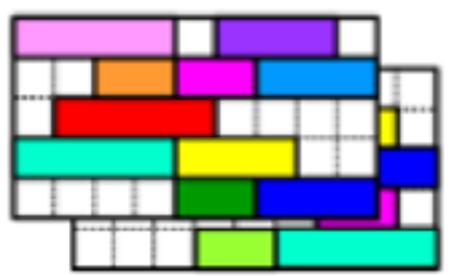


OPEN APEREO 2017
PHILADELPHIA 4-8 JUNE

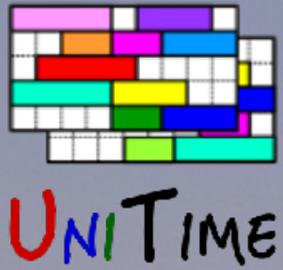


UNITIME June 2017

UniTime 4.2: Instructor Scheduling

Tomáš Müller





Agenda

Agenda

- Short introduction of UniTime
- State of the project
- New features of UniTime 4.2
 - Instructor scheduling
 - Other features
- Next release (UniTime 4.3) & long term

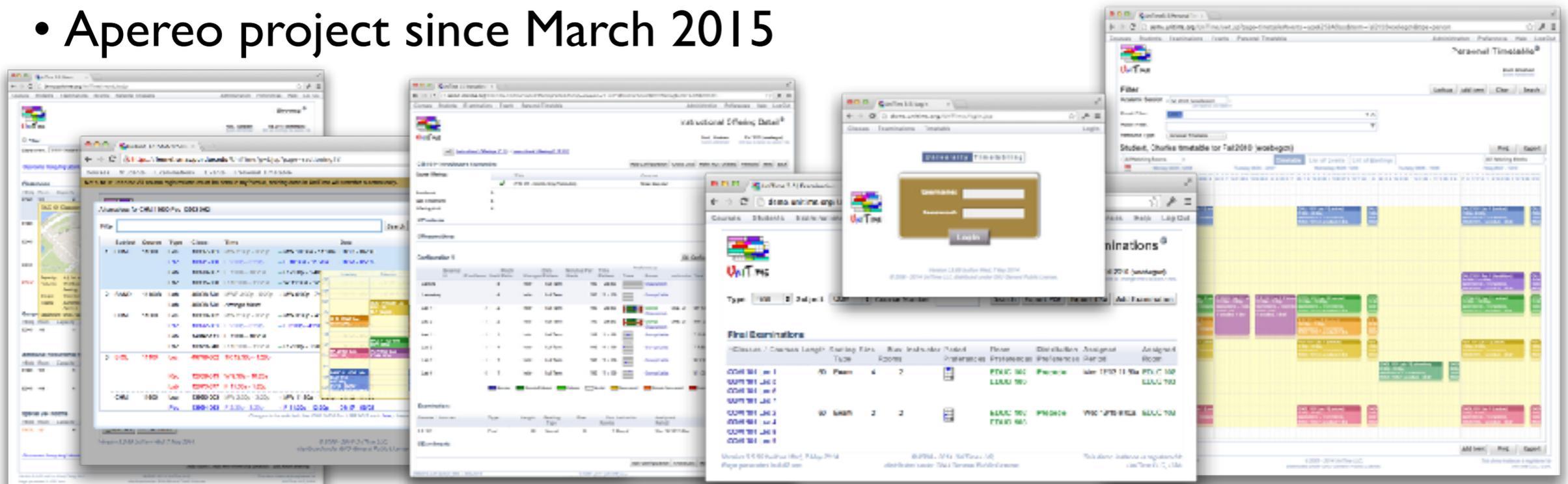


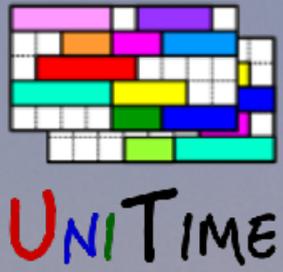


Introduction

What is UniTime?

