

Meeting State Mandated Guidelines for Student Degree Progress at Purdue

Stephanie Schluttenhofer
Tomas Muller

June 2015

- Indiana's State Law
- Ramifications
- Considerations
- Compliance
- Purdue's Vision
- Purdue's Current State
- Purdue's Work In Progress

Indiana's State Law

IC 21-12-14
Chapter 14. Degree Maps

IC 21-12-14-1
Establishment of degree maps

Sec. 1. Not later than October 1, 2013, the commission shall develop guidelines in consultation with state educational institutions to provide a state educational institution guidance for establishing degree maps for each full-time student attending the state educational institution. The guidelines must include:

- (1) procedures for establishing a degree map with a student, including requirements for adjusting a degree map in situations in which the student changes the student's field of study;
- (2) requirements and guidance for a state educational institution to determine when the state educational institution must offer a course at no cost to a student under section 3 of this chapter; and
- (3) any provision the commission determines is necessary to implement this chapter.

As added by P.L.281-2013, SEC.30.

IC 21-12-14-2
Degree maps; contents

Sec. 2. This section applies to a student who initially enrolls in a state educational institution after July 31, 2014. A state educational institution shall develop a degree map for each full-time student based on the student's specific educational objective or course of study. A full-time student's degree map must contain:

- (1) an academic term by academic term sequence of course options that will allow the full-time student to complete either: (A) a baccalaureate degree within four (4) academic years;

or

- (B) an associate degree within two (2) academic years; in the student's intended field of study;
- (2) the expected date that the student will earn a baccalaureate degree or an associate degree described in subdivision (1);
- (3) the academic requirements that a student must complete each academic year to timely earn a degree described in subdivision (1); and
- (4) any information the commission determines is appropriate under section 1 of this chapter.

As added by P.L.281-2013, SEC.30.

IC 21-12-14-3

Degree maps; availability of courses

Sec. 3. This section applies to a student who initially enrolls in a state educational institution after July 31, 2014. A state educational institution shall ensure that courses necessary for the student to comply with the student's degree map are available for the student during the academic term in which the student is required to complete the particular course. If a student who complies with the student's degree map is unable to take a course required under the student's degree map for the current academic term because:

- (1) the state educational institution does not offer the course during that particular academic term; or
- (2) the student is unable to enroll in the course:

- (A) because the course times at which the course is offered conflict with other course requirements specified for the current academic term in the student's degree map; or
- (B) because the course is full;

the state educational institution shall provide the particular course to the student at no cost during the next available academic term in which the course is offered unless the state educational institution provides the student with an alternate degree map that does not require the student to take the course that semester.

As added by P.L.281-2013, SEC.30.

Major Points

- Every degree program must have an achievable documented path to completion (**degree map**) in 2 years for a 2 year degree and 4 years for a 4 year degree.
- Every student must have a degree map that will allow them to achieve the degree they are seeking in the expected time.
- If a student gets off their degree map because a course is not available in the expected term for them to make progress, the institution must provide them with an alternate degree map or provide them with the course for free in a later term.

Ramifications

- Previously institutions documented the course requirements to achieve each of the degrees they offer, now they must also specify the order the courses should be taken and make sure they are available in that order.
- Need a method to document each individual student's degree map.
- Need to monitor a students progress toward their degree goal.
- If a student fails to make progress toward their degree because a required course is unavailable, then the institution covers the cost of the missing course in a future term.

Considerations

Documenting the default path to a degree or “degree map” as it is referred to in the law.

- A degree map is **not** the same as the data needed for a degree audit.
- If you have a degree program that is made of a huge number of electives, how do you create a degree map?
- Even though there are multiple paths to most degrees, an institution must have one path that if the student follows it and passes the courses, they are guaranteed to get their degree in the advertised number of years.

Considerations - Continued

Institutions need to have a method to document each individual student's degree map.

- There is a wide range of maturity in this process across and within institutions.
 - Nothing
 - A file in the advisors office
 - Electronically in a system designed for the task

Considerations - Continued

Need to monitor each students progress toward their degree goals.

- Unless an institution has a very large contingent of advisors, this needs to be an electronic process.
- How aggressive should the monitoring be?
 - Is it the student's or the institution's responsibility to keep to the plan?
 - Should the institution check where the student is in their plan during their normal meeting with their advisor?
 - Should the institution contact the student as soon as they register for a course or set of courses that are off plan?

Considerations - Continued

If a student fails to make progress toward their degree because a required course is unavailable, then the institution covers the cost of the missing course in a future term.

- Institutions need to make sure they are offering the courses their students need to make progress in the term the student is expected to take the course.
- Institutions need to make sure that required courses for a degree are not offered at conflicting times.
- Institutions need to make sure they are offering enough space in the courses required for students to make degree progress.

Considerations - Continued

If the required course is a prerequisite to a required course in a future term this could lead to the institution covering the cost of missing courses in multiple terms.

