



CourseComb Demo



A fast way to narrow down your
course selection





The Problem

The Current State of the Art

SCHEDULE 1  

SCHEDULE 2

SCHEDULE 3

SCHEDULE 4

Monday	Tuesday	Wednesday	Thursday	Friday
	9:00 - 9:50 ECO362 P02		9:00 - 9:50 ECO362 P07	
			10:00 - 10:50 ECO362 P08	10:00 - 10:50 COS340 P03 10:50 - 10:50 ECO362 P09
11:00 - 12:20 COS318 L01	11:00 - 11:50 ORF309 L01	11:00 - 12:20 COS318 L01	11:00 - 11:50 ECO362 P05 11:00 - 11:50 ORF309 L01	11:00 - 11:50 ECO362 P10 11:00 - 11:50 ORF309 L01
12:30 - 14:20 DAN213 U01		12:30 - 14:20 DAN213 U01	12:30 - 13:20 COS340 P01	
	13:30 - 14:50 COS109 L01	13:30 - 14:50 ECO362 L01		13:30 - 14:20 COS340 P04
15:00 - 16:20 COS340 L01	15:30 - 16:20 ORF309 P03 15:30 - 16:20 ORF309 P05	15:30 - 16:20 ECO362 P03 15:30 - 16:20 ORF309 P04 15:30 - 16:20 ORF309 P06	13:30 - 16:20 MUS231 C01 13:30 - 14:50 ECO362 L01	14:30 - 15:20 COS340 P02 14:30 - 15:20 COS340 P05
19:30 - 20:20 COS318 P01	19:30 - 20:20 ECO362 P01 19:30 - 20:20 ORF309 P01	19:30 - 20:20 ECO362 P04 19:30 - 20:20 ORF309 P02		

Aman

A **manual**, tedious process...



What We Want

An **automatic** way of creating possible schedules



Demo

How it works

1. Generating course combinations
2. Displaying interactive events on calendar
3. Favoriting a schedule
4. Database structure

Generating Course Combinations



Displaying interactive events on calendar

django



{JSON}

AJAX
GET

FullCalendar

Selected Schedule: Favorite

	Mon	Tue	Wed	Thu	Fri
8am					
9am					
10am	1000-1004 ART 100 L01		1000-1004 ART 100 L01		
11am	1100-1104 ELE 206 L01		1100-1104 ELE 206 L01		
12pm					
1pm					
2pm	100-204 COS 516 L01	100-204 ELE 206 L01	100-204 COS 516 L01	100-204 ELE 206 L01	
3pm					
4pm					
5pm					
6pm					

Click to show precepts

ELE 206 ART 100 PHI 203

JavaScript + jQuery

FullCalendar

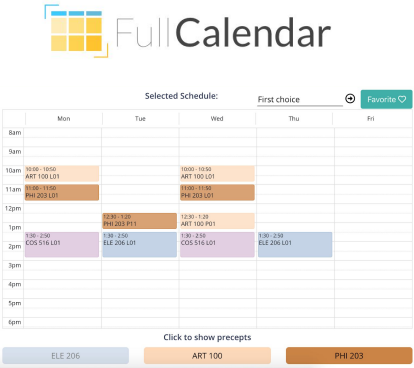
Selected Schedule: Favorite

	Mon	Tue	Wed	Thu	Fri
8am					
9am					
10am	1000-1004 ART 100 L01	1000-1004 ELE 206 L01	1000-1004 ART 100 L01	1000-1004 ART 100 P04	1000-1004 ART 100 P08
11am	1100-1104 ELE 206 L01	1100-1104 ELE 206 L01	1100-1104 ELE 206 L01	1100-1104 ELE 206 L01	1100-1104 ELE 206 L01
12pm					
1pm					
2pm	100-204 COS 516 L01	100-204 ELE 206 L01	100-204 ELE 206 L01	100-204 ELE 206 L01	100-204 ELE 206 L01
3pm					
4pm					
5pm					
6pm					

Click to show precepts

ELE 206 ART 100 PHI 203

Favoriting a schedule



The FullCalendar interface displays a weekly grid from 8am to 6pm. A schedule is selected, showing events for Monday, Tuesday, Wednesday, and Thursday. The events are color-coded: orange for ART 100 L01, purple for COS 516 L01, and blue for ELE 206 L01. A 'Favorite' button is visible in the top right corner.

