

## A College Intranet and its Impact on Students and Faculty

Philippos Pouyioutas<sup>1</sup>  
Intercollege  
Cyprus

Maria Poveda<sup>2</sup>  
University of Cyprus  
Cyprus

Victoria Kalogerou<sup>3</sup>  
Intercollege  
Cyprus

### Abstract

*This paper presents the Intercollege Intranet, which has been developed within the strategic aims of the College to offer better services to students and faculty and to enhance the College's Teaching and Learning Environment. The main objective of the Intranet is to provide on-line access to shared information and to support electronic educational transactions. Within this objective, our Intranet provides students with on-line access to all the College's rules and regulations regarding admission, academics and finance, information on student life, as well as personal student information (timetable, exam schedule, academic path, transcript, progress reports, financial statements, etc.). Moreover students have access to the Intercollege's Web-Based Teaching and Learning Environment (IWBTL), which is an integrated module of the Intranet. Finally, students can register for their courses on-line. The Intranet provides support also to the faculty of Intercollege. Faculty members have on-line access to Intercollege general information, their teaching timetable, class lists and contact information of students, discussion forums, e-mail facilities, etc. Moreover, they can build their courses' grading formulae and insert marks for students; the system produces final marks and grades, as well as very useful grade statistics and charts. Finally, through the integrated InterLearning web-based educational software, faculty members develop on-line educational material which is posted on the IWBTL and is available to students.*

**Keywords:** Intranet, e-services, e-learning, academics, IT strategy.

### Introduction

Information Technology (IT) plays a vital role in teaching and learning, research, administration and management of Educational Institutions. Intranet and Internet applications have been recently developed in most such institutions, for enhancing the Educational environment offered (Goodyear, 1999). One such institution, very similar to ours in terms of number of students and functioning, is the University Fernando Pessoa; their Web application was presented in (Gomes & Gouveia, 2003). Within this philosophy, Intercollege IT Strategy (Pouyioutas, 2002) guided the development and maintenance of a well-found information environment in order to deliver convenient access to information, improve communication, collaboration and learning and ensure a flexible, responsive and above all reliable system that aims to:

- Support teaching and learning to be both effective, efficient and of the highest quality
- Provide research with the highest quality support
- Provide access to electronic sources of scholarly information and a forum for scholarly debate
- Enable all College units to function effectively
- Provide effective, efficient and reliable administrative support to students, staff and faculty members
- Provide support at the operational, middle management and executive level functioning of the College in terms of providing information, automating tasks and enabling and automating decision making
- Implement to the highest possible extent a “paperless office” business environment
- Provide the required infrastructure and the human resources expertise for providing services to community and consultancy work to industry.

The Intercollege Intranet (Pouyioutas et al., 2004f; Pouyioutas et al., 2005) has been developed within the IT Strategy framework as part of our integrated College Information System. The main objective of the Intranet is to provide support to various operational level tasks and to service better both the students and the faculty members of the College. We wanted to provide students with on-line services so that to eliminate the need for physical visits to various offices. Thus, time restrictions barriers, especially for night-mode students, as well as long queues outside offices have been eliminated. Students are given better service at the time of request. We also wanted to provide students with access to on-line teaching and learning material. Students have now on-line access to the Intercollege’s Web-Based Teaching and Learning Environment (IWBTL), which is an integral component of the Intranet. Furthermore, we wanted to support faculty members to their teaching tasks, by providing them with easy-to use educational software that allows the posting of on-line teaching and learning material on the IWBTL. This has been made possible through the Intranet in-house developed web-based educational software, InterLearning.