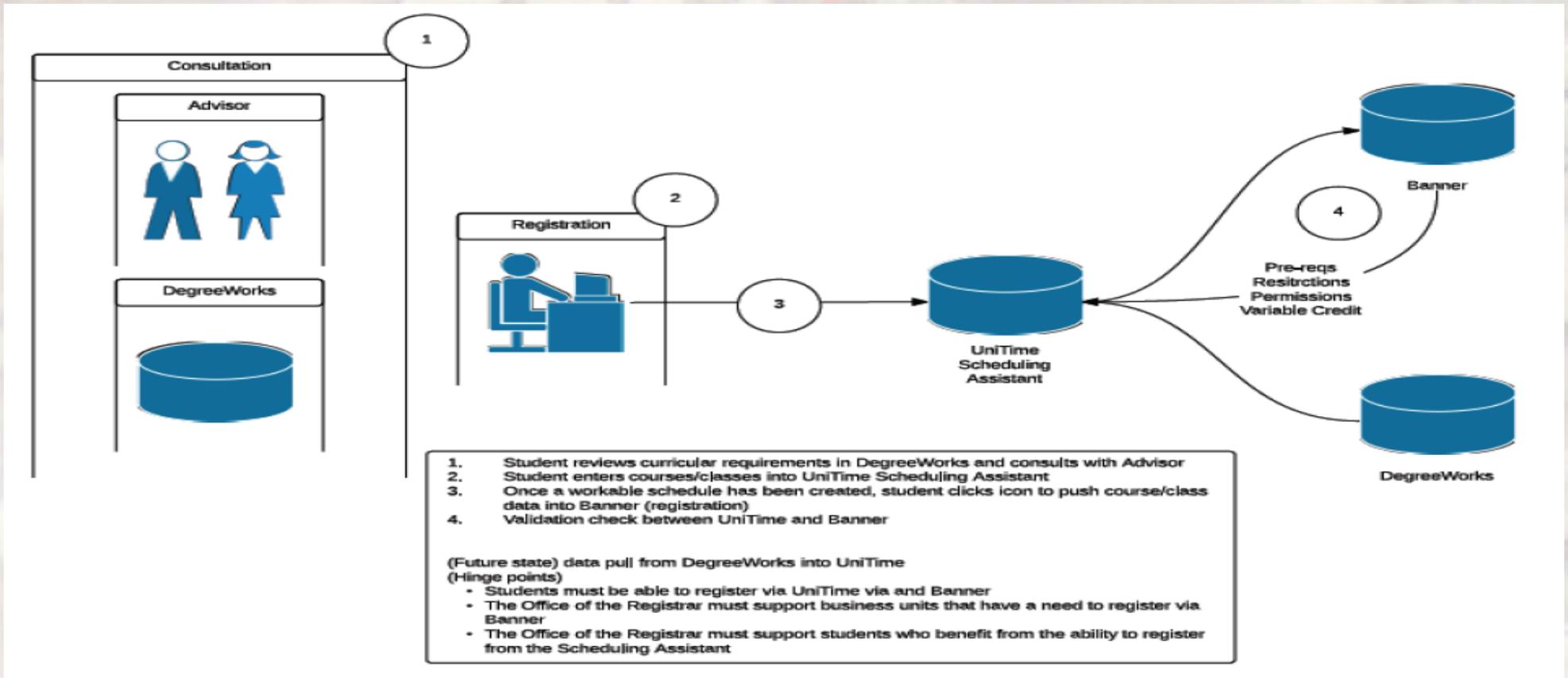
- Falling behind on a required course can have a compounding effect when prerequisites are involved.
- The farther a student falls behind because the institution has not provided access to needed courses, the more it will cost the institution.

Compliance

How does an institution show compliance with the law?

- Degree Planning for Students
- Building a Course Timetable that Meets Student Degree Maps
- Getting the Students into the Courses Needed to Make Progress
- Ability to Show the Needed Courses Were Available to Each Student

Purdue's Vision



Purdue's Vision - Continued

- Build the schedule of classes using UniTime based on projections of student curricular demand.
- Incoming students provided with a personal degree map in DegreeWorks based on the template degree map for the program they are admitted into.