Time	Mon	Tue	Wed	Thu	Fri
8am					
9am					
10am	ART 100 L01		ART 100 L01		
11am	ART 100 L01		ART 100 L01		
12pm					
1pm		COS 516 L01	COS 516 L01		
2pm		ELE 206 L01	ELE 206 L01		
3pm					
4pm					
5pm					
6pm					

{JSON}



AJAX
POST



django

ArrayField(models.TextField())

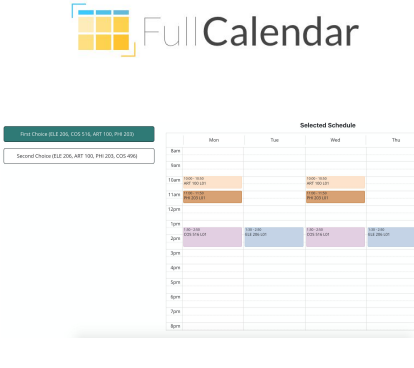


PostgreSQL

{JSON}



AJAX
GET



The FullCalendar interface displays a weekly grid from 8am to 6pm. A schedule is selected, showing events for Monday, Tuesday, Wednesday, and Thursday. The events are color-coded: orange for ART 100 L01, purple for COS 516 L01, and blue for ELE 206 L01. A 'Favorite' button is visible in the top right corner.

Time	Mon	Tue	Wed	Thu	Fri
8am					
9am					
10am	ART 100 L01		ART 100 L01		
11am	ART 100 L01		ART 100 L01		
12pm					
1pm		COS 516 L01	COS 516 L01		
2pm		ELE 206 L01	ELE 206 L01		
3pm					
4pm					
5pm					
6pm					



Database Structure Overview

Profile	
user	One-to-One
courses	Text

Favorite	
profile	ForeignKey
name	TextField
courses	TextField
favorite_fields	ArrayField(TextField)


Filter	
profile	One-to-One
number_of_courses	SmallIntegerField
must_courses	ArrayField(TextField)
must_dept	ArrayField(TextField)
distribution	ArrayField(TextField)
priority	ArrayField(TextField)
no_friday_class	BooleanField
...	...

Combination	
profile	ForeignKey
comb_id	SmallIntegerField
course_combo	TextField
registrar_combo	TextField
filtered	BooleanField

The User Interface

Upon first glance...

CourseComb

Favorites About Feedback Welcome mkyi! 


Search Course Here...

Courses of Interest (0)
[Create My Schedule!](#)

0 Possible Schedules
Ranked by Preference:

Please add courses to your
Courses of Interest

Welcome to CourseComb!



1. Enter ALL the courses that you are interested in taking and click Create My Schedule!
2. Set your preferences and we will show you all the possible combinations in ranked order based on your preferences.
3. Click on a combination and select your precepts.
4. You can favorite your schedule and see them on the Favorites page.

Good luck on your semester!



Course Search

→ jQuery's Autocomplete

eco

ECO 101: Introduction to
Macroeconomics

ECO 300: Microeconomic
Theory

ECO 100: Introduction to
Microeconomics

ECO 362: Financial
Investments

ECO 324: Law and Economics

ECO 501: Microeconomic
Theory I

ECO 465: Options, Futures, and

Your Course Queue

- A list of all selected courses
- No limit to how many courses can be selected
- Interactivate slide buttons for accessing registrar info, course ratings, and deleting from course queue
- Click the button to continue!

Courses of Interest (6)



ECO 310: Microeconomic
Theory: A Mathematical
Approach

COS 333: Advanced
Programming Techniques

AST 551/MAE 525: General
Plasma Physics I

ECO 300: Microeconomic
Theory

AST 558: Seminar in Plasma
Physics

Create My Schedule!