In order to support further the teaching and research of faculty members, we decided to utilize IT and automate various administrative tasks assigned to faculty members. One time consuming task is the student registration. So far, students were assigned faculty members as academic advisors and used to register for courses after having consulted their advisors. This meant queues outside faculty members’ offices and time spent by faculty to provide academic advising. The on-line registration module of the Intranet allows now students to register for courses and provides appropriate academic advising and guidance. This has resulted in both student and faculty members’ satisfaction. Students can do on-line their registration without waiting to see their advisors and faculty members can utilize the time saved for enhancing their teaching and research output. Finally, the Intranet on-line recording of marks by faculty members, which includes the building of grading formulae and the automatic calculation and posting of grades, has eliminated the time needed for manual calculations and the possibility of errors, again giving more time to faculty members to concentrate in teaching and research. Furthermore, this eliminated the pressure on administrative staff to record grades on time and has therefore speeded up the publication of the exam grades and greatly reduced the possibility for errors.

In the second section of this paper we briefly explain how the Intranet fits within the College Information System. In the third and fourth section we present the Faculty (Pouyioutas et al.,

2005) and Student (Pouyioutas et al., 2004f) modules of the Intranet. In the fifth section we report on the evaluation of both modules by faculty and students respectively. Finally, in Conclusion, we discuss our current and future work.

### The Intranet and the Intercollege Information System

Figure 1 shows how the Intranet is integrated into our College Information System. Our College data resides on a database application, which has been developed using the Oracle (version 9.0) Database Management System and which supports the operations of the main Departments of the College, namely Student Affairs, Admissions, Finance and Academic Affairs, providing day-to-day operational support as well as MIS executive support to the College top management. The database also provides data to the College Web site (<http://www.intercollege.ac.cy>). The Intranet is divided into the Student Intranet (<http://www.intranet.intercollege.ac.cy>) and Faculty Intranet (<http://www.facultyintranet.intercol.edu>). Both modules of the Intranet use data from the database application. The Student Intranet is accessible through the Web-Site of the College. Furthermore, part of the Faculty Intranet (Faculty Profiles showing qualifications, contact information, research interests and publications) is also accessible through the Web-site. Finally, both the Student and Faculty Intranet have access to the Intercollege’s Web-Based Teaching and Learning Environment (IWBTL). Faculty use the InterLearning software to post through the Intranet on-line material on the IWBTL and students use the Intranet to access the material available on IWBTL.

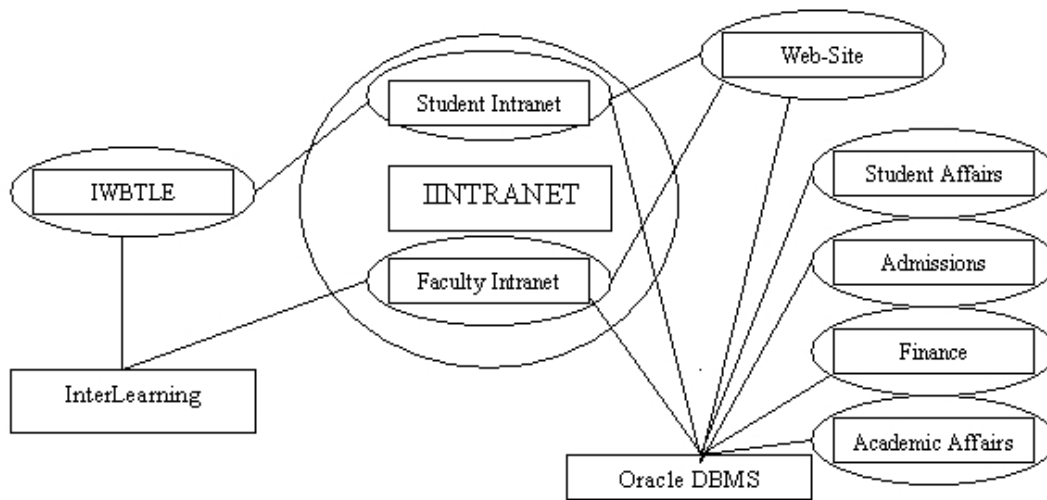


Figure 1. The Intranet and the College Information System

### The Faculty Intranet

The Faculty Intranet (<http://www.facultyintranet.intercol.edu>) interface is shown in Figure 2. It provides faculty members with one vertical and one horizontal toolbar menu allowing access to very useful College information and other facilities such as Academic (information about the

courses, classes and the students of faculty), Faculty Collective Agreement, Academic Policies, Forms, Discussion Forum, Utilities (Profile Editor, InterLearning Software, Backup Utilities), Library Link, Web-site link, Focus on-line magazine, Notice Board of announcements, Who is Who information (staff and faculty), Service Hours and Campus Life.

