

# Window to a New World: Online Freshman Orientation via Portal

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## ABSTRACT

In June 2003, Lehigh University embarked on an experiment to present incoming freshmen with an online pre-orientation experience using the SCT Luminis 3 Portal environment. Three main content areas were developed: targeted information about the student's college/program area, a customized course selection tool, and an online Calculus-readiness test integrated with the Blackboard course management system. The goal of this project was to replace the three-day, on-campus pre-orientation program held in July each year, and to introduce the incoming students to the MyLehigh Portal. This paper will present an overview of the content areas developed and deployed, the results of a student satisfaction survey developed to gauge response to this pre-orientation experience, and thoughts on how to improve the process for the future.

**Categories and Subject Descriptors:**K.6 [General]

**General Terms:** Management

**Keywords:** Portal, First Year Student, Student Orientation, On-line Orientation

## 1. INTRODUCTION

Lehigh University is located in Bethlehem, PA. Founded in 1865 with 4700 undergraduates, 1200 graduate students, 400 Faculty, and 1200 Staff across four Colleges (Arts & Sciences, Engineering, Business & Economics, and Education), Lehigh is known for being a leader in the use of innovative technology to advance teaching, learning and research.

In February 2003, Lehigh University introduced the SCT Luminis Portal to faculty, staff and students. Although this portal product has a number of built-in features such as single sign-on access to calendaring, email, groups and other systems, Lehigh's portal implementation team held the opinion that "content was king" and would be the driver that would entice people to use the portal. As

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a result, one of the first portal content projects proposed was to move our first year student (freshman) pre-orientation program entirely online.

Prior to summer 2003, Lehigh sponsored a pre-orientation weekend program in mid-July for incoming freshmen. One purpose of this program was to reduce the "summer melt" factor where students who have accepted multiple University and College offers decide to withdraw from Lehigh to attend elsewhere. The thought was that by bringing students on campus in July for a number of activities, they would have a better feel for the campus, the faculty and staff, and their propensity to decide to attend another institution would be minimized.

Unfortunately, that theory turned out to be unfounded, as statistically the same number of students still withdrew to attend elsewhere. As a result, it was apparent that bringing students on campus was not increasing our yield and was expensive in terms of dollars and time for Lehigh as well as the students and their parents.

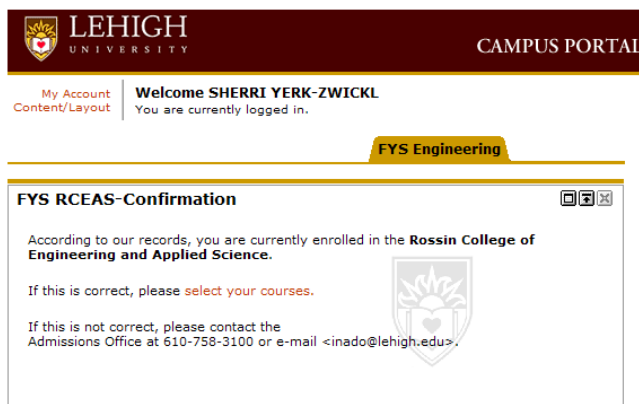
## 2. FIRST YEAR STUDENT PROPOSAL

In late February 2003, a group of administrators and the portal implementation team met to discuss the possibility of using the newly-introduced MyLehigh portal as a vehicle for an online first year student pre-orientation program. The initial goals that were defined included: providing customized college or program information to each student, the ability for the student to take an online Calculus readiness exam for mathematics course placement, and a course selection process that would lead the student through the process of selecting appropriate courses for the fall semester. In addition, a variety of other useful information related to computing, libraries, dining, the summer reading program, etc. would be made available to ease the transition to University life.

The development of the content, and programming necessary to accomplish these goals began in March, with a roll-out date of June 1, 2003. A cross-functional team was created to accomplish this aggressive schedule with members from the Dean of Students Office, the Registrar, Library & Technology Services, and assistant deans from the College of Arts & Sciences, Business & Economics, and the Rossin College of Engineering and Applied Science.