- Comprehensive academic scheduling solution
- Four components: course timetabling, examination timetabling, student scheduling and event management
- Open source, web-based, written in Java using modern technologies
- Using state-of-the-art optimization algorithms
- Distributed data entry and timetabling in multi-user environments
- Apereo project since March 2015



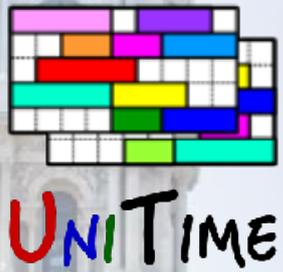


State of the Project

Releases / Achievements

- UniTime 4.2 to be released in June 2017
 - Following a steady schedule of one release every 15 months
- UniTime 4.3 is being specked out
 - Planned release Q3 2018
- 76 institutions from 42 countries filled our voluntary registration form during the last 12 months
- 55 institutions indicated that they use UniTime in production
- Steady increase in interest and adoption from literally around the world
 - USA, Czech Republic, Pakistan, Croatia, Poland, Turkey, Peru, Kuwait, Canada, Malaysia, Spain, UAE, Palestine, Zambia, Kenya,...
 - ... but still very little outside contributions
- Both sides of the interface with Ellucian Banner are now available





New Release: UniTime 4.2

UniTime 4.2

- To be released in June 2017
- Brand new Instructor Scheduling component
- Mobile-friendly user interface
- Improved ability to keep students of a particular group together
- Point in time reports
- Many other improvements across the whole application

See <https://goo.gl/4gIXQV> (UniTime 4.2 Release Docs) for more details.



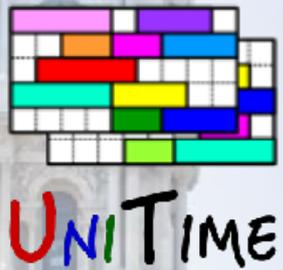
Instructors

- Attributes: *skills, qualifications, seniority, certifications, etc.*
- Maximal teaching load
- Availability and preferences (*on time and courses*)
- Other: *hiring cost, back-to-back / same day / same room preferences, ...*

Courses

- Teaching requests (*classes that need an instructor*)
- Teaching load
- Number of instructors needed
- Requirements and preferences (*instructor and attributes*)
- Other: *same course, same lecture preferences*

Goal: assign instructors to classes in a way that maximizes satisfaction while all the constraints are met



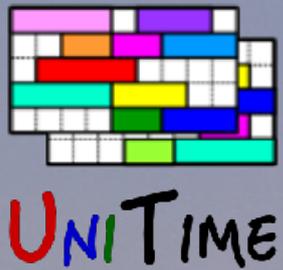
Instructor Scheduling

Problem Description

- Assignment of instructors to classes
 - Automatic (*using the solver*)
 - Interactive (*with conflict checking and suggestions*)
- Respecting various constraints
 - Instructor availability, teaching load, required skill, no overlaps, etc.
- Optimization problem
 - Preferences on time, attributes, courses, instructors, etc.
 - Maximize original assignment (in MPP mode)
 - Minimize unused instructor load, etc.
- Instructors are assigned after the timetabling and student scheduling is done
 - Making use of student availability (for teaching assistants)
- Much like examination timetabling or (batch) student scheduling
 - Instructor assignments are committed (made visible, etc.) when done

See <https://goo.gl/Zb2aES> for the Instructor Scheduling manual.



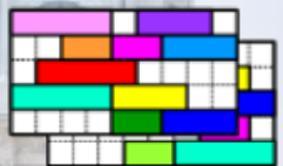


Instructor Scheduling Example

Teaching Assistants for Chemistry

- Each course has
 - One or more lectures (*already assigned to a professor*)
 - Many labs and practices (*forming pairs and related to a particular lecture*)
- Each teaching assistant should teach one or two pairs of a lab and a practice
 - Full time TAs get two assignments, half-time TAs get just one
 - A TA can only teach one course (*both pairs must be of the same course*)
 - Preferably of the same lecture (*same professor*)
 - Must be available for the classes and the lecture (*he/she cannot be enrolled in an overlapping class as a student*)
 - Each course may have a different set of skills and qualifications needed
 - Some (higher level courses) may require particular TAs
- Each course also needs one or two teaching assistant supervisors
 - These get assigned as course coordinators (do not show up for classes)
 - TA supervisors should be available for most of the lectures





