**Team B (Long, Cory, Darwin, Usama, Emilio)**

**Audience and Process Analysis**

Users

* Faculty: Teaching Staff, Course Coordinator (Client), and Maintenance
  + Teaching Staff, rather than emailing an excel file with their preferred schedule, they will now input data into the new system for the course coordinator to compile. After the course coordinator creates a draft for the schedule, it is then up to the teaching staff to correct any errors or problems with the drafted schedule.
    - Input data
    - Data: Teaching Staff preferences and requirements
      * Preferred days
      * Preferred times
      * Preferred courses
      * Required Credits for tenure/fixed teaching
      * Extra work load
  + Course Coordinator / Client (David Bender): With the new system the tasks of the course coordinator will not necessarily change, but it will be a lot more efficient than how it would have been done prior to the new system. With a quicker more efficient way of compiling information, the course coordinator will be able to create drafts more quickly. This in term means that less time will be wasted on compiling information and more time can be focused on meeting the preferences of the teaching staff.
    - Compiles teacher preferences and requirements
    - Follows specific guidelines for scheduling courses and sections (Number of credits, Teacher Workload, Fixed Term/Tenure Track, etc.)
    - Uses information from previous years to determine specific number of sections
    - Creates draft schedule as close to teaching staff preferences as possible while still meeting the requirements for fix/tenure
    - Makes revisions if there is conflict with drafted schedule
    - Makes all final decisions for scheduling
  + Maintenance Staff: Maintenance staff will be needed in order to keep the system up and running.
    - Configuring
    - Upgrading
    - Administration
    - Monitoring
    - Security
    - Maintenance
* Students: Won’t necessarily be inputting data into the system but will be taking the information already inputted by the teaching staff and compiled by the course coordinator and create a class schedule for the next semester.
* Business Process
  + Compiling Data: Teaching staff input preferential data. Course coordinator compiles the teaching preferential data along with scheduling data from previous years. After compiling both data sets, the course coordinator then applies any specific course priorities for each semester. Each priority goes as follows:
    - Priority: At least one section of the courses listed on the academic roadmap
    - Priority: All mandatory courses are offered according to academic roadmap
    - Secondary Priority: courses required to declare a major is offered both semesters
  + Drafting Schedule: After compiling all of the necessary data, the course coordinator creates a draft schedule.
    - Courses offered
    - Number of sections per course
    - Class times
    - Who is teaching each sections
  + Revising Schedule: Draft finished and sent to teaching staff and faculty to check for any conflicts. Revising may take several drafts before final product.
  + Finalizing Schedule: The revised draft is finalized with minimal errors/conflicts and is ready to be uploaded and available for student use.

**Data Analysis**

* Data gathered based from Client’s description of problem
  + Preferred schedules from teaching staff
    - Determines:
      * How many classes the teaching staff can teach?
      * Who teaches what class?
      * What day?
      * What time?
  + Information gathered from previous years (Scheduling information: Which courses were open, numbers of sections in each, how many students applied for the section, etc.)
    - Determines:
      * Number of sections to open per course
      * What courses to offer (New/old), that are not part of the academic roadmap
      * Is it worth it to open a new section?
      * Are there enough resources (Classrooms, equipment, teaching staff, etc.) to have multiple sections of a course to be open?
      * Depending on the course, certain classes can only be in certain classrooms and can have so many students per room
* Must coincide with Recommended Academic Plan (Academic Roadmap) for every major
* Analyzing Data
  + Step by step breakdown
  + Point out areas which can be improved
    - Data input
    - Make scheduling simpler
      * Automatically include courses in Academic Roadmap
      * Find a way to incorporate simpler schedule compilation

**Data Uses, Issues and Guidelines**

* Data Uses
  + Used to create course schedule for every semester
  + Course schedule draft will be made more quickly
  + Data will be input more efficiently
  + Time between drafts will decrease
  + More time for fine tuning a final draft of course schedule
* Issues
  + Transition to new system
  + Including automatic academic roadmap towards new drafts
  + Potential security issues
* Guidelines
  + Straightforward input data to get output course schedule draft
  + Data input will stay close to faculty preferences as best as possible
    - Faculty: easier input for faster course schedule draft
    - Student: no real change in use
  + Allows for more time for fine tuning to teacher preferences
* System design
  + Not necessarily a new system
  + Modified old system into a newer more efficient model
  + Don’t fix what isn’t broken just improve
* Justification
  + Based on client description:
    - Time spent on data input of teacher preferences is inefficient
    - Many constraints that can be easily remedied through implementing a centralized database.
    - Rather than taking the time to creating a completely different system, take the old system and reinvigorate it to a more optimized efficient state.