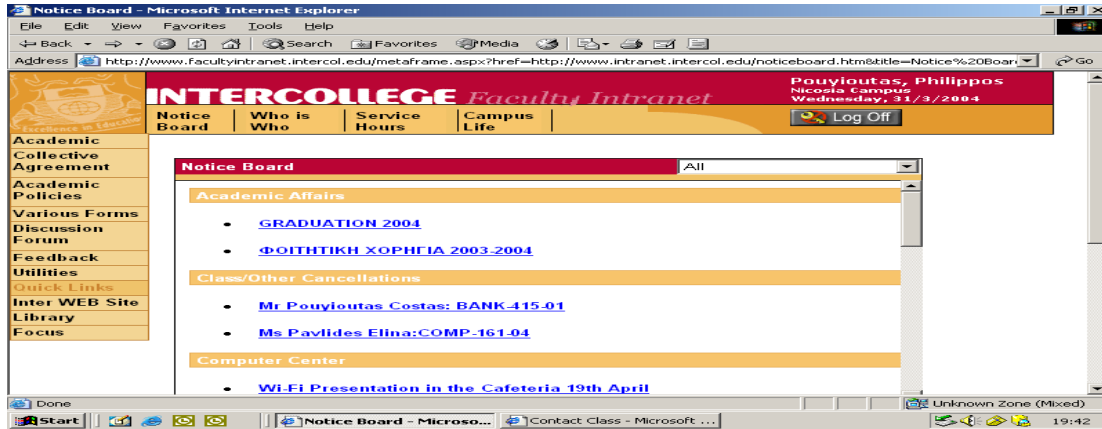


Figure 2. The Faculty Intranet Interface

We next explain some of the most useful modules of the Faculty Intranet, namely the Academic and the Utilities modules. The Academic module (Figure 3) provides the faculty members with their course schedule. Clicking on any of the courses, faculty members have access to the Course Class List (Figure 4), Attendance Sheet, Contact Class (Figure 5), Course Grading Formula (Figure 6), Course Grade Statistics (Figure 7) and Online Course Setup (Figure 8).

Course Schedule						
Semester		Spring	Year		2004	Find
Course Id	Sec	Title	Course Schedule	NTH	CR	TH
<a href="#">COMP-153</a>	02	Visual Basic	Mo/We 12:00-13:30 B101;	3	3	3
<a href="#">COMP-153</a>	03	Visual Basic	Mo/We 14:30-16:00 B101;	3	3	3
<a href="#">Class List</a> <a href="#">Print Attendance Sheet</a> <a href="#">Contact Class</a> <a href="#">Course Grading Formula</a> <a href="#">Course Grade Entry Form</a> <a href="#">Online Course Setup</a>						

Figure 3. The Academic Module of the Faculty Intranet

The Course Class List (Figure 4) allows faculty members to see all the students and their contact information (e-mail) in each of their classes. Clicking on the Student Id, faculty members have access to the picture of the student and relevant academic information such as progress reports and academic path.