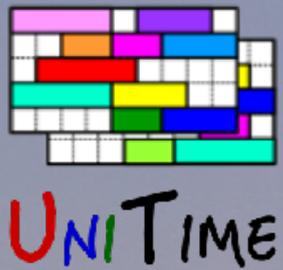
UNITIME

Instructor Scheduling Example

| -----Timetable----- | | | | | | |
|----------------------------|-------------|-------|-------------------|-------------------|-----------|----------|
| | External Id | Limit | Time Pattern | Time | Room | Room Cap |
| CHM 11100 | | 240 | General Chemistry | | | |
| Lecture | | 240 | 2 x 50 | | | |
| Practice Study Observation | | 240 | 1 x 50 | | | |
| Laboratory | | 240 | 1 x 150 | | | |
| Lec 1 | 13773-001 | 120 | 2 x 50 | TTh 10:30a-11:20a | WTHR 200 | 480 |
| Pso 1 | 13782-026 | 24 | 1 x 50 | T 8:30a-9:20a | BRWN 3100 | 30 |
| Lab 1 | 13765-009 | 24 | 1 x 150 | W 11:30a-2:20p | BRWN 1164 | 24 |
| Pso 2 | 13784-028 | 24 | 1 x 50 | T 7:30a-8:20a | BRWN 3104 | 30 |
| Lab 2 | 13767-011 | 24 | 1 x 150 | W 11:30a-2:20p | BRWN 1135 | 24 |
| Pso 3 | 13774-018 | 24 | 1 x 50 | T 1:30p-2:20p | BRWN 3104 | 30 |
| Lab 3 | 13757-017 | 24 | 1 x 150 | W 11:30a-2:20p | BRWN 1134 | 24 |
| Pso 4 | 13775-019 | 24 | 1 x 50 | M 1:30p-2:20p | BRWN 3104 | 30 |
| Lab 4 | 13758-002 | 24 | 1 x 150 | W 2:50p-5:40p | BRWN 1125 | 24 |
| Pso 5 | 13779-023 | 24 | 1 x 50 | M 3:30p-4:20p | BRWN 3102 | 30 |
| Lab 5 | 13762-006 | 24 | 1 x 150 | W 11:30a-2:20p | BRWN 1124 | 24 |
| Lec 2 | 13823-001 | 120 | 2 x 50 | TTh 11:30a-12:20p | AR 106 | 180 |
| Pso 6 | 13777-021 | 24 | 1 x 50 | T 12:30p-1:20p | BRWN 3104 | 30 |
| Lab 6 | 13760-004 | 24 | 1 x 150 | W 2:50p-5:40p | BRWN 1134 | 24 |
| Pso 7 | 13783-027 | 24 | 1 x 50 | T 9:30a-10:20a | BRWN 3100 | 30 |
| Lab 7 | 13766-010 | 24 | 1 x 150 | W 11:30a-2:20p | BRWN 1125 | 24 |
| Pso 8 | 13778-022 | 24 | 1 x 50 | T 3:30p-4:20p | BRWN 3100 | 30 |
| Lab 8 | 13761-005 | 24 | 1 x 150 | W 2:50p-5:40p | BRWN 1164 | 24 |
| Pso 9 | 13776-020 | 24 | 1 x 50 | T 2:30p-3:20p | BRWN 3104 | 30 |
| Lab 9 | 13759-003 | 24 | 1 x 150 | W 2:50p-5:40p | BRWN 1135 | 24 |
| Pso 10 | 13781-025 | 24 | 1 x 50 | T 4:30p-5:20p | BRWN 3100 | 30 |
| Lab 10 | 13764-008 | 24 | 1 x 150 | W 2:50p-5:40p | BRWN 1124 | 24 |

2 Lectures
 10 Pso-Lab pairs
(5 full time TAs)
 1 TA supervisor





Instructor Scheduling Example

1. Teaching Request

Remove Request

Teaching Load:

10

Scheduling Subpart:

CHM 11100 Lab

Classes:

| | Class | External Id | Enrollment | Limit | Time | Date | Room |
|--------------------------|------------------|-------------|------------|-------|------------------|-----------|-----------|
| <input type="checkbox"/> | CHM 11100 Lab 1 | 13765-009 | 22 | 24 | W 11:30a - 2:20p | Full Term | BRWN 1164 |
| <input type="checkbox"/> | CHM 11100 Lab 2 | 13767-011 | 21 | 24 | W 11:30a - 2:20p | Full Term | BRWN 1135 |
| <input type="checkbox"/> | CHM 11100 Lab 3 | 13757-017 | 20 | 24 | W 11:30a - 2:20p | Full Term | BRWN 1134 |
| <input type="checkbox"/> | CHM 11100 Lab 4 | 13764-008 | 23 | 24 | W 2:50p - 5:40p | Full Term | BRWN 1124 |
| <input type="checkbox"/> | CHM 11100 Lab 5 | 13758-002 | 22 | 24 | W 2:50p - 5:40p | Full Term | BRWN 1125 |
| <input type="checkbox"/> | CHM 11100 Lab 6 | 13762-005 | 22 | 24 | W 11:30a - 2:20p | Full Term | BRWN 1124 |
| <input type="checkbox"/> | CHM 11100 Lab 7 | 13760-004 | 23 | 24 | W 2:50p - 5:40p | Full Term | BRWN 1134 |
| <input type="checkbox"/> | CHM 11100 Lab 8 | 13766-010 | 21 | 24 | W 11:30a - 2:20p | Full Term | BRWN 1125 |
| <input type="checkbox"/> | CHM 11100 Lab 9 | 13761-005 | 24 | 24 | W 2:50p - 5:40p | Full Term | BRWN 1164 |
| <input type="checkbox"/> | CHM 11100 Lab 10 | 13759-003 | 20 | 24 | W 2:50p - 5:40p | Full Term | BRWN 1135 |