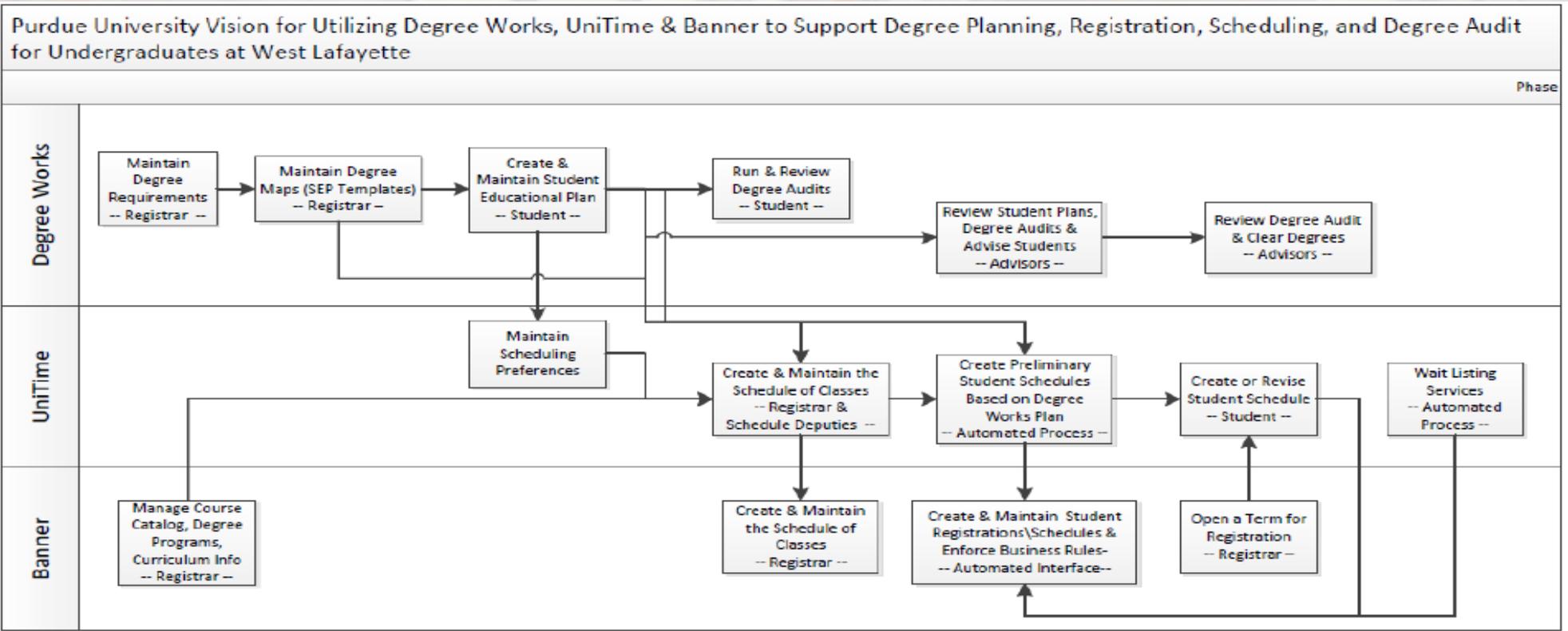
Purdue's Vision - Continued

- When students register for classes, the Student Scheduling Assistant queries DegreeWorks and populates the students course request with the courses in their degree map.
- The students register for their courses.
- Advisors and others use UniTime to monitor how courses are filling and if necessary open more sections.

Purdue's Vision - Continued

- The student registration flows from Banner back into DegreeWorks and updates the students map.
- Students can use DegreeWorks review how the courses they registered for impact their progress toward degree and if necessary adjust their course registrations or their map.
- Advisors also track student progress in DegreeWorks.
- Repeat

Purdue's Vision - Continued



Purdue's Current State

- + Purdue has degree maps - we call them **degree templates** at the general level and when they are applied to an individual student they become the student's **degree plan**.
- + Starting Fall 2014 every incoming student was given a degree plan in DegreeWorks for the degree they were admitted into.
- Few students or advisers want to use them, so the individual student degree plans are not being keep up to date.

Purdue's Current State

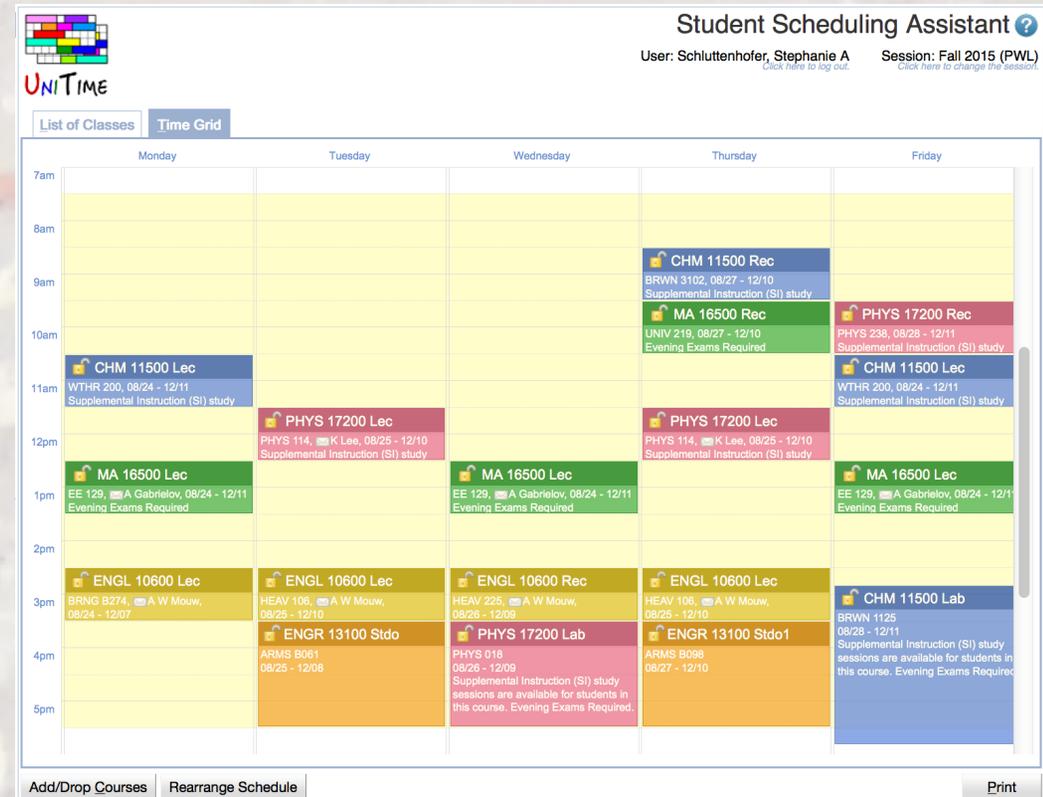
- + Uses UniTime to build its schedule to minimize students conflicts on the courses typically taken together.

