

Information about time modules for AA-001-2223

The proposed referral requests to add several time modules for laboratory classes on M, W, F, or combinations thereof.

Overall enrollment in lab classes by College is shown in Figure 1. Table 1 shows the highest enrollment labs (those with 200 or more students in Fall 2022) along with their prerequisites. Since Physics has PHY 1210/L, PHY 1220/L, PHY 1510/L and PHY 1520/L with very high enrollment, the need for better alignment between labs and 3-unit lectures is clear.

To see the issue that the Physics Department is concerned about, Figure 2 shows the laboratory times and the 3-unit lectures that are twice a week. You can see that the existing lab time modules for once-a-week labs conflict with 3 different lecture times, while the proposed lab time modules for once-a-week labs conflict with only 2 different lecture times. Looking at the twice-a-week labs, the existing modules conflict with 2 lectures, while the proposed modules conflict with only 1 lecture.

The most common existing time modules involving M, W, or Friday, or combinations thereof are shown in Figure 3, along with the requested new time modules. I only graphed 1-unit labs, and 3- and 4-unit lectures. Omitted are 2-unit labs and 1- or 2-unit lectures.

In discussions with College of Engineering, the lab time module of 9-11:50am was brought up. This additional request is added as an amendment to the referral, especially as Figure 1 shows that Science and Engineering are the two biggest users of lab time modules. To check on the feasibility of including the T and Th labs, I also graphed the most common T, Th time modules in Figure 4.

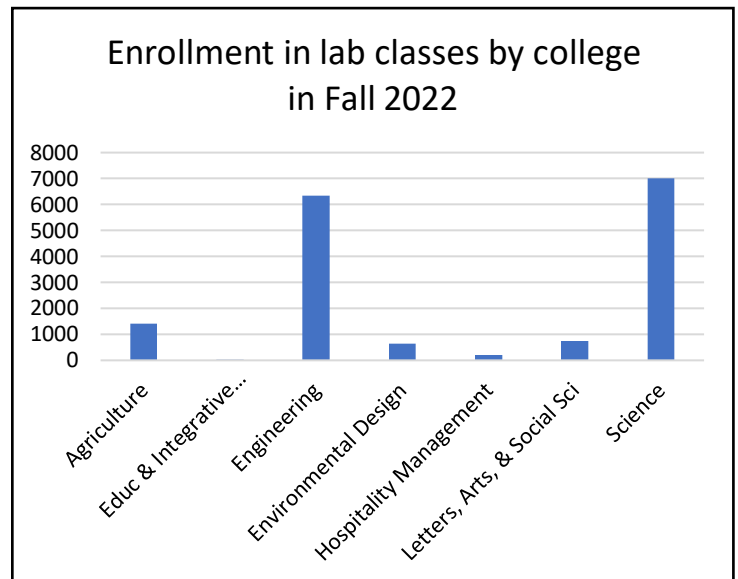


Figure 1

Finally, Figure 5 shows how labs are currently being scheduled, by day, time, and department.

Table 1

High enrollment labs (more than 200 students in Fall 2022)					
Enrollment in lab classes	Count of Section	Sum of Enrl	Co-requisite	Type of co-req	
ARO					
1011L	6	230	MAT 1140	4 unit lecture	
BIO					
1110L	23	513	BIO 1110	2 unit lecture	
1150L	12	287	BIO 1150	3 unit lecture	
1210L	15	347	BIO 1210	3 unit lecture	
1220L	12	277	BIO 1220	3 unit lecture	
2060L	10	240	BIO 2060	3 unit lecture	
CE					
1001L	9	253	CE 1001	1 unit lecture	
1011L	6	141	CE 1011 and MAT 1140	3 unit lecture and 4 unit lecture	
CHM					
1210L	31	700	CHM 1210	3 unit lecture	
1220L	14	315	CHM 1220	3 unit lecture	
ECE					
1101L	9	213	ECE 1101	3 unit lecture	
EGR					
1000L	8	220	EGR 1000	2 unit lecture	
GSC					
3210L	8	200	GSC 3210	2 unit lecture	
ME					
1001L	7	271	none		
PHY					
1210L	15	308	PHY 1210	3 unit lecture	
1220L	10	214	PHY 1220	3 unit lecture	
1510L	27	627	PHY 1510	3 unit lecture	
1520L	24	552	PHY 1520	3 unit lecture	
Grand Total	255	6157			