Include Subparts

| | Instructional Type | Assign | Share | Lead | Can Overlap | Common |
|-------------------------------------|--------------------------------|-------------------------------------|-------|-------------------------------------|--------------------------|-------------------------------------|
| <input checked="" type="checkbox"/> | CHM 11100 Lec (1 parent class) | <input type="checkbox"/> | | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| <input checked="" type="checkbox"/> | CHM 11100 Pso (1 parent class) | <input checked="" type="checkbox"/> | 100 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <input checked="" type="checkbox"/> | CHM 11100 Lab | <input checked="" type="checkbox"/> | 100 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Same Course Preference:

Required

Same Common Part:

Preferred

Qualification Preferences:

CHM 11100

Strongly Preferred



Select...

Neutral



Role Preferences:

TA

Required



Select...

Neutral



Skill Preferences

Select...

Neutral

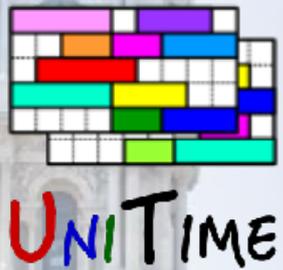


Instructor Preferences:

Select...

Neutral





Instructor Scheduling Example

2. Teaching Request

Remove Request

Number of Instructors:

Teaching Load:

Assign Coordinator:

Coordinator Percent: Share:

Classes:

| Class | External Id | Enrollment | Limit | Time | Date | Room | Assign | Share | Lead | Can Overlap | Common |
|---|-------------|------------|-------|---------------------|-----------|----------|--------------------------|-------|------|--------------------------|-------------------------------------|
| <input checked="" type="checkbox"/> CHM 11100 Lec 1 | 13773-001 | 218 | 240 | TTh 10:30a - 11:20a | Full Term | WTHR 200 | <input type="checkbox"/> | | | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| ... | | | | | | | | | | | |
| <input checked="" type="checkbox"/> CHM 11100 Lec 2 | 13823-001 | 0 | 120 | TTh 11:30a - 12:20p | Full Term | AR 106 | <input type="checkbox"/> | | | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| ... | | | | | | | | | | | |

Same Course Preference:

Same Common Part:

Qualification Preferences:



Role Preferences:



Skill Preferences:

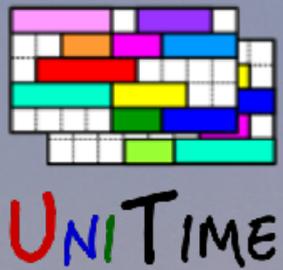


Instructor Preferences:



Common: two assignment can share (typically the lecture)
TA Supervisor gets assigned as course coordinator





Instructor Scheduling Solver

Instructor Scheduling Solver

Solver stopped. Muller, Tommas Administrator Spring 2017 (FWL)

Instructor Scheduling Solver

Input Data Loaded: 05/04/2017 03:59PM
Status: Solver stopped.
Solver Configuration: Default
Solver Mode: Initial
When Finished: No Action
Owner: 1393 - Chemistry
Host: auto

Start Reload Input Data Save Save & Commit Clear Unload Refresh

Best Timetable

| | |
|------------------------|---------------------------|
| Assigned variables | 100.00% (108/108) |
| Overall solution value | 35992.00 |
| Time | 0.12 min |
| Iteration | 35927 |
| Speed | 5184.68 its |
| Assigned Load | 100.00% (109.00 / 109.00) |
| Course Preferences | 3.67% (-8) |
| Same Lecture | 100% (177) |
| Time Overlaps | 3 h |
| Time Preferences | 100% (0) |
| Unused Instructor Load | 100% (0) |

