

Gina Anderson

From: Jeff Barrett
Sent: Friday, March 16, 2012 4:25 PM
To: Gina Anderson
Subject: Administrative Systems Review (200-45) - GSM Registration & Payment System

Hello Gina,

(I'm sorry that this and the prior review are being initiated at the same time. Please feel free to prioritize or stagger your analyses as needed.)

We'd like to invite the Academic Senate to participate in the following review under the 200-45 Administrative Computing Policy:

Project: **Registration & Payment System (RaPS)**
Sponsor: **Graduate School of Management**
Details: <http://admincomputing.ucdavis.edu/projects/raps.cfm>

Overview:

The purpose of the Registration & Payment system (RaPS) is to provide GSM students with a single web portal to perform course discovery, course registration, process independent study requests, pay course fees, provide statements for employee reimbursement, track degree progress against requirements, submit degree candidacy, update contact and employment information, and provide for transition to alumni status. It will also allow staff to manage course offerings and information for the student educational process in a timely manner with minimal manual intervention and achieve a high degree of workflow accuracy.

Status:

- As part of the conceptual 200-45 review process for this project, we are seeking a brief statement summarizing the Academic Senate's feedback/position regarding the proposed system. You can send any Senate feedback directly to me, in whatever electronic format (Word, PDF, etc.) is most convenient for you.
- As with other projects, 200-45 provides a venue for ongoing review and discussion. In addition to a formal Academic Senate response, direct comments from Senate members are always welcome. (As previously discussed, we are careful to distinguish between individual comments and the official positions of campus organizations.)

Best Regards,

Jeff

Jeff Barrett
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If members wish to comment directly, we have established a SmartSite for 200-45 project reviews. For those who have not yet joined, directions for signing up and participating are as follows:

To access the 200-45 Review SmartSite

1. Go to SmartSite (<http://smartsite.ucdavis.edu>) and select the **Log In** button in the top right corner.
2. Enter your UC Davis LoginID and password.
3. The first time you access the site, you will need to join the 200-45 Review site so you can participate in the discussion forum.
 - o To join, click **Membership** under the My Workspace tab in the top left corner.
 - o Select **Joinable Sites** at the top of the Membership window.
 - o Select **Join** under the **200-45 Review** entry. (The site list is alphabetical, so it should be near the top.)
 - o You now should see a **200-45 Review** tab to the right of the My Workspace gold tab (or in the More pull-down menu in the upper right corner).
4. Click on the **200-45 Review** tab to enter the site.

To provide feedback or ask questions regarding a project under review

1. Within the 200-45 SmartSite, choose **Project Forums**.
2. **Select the specific project** (called a Topic in SmartSite) that you would like to discuss.
3. Within a Topic, you can choose **Post New Thread** to add new comments or questions.
4. To contribute to an existing discussion or respond to a question, select the item of interest and choose **Reply**.

You can also pose questions directly to the project contacts; they are listed on the project page referenced above.

(For examples of previously submitted projects and feedback, please see <http://admincomputing.ucdavis.edu/projects/>.)

Be green - please print only when necessary

**200-45 Business Review
Registration & Payment System (RaPS)
Graduate School of Management**

Description

The purpose of the Registration & Payment system (RaPS) is to provide GSM students with a single web portal to perform course discovery, course registration, process independent study requests, pay course fees, provide statements for employee reimbursement, track degree progress against requirements, submit degree candidacy, update contact and employment information, and provide for transition to alumni status. It will also allow staff to manage course offerings and information for the student educational process in a timely manner with minimal manual intervention and achieve a high degree of workflow accuracy.

Background

The GSM was the fastest rising top-50 business school in the *U.S. News & World Report's* March 2011 ranking of the 437 MBA programs accredited by the Association for the Advancement of Collegiate Schools of Business International. The School jumped 14 places to No. 28, reaching the top 6 percent of accredited schools. Also in 2011, *The Economist* ranked the School No. 3 in the world for faculty quality. Our Organizational Behavior faculty has been ranked No. 1 in the world by the *Financial Times* in recent years.

The GSM currently focuses on the following educational programs:

1. Masters of Business Administration (MBA) degrees; one full-time day program at Davis and two part-time Working Professional programs in Sacramento (UCDMC) and San Ramon (Bay Area)
2. Masters of Professional Accountancy program
3. Technology Minor program to qualifying UC Davis undergraduate students.
4. Executive Education

The GSM currently uses several disparate systems to manage various business processes, including:

Student Information System: Banner, the UC Davis Student Information System (SIS)

Course Fee Payment System: GSM requires course fees to be paid in advance of registration by students participating in its Working Professional MBA programs. The GSM eliminated acceptance of credit card facsimile transmittals in June 2008 per UCD A&FS Internal Controls instructions in accordance with UCD PPM 330-35. Fax was the primary mechanism used by students making course fee payments and elimination of this mechanism forced the GSM to quickly develop an on-line course fee payment system that interfaced with the Campus TouchNet credit card payment portal.