| | 7:30a | 8:00a | 8:30a | 9:00a | 9:30a | 10:00a | 10:30a | 11:00a | 11:30a | 12:00p | 12:30p | 1:00p | 2:00p | 3:00p | 4:30p | 5:00p |
|------------------------|----------------|-----------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|--------|-------|-------|-------|-------|-------|
| KRAN G016 (128) | | | | | | | | | | | | | | | | |
| Mon | | | AGEC 20300 Lec 1 | MGMT 50400 Lec 2 | AGEC 45000 Lec 1 | AGEC 33000 Lec 1 | AGEC 22000 Lec 1 | IE 47400 Lec 1 | IE 43100 Lec 1 | IE 33000 Lec 1 | | | | | | |
| Tue | | | AGEC 25000 Lec 1 | | EAPS 11600 Lec 1 | | AGEC 32100 Lec 1 | AGEC 40600 Lec 1 | AGEC 20300 Lec 1 | ME 10400A Lec 2 | | | | | | |
| Wed | | | AGEC 20300 Lec 1 | MGMT 50400 Lec 2 | AGEC 45000 Lec 1 | AGEC 33000 Lec 1 | AGEC 22000 Lec 1 | IE 47400 Lec 1 | IE 43100 Lec 1 | IE 33000 Lec 1 | | | | | | |
| Thu | | | AGEC 25000 Lec 1 | | EAPS 11600 Lec 1 | | AGEC 32100 Lec 1 | AGEC 40600 Lec 1 | AGEC 20300 Lec 1 | ME 10400A Lec 2 | | | | | | |
| Fri | | | AGEC 20300 Lec 1 | MGMT 50400 Lec 2 | AGEC 45000 Lec 1 | AGEC 33000 Lec 1 | AGEC 22000 Lec 1 | IE 47400 Lec 1 | IE 43100 Lec 1 | IE 33000 Lec 1 | | | | | | |
| ME 1130 (120) | | | | | | | | | | | | | | | | |
| Mon | ME 20000 Lec 2 | ME 27000 Lec 3 | ME 27000 Lec 1 | ECE 20100A Lec 6 | ME 27000 Lec 2 | ME 27000 Lec 4 | | | | | | | | | | |
| Tue | | ME 49700D Lec 2 | ME 49700D Lec 4 | ME 27000 Lec 7 | | ME 44400 Lec 1 | ECE 20100A Lec 4 | ME 27000 Lec 6 | ME 20000 Lec 3 | ECET 22400 Lec 1 | | | | | | |
| Wed | ME 20000 Lec 2 | ME 27000 Lec 3 | ME 27000 Lec 1 | ECE 20100A Lec 6 | ME 27000 Lec 2 | ME 27000 Lec 4 | | | | | | | | | | |
| Thu | | ME 49700D Lec 2 | ME 49700D Lec 4 | ME 27000 Lec 7 | | ENGR 10300 Lec 3 | ME 27000 Lec 1 | | | | | | | | | |
| Fri | ME 20000 Lec 2 | ME 27000 Lec 3 | ME 27000 Lec 1 | ECE 20100A Lec 6 | ME 27000 Lec 2 | ME 27000 Lec 5 | ECE 20100A Lec 4 | ME 27000 Lec 6 | ME 20000 Lec 3 | ME 27000 Lec 4 | | | | | | |

- Does not use degree template data to determine the courses that should be taken together.

Purdue's Current State

- + Uses UniTime's Scheduling Assistant to enable students to build a course schedule that ensures if it is possible to take a set of courses the student will have a schedule with those courses.



The screenshot displays the UniTime Student Scheduling Assistant interface. At the top right, it shows the user name 'User: Schluttenhofer, Stephanie A' and the session 'Fall 2015 (PWL)'. Below the user information are two tabs: 'List of Classes' and 'Time Grid', with 'Time Grid' selected. The main area is a grid with days of the week (Monday to Friday) as columns and time slots (7am to 5pm) as rows. The grid is populated with course blocks, each containing course ID, instructor, and dates. For example, on Monday, there is a 'CHM 11500 Lec' block from 11am to 12pm. On Tuesday, there is a 'PHYS 17200 Lec' block from 12pm to 1pm. On Wednesday, there is an 'ENGL 10600 Rec' block from 3pm to 4pm. On Thursday, there is a 'CHM 11500 Rec' block from 9am to 10am. On Friday, there is a 'CHM 11500 Lab' block from 3pm to 4pm. At the bottom of the grid, there are buttons for 'Add/Drop Courses', 'Rearrange Schedule', and 'Print'.

