



Guam Community College:
Distance Education Capabilities
Assessment

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Introduction

Guam Community College (GCC) continues to strive to meet its mission in providing high quality, student-centered education and job training for Micronesian students. As part of this process, the college has embarked on an analysis of its Distance Education (DE) capabilities by engaging Ellucian consultants. During the week of February 10th – 14th, Dr. Christine Martey-Ochola and Mr. Martin LaGrow from Ellucian visited the GCC campus in Mangilao and through the coordination efforts of Wesley Gima (GCC), met with students, faculty and staff members as part of the assessment process. Although the college has already offered a few distance education courses, there are opportunities to strengthen the development, management and delivery of distance education offerings from GCC.

Through a grant from the US Department of Education, the Education Department developed DE courses; however, the support services that play a key role in ensuring good online student experiences were not addressed by the grant. Furthermore, there was no institutional technical support or helpdesk that was made available to these students. The online courses neither met quality matters standards and were lacking in instructor interactivity, nor were students equipped for online instruction through orientation and training. As a result, several learners did not have the knowledge of what it takes to be a successful online student. It was also mentioned that students were unable to distinguish the online courses from their regular courses during registration (courses were previously labeled as Friday courses), which caused several students to be enrolled in online courses without their full knowledge. This has since been rectified and the DE courses are now slotted under the schedule type online. Faculty from the Education department also mentioned that some students signed up for the online courses as a last resort because the traditional in-class courses were full, indicating that a thorough market analysis was not completed prior to development and delivery of these online courses.

This document outlines the findings of the institutional assessment and specifically addresses the technological, management, training, and student support service components currently available at the college. Also included in this summary is a review of regional and national rules and regulations that guide DE. These policies and procedures have been reviewed and aligned with current GCC policies and procedures. Recommendations have been provided which, if implemented by the college, will strengthen DE development and management. A summary of recommendations on resources and capabilities has also been provided. If considered and implemented, these recommendations will enable GCC to offer accredited online programs that are competitive and meet market need.

Are GCC constituents interested in Distance Education?

Hundreds of higher education institutions offer online courses and programs. In most instances, the main driving force is a desire to increase enrollment. Although an increase in enrollment is a good reason to enter into this field, a deeper more fundamental desire to provide students a better learning experience, instructors a better teaching experience and staff and administrators an efficient working experience makes the difference in the value that an institution derives from its distance education (DE) activities.

Student access and success is a key decision driver at GCC. Tools and initiatives that can improve a student's access to college and success in their program of study are the main driving force for any change to the current system. Faculty were concerned about students having insufficient face time with their peers and instructors, while students wondered about the effectiveness of distance learning and whether their faculty would be trained to teach online. Faculty, department chairs and executive leadership asked questions on "*how the courses can be evaluated*" and how to ensure that the courses or programs meet accreditation standards. Assessment was not far from the minds of most of the institutional leaders and staff members. A thorough review of the business processes gave staff a chance to start visualizing what it would take to give a DE student an experience comparable to that of a face-to-face learner.

Staff indicated that they have multiple manual processes which if automated or streamlined to meet the needs of the DE student would support the whole student body. (These are discussed in further detail below). Faculty were also responsive to the flexibility that DE courses would bring to their students, and

indicated that there are some students who have delayed graduation because of course access. Faculty recommended the development of hybrid as well as online courses, because there was consensus in student behavior/culture and their desire to have an onsite experience even though they may want flexibility in taking certain courses online. Students indicated that they have taken some courses online at other institutions and are considering being fully online students upon graduation from GCC. An opportunity to have a DE experience while at GCC but prior to transferring to other institutions was also raised by students. Taken together, the students indicated an interest in taking DE courses at the college and cited transportation and course scheduling as the main reasons they would like to take DE courses.

Summary of current status of DE at GCC

DE management, communication, marketing and business processes	
<ul style="list-style-type: none"> GCC is committed to meeting accreditation requirements but it is unclear whether there is commitment to developing a robust distance education program / division DE vulnerability due to partnership with 3rd party online course/program providers e.g. Ed2Go There are memoranda of understanding / articulation agreements with institutions that may be potential DE competitors e.g. University of Phoenix Banner capabilities are not optimized - Multiple manual processes in student management (admissions, registration, etc.) 	<ul style="list-style-type: none"> Varied understanding of DE at the faculty, student and staff level Faculty suspicious about GCC's DE intentions Inconsistent adherence to current institutional policies Inconsistent marketing plan for programs Inconsistent recruitment plan for programs No DE program(s) selection Unclear rationale for selection of courses for pilot DE program
Current DE status	
<ul style="list-style-type: none"> Insufficient technical knowledge and hardware resources to successfully host and support Moodle in-house Lacking both front-end and back-end Moodle support Insufficient policies and procedures to guide DE Lack of oversight of current DE courses 	<ul style="list-style-type: none"> No faculty training for online instruction Current online courses are not consistent in template, and are not ADA compliant nor fully online Inconsistent course development – lacking instructional development personnel Inconsistent course evaluation No online course evaluator training
Other factors that impact DE	
<ul style="list-style-type: none"> Overloaded website – too much information in certain tabs Inconsistent adjunct faculty onboarding process at the departmental level Inadequate student advising – long “Time to Completion” for students 	<ul style="list-style-type: none"> Insufficient staffing to support full DE division Less than optimal student services for fully online learners. No helpdesk or student/faculty tech support Faculty are engaging with online tools that do not have onsite support

Concerns that were raised about DE

The questions below were raised during the faculty, staff and student focus group sessions and were addressed as indicated below each bullet point (*italics*). It will be necessary for the college to continue the dialog about DE to all constituents so that their questions and needs are addressed as the college seeks to implement DE.