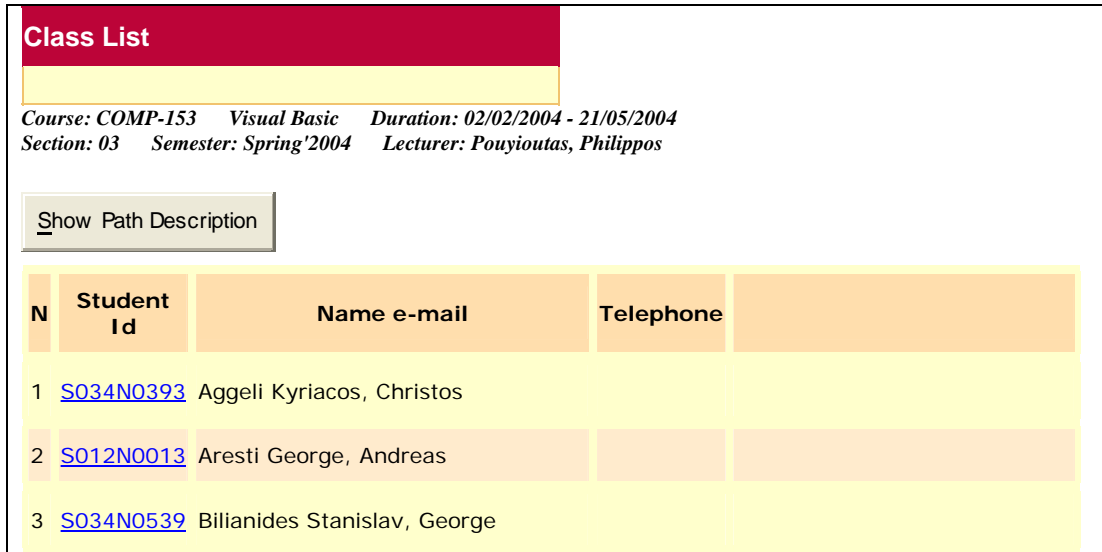


Figure 4. The Class List Module of the Faculty Intranet

The Contact Class Module (Figure 5) allows faculty members to select either individual students or all students of their class and send to the Intranet student accounts and/or to the email addresses various messages. In the case that a message is sent to the Intranet accounts, the message appears in the Student Intranet (when the students logs into her/his account, under the Personal Messages sub-module) until the Message Expiration Date, which can be set by the faculty member.