Purdue's Current State

- + UniTime's interface with Banner performs the requisite checking to ensure the student is eligible to register for the courses they request and registers them in Banner.

| | | | | | | | | | | | | | | | | | | | |
|---|------|-------|-----|-----------|--------|-------|-------|--------|---------------|---------|-------------|--------------------|---|----------------------|---|-----------------|--|-------|--|
| <input type="checkbox"/> | GER | 10200 | Lab | 66056-025 | 1 / 25 | R | 3:30p | 4:20p | 01/15 - 04/30 | SC 283 | J T Conklin | 69960-026 | | + | ! | | | | |
| <input type="checkbox"/> | | | Lec | 69960-026 | 1 / 25 | MW | 3:30p | 4:20p | 01/12 - 04/29 | SC G040 | J T Conklin | | 3 | + | ! | | | | |
| <input type="checkbox"/> | | | Lec | 69960-026 | 1 / 25 | T | 3:30p | 4:20p | 01/13 - 04/28 | SC G002 | J T Conklin | 69960-026 | | + | ! | | | | |
| <input type="checkbox"/> | Free | Time | | | | MTWRF | 7:30a | 10:30a | | | | | | | | | | | |
| Total Credit: 16 | | | | | | | | | | | | | | | | | | | |
| Add/Drop Courses | | | | | | | | | | | | Rearrange Schedule | | Current Registration | | Submit Schedule | | Print | |
| GER 10200 Lab 66056-025: Prerequisite error. See the Schedule of Classes. | | | | | | | | | | | | | | | | | | | |
| GER 10200 Lec 69960-026: Prerequisite error. See the Schedule of Classes. | | | | | | | | | | | | | | | | | | | |

- Does not have UniTime integrated with the students degree plans to help ensure they get an initial schedule with the courses in their plan.

Purdue's Current State

- + Registrar's Office uses UniTime's Student Scheduling Dashboard to monitor how courses are filling and add space as appropriate.
- Does not currently have curricular data to monitor how well the students are following their curriculum.

Online Student Scheduling Dashboard ?

Schluttenhofer, Stephanie A Administrator Fall 2015 (PWL) [Click here to change the session / role.](#)