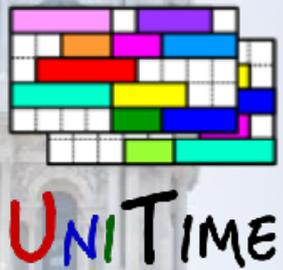
Current Timetable

| | |
|------------------------|---------------------------|
| Assigned variables | 100.00% (108/108) |
| Overall solution value | 35992.00 |
| Time | 0.42 min |
| Iteration | 127227 (0.00% failed) |
| Speed | 5093.29 its |
| Assigned Load | 100.00% (109.00 / 109.00) |
| Best Iteration | 35927 |
| Best Time | 0.12 min (5184.68 its) |
| Course Preferences | 3.67% (-8) |
| Same Lecture | 100% (177) |
| Time Overlaps | 3 h |
| Time Preferences | 100% (0) |
| Unused Instructor Load | 100% (0) |

Save To Best Restore From Best Export XML

- Just like any other solver in UniTime
- Using the same constraint-based solver framework and algorithms, just a different constraint model
- Fully automated or interactive
- Variable: teaching request
(one or more classes that need an instructor)
- Value: teaching assignment
(assignment of an instructor to a teaching request)





Instructor Scheduling Solver

Instructor Scheduling Solver

Input Data Loaded: 05/04/2017 03:59PM
 Status: Solver stopped.
 Solver Configuration: Default
 Solver Mode: Initial
 When Finished: No Action
 Owner: 1383 - Chemistry
 Host: auto

Best Timetable

Assigned variables: 100.00% (103/103)
 Overall solution value: 35982.00
 Time: 0.12 min
 Iteration: 35827
 Speed: 5184.68 it/s
 Assigned Load: 100.00% (109.00 / 109.00)

Department: CHM

| External Id | Name | Assigned Load | Attributes |
|-------------|---------------------|---------------|--------------------------------------|
| 100 | Doe, Joe | 10 / 20 | P1, Beginn |
| 101 | Newman, George | 10 / 10 | P2, Advanc |
| | Novak, Josef | 20 / 20 | P1, Calculu |
| 102 | Smith, John William | 10 / 20 | P1, Expert |
| 1001 | Student Andrew | 10 / 20 | Oral Englis |
| 1002 | Student Brian | 10 / 20 | Oral English, P1, Biology, Chemistry |
| 1003 | Student Charles | 0 / 20 | Oral English, P1, Chemistry |
| 1004 | Student David | 10 / 20 | Oral English, P1, Chemistry |
| 1016 | Student Steve | 20 / 20 | Oral English, P1, Chemistry |

Instructor Scheduling Solver

Solver stopped. Muller, Tomas (Spring 2017 (FWL))
 Administrator

UNI TIME

Subject Area: CHM

Course: Section Time Date Room Load Assigned Instructors Attribute Preferences Instructor Preferences

Details of CHM 10100 Lab 2 and Rec 0

Teaching Request:

| Course | Section | Time | Date | Room |
|-----------|---------|--------------------|-----------|----------|
| CHM 10100 | Lab 2 | Th 11:30a - 12:00p | Full Term | EDUC 101 |
| CHM 10100 | Lab 4 | Thu 3:00p - 3:20p | Full Term | EDUC 187 |
| CHM 10100 | Rec 0 | T 1:00p - 2:00p | Full Term | EDUC 186 |

Assigned Instructors:

| External Id | Name | Assigned Load | Attributes | Course Preferences | Time Preferences | Distribution Preferences | Objectives |
|-------------|---------------|---------------|-----------------------------|--------------------|------------------|--------------------------|---|
| 1004 | Student David | 10 / 20 | Oral English, P1, Chemistry | | | | Attribute Preferences: -1 Different Lectures: -1 |

Selected Assignment:

| Course | Section | External Id | Name | Assigned Load | Attributes | Course Preferences | Time Preferences | Distribution Preferences | Objectives |
|-----------|---------|-------------|---------------|---------------|-----------------------------|--------------------|------------------|--------------------------|--|
| CHM 10100 | Lab 2 | 1004 | Student David | 10 / 20 | Oral English, P1, Chemistry | | | | Attribute Preferences: -1 Different Lectures: -1 Unused Instructor Load: +10 |