- Was the college ready to invest in establishing a competitive DE program/initiative?

This is going to be determined by the college following the needs and capabilities assessment.

- How would the quality of instruction be determined and would the online courses be evaluated differently?
Measures would be put in place, and processes established to evaluate the online classes and support faculty seeking to teach online so that they can be successful online instructors. (This is pending GCC's decision about whether or not to embark on DE).
- Would the programs be developed to meet all accreditation standards including Quality Matters?
Any program developed for DE would have to meet ACCJC accreditation requirements and be built per Quality Matters (QM) standards at a minimum.
- Stability of the learning management system
The college is still assessing Moodle and will come to a decision on which LMS to use and how extensive it will be in the college.
- Would students still be able to access federal grants/loans to pay their tuition if they were in DE?
Yes.
- Would students have some online training and orientation? *Yes.*
- Would faculty have a differential compensation system? *No, but models that other institutions have used include compensating a faculty member to build a master course. The course is then cloned for additional faculty members and is owned by the college.*
- Would there be required training for faculty? *Yes, for faculty who are going to teach online.*
- Would all faculty have to teach online? *No, only faculty who want to teach online will engage in this process.*
- Would there be technology support? *This is still under review. Support will be provided, but the extent to which it will be provided remains to be determined.*
- Would there be helpdesk support? *This is still under review. Support will be provided, but the extent to which it will be provided remains to be determined.*
- Would faculty get instructional design support? *This has not been determined, but would be the recommended solution, especially early in the development of DE courses and programs.*
- What impact would DE have on faculty teaching load? *It should not have any impact. The DE courses would be treated like any other course currently being offered at GCC.*

Federal and local rules/regulations/public laws on DE and recommendations for GCC

Investigation did not uncover any current local rules or regulations governing DE on Guam, however it is required that all institutions offering distance learning adhere to Federal rules and regulations. Federal rules for DE have been taken into account by the ACCJC recommendations. Please see the document entitled *Federal Regulations and their Impact on Accreditation*.

The Distance Education and Training Council (DETC), which is a private non-profit accrediting agency provides accreditation for secondary and tertiary institutions, and works in concert with federal rules and regulations. University of Guam (UoG) has DETC accreditation and adheres to their rules and regulations. At this time, GCC has not sought DETC review (although ACCJC supersedes DETC) and may want to review DETC in order to meet the needs of GCC students who may seek to transfer to UoG DE credits back to GCC. It was discussed during several sessions on campus that many GCC students take courses at UoG and transfer them back to GCC as part of the degree completion process. As GCC looks to strengthen DE, it will be critical to look at the impact of DE courses on transfer articulation agreements. Information on the DETC and DETC accreditation can be found at <http://www.detc.org>

ACCJC rules on DE and recommendations for GCC.

This table was completed through reference to the ACCJC Distance Learning Manual, the ACCJC Evaluation Report, and GCC Policy-340.

Curriculum and Instruction	
ACCJC DE Rule	GCC Recommendation
Each electronically-delivered course or program of study results in learning outcomes appropriate to the rigor and breadth of the course credit, degree, or certificate awarded.	The College plans to use the same processes for the planning, approval, evaluation, and review of courses offered in the distance education mode as they do for face-to-face courses, certificates, and degrees. This may pose some difficulties as not all tools and policies apply equally to face-to-face and online courses.
A degree or certificate program delivered partially or entirely through electronic means is coherent and complete and results in learning outcomes comparable to those delivered through other means.	
Student experiences result in achievement of intended learning outcomes whether electronically-delivered courses provide for synchronous or asynchronous interaction between faculty and students and among students.	Currently, the College does not separate Distance Education data for success and retention. As Distance Education at the College grows, it is recommended that GCC enact this separation because online education differs from face-to-face education in audience, challenges, and opportunity.
Portions of courses delivered through electronic means adhere to the same principles of academic quality and integrity as courses delivered entirely through these means.	Because GCC does not separate online from face-to-face data, this is difficult to determine. Furthermore, there have been challenges in the implementation of the tool used to evaluate distance courses. To fully address this rule, it is recommended that GCC institute a reliable means to evaluate online and hybrid courses. Eventually, data for online and hybrid courses should be evaluated separately from that for face-to-face courses.

The institution has an effective means of ensuring the integrity of the educational process in electronically delivered courses including assuring that the work submitted for credit by students is submitted by students actually enrolled in the course.	In a recent report entitled "Managing Online Education 2013: Practices in Ensuring Quality," WCET states that 79% of institutions surveyed have a policy on academic integrity for online learners; 41% use technologies to authenticate the identity of online learners (36% do not); and 40% identify proctoring sites for online learners at a distance. It is recommended that GCC build means for insuring learner integrity into their Distance Learning Plan and Policy.
Role and Mission	
ACCJC DE Rule	GCC Recommendation
Delivery of courses and programs through electronic means is consistent with the institution's role and mission.	GCC has fulfilled this requirement. The mode of delivery allows the College to provide the "highest quality education" and address the needs of vocational students. Broad-based College-wide discussions have led to the adoption of Board Policy (BP) 340: Distance Education Policy. It is recommended that Policy-340 be reviewed, revised, and operationalized in either a faculty manual or a DE strategic plan.
Review and approval processes ensure the appropriateness of electronic delivery to meeting the course and program objectives.	
Specific needs of students for whom electronically delivered courses are intended are identified and addressed.	
Learning Resources	
ACCJC DE Rule	GCC Recommendation
Appropriate learning resources are available to students who take electronically delivered courses.	In the Evaluation Report compiled after the March 19 -22 nd site visit, ACCJC accreditors recommended that the College implement appropriate support services and procedures to deliver instruction online. These should be considered in the GCC Strategic Plan for Distance Learning.
Students and Student Services	