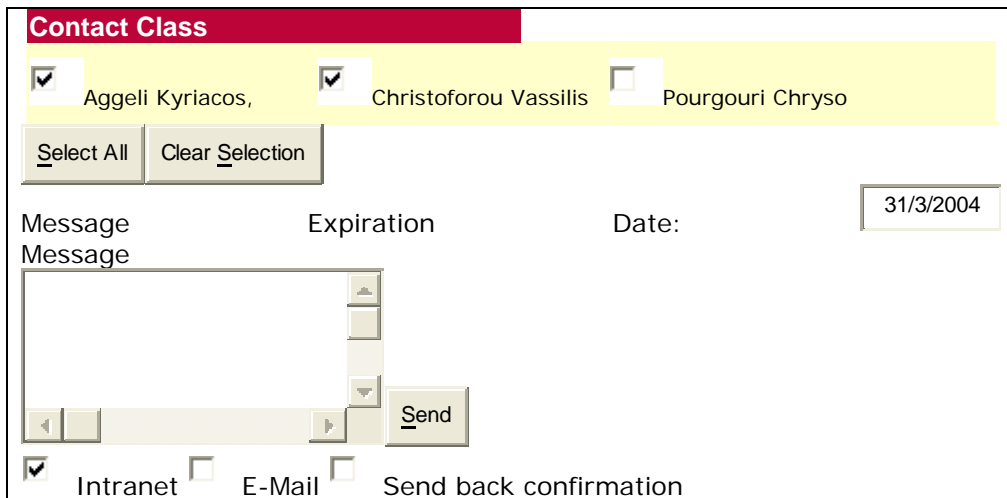


Figure 5. The Contact Class Module of the Faculty Intranet

The Course Grading Formula Module (Figure 6) allows faculty members to build the grading formulae of their courses. This can be done either from scratch or from copying and pasting from other courses in which they have already built grading formulae. The module allows faculty to choose the percentage of each particular assessment, the maximum points that a student can score in each assessment and the type of the particular assessment (final exam or continuous assessment during the semester). The latter differentiation is needed so that the system can then produce the various reports of final marks and grades of students showing the scores in the Final Exam and the Continuous Assessment in the format required by the Ministry of Education and Culture of Cyprus. The system performs various validation checks (e.g. the sum of all the percentages should be exactly 100; in any other case an appropriate message is given to the faculty member). Once the Grading Formula of the course is built faculty members can insert the students' marks for each individual assessment. Any change to the marks results in recalculation of the grades. At the end of the semester faculty members can submit electronically the grades, which are recorded in our database system application (Figure 1). Before a faculty member submits the grades s/he can see (Figure 7) a statistical analysis of the student performance in terms of numbers of students, completion rates, summary and detailed grade distribution, CPA course average and comparisons with previous results of the same course.

Course Grading Formula COMP-153-03 -- Visual Basic, Spring 2004				
Description	Type	Max. Points	%	
Homework	Cont. Assessment	100	20	Delete
Mid-Term	Cont. Assessment	100	30	Delete
Final Exam	Final Exam	100	50	Delete

Figure 6. The Course Grading Formula Module of the Faculty Intranet

The On-Line Course Setup Module of the Faculty Intranet allows faculty members to develop on-line course material and post it on the IWBTLE. Students have access to this material through the Intranet. Faculty members use the InterLearning software to develop the on-line material. The development of the InterLearning software (Pouyioutas et al., 2004a,b,c,d,e) was funded by a grant awarded to Intercollege by the Cyprus Research Promotion Foundation. The InterLearning interface showing the facilities available to the lecturer is shown in Figure 8.

COMP-153-03 -- Visual Basic, Spring '2003, Pouyioutas, Philippos									
<b>Statistics:</b>									
Total number of students registered for this course								23	
Total number of marked students								20	
This course GPA								2,24	
Previous two semesters same course average GPA								2.6	
<b>Completion Rates:</b>									
<b>Marked</b>	<b>I</b>	<b>DE</b>	<b>WA</b>						
20 (87%)	2 (8,7%)	0 (%)	1 (4,3%)						
<b>Detailed Grade Distribution:</b>									
<b>A</b>	<b>A-</b>	<b>B+</b>	<b>B</b>	<b>B-</b>	<b>C</b>	<b>C-</b>	<b>D</b>	<b>D-</b>	<b>F</b>
4 (20%)	1 (5%)	1 (5%)	3 (15%)	1 (5%)	2 (10%)	1 (5%)	3 (15%)	2 (10%)	2 (10%)