Available Instructors:

| External Id | Name | Assigned Load | Attributes | Course Preferences | Time Preferences | Distribution Preferences | Objectives |
|-------------|----------------|---------------|-----------------------------|--------------------|------------------|--------------------------|--|
| 1004 | Student David | 10 / 20 | Oral English, P1, Chemistry | | | | Attribute Preferences: -1 Different Lectures: -1 Unused Instructor Load: +10 |
| 1001 | Student Andrew | 10 / 20 | Oral English, P1, Chemistry | | | | Attribute Preferences: -1 Different Lectures: -1 Unused Instructor Load: +10 |
| 1004 | Student David | 10 / 20 | Oral English, P1, Chemistry | | | | Attribute Preferences: -1 Different Lectures: -1 Unused Instructor Load: +10 |

Suggestions:

| Room | Course | Section | External Id | Name | Assigned Load | Attributes |
|----------|-----------|---------|-------------|---------------|---------------|-----------------------------|
| EDUC 101 | CHM 10100 | Lab 2 | 1004 | Student David | 10 / 20 | Oral English, P1, Chemistry |
| EDUC 187 | CHM 10100 | Lab 4 | 1004 | Student David | 10 / 20 | Oral English, P1, Chemistry |
| EDUC 186 | CHM 10100 | Rec 0 | 1004 | Student David | 10 / 20 | Oral English, P1, Chemistry |

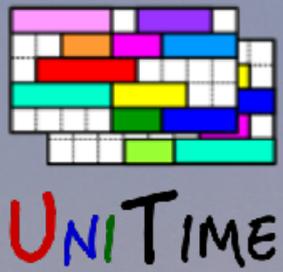
Not-Assigned Teaching Requests

Root, Abraham (Fall 2010 (woebagon))
 Administrator

Search Export CSV Export PDF

| Date | Room | Load | Attribute Preferences | Instructor Preferences | Objectives |
|-----------|----------|------|-----------------------|------------------------|---|
| Full Term | EDUC 101 | 10 | P1 | | Course Preferences: -4 Time Overlaps: +12 Time Preferences: +4 |
| Full Term | EDUC 183 | 10 | P2, Algorithms | | Attribute Preferences: -1 Teaching Preferences: -4 Time Overlaps: +72 Time Preferences: +4 |
| Full Term | EDUC 101 | 10 | P1, P1, Chemistry | | Attribute Preferences: -3 Same Cammon: -8 |
| Full Term | EDUC 186 | 10 | P1, P1, Chemistry | | Attribute Preferences: -3 Same Cammon: -8 |
| Full Term | EDUC 187 | 10 | P1, P1, Chemistry | | Attribute Preferences: -3 Same Cammon: -8 |
| Full Term | EDUC 188 | 10 | P1, P1, Chemistry | | Attribute Preferences: -3 Same Cammon: -8 |
| Full Term | EDUC 189 | 10 | P1, P1, Chemistry | | Attribute Preferences: -3 Same Cammon: -8 |
| Full Term | EDUC 190 | 10 | P1, P1, Chemistry | | Attribute Preferences: -3 Same Cammon: -8 |
| Full Term | EDUC 191 | 10 | P1, P1, Chemistry | | Attribute Preferences: -3 Same Cammon: -8 |
| Full Term | EDUC 192 | 10 | P1, P1, Chemistry | | Attribute Preferences: -3 Same Cammon: -8 |
| Full Term | EDUC 193 | 10 | P1, P1, Chemistry | | Attribute Preferences: -3 Same Cammon: -8 |
| Full Term | EDUC 194 | 10 | P1, P1, Chemistry | | Attribute Preferences: -3 Same Cammon: -8 |
| Full Term | EDUC 195 | 10 | P1, P1, Chemistry | | Attribute Preferences: -3 Same Cammon: -8 |
| Full Term | EDUC 196 | 10 | P1, P1, Chemistry | | Attribute Preferences: -3 Same Cammon: -8 |
| Full Term | EDUC 197 | 10 | P1, P1, Chemistry | | Attribute Preferences: -3 Same Cammon: -8 |
| Full Term | EDUC 198 | 10 | P1, P1, Chemistry | | Attribute Preferences: -3 Same Cammon: -8 |
| Full Term | EDUC 199 | 10 | P1, P1, Chemistry | | Attribute Preferences: -3 Same Cammon: -8 |
| Full Term | EDUC 200 | 10 | P1, P1, Chemistry | | Attribute Preferences: -3 Same Cammon: -8 |





Instructor Scheduling

More Features...