Course Scheduling System: The course scheduling system was developed by GSM in 2011 to manage its course catalog, program curriculum, course offerings, and room scheduling processes. This system is also used to publish course schedules to current and

prospective students on the web. Information published may or may not be included in the Campus Student Information System (i.e., Banner).

Course Advisory System: The GSM developed a course advisory system in the third quarter of 2010, which provides current MBA students with an overview of their required courses, enrollments, and waivers.

Registrar Database: GSM staff must have access to enter and review a wide array of information in order to monitor and manage the student registration and payment process. The GSM developed a robust Oracle database to track information on all its constituents (i.e., students, alumni, staff, faculty, and business partners/affiliates).

Alumni Directory System: The GSM developed an Alumni Directory system to track MBA Alumni and allow alumni to maintain their contact information (i.e., address, phone, email) and employment information. Alumni can choose what information within this system is shared among other alumni, staff/faculty, and students.

Admissions System: The GSM employed a commercial cloud service, Hobson's Admissions & Enrollment Management system, in 2008 to manage its MBA admissions process. On-line applications to the MBA program are submitted by prospective students through this system. This system is integrated with the UC Davis Touchnet Payment Portal for credit card payment of admission fees.

Event Management System: The GSM uses commercial off-the-shelf software package for managing/scheduling classroom/meeting room resources.

<http://www.dea.com/ProductsAndServices/Enterprise/Default.aspx>

The systems currently in use were developed at various times using a variety of development platforms, such as .NET, Oracle Forms, and Java. The goal of this system development is to consolidate and significantly enhance the functionality of these individual systems into a single application developed within the Java Spring Framework.

Business Requirement/Need:

The GSM is largely a self-supporting operation, relying on student fees and donations, rather than state or federal funding. Providing premium technology to enhance its students' educational experience is critical to its success and to its ability to maintain national and international rankings. Many of the business processes and information required to manage a professional business school operation is unique. As such, the GSM has struggled with managing operations using systems currently available on Campus and has determined that it is necessary to proceed with implementation of systems that meet its unique requirements. Some of the unique elements of the GSM operations include:

1. The student admissions process is unique and autonomous to the University.
2. Programs include non-degree and executive education students that are not included in the campus Student Information System (SIS).
3. The GSM is not afforded its own level code in SIS to differentiate students from other graduate level programs.

4. Course fees for self-supporting programs must be paid in advance; payments generally made with credit card during registration process.
5. Students are allowed to repeat certain course numbers for provisionally approved seminar topics.
6. Students regularly participate in variable unit independent study courses and consulting projects which require a review/approval process prior to registration.
7. The GSM operates at multiple locations (i.e., Sacramento, Davis, and San Ramon) and must manage students that cross-register for courses at locations other than their home campus, including charges/credits for location fee differentials.
8. Course scheduling for the Working Professional MBA program does not conform to normal course session patterns. Courses must often be scheduled before the term start or after the term end date. Likewise, courses are scheduled for odd/even weekends and meet two days per week for five weeks over a ten week period; students schedule different courses for the alternate weeks. Likewise, the summer quarter is divided into two unique sessions.
9. Students require immediate access to statements that include course, unit, fees, and grade in order to process employer reimbursements.
10. Registration timeline is compressed and must close 30 days prior to term start in order to manage instructor teaching loads and contracts.
11. Priority registration groups must be controlled by program in addition to number of units completed.
12. Course materials are provided to students by the school for some self-supporting programs.
13. Developing and managing personal connections between students and alumni is critical to the MBA program.
14. Career Services is a significant component of the GSM programs

Project Scope:

This system will fully integrate and enhance functionality from previously describe systems and will be used to manage all processes identified in the System Workflow Diagram, Attachment 1. All enhancements cannot be adequately defined in this document, but a summary of enhancements that will be made to previous systems include:

- *Course Scheduling System.* The course scheduling system will be fully integrated to provide a seamless interface for course catalog, program curriculum, course offerings, and room scheduling processes. It will be enhanced to implement business rules related to mandatory course pre-requisites, suggested related coursework, course associations, designated courses, and registration restrictions.
- *Course Fees Payment System.* The RaPS system will provide a seamless transition from student course selection through course fee calculation, payment, and invoicing process. Furthermore, it will include payment options by electronic check and/or Paypal. Processing paper check payments simply isn't necessary with current technology. Check processing can be accomplished electronically and provide vastly improved efficiency and timeliness.