ACCJC DE Rule	GCC Recommendation
Students receive clear, complete, and timely information on the curriculum, course, and degree requirements, nature of faculty / student interaction, assumptions about technological competence and skills, technical equipment requirements, availability of academic support services and financial aid resources, and costs and payment policies.	In the Evaluation Report compiled after the March 19 -22 nd site visit, ACCJC accreditors recommended that the College implement appropriate support services and procedures to deliver instruction online. These should be considered in the GCC Strategic Plan for Distance Learning.
Enrolled students have reasonable and adequate access to the range of student services appropriate to support their learning and assess their progress.	
Students have the background, knowledge, and technical skills needed to successfully use the technology involved in their course work.	It is recommended that GCC implement means for students to self-assess whether their background, knowledge, and technical skills are sufficient to embarking on Distance Learning. Requirements should be clearly stated in all marketing and catalogue materials.
Advertising, recruiting, and admissions materials clearly and accurately represent the courses and programs, and the services available.	It is recommended that GCC develop these materials for online courses, certificates, and programs in accordance with a Marketing Plan
Commitment to Support	
ACCJC DE Rule	GCC Recommendation
The institution demonstrates a commitment to ongoing program support, both financial and technical, and to continuation of the program for a period sufficient to enable students to complete a degree / certification.	GCC's Information Technology Strategic Plan states that GCC has adequate broadband for the current online courses, but expresses the need for a thorough assessment of technical resources if DE offerings are to grow. It is recommended that this assessment be considered in the DE planning and budgeting process.
The institution ensures that qualified faculty provide appropriate oversight of courses delivered electronically.	Board of Trustees Policy-340 makes accommodations for these rules; it is recommended that this policy be reviewed and operationalized in a faculty manual and/or strategic plan.
The institution gives appropriate consideration to the technical skills and needs of faculty	

assigned to teach through electronic means.

The faculty evaluation process provides a means to evaluate technical skills when appropriate.

The institution provides faculty training and support services specifically related to teaching via electronic means.

Evaluation and Assessment

ACCJC DE Rule

The institution evaluates the educational effectiveness of electronically delivered course work, including assessment of student learning outcomes, student retention, and student and faculty satisfaction. Students have access to such evaluation data.

The institution provides for assessment of student achievement in each course and at completion of a program.

GCC Recommendation

The GCC catalog lists the SLOs for 100 percent of the instructional programs. The Curriculum Mapping Booklet provides evidence that course SLOs are mapped to programs. The SLO mapping process connects course level SLOs to program SLOs and institutional learning outcomes. The College requires all regular semester, special project, or Continuing Education credited distance education courses and programs to be approved through the Curriculum Approval Substantive Change Process. It is recommended that AIER should evaluate the DE courses through an institutionally standardized evaluation procedure.

The accrediting standards that apply specifically to Distance Education and are not duplicated by the ACCJC standards are listed below. As this is by no means an exhaustive list of DETC standards, it is recommended the Distance Education Task Force review the complete standards document: <http://www.detc.org/UploadedDocuments/DETC%20Accreditation%20Handbook/A.1.%20Accreditation%20Standards%2013.pdf>

DETC Rule

II. I. Curriculum Delivery:

Online and/or written instructional materials are appropriately presented. Online materials fit the content and are delivered using readily available, reliable technology. Institutional prepared materials must be keyed to the reading competence of the students in the program and be legibly reproduced.

GCC Recommendation

In its reference to the “appropriate technology,” this statement alludes to the necessity of investigating, selecting and supporting those tools necessary for the delivery of distance education. These may include sustainable investment in a course management system and 3rd party tools that support distance education. Involvement of an instructional designer may be helpful to aid instructors in the production of online materials.

II. K. Educational Media and Learning

The investment speaks to the necessity of

DETC Rule	GCC Recommendation
<p>Resources:</p> <p>Learning resources for faculty and students must be available and appropriate to the level and scope of program offerings. Program designers and/or faculty/instructors make effective use of appropriate teaching aids and learning resources, including educational media and supplemental instructional aids in creating programs and in teaching students. The institution makes effective provisions for students to access learning resources and libraries that are appropriate for the attainment of program learning outcomes.</p>	<p>working closely with the library to assess and scaffold their ability to fully support distance learners. We recommend that library services be included in the Distance Education strategic plan.</p>
<p>II. L. Student Privacy, Integrity, and Identity:</p> <p>The institution has clear, specific, published policies related to student privacy, integrity, and academic honesty. The institution has a student identity verification process that ensures that students who earn the credit or completion credentials are the same students who did the course assignments and assessments.</p>	<p>We recommend that GCC consider investigate and script this policy as a precursor to launching Distance Learning programs.</p>
<p>III. F. Appropriate Technology:</p> <p>The institution uses appropriate and readily accessible technology to optimize interaction between the institution and the learner and enhance instructional and educational services.</p>	<p>This area is considered in the assessment and Distance Learning Strategic plan.</p>
<p>III. G. Resident Training</p> <p>Resident training or face-to-face learning sessions must supplement the electronically delivered, online, or other distance study method whenever it is necessary to attain the stated institutional and program objectives and intended student learning outcomes.</p>	<p>It is recommended that planning for Distance Learning take into considering those times where students may need to be on campus.</p>