- Teaching conflicts reporting
- Data exchange and roll forward
- Teaching assignments in Scheduling Assistant

Student Scheduling Assistant ?
User: Student, David Click here to log out. Session: Fall 2010 (jacobegoni) Click here to change the session.

UNI TIME

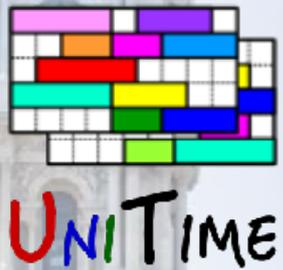
List of Classes | Time Grid | **Class Schedule**

| Lock | Subject | Course | Type | Class | Avail | Days | Start | End | Date | Room | Instructor | Requires | Note | Credit |
|------|---------|--------|---------------|-------|-------|--------------|--------|--------|-----------|-------------------------|------------|----------|------|--------|
| | CHM | 10100 | Lec | 1 | 0/4 | MW | 12:30p | 1:30p | Fall Term | EDUC 101 (Display Name) | | | | |
| | | | Lec | 3 | 0/4 | TR | 11:30a | 12:20p | Fall Term | EDUC 101 (Display Name) | | | | |
| | | | Lab | 9 | 0/1 | R | 3:00p | 5:50p | Full Term | EDUC 107 | D Student | 3 | | |
| | | | Lab | 4 | 0/1 | T | 3:00p | 5:50p | Full Term | EDUC 107 | D Student | 1 | | |
| | | | Rec | 9 | 0/1 | T | 1:30p | 2:20p | Full Term | EDUC 104 | D Student | 9 | | |
| | | | Rec | 4 | 0/1 | M | 2:30p | 3:20p | Full Term | EDUC 102 | D Student | 4 | | |
| | BIOL | 10100 | Lec | 2 | 2/4 | TR | 7:30a | 9:20a | Full Term | EDUC 101 (Display Name) | G Newman | | | ✓ |
| | | | Rec | 6 | 0/1 | F | 9:30a | 10:20a | Full Term | EDUC 104 | | | | ✓ |
| | | | Lab | 6 | 0/1 | F | 3:30p | 5:20p | Full Term | EDUC 107 | | | | ✓ |
| | | | Psy | 3 | 1/4 | R | 8:30a | 9:20a | Full Term | EDUC 101 (Display Name) | G Newman | | | + |
| | | | Psy | 2 | 1/4 | W | 9:30a | 10:20a | Full Term | EDUC 101 (Display Name) | G Newman | | | * |
| | CHM | 10100 | Lec | 2 | 0/4 | TR | 9:30a | 10:20a | Full Term | EDUC 101 (Display Name) | | | | ✓ |
| | | | Lab | 7 | 0/1 | W | 3:00p | 5:50p | Full Term | EDUC 106 | J Novak | 2 | | ✓ |
| | | | Rec | 7 | 0/1 | W | 10:30a | 11:20a | Full Term | EDUC 104 | J Novak | 7 | | ✓ |
| | CALC | 10100 | Lec | A | 0/4 | MWF | 7:30a | 8:20a | Full Term | EDUC 101 (Display Name) | J Dow | | | ✓ |
| | | | Rec | A2 | 0/1 | M | 10:30a | 11:20a | Full Term | EDUC 104 | J W Smith | A | | ✓ |
| | PHAR | 10100 | Lec | 1 | 1/4 | T | 8:30a | 9:20a | Full Term | EDUC 101 (Display Name) | | | | ✓ |
| | ENGL | 10100 | Lec | 6 | 0/1 | MWF | 1:30p | 2:20p | Full Term | EDUC 103 | | | | ✓ |
| | | | Lab | 6 | 0/1 | M | 3:30p | 4:20p | Full Term | EDUC 109 | | 6 | | ✓ |
| | ALG | 10100 | Dist (Online) | 2 | = | Arrage Hours | | | Full Term | | | | | 3 |

Total Credit: 3 Show unassignments

You have made some changes in your schedule. Please click the Submit Schedule button to update your registration.





Other Features in UniTime 4.2

Mobile-friendly user interface

- All GWT-based pages are made responsive (*this cover all pages accessible by students and instructors*)
- Same look and content
- Only a few new components (*like the menu or notifications*)
- Some improvements to older (Struts-based) pages too

UniTime 4.2 | Student Scheduling Assistant

localhost:8080/UniTime/gwt.jsp?pag... ☆ ⓘ

Student Scheduling Assistant ?