- *Registrar Database.* The previous system is currently hosted in Oracle Forms which is no longer a recommended development platform. Data management will be moved to a Java Spring Framework and enhanced to include admissions testing and application data, sponsorship information, undergraduate information, and employment data.
- *Course Advisory System.* The previous system will be enhanced to track exemptions to course pre-requisites, mandatory course associations, and all degree requirements, including:
 1. Completion of established core courses
 2. Completion of a minimum number of units (including recognition of transfer units and exceptions for joint degree students)
 3. Minimum GPA
 4. Minimum number of quarters in residence
 5. Restrictions on independent study courses
- The Alumni Directory system will be replicated to serve students and enhanced to include additional data elements, such as employment history.

Project Stakeholders:

Sponsor: James Stevens, Assistant Dean Student Affairs, Graduate School of Management.

Primary point of contact: Chip Mrizek, Director IT, Graduate School of Management (cjmrizek@ucdavis.edu, 530-752-8330)

Restricted Data Content:

The system design does not include any personal identity information. All credit card payments submitted by students are processed through the Campus Touchnet Payment Gateway portal in compliance with University policy. Some personal information, such as addresses and phone numbers are stored in the system, if provided by the individual. This information is necessary to support the personal networking component that is critical to GSM programs. Individuals are provided the opportunity to identify whether or not contact information should be made available to students, alumni, faculty, and staff.

Project Timeline:

Detailed functional and design requirements were gathered between March 2011 and December 2011. System development and implementation will proceed from January 2012 through January 2013, with a staggered implementation as soon as functional components are ready.

Budget:

The GSM is funding the development and support of the system and no central funds are being requested.

Estimated cost:

\$ 120,000 for system design/development (2400 hours * average \$50/hr, including benefits).

\$20,000 for EMS Campus (i.e., integration product to existing EMS Enterprise)

Existing hardware and software will be used for this project, so there are no additional hardware or software costs. The current system infrastructure includes production and test Oracle Relational Database Management server and Apache/Tomcat application web server, residing on RHEL Linux systems. The existing systems are currently managed through partnerships between GSM and various IET services (i.e., ITPS, Virtualization services, and Oracle database administration group).

Business Impact:

The system will be developed using object oriented design techniques and integrate seamlessly into the larger workflow of various existing processes at GSM and UC Davis, including student admissions, course and curriculum management, registration and payment, student graduation, career services, and alumni tracking. As the curriculum and course offering evolve, the object oriented design should handle changes over time with minimal impact to system changes.

This system development will result in the following benefits/improvements:

- Decrease duplicate data entry
- Improve data consistency, accuracy, and timeliness
- User friendly interfaces and controls for managing data and business processes.
- Enhance the student experience in order to maintain GSM ranking as a top 50 accredited business school.
- Integration of current systems into a single system will provide improved data analysis and reporting capabilities.
- Improve the ability to support existing systems by transitioning disparate systems into a single Java Spring development framework; support staff will no longer need to maintain expertise in multiple software development and database platforms.

Infrastructure Integration:

Authentication of students and staff will be provided through integration with the Campus Central Authentication System (CAS).

Information will need to be transferred between the GSM database and Banner(SIS) in both directions.

The system will integrate with the Campus TouchNet portal for credit card payments.

Administrative Integration:

This system will integrate with the following campus units:

1. Office of Student Affairs and UCD Registrar's Office for Banner database and SISWEB (including SmartSite & MyUC Davis)
 - a. Registration
 - b. Enrollment
 - c. Final grades
 - d. Academic history
 - e. Demographic information (home address, phone)
2. Student Accounting - Banner database
 - a. Student account transactions
 - b. Processing Employer Letters of Credit for course fee payment
 - c. Processing UC Davis departmental payments for course fees
 - d. Processing non-credit card refunds
 - e. Processing other non-standard refunds (i.e., DaFIS transfers)
3. Cashier's Office
 - a. Processing check and cash payments
4. Financial Aid – Banner database
 - a. Accepted federal direct loans available for course fee payments
5. Accounting & Financial Services (TouchNet)
 - a. Processing credit card payments and refunds

Risks/Mitigations:

The most significant risk associated with this project is the need to transfer data between the GSM database and Banner (SIS). If this data transfer cannot be accomplished, then significant redundant data entry may be required in each system. James Stevens, Asst. Dean Student Affairs, GSM, has approached Lora Jo Bossio, AVC, Student Affairs, requesting support for this programming effort.

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