	Lecture 3 units twice a week, MW, WF, or MF	Laboratories, 1 unit once per week, M, W, or F		Laboratories, 1 unit twice per week, MW, MF, WF	
7:00:00 AM					
7:15:00 AM					
7:30:00 AM					
7:45:00 AM					
8:00:00 AM					
8:15:00 AM					
8:30:00 AM				1/2 Lab 8-9:15	
8:45:00 AM					
9:00:00 AM		1/1 Lab 8-10:50			
9:15:00 AM					
9:30:00 AM					
9:45:00 AM					
10:00:00 AM				1/2 Lab 9:30-10:45	
10:15:00 AM					
10:30:00 AM					
10:45:00 AM					
11:00:00 AM					
11:15:00 AM					
11:30:00 AM					
11:45:00 AM					
12:00:00 PM	3/2 Lecture 11:30-12:45			1/2 Lab 12-1:15	
12:15:00 PM					
12:30:00 PM					
12:45:00 PM					
1:00:00 PM		1/1 Lab 12-2:50			
1:15:00 PM			1/1 Lab 1-3:50		1/2 Lab 1-2:15
1:30:00 PM	3/2 Lecture 1:00-2:15			1/2 Lab 1:30-2:45	
1:45:00 PM					
2:00:00 PM					
2:15:00 PM					
2:30:00 PM					
2:45:00 PM					1/2 Lab 2:30-3:45
3:00:00 PM	3/2 Lecture 2:30-3:45				
3:15:00 PM				1/2 Lab 3-4:15	
3:30:00 PM					
3:45:00 PM					
4:00:00 PM		1/1 Lab 3-5:50			
4:15:00 PM					
4:30:00 PM	3/2 Lecture 4:00-5:15				1/2 Lab 4-5:15
4:45:00 PM					
5:00:00 PM				1/2 Lab 4:30-5:45	
5:15:00 PM			1/1 Lab 4-6:50		
5:30:00 PM					
5:45:00 PM					
6:00:00 PM	3/2 Lecture 5:30-6:45		1/1 Lab 5-7:50		1/2 Lab 5:30-6:45
6:15:00 PM				1/2 Lab 6:00-7:15	
6:30:00 PM					
6:45:00 PM		1/1 Lab 6-8:50			
7:00:00 PM					
7:15:00 PM					
7:30:00 PM	3/2 Lecture 7:00-8:15				
7:45:00 PM					
8:00:00 PM				1/2 Lab 7:30-8:45	
8:15:00 PM					
8:30:00 PM			1/1 Lab 7-9:50		
8:45:00 PM					
9:00:00 PM	3/2 Lecture 8:30-9:45				
9:15:00 PM					
9:30:00 PM					
9:45:00 PM					
10:00:00 PM					

Figure 2 -- Lab time modules compared to 3-unit lecture, twice a week, time modules. The proposed new lab time modules conflict with fewer of the lecture times.

AA-001-2223 Proposed new time modules for labs on Mondays, Wednesdays, and Fridays		Existing time modules are shown in pale colors, with different colors for different types of class. The notation "n/k Lecture" refers to an n-unit lecture that meets k times a week. For example, 3/2 lectures are 3 unit lectures that meet twice a week. The darker shaded modules with double borders are the proposed new modules in the referral, and the darkest module (1/1 Lab 9-11:50) is an additional lab requested by EGR chairs.									
		Lecture 3 units 1 meeting per week, M, W, or F	Lecture 3 units twice a week, MW, WF, or MF	Lecture 3 units 3x per week, MWF	Lecture 4 units twice per week, MW, MF, or WF	Lecture 4 units 3x per week, MWF	Laboratories, 1 unit once per week, M, W, or F			Laboratories, 1 unit twice per week, MW, MF, WF	
7:00:00 AM											
7:15:00 AM											
7:30:00 AM											
7:45:00 AM											
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Figure 3: Existing time modules for M, W, F (or combinations of M, W, F) along with proposed additions in darker shading Omitted are 1- and 2-unit lectures, 2-unit labs, and activity classes..