Recommendations on Policies

In order fully support distance learners and distance learning at the institution, it is recommended that GCC consider creating and implementing the following policies:

- GCC Strategic Plan for Distance Learning
- Intellectual Property Policy and Strategy for Online Course Creation
- Policy to Assess and Insure Integrity in Distance Education

Assessment of Current Service Capabilities and Resources

Assessment of GCC Institutional Resources

Hardware

- GCC has 46 classroom labs. Thirty-one of the labs are instructional labs ranging from 12 to 41 computers. There are also 2 open labs, one housing 48 computers (5 are Macs) and the other holding a combination of 18 Macs and PCs. Additionally there are 11 GCC High School Program Labs that hold 10 to 24 computers per lab. There are also 2 testing labs ranging from 15-23 computers. These labs are used for administering secure tests such as Pearson Vue, Prometric, etc.
 - Though many labs exist, there are limited labs available with enough computers for larger course sections. Scheduling classes in these labs has become problematic and there is competition at scheduling time to get access to these labs.
 - The number of open lab machines available is adequate for current use. However, development of DE programs could result in increased demand for open lab access, including weekend time.
- GCC has a stable network infrastructure. However, students reported that wireless access is inconsistent and not all areas of the campus are covered. MIS confirmed that a wireless plan was deployed, but scaled back for financial reasons, thus there is not wireless coverage in all areas. The wireless network is unsecured.
- Seventy-seven Faculty members participated in a Spring 2013 survey run at the college on faculty perception and need for Academic Technology and training. The faculty included both full time and adjunct faculty who teach at the college and at the high schools affiliated with GCC. About 70.1% of the faculty use a computer (desktop/laptop) to teach their face to face courses, and of these, 44 faculty indicated that they use a laptop (either GCC owned or personal) to teach their courses with about 26 indicating use of their personal computers for teaching purposes. About 7.6% use tablets for instruction. A future survey asking faculty if they own personal computers at home that can support their DE courses would be necessary to obtain a better understanding of their DE capabilities.
- The Moodle LMS presently supported by MIS exists in a VMWare environment that is scheduled to be upgraded on March 1-2, requiring full shutdown.

Software

- GCC does not employ any software for instructional use that would support synchronous distance delivery (e.g. Adobe Connect, WebEx). No licenses are held for presentation software or video hosting (e.g. Voicethread, Kaltura).
- CourseShare/GroupStudio – Is a Banner enabled document sharing tool that some faculty at the college are using to manage their courses. The platform is used to share course materials, syllabi and other information that the faculty member finds relevant to the students. There is inconsistency in how it is used for instruction. Additionally, GroupStudio is being used as project management tool (sharing documents) amongst taskforce members, institutional committees and departments.
- MathXL – Being used to support web-enabled learning for Math 085, 095 and 108. Previous performance analysis has been done and it was determined that after implementation of MathXL

in 2006 there was an improvement of Math grades to previous levels seen in 2003, however, there hasn't been a significant improvement of Math average grades beyond the 2003 levels, even with the institution of MathXI. Faculty in the department (both full and adjunct) were trained on MathXI use for ~ 2 hours and were provided with the pertinent knowledge to successfully utilize the software. A clear project to determine performance of students in these courses relative to students who are not taking Math courses supported by MathXI has not been completed.

- In a spring '13 Academic technology survey, with a total of 77 respondents, 14 faculty indicated that they were using web course management which included Blackboard, Edmodo, and Ed2Go, interestingly Moodle was not included as an option. This may skew the data because in a preceding question, faculty were asked if they would like to see Moodle and there were several respondents who mentioned that they would like to use or have access to Moodle. About 46 faculty indicated that they use web sources to support their teaching practice, and 38 utilize quiz software whether provided by GCC, personally developed or found online.
- In the above referenced survey, faculty were asked about their need for grading software. In response to this question, 52 out of 54 faculty indicated they need or want access to grading software, with the great majority (74%) indicating that this was an "absolute must". Only 2 out of 54 faculty indicated "no need" for a grading software. This data strongly suggests that if faculty are provided with reliable grading software and are adequately trained on it, the majority would use the software. Currently, the college hosts Gradekeeper, Moodle, and some faculty use GradeSource which is open source.
 - Gradekeeper: Currently some faculty use Gradekeeper to manage course grades. GCC has a site license for it and it is available to all faculty, but not everyone uses it. There's a website for the college and faculty upload course info on a semester basis. Some faculty provide full access to their students while others use the gradekeeper for their own course management. Faculty who have a Moodle classroom still use Gradekeeper rather than the moodle gradebook. There is inconsistency in the way students receive their grades from course to course within the institution. In discussion, Wes mentioned that it would be ideal to have an LMS gradebook that provides the features that Gradekeeper has. In previous discussion with Martin LaGrow we had discussed the possibility of integrating the LMS with Banner so as to support grade migration and storage within the institutional Banner system.
 - Gradesource: Some faculty are using Gradesource to support grade management, whereby students can log into the portal and review their current grades. Gradesource is a grading app that is free to use, however the students whom a faculty member enrolls in this platform can receive advertisements. It is unclear whether there is an institutional license for this product. Furthermore, the college already has a license with Gradekeeper, so it may be possible that there are faculty who are using familiar resources to support their courses and not necessarily utilizing institutional approved software.

