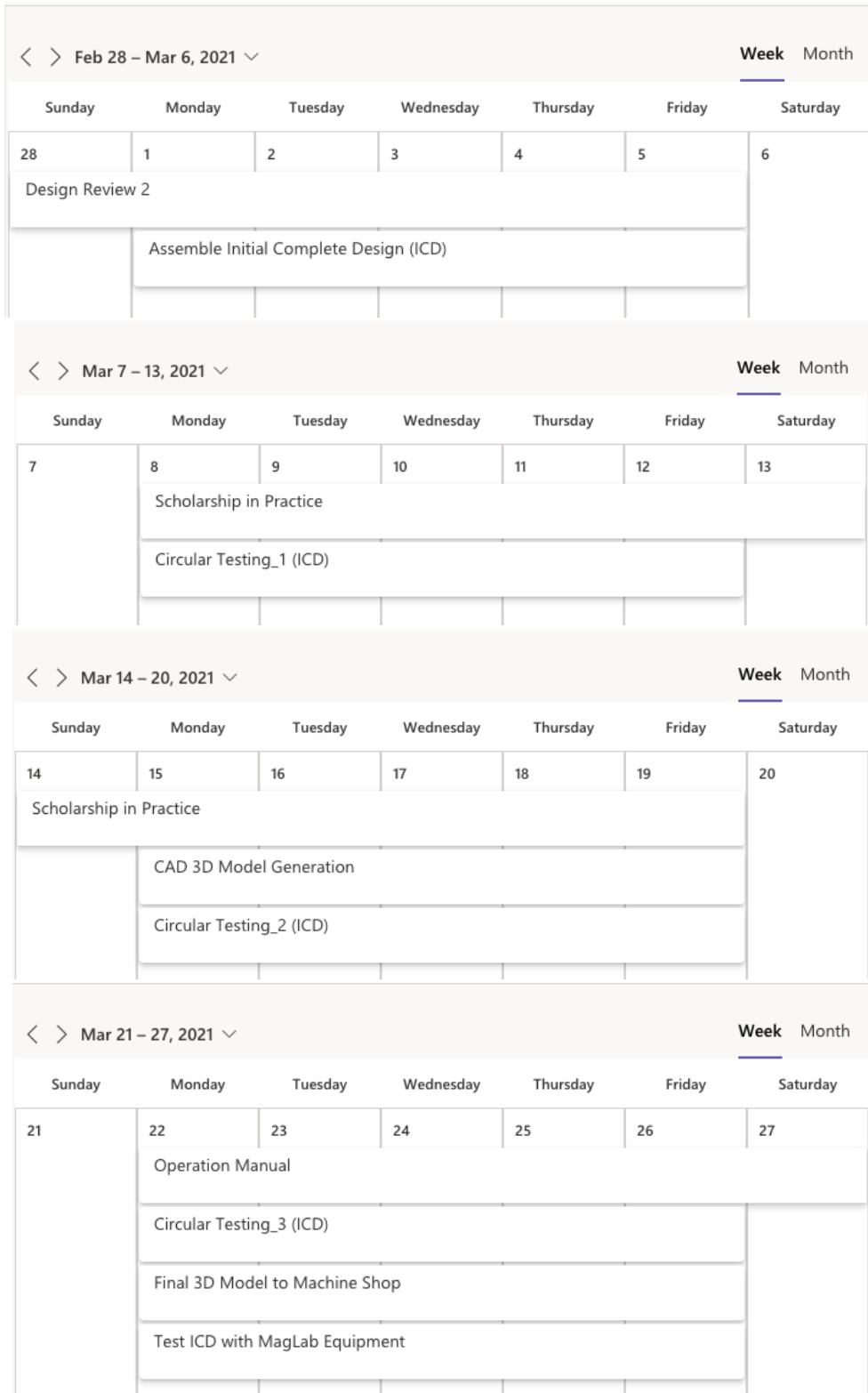


Figure 11: Weekly Overview elements contained in this figure

Figure XII: Weekly Overview (April)

< > Mar 28 – Apr 3, 2021 Week Month						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
28	29	30	31	1	2	3
Operation Manual						
	Final Report					
	Assemble Final Complete Design (FCD)					

< > Apr 4 – 10, 2021 Week Month						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
4	5	6	7	8	9	10
Final Report						
	Prototype Demonstration					
	Engineering Design Day					
	Final Demo Preparation					
	Final Presentation					
	Test FCD with MagLab Equipment					

< > Apr 11 – 17, 2021 Week Month						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
11	12	13	14	15	16	17
Final Report						
Prototype Demonstration						

Figure 12: Weekly Overview elements contained in this figure

Figure XIII: Weekly Overview (April Cont...)

Apr 18 – 24, 2021							Week	Month
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday		
18	19	20	21	22	23	24		
Final Report								
	Final Exams							
	Graduation Day							

Figure 13: Weekly Overview elements contained in this figure

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