Time modules on TTh	Existing time modules are shown in pale colors, with different colors for different types of class. The notation "n/k Lecture" refers to an n-unit lecture that meets k times a week. For example, 3/2 lectures are 3 unit lectures that meet 2 times a week. The darker shaded modules with double borders are the proposed new modules in the referral, and the darkest module (1/1 Lab 9-11:50am) is the darkest module (1/1 Lab 9-11:50am).								
	Lecture 3 units 1 meeting per week, T or Th	Lecture 3 units twice a week, TTh	Lecture 4 units twice per week, TTh	Laboratories, 1 unit once per week, T or Th	Laboratories, 1 unit twice per week, TTh				
7:00:00 AM									
7:15:00 AM									
7:30:00 AM									
7:45:00 AM		3/2 Lecture 7-8:15am							
8:00:00 AM									
8:15:00 AM									
8:30:00 AM									
8:45:00 AM			4/3 Lecture 8-9:50am						
9:00:00 AM		Lecture 8:30-9:45am							1/2 Lab 8-9:15am
9:15:00 AM									
9:30:00 AM									
9:45:00 AM									
10:00:00 AM									
10:15:00 AM									
10:30:00 AM		Lecture 10-11:15am							
10:45:00 AM			4/3 Lecture 10-11:50am						2 Lab 9:30-10:45am
11:00:00 AM									
11:15:00 AM									
11:30:00 AM									
11:45:00 AM									
12:00:00 PM									
12:15:00 PM	U-Hour	U-Hour	U-Hour	U-Hour	U-Hour	U-Hour	U-Hour	U-Hour	U-Hour
12:30:00 PM									
12:45:00 PM									
1:00:00 PM									
1:15:00 PM			Lecture 1-2:15pm						
1:30:00 PM				4/3 Lecture 1-2:50pm					1/2 Lab 1-2:15pm
1:45:00 PM									
2:00:00 PM	3/1 Lecture 1-3:45pm								
2:15:00 PM									
2:30:00 PM			Lecture 2:30-3:45pm						
2:45:00 PM				4/3 Lecture 3-4:50pm					1/2 Lab 2:30-3:45pm
3:00:00 PM		3/1 Lecture 2:30-5:15pm							
3:15:00 PM									
3:30:00 PM									
3:45:00 PM			Lecture 4-5:15pm						
4:00:00 PM									
4:15:00 PM									
4:30:00 PM									1/2 Lab 4-5:15pm
4:45:00 PM									
5:00:00 PM	3/1 Lecture 2:30-5:15pm								
5:15:00 PM									
5:30:00 PM				4/3 Lecture 5-6:50pm					
5:45:00 PM									
6:00:00 PM			Lecture 5:30-6:45pm						1/2 Lab 5:30-6:45pm
6:15:00 PM									
6:30:00 PM		3/1 Lecture 5:30-8:15pm			4/3 Lecture 6-7:50pm				
6:45:00 PM									
7:00:00 PM									
7:15:00 PM			Lecture 7-8:15pm						
7:30:00 PM				4/3 Lecture 7-8:50pm					1/2 Lab 7-8:15pm
7:45:00 PM									
8:00:00 PM	3/1 Lecture 7-9:45pm								
8:15:00 PM									
8:30:00 PM									
8:45:00 PM									
9:00:00 PM			Lecture 8:30-9:45am		4/3 Lecture 8-9:50pm				
9:15:00 PM									
9:30:00 PM									
9:45:00 PM									
10:00:00 PM									

Figure 4 -- Most common T, Th, and TTh time modules, with additional requested 9-11:50 laboratory module shown in darker shade. Omitted are 1- and 2-unit lectures, 2-unit labs, and activity courses.