Distance Delivery Technologies

- GCC's education department is running an instance of Moodle 2.3 internally. MIS reports that the installation, which has migrated twice, may be unstable as occasional unresolved errors have been noted by MIS.
 - In the Academic technology survey taken by 77 faculty in spring '13, almost 40 out of 43 faculty indicated that they would like access to Moodle, either in their classroom, or in some classrooms. 22% of these faculty indicated that it was an absolute must to have Moodle, suggesting that there is an uptake for Moodle by the faculty and additional training and exposure could improve interest in the use of this LMS. Only three out of the total 43 respondents to the moodle LMS question stated that there was no need for this LMS.
- The Continuing Education Department offers "online courses" (as stated on guamcc.edu) using Ed2Go, LERN, and JER online. These courses are branded as GCC content, but are offered by third party vendors.

Technical Support Staff

The MIS department consists of 10 individuals, including programmers, analysts, computer technicians, and a teleprocessing network coordinator. The staff's function is largely focused on infrastructure support

and some data management. The staff does not include personnel for end-user support, and does not support students directly. MIS is in the process of interviewing to replace one systems position. Due to the absence of DBA support on staff, the MIS department relies heavily on a third-party support company, partly to support and maintain Banner. The previously administered academic technology had respondents requesting for technology support for classrooms, students and faculty. This need was made evident during the student focus group sessions, where students described lack of technology support for their computers, email, website (when it goes down), access to MyGCC, in addition insufficient wireless service throughout the campus.

Instructional Development Support Staff

There are no instructional development staff at Guam Community College. Faculty who have developed online, hybrid or web-enabled courses have done so without institutional support. As mentioned previously, the education department received funding to support instructor use of Moodle (LMS used to initiate the DE program), however training on online course development using appropriate instructional design principles and including ADA compliance was not delivered as is evident in online course set up (Appendix 1).

Related projects already started/being maintained

- In Moodle, the Education department has offered CD221 Child Growth and Development and ED220 Human Growth and Development fully online. These courses are also running in spring of 2014. ED270 Behavior Management has run in Moodle as a hybrid course (Troy Lizama). A number of computer science, business and technology related courses use (or have used) Moodle as 'web enhanced' courses.
- As previously mentioned, certificate programs from third-party vendors are offered to GCC students online by the Continuing Education Department. Specifically Ed2Go, LERN and JER Online. At this time, we were unable to determine what the actual contractual agreement was/is with these online vendors, and cannot make a recommendation as to either maintain or remove the partnership without further knowledge. Areas of concern are:
 - The courses are branded as GCC courses and although the institution knows it doesn't provide credit for these courses, an individual who signs up for these courses may actually think that they are GCC courses.
 - GCC generates revenue by providing access to these courses, however there have been instances where courses offered through these vendors are similar to courses onsite, therefore potentially affecting institutional revenues. The link <http://www.guamcc.edu/Runtime/onlinecourses.aspx> states that "Continuing Education offers a variety of online non-credit/skill enhancement courses. Gain knowledge of different skills on your own time!" suggesting that GCC has a vested interest in running these courses and obtains value by marketing them through the institutions website.

Assessment of Current GCC Service Capabilities

Infrastructure

- The power and network infrastructure at GCC are adequate for their needs. Network usage is monitored and kept at no more than 75 percent of capacity. The wireless network is open, although MIS is investigating security solutions to require sign-in to access wireless. Wireless access points are available around the campus, however there is not full coverage. At time students will create ad hoc networks to extend coverage, causing some confusion for other students. For effective support of distance education, wireless access should be stable and expanded to all areas of the campus.
- A number of challenges prevent the MIS department from effectively supporting distance education:
 - Lack of in-house technical hardware/UNIX/LINUX operating system support. This may be partially resolved with the new position MIS is presently interviewing for; however, there is likely to be a steep learning curve with Moodle and UNIX/LINUX as well as server virtualization.
 - Presently there is no real-time backup in place for disaster recovery, failover, or redirection. Uptime is not guaranteed.

- No data backup processes are in place.
- There is no sandbox for testing system changes.
- There is presently no budget for maintenance, expansion, or training of MIS staff in required technologies to support distance education.

Student validation/authorization

- To access Moodle, students must self-register. They are given unique registration information before initially logging in to provide validation. Currently there are instances where students who have multiple courses supported by moodle have different usernames and passwords for each of their courses. This creates confusion and frustration for the students when they try to access their courses. Furthermore, because of lack of helpdesk support, there is a higher chance that these students who struggle with access to content may sometimes even forfeit the course altogether leading to poor course retention. Some instructors have been provided with administrative functions so that they can independently provide student user names and passwords in the even that a student reaches out to them. At a small scale this may be manageable, however this is not scalable.
- Students authenticate to access email, calendars, and some course resources through the MyGCC portal.
- Ideally, any LMS access should be available to students via single sign-on from the portal. Registration processes and course creation should be integrated from Banner rather than manual. GCC's MIS lacks the expertise to do this.

Faculty capability

Generally speaking, GCC faculty are not trained or prepared for distance education. Some faculty have knowledge and experience in distance education from outside personal experiences, such as taking online courses or teaching online for other institutions. However, there is inconsistent foundation of knowledge or baseline of skills for distance education. Interestingly, in the above mentioned academic technology survey, faculty from the English department requested that they be allowed to use Moodle as expressed in the response *"Again, please look into allowing faculty members from the English Department to Use Moodle. Thanks!"*. Another responder stated *"Thanks for the opportunityI hope you will consider making Moodle available to all faculty who are interested"*. This suggests that faculty are interested in utilizing LMS to support instruction, but at this time they have been unable to access the resource due to internal constraints. This was a sentiment that was also shared during the faculty focus group sessions.