Filter: GER Search

Enrollments Students Change Log

| Subject Type | Course CRN-SectionId | Title Time | Date | Consent Room | Available | Projection Enrollment | Not-Enrolled | Reservation | Need Consent |
|--------------|----------------------|--------------------------|---------------|--------------|-----------|-----------------------|--------------|-------------|--------------|
| GER | 10100 | German Level I | | Dept | 49 / 100 | 97 | 51 | 4 | - 51 |
| Lec | 13442-013 | MW 9:30a - 10:20a | 08/24 - 12/09 | REC 226 | 12 / 25 | 10 | 13 | 2 | - 13 |
| Lec | 13442-013 | T 9:30a - 10:20a | 08/25 - 12/08 | REC 303 | 12 / 25 | 10 | 13 | 2 | - 13 |
| Lab | 64937-012 | R 9:30a - 10:20a | 08/27 - 12/10 | SC 289 | 12 / 25 | 10 | 13 | 2 | - 13 |
| Lec | 13445-014 | MW 2:30p - 3:20p | 08/24 - 12/09 | SC 102 | 4 / 25 | 17 | 21 | - | - 21 |
| Lec | 13445-014 | T 2:30p - 3:20p | 08/25 - 12/08 | SC 102 | 4 / 25 | 17 | 21 | - | - 21 |
| Lab | 62446-007 | R 2:30p - 3:20p | 08/27 - 12/10 | SC 289 | 4 / 25 | 17 | 21 | - | - 21 |
| Lec | 13446-015 | MW 3:30p - 4:20p | 08/24 - 12/09 | REC 303 | 17 / 25 | 5 | 8 | 1 | - 8 |
| Lec | 13446-015 | T 3:30p - 4:20p | 08/25 - 12/08 | SC G002 | 17 / 25 | 5 | 8 | 1 | - 8 |
| Lab | 62444-005 | R 3:30p - 4:20p | 08/27 - 12/10 | SC 289 | 17 / 25 | 5 | 8 | 1 | - 8 |
| Lec | 62440-001 | MW 8:30a - 9:20a | 08/24 - 12/09 | SC G060 | 16 / 25 | 2 | 9 | 3 | - 9 |
| Lec | 62440-001 | T 8:30a - 9:20a | 08/25 - 12/08 | EE 234 | 16 / 25 | 2 | 9 | 3 | - 9 |
| Lab | 64936-011 | R 8:30a - 9:20a | 08/27 - 12/10 | SC 289 | 16 / 25 | 2 | 9 | 3 | - 9 |
| GER | 10200 | German Level II | | | 32 / 100 | 95 | 68 | 2 | - - |
| Lec | 62448-001 | MW 3:30p - 4:20p | 08/24 - 12/09 | EE 234 | 4 / 25 | 13 | 21 | 1 | - - |
| Lec | 62448-001 | T 3:30p - 4:20p | 08/25 - 12/08 | SC G039 | 4 / 25 | 13 | 21 | 1 | - - |
| Lab | 62452-005 | R 3:30p - 4:20p | 08/27 - 12/10 | SC 277 | 4 / 25 | 13 | 21 | 1 | - - |
| Lec | 62449-002 | MW 9:30a - 10:20a | 08/24 - 12/09 | EE 234 | 6 / 25 | 10 | 19 | 2 | - - |
| Lec | 62449-002 | T 9:30a - 10:20a | 08/25 - 12/08 | BRNG B261 | 6 / 25 | 10 | 19 | 2 | - - |
| Lab | 62453-006 | R 9:30a - 10:20a | 08/27 - 12/10 | SC 277 | 6 / 25 | 10 | 19 | 2 | - - |
| Lec | 62450-003 | MW 8:30a - 9:20a | 08/24 - 12/09 | REC 308 | 16 / 25 | 3 | 9 | 1 | - - |
| Lec | 62450-003 | T 8:30a - 9:20a | 08/25 - 12/08 | CL50 121 | 16 / 25 | 3 | 9 | 1 | - - |
| Lab | 62454-007 | R 8:30a - 9:20a | 08/27 - 12/10 | SC 277 | 16 / 25 | 3 | 9 | 1 | - - |
| Lec | 62451-004 | MW 2:30p - 3:20p | 08/24 - 12/09 | CL50 125 | 6 / 25 | 12 | 19 | 1 | - - |
| Lec | 62451-004 | T 2:30p - 3:20p | 08/25 - 12/08 | SC G060 | 6 / 25 | 12 | 19 | 1 | - - |
| Lab | 62455-008 | R 2:30p - 3:20p | 08/27 - 12/10 | SC 277 | 6 / 25 | 12 | 19 | 1 | - - |
| GER | 11200 | Elem German Conversation | | | 12 / 15 | 13 | 3 | - | - - |
| Lec | 21228-001 | F 3:30p - 4:20p | 08/28 - 12/11 | EE 234 | 12 / 15 | 2 | 3 | - | - - |
| GER | 20100 | German Level III | | | 49 / 100 | 78 | 51 | - | - - |
| Lec | 50608-002 | MWF 12:30p - 1:20p | 08/24 - 12/11 | CL50 121 | 11 / 25 | 9 | 14 | - | - - |
| Lec | 50609-003 | MWF 10:30a - 11:20a | 08/24 - 12/11 | KRAN G013 | 12 / 25 | 7 | 13 | - | - - |

Purdue's Work In Progress

- Processing DegreeWorks Templates into UniTime curricula for building the schedule of classes.

Curriculum Details
Edit Previous Next Delete Print Back

Abbreviation: S/BIOL
 Name: Biology Fall 2014
 Academic Area: Science
 Major(s): BIOL - BIOL
 Department: 1392 - Biological Sciences

Curriculum Classifications

| Name: | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | IC |
|-----------------------|----|----|----|----|----|----|----|----|----|
| Classification: | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | IC |
| Last-Like Enrollment: | 77 | 36 | 79 | 45 | 52 | 44 | 42 | 71 | 2 |
| Projected by Rule: | 77 | 36 | 79 | 45 | 52 | 44 | 42 | 71 | 2 |
| Requested Enrollment: | 81 | | 48 | | 48 | | 36 | | |
| Current Enrollment: | 81 | 41 | 48 | 59 | 48 | 36 | 36 | 60 | |
| Course Registrations: | 81 | 41 | 49 | 59 | 48 | 36 | 36 | 60 | |