### 3. CUSTOMIZED CONTENT AREAS

Lehigh uses the SCT Banner Student system which integrates with the SCT Luminis Portal product. This integration provided the ability to create portal roles for each student based on the information stored in the Student system. These roles allow the customized “push” of information to the students on their First Year Student (FYS) tab, so that they see content specifically related to their admitted College or program. In total, six roles were defined; three college roles: College of Arts & Sciences, College of Business & Economics, College of Engineering, and three program roles: Integrated Business and Engineering, Computer Science and Business, and Arts Engineering. Two portal channels were created for this customized information. The first channel is the Confirmation channel; which presents the student with a statement that indicates the college or program in which the student is enrolled. If this information is incorrect, the student is directed to contact the Admissions office with the contact information displayed in the channel.



The Confirmation channel is the entry point for the mandatory course selection process. This process is not the same as registering for courses. Instead, based on role information, the student is stepped through a series of screens that prompts for first, second, third, and alternate course selections in each required curriculum area. The student is not allowed to choose individual course sections that are tied to specific timeslots. With the students' completed course preferences, the Registrar's Office reviews the student requests and makes every effort to accommodate preferences while balancing section enrollments. Since the various colleges and programs have different first year course requirements, this process eliminates much of the confusion that previously existed for students who were unsure what courses were optional and which were mandatory.

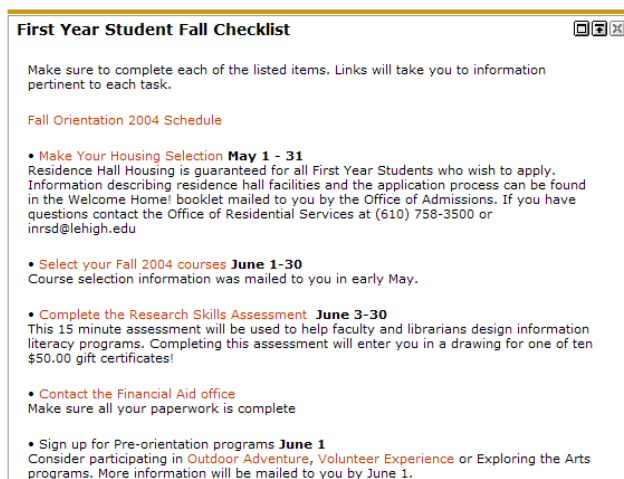
Part of the course selection process involves the selection of an appropriate-level mathematics course. Since many programs require the successful completion of calculus, Lehigh had traditionally administered a paper-based calculus readiness exam (CRE). Based on the score of the readiness exam, the student would receive a recommendation on which math course to select. Migrating this exam to an online format was one hurdle that needed to be overcome in order to keep the pre-orientation entirely online. The decision was made to use the Blackboard course management system's assessment tool for the CRE. With single sign-on access to Blackboard through the portal, we were

able to link the Blackboard assessment from the mathematics course selection area. This facility allowed us to prompt the student to take the CRE in a “just-in-time” mode, as soon as they reached the math selection segment. When the CRE is completed, the student is presented with their score which they enter into the math course selection screen. Based on the score information entered, the student is presented with a drop-down menu displaying appropriate courses that they are eligible to choose. The CRE score information is later loaded into the Student system, providing a mechanism for historical reporting and comparison purposes.

The second custom “program information” channel presents links to information specifically related to the curriculum options available for that college or program. This channel provides the student with access to information that was traditionally provided in paper form, and quickly misplaced or forgotten. By providing this information through the program information channel, the student has access to material that assists with making informed decisions related to their choice of curriculum.

### 4. OTHER CONTENT AREAS

In addition to the customized content provided to the student, a number of other channels were created to provide additional useful information. These channels include: a “Computing and Library Information” area where content related to bringing a computer to campus, computing facilities, available software, telephone and voice mail, and library facilities overview are presented; a “Campus Links” area which provide web links to the Bursar's Office, Financial Aid Office, Dining Services, Health & Wellness Center, and other support services typically used; and a “Checklist” channel which provides a chronological list of the tasks that students need to complete prior to their campus arrival.



### 5. SUPPORT ISSUES

In preparing for the deployment of the online pre-orientation, the project team anticipated a number of problem areas including: browser compatibility, advising questions, the procedure for opening computing accounts, and how to log-in to the portal. To prepare for these expected issues, training sessions and documentation were provided for the Help Desk and college support staff.