In focus group sessions, several of the faculty leaned towards hybrid models rather than fully online courses, so there may need to be further dialog on the value that fully online courses/programs would bring to the institution. Several students struggle with getting on campus due to transportation issues and also scheduling conflicts due to their work schedule, so access to a few online courses would alleviate their difficulties and lead to course or even degree completion. It will be critical for the DE taskforce to support the college in determining faculty ideology and philosophy on DE and whether they will actively engage in DE if indeed it is decided that this is a path that the college will embark on.

Faculty hiring

At the college there are more adjunct faculty than full time faculty. Faculty achieve full time status after a one year probationary period during which they enroll in a 6 credit CTE course which they are allowed to complete in 3 semesters (an exception is if they have 18 education credits). The department chair is the main decision maker on adjunct faculty qualifications and hire. The process is not as stringent for adjuncts as compared to full time faculty, however more than 50% of the courses are taught by adjunct faculty.

Instructional technology

Training for instructional classroom technology (e.g. smartboards, laptop presentation tools) occurs on a per request basis. Instructors who use Math XL are trained departmentally.

Faculty training and support requirements

- To successfully offer distance education, a baseline of knowledge and skills for instruction would need to be established. Faculty will require training in both tools (functionality of the chosen LMS) and technique (best practices in online pedagogy). Even those who are presently teaching online are not versed in the capability and functionality of Moodle or in best practices such as meeting ADA requirements for online instruction.
- Based on these observations, any plan to offer distance education should include instructor training and instructional design assistance, both in the process of designing courses and in support of instructors while delivering the courses.
 - In the previously mentioned academic technology survey, faculty indicated the greatest need for training in grading software, Moodle, Quiz software, CourseStudio, Google apps, Web Course Management, and the use of Web sources.
 - When asked if they take advantage of training, 77.8% indicated that they either take the training or take it sometimes. The majority of the respondents who are not participating in training regularly or at all, stated that there were scheduling conflicts. A few mentioned lack of knowledge of training sessions but most of the faculty are seeking some level of flexibility in accessing training. This was a key component of the faculty focus group sessions held on campus and faculty specifically asked if GCC would be factoring in training in the event that the DE initiative was implemented.

Student training and technical support requirements

- Students of GCC typically have little or no exposure to distance education and are not aware of what it entails, though some students have expressed interest. Prior to taking distance education courses, students should be vetted for their technical capability. Training in three areas should be provided:
 - LMS functionality and features;
 - Best practices for online learning;
 - DE support resources available from GCC.
- As technical support for students is limited at GCC, the adoption of any distance education program should also include a plan to support distance education students. Technical assistance will be necessary for sign-in issues, compatibility issues, functionality issues, and the like. For a fully online program, ideally the support should be available 24/7.

Student Support Services

Admissions and Registration

The admissions and registration functions are handled under the same management. As indicated in the figure below, there are several functions that utilize manual processes and would hinder smooth admission and registration of a new fully online student. Returning/continuing students who do not have a hold on their accounts (green arrow) can reapply and register for their courses online, however, they are still required to go to the registrar's office for ID purposes. A new student to the college would undergo manual application from the beginning of their application process because there are several PDF documents available on the [Apply now](#) page of the college's website (Figure 1). The student doesn't have access to the [Apply now](#) portal in Banner until they have sent in required documentation. Currently the college is using an ID system that requires ID provision every semester. The college is seeking solutions to streamline ID provision with Banner. In order to support a fully online student, the manual processes described in the figure will require automation or work-around processes, such as use of phone, email, fax to authenticate and provide required documentation. The TB clearance will require additional discussion on policy and process because onsite students require this clearance. It was discussed during the onsite visits that it may be possible to waive the TB clearance since a fully online DE student would not need to come on campus.

Financial Aid

Following course selection the student has to make a tuition payment. In instances whereby the student applied for financial aid (FA) early and went ahead and was approved, a hold on their business account is lifted and the student would be able to reapply, register and enroll for courses online (automated). Figure 2a describes the process a student takes when they apply for Financial Aid as recommended by the FA office. However, they would still have to come on campus to get their college ID. If there are any holds (pre-req, grades, health certificate etc.) on the account then a manual visit to the college is warranted so as to lift all holds. The registrar's office mentioned that during registration nearly 750 students wait on them per day, many of whom have issues that could be resolved online if there was automation of processes such as installment plan establishment.