Pale yellow are approved time modules												
Green are the modules requested in this referral												
Coral are the classes filed by schedule deviation												
M	T	W	TH	F	SU	T TH	M W	W F				
134	154	151	157	64	2	31	30	2				
8:00:00 AM 37	8:00:00 AM 41	7:00:00 AM 1	8:00:00 AM 50	7:00:00 AM 1	8:00:00 AM 1	8:00:00 AM 2	8:00:00 AM 5	8:30:00 AM 1				
AMM 1	AHS 1	ECE 1	ARO 1	ECE 1	GSC 1	ARO 1	AHS 1	HRT 1				
ARO 1	BIO 9	8:00:00 AM 44	AVS 4	8:00:00 AM 21	12:00:00 PM 1	CHM 1	ARO 1	4:15:00 PM 1				
AVS 3	CE 2	AHS 1	BIO 7	AHS 1	GSC 1	8:30:00 AM 1	CHM 1	HRT 1				
BIO 4	CHE 1	AMM 2	CE 2	ARO 1	S 5	HRT 1	GEO 2					
CE 3	CHM 6	AVS 2	CHE 1	AVS 1	8:00:00 AM 1	9:30:00 AM 5	8:15:00 AM 1					
CHE 1	EGR 1	BIO 5	CHM 9	BIO 3	CE 1	AMM 1	SOC 1					
CHM 6	ETE 3	CE 7	EGR 7	CE 2	11:00:00 AM 1	GEO 1	9:00:00 AM 2					
EGR 1	ETM 1	CHM 1	ETE 3	CHE 1	EDD 1	MAT 1	TH 2					
ETE 3	GSC 2	CHM 6	ETM 1	CHM 6	12:00:00 PM 3	TH 2	9:30:00 AM 3					
ETM 1	KIN 2	EGR 1	GSC 2	IME 1	10:30:00 AM 1	SOC 1	GEO 1					
GSC 1	ME 4	ETE 2	IE 2	IME 1	11:30:00 AM 1	SOC 1	MAT 1					
KIN 1	MTE 1	FST 3	IME 1	PHY 3	11:30:00 AM 1	SW 1	SW 1					
MFE 1	NTR 2	GSC 1	KIN 2	PLT 1	SOC 1	10:00:00 AM 1	10:00:00 AM 1					
MTE 1	PHY 6	IE 1	ME 3	9:00:00 AM 5	1:00:00 PM 8	PHY 1	PHY 1					
NTR 2	9:00:00 AM 4	IME 1	MFE 1	CE 1	AMM 1	AMM 1	11:00:00 AM 1					
PHY 6	BIO 1	KIN 2	MTE 1	ECE 2	ARO 1	ARO 1	SW 1					
PLT 1	ECE 2	ME 1	NTR 3	GSC 1	CHM 1	CHM 1	12:00:00 PM 7					
9:30:00 AM 1	HRT 1	MFE 1	PHY 5	ME 1	FST 2	FST 2	AHS 1					
GSC 1	10:00:00 AM 1	PHY 5	PLT 1	12:00:00 PM 19	GEO 1	GEO 1	AMM 1					
11:00:00 AM 1	ME 1	URP 2	URP 2	AHS 1	MU 2	MU 2	GEO 1					
MFE 1	1:00:00 PM 51	9:00:00 AM 1	9:00:00 AM 1	AMM 1	2:30:00 PM 2	2:30:00 PM 2	MU 1					
12:00:00 PM 24	AHS 2	HRT 1	ECE 1	HRT 1	ARO 2	ARO 2	URP 3					
AVS 2	BIO 12	11:30:00 AM 2	9:30:00 AM 1	BIO 4	SOC 1	SOC 1	1:30:00 PM 1					
BIO 8	CE 5	ECE 2	GSC 1	BIO 4	4:00:00 PM 6	4:00:00 PM 6	TH 1					
CE 2	CHE 1	12:00:00 PM 38	10:00:00 AM 1	CE 1	AHS 1	AHS 1	2:00:00 PM 1					
CHM 5	CHM 7	AHS 1	ME 2	CHE 2	AMM 2	AMM 2	MU 1					
ECE 1	ECE 3	AMM 1	1:00:00 PM 50	CHM 3	ARO 1	ARO 1	3:00:00 PM 4					
ME 2	EGR 1	ARO 1	AHS 1	CHM 3	CHM 1	CHM 1	ARO 1					
MTE 1	GSC 2	AVS 2	ANT 1	IME 2	GEO 1	GEO 1	CHM 2					