Figure 7. The Course Statistics Module of the Faculty Intranet

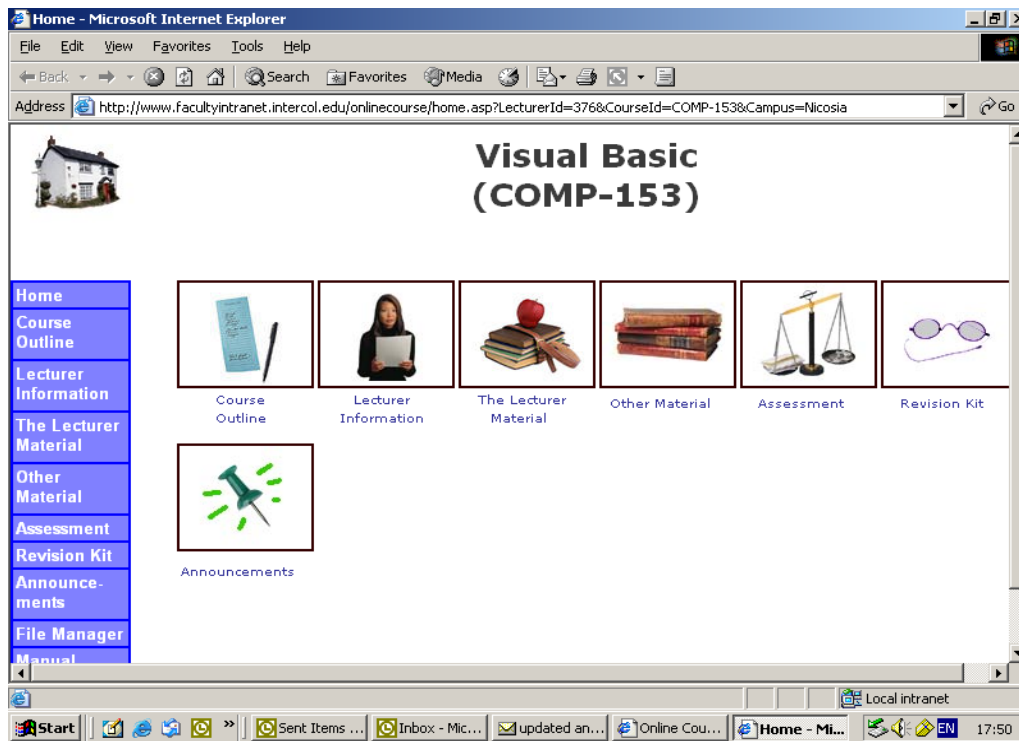


Figure 8. The InterLearning Interface

## The Student Intranet

The Student Intranet (<http://www.intranet.intercollege.ac.cy>), similarly to the Faculty Intranet, provides students with one vertical and one horizontal toolbar menu, allowing access to very useful College information and other facilities such as Academic and Academic Policies, Forms, Counseling Services, Library Link, Web-site link, Focus on-line magazine, Chatting, Classified, Notice Board of Announcements, Who is Who information (staff and faculty), Service Hours, Student Affairs and Campus Life. In addition to the general information available, each student can log on to their account and access personal information including academic status, personal messages, financial status, on-line course material, course schedule and exam schedule. Finally students can now use the Intranet to register on-line for courses.

We next explain some of the most useful modules of the Student Intranet, namely the Academic Affairs, Registration and Finance modules. The Academic Affairs module provides students with the facilities given in Figure 9. Figure 10 gives an example of the facilities offered through this module, namely the Personal Course Schedule of the student that shows the courses, timetable and lecturer of a student. If a faculty member has posted on-line material on the IWBTLE, then the course code is blue and underlined (e.g. PSY-110, Figure 10). Clicking on the course code the student has access to the material through the interface shown in Figure 8.

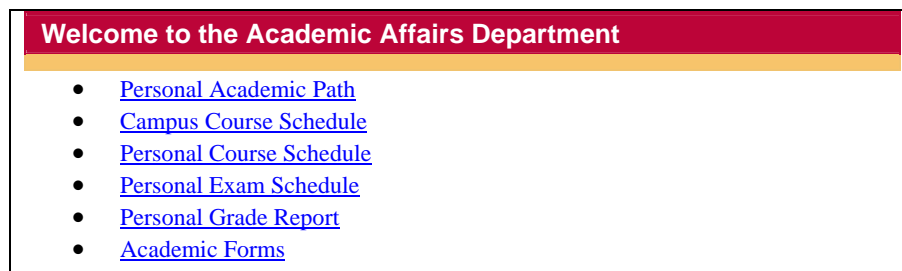


Figure 9. The Academic Affairs Module of the Student Intranet

One of the most important modules of the Student Intranet, is the recently developed On-Line Registration module (Figure 11), which allows students to register for courses on-line. The module has been designed to meet various restrictions and validation checks so that students do not register for courses they should not take. The system presents to students only courses from their academic pathway. Closed sections are not presented. Students are not allowed to register for courses for which they do not have the prerequisites. Furthermore, students with low CPA are not allowed to take more than 15 credit hours, whereas students with a normal CPA are allowed to take up to 18 credit hours; students with a CPA  $\geq 3.3$  are allowed to take up to 21 credit hours. Finally, international students are not allowed to take less than 12 credit hours. Thus, the registration module ensures that a student can register for courses according to the College academic regulations and the various regulations of the Cyprus Immigration Office. Lastly, students can have access to their financial status (Statement of Account, Installments and Semester Fee Analysis). An example of the information provided is given in Figure 12.