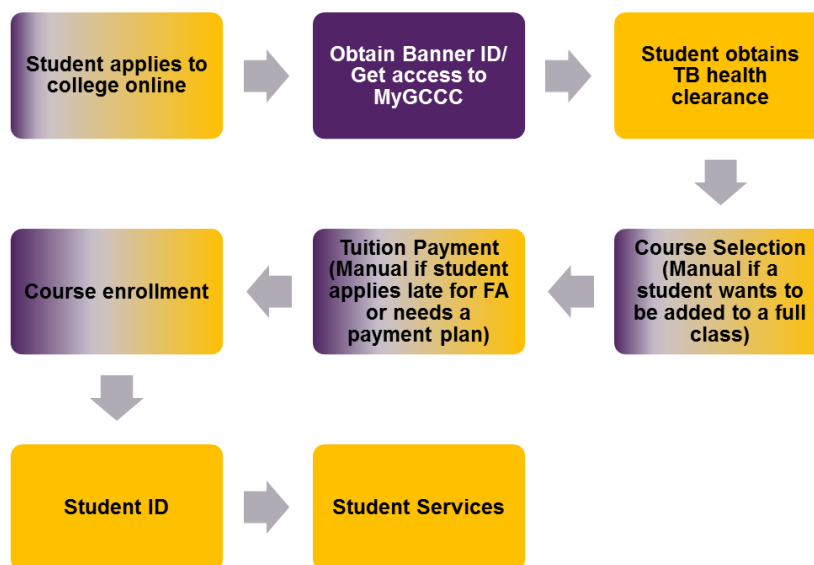


Figure 1. New Student Admission Process

Students who have missed the financial aid deadline have multiple layers of steps they have to undertake in order to register for the courses they need. As indicated in figure 2b, the student would have to meet with an accounting supervisor if they are unable to pay for their courses prior to FA clearance. The Accounting Supervisor assesses the students' situations on a case by case basis and in certain instances has not granted the student a waiver. Students who receive a waiver, manually select courses, pay a fee to the cashier and sign up for installment payments, after which, they take receipts to the accounts receivable technician so that the student's information can be updated in Banner (as a payment plan). This then allows the student to pay for tuition (they can pay online or in-person), and the tuition hold is released after the last installment is paid, or after they receive FA and they make bulk payment to the cashier.

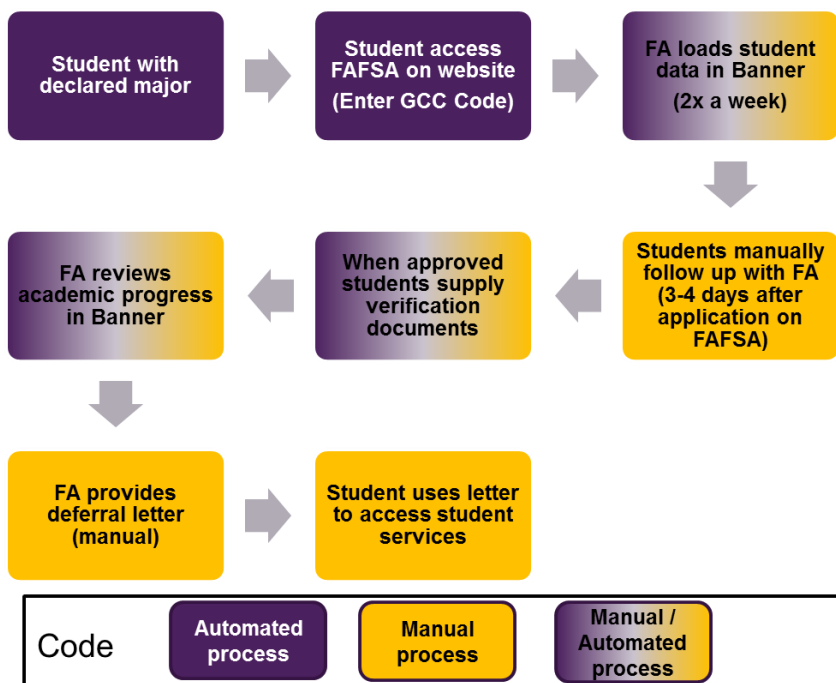


Figure 2a. Financial Aid (FA) application and processing

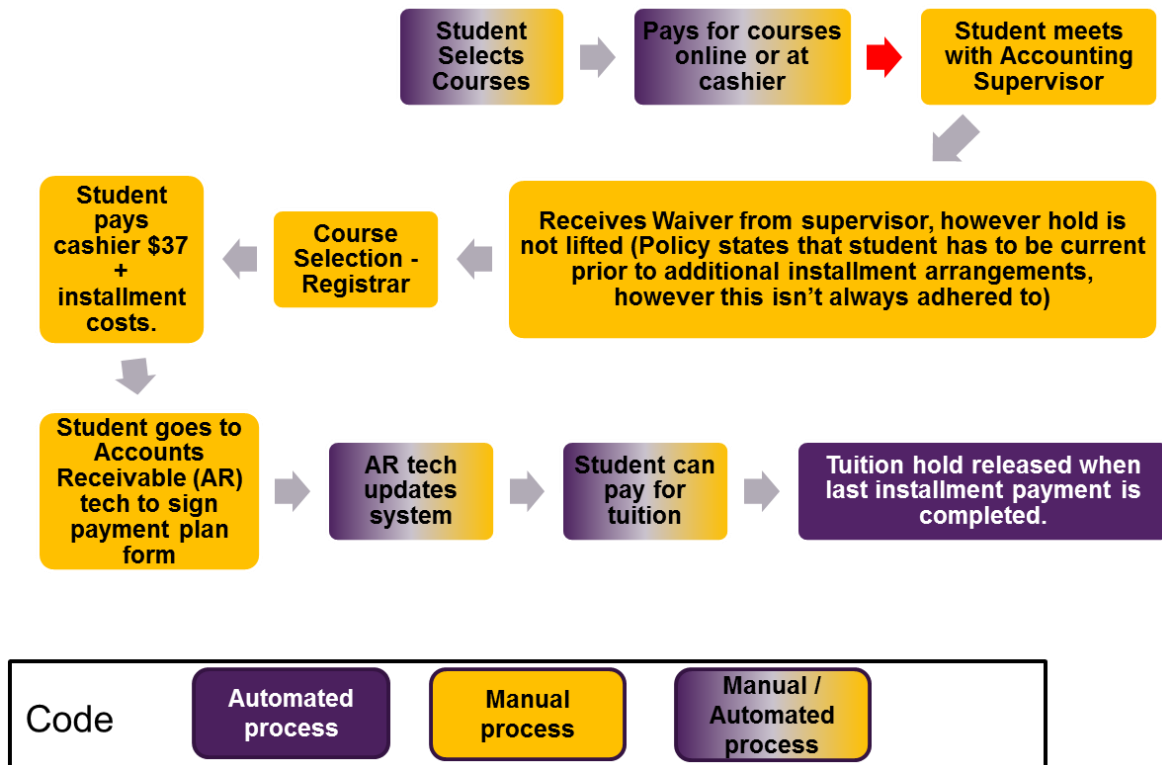


Figure 2b. Deferred Payment Process, for students apply late for Financial Aid. Red arrow indicates that a student needs to meet with Accounting Supervisor because they cannot afford the payment plan and need FA.