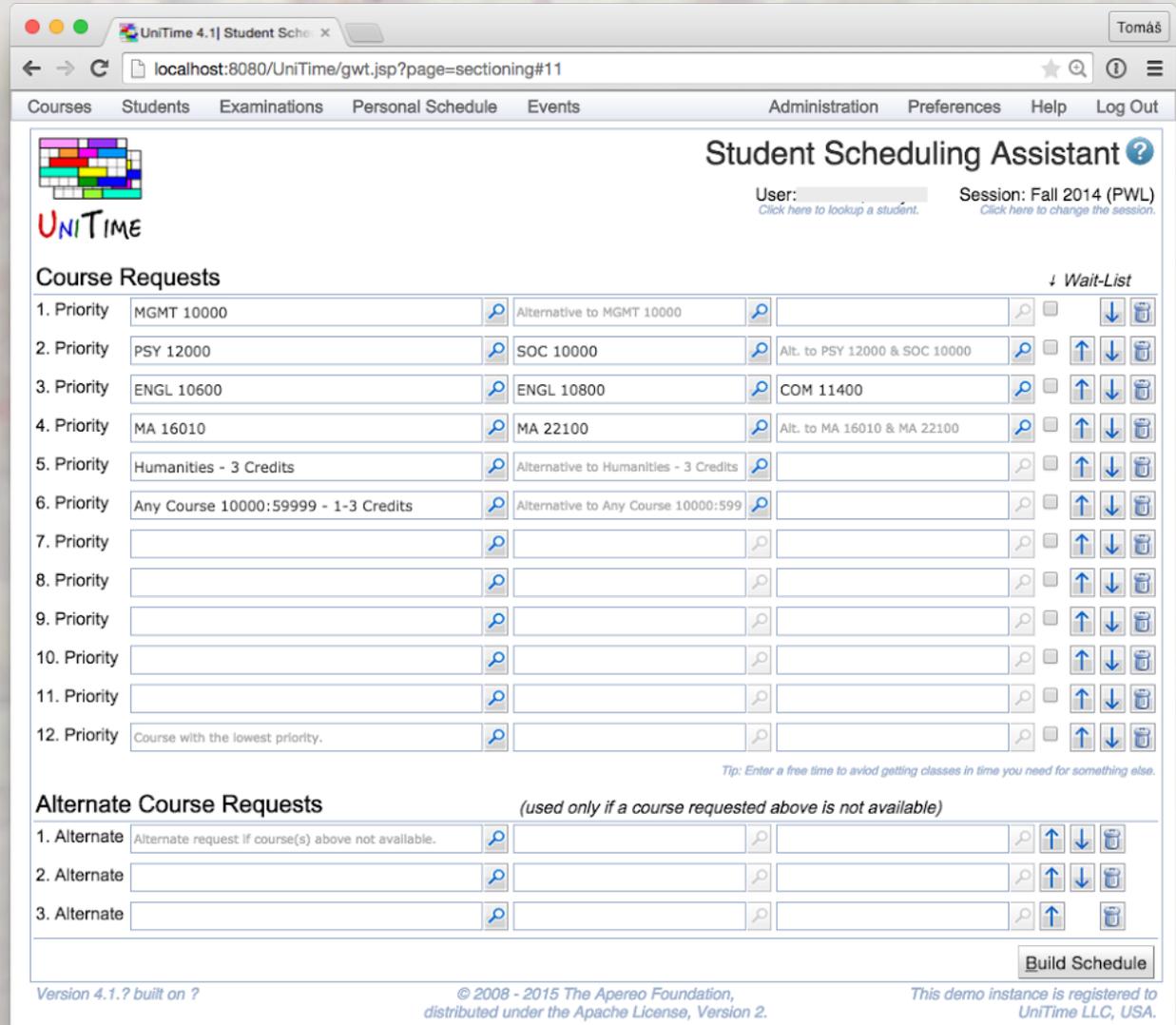
Course Projections

| Group Course | 01 Proj | | 03 Proj | | 05 Proj | | 07 Proj | |
|------------------|---------|----|---------|----|---------|--|---------|---|
| R01 BIOL 12100 | 81 | 53 | 10 | | 1 | | 1 | |
| R01 BIOL 13500 | 81 | 23 | 5 | | | | | |
| O01-1 CHM 11500 | 41 | 33 | 7 | | | | | |
| O01-1 CHM 12901 | 41 | 8 | 1 | | 1 | | | |
| R03 BIOL 23100 | | | 48 | 54 | 18 | | 5 | |
| R03 BIOL 23200 | | | 48 | 55 | 18 | | 2 | |
| R03 COM 21700 | 1 | | 48 | | | | | |
| O05-1 PHYS 17200 | | | 2 | | 24 | | | |
| O05-1 PHYS 23300 | | | | | 24 | | | |
| R07 STAT 50300 | | | | | 9 | | 36 | 6 |

Edit Previous Next Delete Print Back

Purdue's Work In Progress

- Using the DegreeWorks API to populate student course requests in UniTime.



UniTime 4.1 | Student Scheduling Assistant

localhost:8080/UniTime/gwt.jsp?page=sectioning#11

Courses Students Examinations Personal Schedule Events Administration Preferences Help Log Out

Student Scheduling Assistant ?

User: Tomás Session: Fall 2014 (PWL)

UNI TIME

Course Requests ↓ Wait-List

| | | | | | |
|--------------|--------------------------------------|---------------------------------------|-------------------------------|--|--|
| 1. Priority | MGMT 10000 | Alternative to MGMT 10000 | | | |
| 2. Priority | PSY 12000 | SOC 10000 | Alt. to PSY 12000 & SOC 10000 | | |
| 3. Priority | ENGL 10600 | ENGL 10800 | COM 11400 | | |
| 4. Priority | MA 16010 | MA 22100 | Alt. to MA 16010 & MA 22100 | | |
| 5. Priority | Humanities - 3 Credits | Alternative to Humanities - 3 Credits | | | |
| 6. Priority | Any Course 10000:59999 - 1-3 Credits | Alternative to Any Course 10000:599 | | | |
| 7. Priority | | | | | |
| 8. Priority | | | | | |
| 9. Priority | | | | | |
| 10. Priority | | | | | |
| 11. Priority | | | | | |
| 12. Priority | Course with the lowest priority. | | | | |

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. | | | |
| 2. Alternate | | | | |
| 3. Alternate | | | | |