Some of the unanticipated problems we encountered were categorized into two areas: user “worry” issues, and technical problems. “Worry” issues included student/parent eagerness to access the system, and panic over low scores on the Calculus Readiness Exam. When technical problems required a slight delay in the “opening” of the course selection process, we found that we had many students and parents calling to find out when they would be able to access the system. There was concern that they would not be able to “get into” the desirable courses if they didn’t log in quickly. Some students (and parents) were very concerned that low scores on the CRE would reflect poorly on the student’s academic preparedness and somehow impact the rest of their academic career.

The technical problems we encountered fell into three areas: browser issues, integration, and Blackboard java issues. Although we had anticipated browser compatibility problems, we found very quickly that the programming for the course selection process was not handling students using the Internet Explorer browser on the Macintosh OS X platform. Although we were able to quickly identify the problem, it did require a complete rewrite of the course selection process under stressful conditions (due to student/parent “worry issues” listed above...). From an integration standpoint, we had to resolve numerous problems related to the “behind-the-scenes” synchronization of personal identification numbers (PINs) between the portal and the Banner Student system. Since many of our incoming students have upperclassman friends or relatives, we found that they were getting conflicting information from these sources on how they should be accessing the Banner system to register for courses. Unfortunately, these well-meaning people were directing the students to perform actions outside the portal that affected the synchronization of the PINs between systems. The last technical issue that created havoc was related to java problems with the Blackboard equation editor. When creating the CRE, we opted to make use of a new feature in Blackboard 6 that allowed the creation and display of equations using the java-based equation editor. In testing, the CRE equations performed fine, but we had overlooked one critical area: java. We found that when some students started to take the exam, the browser would detect that they required a java download in order to work. Some students on slow dial-up modems would be prompted to begin a download that could take as long as 7 hours to complete. Since the CRE was a timed assessment (the students had 40 minutes to complete the test), panic immediately ensued, as the exam timer was running while the extremely long download commenced. If the student completed the download, they would need to reboot the computer, effectively becoming locked out of the CRE, since it could only be taken one time. These circumstances added to the “worry” support issues with which our support staff dealt.

## 6. STUDENT SATISFACTION SURVEY

Despite the unanticipated support issues, by late June it appeared as though our “experiment” was a success. Students were accomplishing the required tasks on schedule and with a minimum of trauma. The project team decided that what we really needed was to hear the student’s perspective on this process. We designed a survey (online, of course), and invited the students to participate in the survey via an email message sent during their on-campus orientation in August. We used this opportunity to collect data including background information such as college or

program, how they connected to the internet, and the browser and operating system used. We also wanted to find out their level of satisfaction with the paper-based and portal information available, the CRE and course selection processes, the support services received, and to gather free-form comments on their experiences.

We were very pleased with the results of the survey. A total of 366 students completed the survey, which was approximately 30% of the incoming students. We did offer the option to participate in a random prize drawing when the survey was submitted, which we believe may have helped influence students to complete the instrument. The information that we gathered from the survey showed:

- 45% used cable modems, 36% dial-up, 15% DSL
- 80% used the Internet Explorer browser, 95% used a Microsoft operating system
- 37% had CRE difficulties
- 93% found the paper-based information useful,
- 90% portal information useful
- 57% had course selection difficulties
- 46% needed no assistance, 30% needed advising assistance, 24% needed technical assistance
- For those students requiring assistance, 80%+ rated the assistance excellent or very good
- 50%+ students made comments on how we can improve the process for the future.

The survey also provided a text area where students could provide any comments on their experience. Many of the suggestions were very thoughtful and have formed the basis for many of the improvements planned for the future.

## 7. LESSONS LEARNED

The feedback received from students (and parents), the project team, and staff providing support was invaluable in planning for future portal-based orientations. Some of the areas that will remain basically the same include the reuse of the information channels with updated information, and the reconvening of the same University-wide implementation team. We do plan to improve the process by:

- Starting the planning and testing phases earlier
- Expanding the capabilities offered such as: housing selection process, and credit hour checking in the course selection area
- Improving the CRE to eliminate technical issues
- Improving the clarity of the student instruction packet

## 8. ACKNOWLEDGEMENTS

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