Selecting Your Filters

- Clicking the button leads to a pop-up of filters
- Select your filters and click “Show Combinations” to see possible schedules

Set your preferences:

How many courses do you want to take?: 1

Priority of Each Course:

COS 418

Low

COS 333

Low

COS 126

Low

DAN 319B

Low

HUM 586

Low

Must-have Distributions:

HA

SA

STL

STN

EC

EM

LA

QR

Show/Hide Advanced Options

Must have Departments:

COS

DAN

HUM

Maximum # of Courses in One Department:

5

Time Preferences:

No Friday Class:

No Evening Class:

After 10am:

Exclude Fully Enrolled Classes:

Include 1 PDF-only Class:

Reset Filters

Show Combinations

Selecting Your Filters

- Clicking the button leads to a pop-up of filters
- Select your filters and click “Show Combinations” to see possible schedules

Set your preferences:

How many courses do you want to take?: 3

Priority of Each Course:

COS 126

Low

ECO 310

Must-have

COS 333

Low

AST 551

Low

ECO 300

Low

AST 558

Low

Must-have Distributions:

HA

☐

SA

☒

STL

☐

STN

☐

EC

☐

EM

☐

LA

☐

QR

☐

Show/Hide Advanced Options

Reset Filters

Show Combinations



Your Combinations

Possible Schedules:

ECO 310, COS 126,
AST 558

ECO 310, COS 126,
COS 333

ECO 310, COS 126,
AST 551

ECO 310, AST 558,
COS 333



4 Possible Schedules Ranked by Preference:

1. ECO 310, COS 126, AST
558

2. ECO 310, COS 333, AST
551

3. ECO 310, COS 333, AST
558

4. ECO 310, COS 126, AST
551

Your Selected Schedule

Selected Schedule:					
	Mon	Tue	Wed	Thu	Fri
8am					
9am					
10am					
11am		11:00 - 12:25 ECO 310 L01		11:00 - 12:25 ECO 310 L01	
12pm					
1pm					
2pm		1:30 - 2:50 COS 333 L01		1:30 - 2:50 COS 333 L01	
3pm					
4pm	3:30 - 4:20 AST 558 S01				
5pm					
6pm					
7pm					
8pm					
9pm					
10pm					
Click to show precepts					
ECO 310					



Selected Schedule:					
	Mon	Tue	Wed	Thu	Fri
8am					
9am		8:00 - 9:50 ECO 310 C03	8:00 - 9:50 ECO 310 C05		
10am	9:00 - 10:50 ECO 310 C01	9:00 - 10:50 ECO 310 C04	9:00 - 10:50 ECO 310 C06		
11am	11:00 - 11:50 ECO 310 C02	11:00 - 12:25 ECO 310 L01		11:00 - 12:25 ECO 310 L01	
12pm				12:30 - 1:25 ECO 310 C08	
1pm					
2pm		1:30 - 2:50 COS 333 L01		1:30 - 2:50 COS 333 L01	1:30 - 2:50 ECO 310 C07
3pm					
4pm	3:30 - 4:20 AST 558 S01				
5pm					
6pm					
7pm					
8pm					
9pm					
10pm					
Click to show precepts					
ECO 310					



Selected Schedule:					
	Mon	Tue	Wed	Thu	Fri
8am					
9am					
10am			9:00 - 10:50 ECO 310 C06		
11am		11:00 - 12:25 ECO 310 L01		11:00 - 12:25 ECO 310 L01	
12pm					
1pm					
2pm		1:30 - 2:50 COS 333 L01		1:30 - 2:50 COS 333 L01	
3pm					
4pm	3:30 - 4:20 AST 558 S01				
5pm					
6pm					
7pm					
8pm					
9pm					
10pm					
Click to show precepts					
ECO 310					

How have we solved the problem?

1. Automatic calculation of course combinations
2. Filters to exclude unwanted information
3. Ability to show precepts separately

Ways to improve in the future

1. Export to iCal / Google Calendar and TigerHub
2. Optimize speed of calculating combinations
3. Enable 'Shopping Period' mode



Thank You!