NTR 2	KIN 1	BIO 10	AVS 3	MFE 1	4:15:00 PM 1	4:15:00 PM 1	LA 1					
PLT 1	ME 4	CE 3	BIO 13	SOC 1	HRT 1	HRT 1	4:00:00 PM 1					
1:00:00 PM 9	MFE 1	CHM 2	CE 5	1:00:00 PM 6	5:00:00 PM 1	5:00:00 PM 1	MU 1					
ECE 1	MTE 1	CHM 4	CHE 1	CHE 1	MU 1	MU 1	4:30:00 PM 1					
EGR 1	PHY 6	FST 1	CHM 8	ECE 2	PHY 2	PHY 2	AMM 1					
GSC 1	PLT 3	GSC 2	ECE 3	PLT 1	6:00:00 PM 1	6:00:00 PM 1	5:00:00 PM 1					
PHY 6	URP 2	IME 1	GSC 1	GSC 1	7:00:00 PM 2	7:00:00 PM 2	MU 1					
2:00:00 PM 2	2:30:00 PM 1	KIN 1	ME 3	ECE 1	AMM 1	AMM 1	7:00:00 PM 1					
CE 1	SOC 1	ME 4	MFE 3	3:00:00 PM 5	PHY 1	PHY 1	CE 1					
MFE 1	3:00:00 PM 2	MFE 3	PHY 6	PHY 1	ARO 1	ARO 1						
3:00:00 PM 28	HRT 1	PLT 1	PLT 1	CHM 3	CHM 3	CHM 3						
ARO 2	RS 1	URP 1	URP 1	MFE 1	MFE 1	MFE 1						
BIO 9	4:00:00 PM 30	1:00:00 PM 6	4:00:00 PM 25	4:00:00 PM 2	4:00:00 PM 2	4:00:00 PM 2						
CHE 1	ARO 2	EGR 1	ARO 2	CE 1	CE 1	CE 1						
CHM 6	BIO 9	FST 1	BIO 5	ECE 1	ECE 1	ECE 1						
GSC 1	CE 2	PHY 4	CE 2	5:00:00 PM 1	5:00:00 PM 1	5:00:00 PM 1						
HRT 1	CHE 1	3:00:00 PM 27	CHM 3	ECE 1	ECE 1	ECE 1						
KIN 2	CHM 2	ARO 1	ECE 5	7:00:00 PM 3	7:00:00 PM 3	7:00:00 PM 3						
ME 1	ECE 5	AVS 2	KIN 1	ARO 1	ARO 1	ARO 1						
MFE 1	KIN 1	BIO 10	ME 2	CE 1	CE 1	CE 1						
MTE 1	ME 1	CHE 1	MFE 1	EGR 1	EGR 1	EGR 1						
NTR 1	MFE 1	CHM 3	MTE 1									
URP 2	MTE 1	PHY 3	PHY 3									
4:00:00 PM 7	PHY 5	GSC 1	5:00:00 PM 2									
ME 1	HRT 1	HRT 1	ME 1									
PHY 6	KIN 1	KIN 1	URP 1									
4:30:00 PM 2	CE 2	ME 3	5:15:00 PM 1									
GSC 1	ME 1	MFE 2	RS 1									
SOC 1	7:00:00 PM 19	MTE 1	6:00:00 PM 5									
6:00:00 PM 13	ARO 2	4:00:00 PM 4	ARO 1									
ARO 1	BIO 2	IE 1	CE 1									
BIO 5	CE 2	ME 1	IME 1									
CE 1	ECE 4	PHY 2	KIN 1									
ECE 4	ETE 1	5:00:00 PM 1	RS 1									
ME 2	ETM 1	ME 1	7:00:00 PM 20									
6:45:00 PM 1	GSC 1	6:00:00 PM 16	ARO 1									
SOC 1	ME 1	BIO 6	BIO 1									
7:00:00 PM 9	PHY 6	CE 1	CE 2									
ARO 1	8:30:00 PM 1	ECE 3	ECE 7									
CE 2	GSC 1	GSC 1	HRT 1									
ME 1		IME 1	ME 2									
PHY 5		ME 2	NTR 1									
		MU 1	PHY 5									
		URP 1	8:00:00 PM 1									
		7:00:00 PM 11	ME 1									
		ARO 2										
		CE 4										
		ME 3										
		MFE 1										
		PHY 1										

Figure 5 -- Existing usage of 1-unit lab times and schedule deviations.