User: Student, Brian [Click here to log out.](#) Session: Fall 2010 (wombagon) [Click here to change the session.](#)

Course Requests

| | | | | | | |
|----------------|----------------------------------|------------|-------|---|---|---|
| 1. Priority | ALG 10100 | Online | + P X | ↓ | ⓧ | |
| 2. Priority | COH 10100 | | ✓ | ↑ | ↓ | ⓧ |
| 3. Priority | PSY 10100 | | ✓ | ↑ | ↓ | ⓧ |
| 4. Priority | ECUN 10100 | | ✓ | ↑ | ↓ | ⓧ |
| 5. Priority | GER 10100 | | ✓ | ↑ | ↓ | ⓧ |
| 8. Priority | HTST 10100 | | ✓ | ↑ | ↓ | ⓧ |
| 7. Priority | C.S. 10100 | Loc | + P X | ↑ | ↓ | ⓧ |
| 1. Alternative | | ITNC 10100 | + P X | | | |
| 9. Priority | | | P X | ↑ | ↓ | ⓧ |
| 9. Priority | | | P X | ↑ | ↓ | ⓧ |
| 10. Priority | | | P X | ↑ | ↓ | ⓧ |
| 11. Priority | | | P X | ↑ | ↓ | ⓧ |
| 12. Priority | Course with the lowest priority. | | P X | ↑ | ↓ | ⓧ |

Tip: Enter a free time to avoid getting classes in time you need for something else.

Alternate Course Requests

(used only if a course requested above is not available)

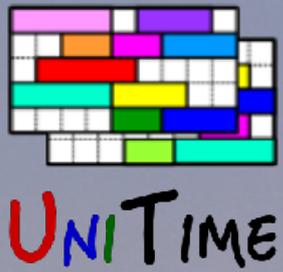
| | | | | | |
|--------------|---|-----|---|---|---|
| 1. Alternate | Alternate request if course(s) above not available. | P X | ↑ | ↓ | ⓧ |
| 2. Alternate | | P X | ↑ | ↓ | ⓧ |
| 3. Alternate | | P X | ↑ | ⓧ | |

[Degree Plan](#) [Current Registration](#) [Build Schedule](#) ➔

! You have made some changes in your schedule. Please click the Build Schedule button to update your registration.

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Other Features in UniTime 4.2

Student Group Scheduling

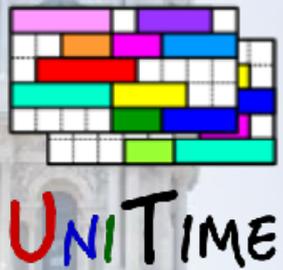
- Students of a group or a curriculum are kept together
- Additional criterion measuring probability of two students (of a group) attending the same class
- More powerful student sectioning algorithm (in course timetabling)
- Student preferences for instructional methods and individual sections

Point In Time Reports

- Snapshot of current state of students and their registration, class limits, etc.
- Using the Data Exchange page
- Multiple snapshots can be imported
- Full set of reports (weekly class hours, room utilizations, etc.)
- Roll forward

See <https://goo.gl/4gIXQV> (UniTime 4.2 Release Docs) for more details.



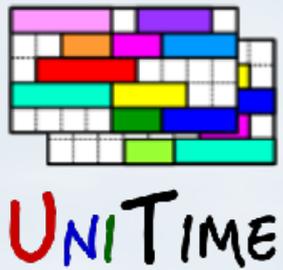


Next Release: UniTime 4.3

UniTime 4.3

- Planned release: Q3 2018
- Student Scheduling
 - Interfaces, student schedule quality / fairness, ...
- Event Management
 - Event approval workflow, ...
- Continue the effort of making the user interface look & feel more modern, mobile friendly, and better localizable





Conclusion

Long Term

- Constraint Solver: instructor and student scheduling, team building
- UI: moving from Struts to GWT, localization, documentation, mobile
- Interfaces: IMS Course Planning & Scheduling, more APIs and XMLs

For more details, please see us at the conference

- UniTime: Best Practices (Sunday, 1:30pm - 4:30pm in Flower)
- Case Study: UniTime at Masaryk University (Monday, Showcase Reception)
- UniTime 4.2: Instructor Scheduling (Tuesday, 10:15am - 11:00am in Flower)
- Course Timetabling Around the World (Tuesday, 2:30pm - 3:15pm in Flower)
- Or visit www.unitime.org

An online demo is available at <https://demo.unitime.org>