### Personal Course Schedule

**Year:** 2004

**Go!** **Semester:** Spring

Course ID	Title	Section	Lecturer	Scheduling
COMP-262	Multimedia Internet Applications	02	Ms. Pieridou, Lisa	Mo 18:00-21:00 A20
DES-180	Typography/Computer Imagery I	03	Mr. Tomblin, Andreas	Th 14:00-17:00 A18
PHIL-120	Ethics	01	Dr Sofroniou, Sofronis	Mo/We/Fr 13:00-14:00 M-203
<a href="#">PSY-110</a>	General Psychology I	01	Mr. Price, Steven	Mo/We 10:30-12:00 YELL

[Back to Academics](#)
[Personal Academic Path](#)
[Campus Course Schedule](#)
[Personal Course Schedule](#)
[Personal Exam Schedule](#)
[Personal Grade Report](#)
[Academic Forms](#)

Figure 10. The Personal Course Schedule Module of the Student Intranet

**Intercollege Online Registration**

Student Id: S984N0123 Neokleous Christos, Theodotos  
 Year: 2004 Semester: Spring

Registered Courses

Course Id	Sec	Title	CR	TH	CTH	Drop
COMP-493	01	Final Year Project	3	3	3	Drop
<b>Total</b>			<b>3</b>	<b>3</b>	<b>3</b>	

Academic Path

**Program: Computer Science (Bachelor)**  
**Min. Credits: 126** **CPA: 2,496**

Academic Path Sections	Min Cr	CR Com	CR Reg	CR Left
+ A - Major Requirements	48	45	3	0
+ B - Major Electives	12	12	0	0
+ C - Math Electives	14	14	0	0
+ D - Science Electives	8	4	0	4
+ E - Business Electives	6	6	3	0
+ F - Language Expression	9	15	0	0
+ G - Computer Electives	6	3	0	3
+ H - Math Electives	7	3	0	4

Figure 11. The On-Line Registration Module of the Student Intranet

Installments				
<b>Current Balance:</b>	255.00			
	10/02/04	29/02/04	31/03/04	30/04/04
<b>Amount</b>	400.00	285.00	285.00	285.00
<b>Paid</b>	400.00	285.00	285.00	30.00
<a href="#">Back to Finance</a>	<a href="#">Statement of Account</a>	<b>Installments</b>	<a href="#">Semester Fee Analysis</a>	

Figure 12. The Finance Module (Installments) of the Student Intranet

### Evaluation of the Intranet

The Faculty Intranet was evaluated by 30 out of 100 Full-Time faculty members at the College. Feedback was collected through a questionnaire. Faculty members were asked to rate the Intranet and its functions using a scale from 0 to 4 (0 being the lowest value, 4 being the highest value). Table 1 summarizes the feedback received. In general, faculty members are satisfied with the Faculty Intranet and its services. The main problem recorded is the speed of access. We are currently upgrading our server in order to provide faster access to both the Intranet and the Internet. Faculty members found the On-Line Grading function, which allows them having the grades automatically, calculated based on the given marks and directly submitted to the registrar's office, as the most useful function. They also found very useful the functions that allow them to develop on-line material, get academic and library information and contact their students. The least useful functions were found to be the functions providing them facilities for publishing their CV on the Intranet (Profile Editor) the Discussion Forum, the Backup Facility and the on-line magazine Focus. As we believe that at least the Profile Editor and the Backup functions are very useful we intend to inform better faculty members about their importance and provide any help, especially for using the Profile Editor.

The Student Intranet was evaluated by a sample of 150 students during the Summer 2004 semester. Students of different programs of study and different years were selected in order to ensure that we get representative feedback. The students' feedback was collected through a questionnaire. Students were asked to rate the Student Intranet and its supporting functions using a scale from 0 to 4 (0 being the lowest value, 4 being the highest value). The tables below summarize the students' responses. In general, the students are satisfied to very satisfied with the Student Intranet and its supporting services. The main problem recorded in Table 2 is the speed of access. We are currently upgrading our server in order to provide faster access to both the Intranet and the Internet. From Table 2, it seems that students found more useful the personal academic and financial information and services which are accessed once they are logged into their personal Intranet account. From the rest of the services, students found more useful the Notice Board, the Useful Information and the Personal Messages, services that inform them about various activities, functions, events and other things happening at the College or provide them with access to personal messages.