Build Schedule

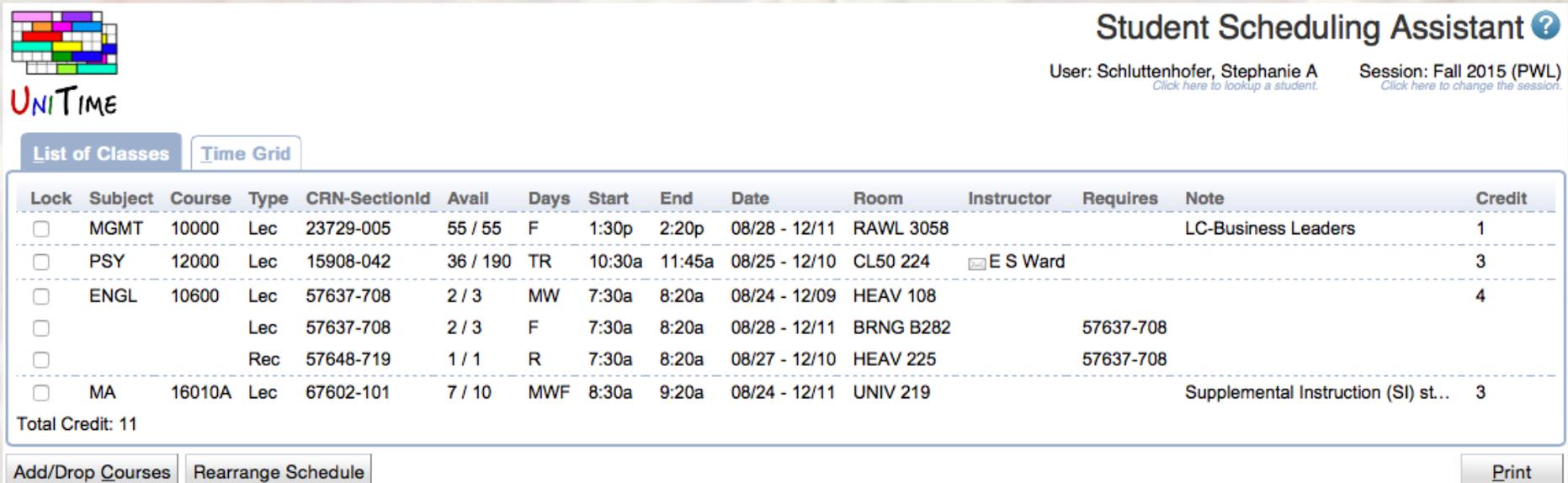
Version 4.1.? built on ?

© 2008 - 2015 The Apereo Foundation, distributed under the Apache License, Version 2.

This demo instance is registered to UniTime LLC, USA.

Purdue's Work In Progress

- Using UniTime to create preliminary schedules based on student degree plans obtained through the DegreeWorks API.
- Students can edit schedule.



Student Scheduling Assistant ?

User: Schluttenhofer, Stephanie A [Click here to lookup a student.](#) Session: Fall 2015 (PWL) [Click here to change the session.](#)

UniTime

List of Classes | Time Grid

| Lock | Subject | Course | Type | CRN-SectionId | Avail | Days | Start | End | Date | Room | Instructor | Requires | Note | Credit |
|--------------------------|---------|--------|------|---------------|----------|------|--------|--------|---------------|-----------|------------|-----------|-------------------------------------|--------|
| <input type="checkbox"/> | MGMT | 10000 | Lec | 23729-005 | 55 / 55 | F | 1:30p | 2:20p | 08/28 - 12/11 | RAWL 3058 | | | LC-Business Leaders | 1 |
| <input type="checkbox"/> | PSY | 12000 | Lec | 15908-042 | 36 / 190 | TR | 10:30a | 11:45a | 08/25 - 12/10 | CL50 224 | E S Ward | | | 3 |
| <input type="checkbox"/> | ENGL | 10600 | Lec | 57637-708 | 2 / 3 | MW | 7:30a | 8:20a | 08/24 - 12/09 | HEAV 108 | | | | 4 |
| <input type="checkbox"/> | | | Lec | 57637-708 | 2 / 3 | F | 7:30a | 8:20a | 08/28 - 12/11 | BRNG B282 | | 57637-708 | | |
| <input type="checkbox"/> | | | Rec | 57648-719 | 1 / 1 | R | 7:30a | 8:20a | 08/27 - 12/10 | HEAV 225 | | 57637-708 | | |
| <input type="checkbox"/> | MA | 16010A | Lec | 67602-101 | 7 / 10 | MWF | 8:30a | 9:20a | 08/24 - 12/11 | UNIV 219 | | | Supplemental Instruction (SI) st... | 3 |

Total Credit: 11

Add/Drop Courses | Rearrange Schedule | Print

Questions & Answers

Thank you!

Stephanie Schluttenhofer

Purdue University, Information Technology at Purdue
Senior Systems Analyst/Engineer
says@purdue.edu

Dr. Tomas Muller

Purdue University, Information Technology at Purdue
Scheduling Research Professional
muller@purdue.edu

Acknowledgment:

Dr. Frank Blalark, Purdue University, Registrar