Table 1. The Results of the Faculty Questionnaire

<b>The Student Intranet is</b>	<b>Rating</b>	<b>The Function Below is Useful</b>	<b>Rating</b>
Useful	3.4	On-Line Grading	3.7
Interesting	2.6	Class List Info	3.3
User-friendly	2.7	Contact Class	3.3
Consistent	2.6	On-Line Course Set up	3.3
Reliable	2.5	On-Line Exam Schedule	3.5
Fast	2.2	On-Line Forms	3.3
		Discussion Forum	1.5
		Profile Editor	2.1
		Notice Board	2.3
		Who is Who	2.4
		Library	3.0
		Academic Policies	3.1
		Collective Agreement	3.1
		Backup Facility	2.1
		Focus	1.9
		Campus Life	2.5

Table 2. The Results of the Student Questionnaire

<b>The Student Intranet is</b>	<b>Rating</b>	<b>The Following Function is Useful</b>	<b>Rating</b>
Useful	3.5	Notice Board	2.9
Interesting	2.8	Useful Information	3.1
User-friendly	3.0	Who is Who	2.8
Consistent	2.9	Service Hours	3.0
Reliable	3.0	Campus Life	2.7
Fast	2.7	Announcements	3.0
		InterChat	1.9
		It's a Student Affair	2.4
		Buy and Sell	2.0
		Job Vacancies	2.4
		Housing	2.2
		Personal Messages	2.8
		On-line Registration	2.8
		Personal Academic Path	3.5
		Campus Course Schedule	3.5
		Personal Exam Schedule	3.5
		Personal Grade Report	3.5
		Academic Forms	3.2
		Statement of Account	3.2
		Installments	3.4
		Semester Fee Analysis	2.9

## Conclusion

In this paper we have presented the Intercollege Intranet and explained how the Faculty and Student modules enhance the educational environment of the College, facilitating both students and faculty in teaching and learning, as well as in administrative support. We have claimed herein that the Intranet has a direct impact on the improvement of the teaching and learning environment of the College. We have presented the design, development and evaluation of the software and address its impact on both the students and the faculty members. As far as faculty members are concerned, the Intranet has automated some tedious and time consuming administrative tasks (e.g. recording of grades) and shifted some others to students (e.g. registration), thus allowing faculty members to spend and utilize the time saved on teaching and research. As far as students are concerned, the Intranet has eliminated physical and time barriers for educational transactions. Moreover, it has provided students with facilities that help them become more independent learners (e.g. on-line registration). Based on the users' feedback, we are currently working on the new version of the Intranet that will provide improved facilities and functions.

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<sup>1</sup> Dr Philippos Pouyioutas is an Associate Academic Dean and Associate Professor of Computer Science at Intercollege, Nicosia Cyprus. He can be reached at: 46 Makedonitissas Avenue, P.O. Box 24005, 1700 Nicosia, Cyprus. Email: pouyioutas.p@intercollege.ac.cy; Phone: +357-22-841510.

<sup>2</sup> Ms Maria Poveda is a Research Associate at the Department of Computer Science of the University of Cyprus, Nicosia Cyprus. She can be reached at: 75 Kallipoleos Street, 1678 Nicosia, Cyprus. Email: mpoveda@ucy.ac.cy; Phone: +357-22-892676.

<sup>3</sup> Ms Victoria Kalogerou is a lecturer at the Department of Languages of Intercollege, Nicosia Cyprus. She can be reached at: 46 Makedonitissas Avenue, P.O. Box 24005, 1700 Nicosia, Cyprus. Email: kalogerou.v@intercollege.ac.cy; Phone: +357-22-841633.

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