A typical example would be a student who needs a cashier's signature so as to have a hold lifted off for a poor grade in a previous semester. The student then takes the form to the FA office for review followed by a waiver being provided to the registrars' office, the student then lines up to register for the courses, pay for them at the cashiers (if necessary), goes on to get an ID and then can buy books and attend class.

Advising / Counseling

GCC currently supports 5 high schools and has guidance counselors embedded in each of the high schools. However, in addition to guidance counselors there are 3 counselors at the college of which one actively supports the "apprenticeship" program. New students are expected to meet with advisors or counselors as part of their enrollment process, during which they receive a clearance form, and pay for courses that they want to enroll in (Figure 3). Students are assigned a faculty advisor about three weeks after they have enrolled in their program of study, and they are supposed to meet with their advisors every semester. However, active advising is not enforced, and in discussion with students they mentioned that in several instances they have been unable to reach their faculty advisors, at which point they resort to meeting with the college counselors. Counselors also mentioned that the students tend to go to them for academic advising because they are more approachable, available and familiar to the students. Further review into the effectiveness of the advising process will be required. Counselors mentioned that in many instances, students do not take courses that meet their program of study and sometimes enroll in courses just so that they can maintain their full time status. The apprenticeship advising model is in closest alignment with distance education advising best practices. This entails provision of a program of study map with a semester by semester outlay of expected courses to enroll in. The students are then actively sought to meet with their respective advisor every semester as they enroll in upcoming courses, and this is tracked. This minimizes error in course selection and manages "time to completion" matters for most students. The advisor tends to also double as a career coach. The counselors at GCC have multiple roles as career coaches, advisors and in some instances provide sociological counseling. (Note:

Unclear as to whether the counselors have certification for this role→ this may pose a risk to the college for lawsuits. Further review of counselor job expectations and certification is warranted).

Students who have to retake a course are required to get clearance from the counselors as presented in Figure 4. A student with a D or F grade is allowed to retake a course and this cost can be offset by Financial Aid. It was determined that

students meeting with counselors was of no value to the student because they receive a signed form indicating that they are retaking a course, however there is no review of current student progress at this stage, nor is there any advising on study skills, setting goals, or even review of career paths (unless the student specifically asks for it). This suggests that the students go to counselors just to have a form signed after which they go back to FA for clearance (If they need FA) and then to the cashier to pay for the course which is added manually to their schedule. The counselors mentioned that during the first week of school they have sometimes processed about 100 students undergoing the course retake clearance process. In the event that the student has to reschedule the retake course, they have to go through a manual withdrawal process, and then repeat the process (red arrows in figure 4).

Library

The Learning Resource Center is open Monday through Friday, most weeknights until 8:00 pm. In addition to traditional library resources, the LRC offers a Kindle e-reader borrowing program, streaming videos available through Films on Demand, access to the catalog through Dynix Bookmyne (a mobile app), and access to EBSCO. As such, the library is well-positioned to support distance education. Areas in which the library would need to expand services include:

- Real-time research and style guide support for online students (e.g. chat, 1-800 phone support) to match the support provided in-person;
- Expansion of hours to include later evening and weekends for distance students that may work odd hours;
- Development of a mailing loan program for students that cannot

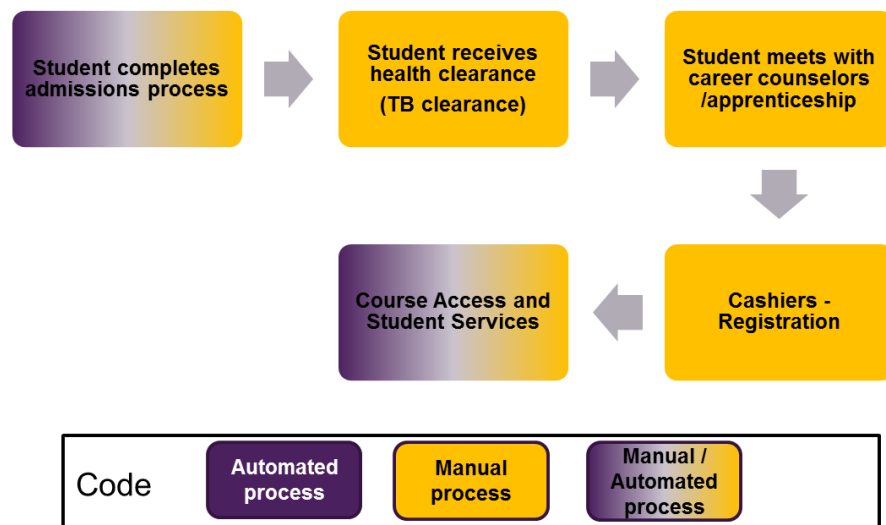


Figure 3. Advising as part of the enrollment process for new students

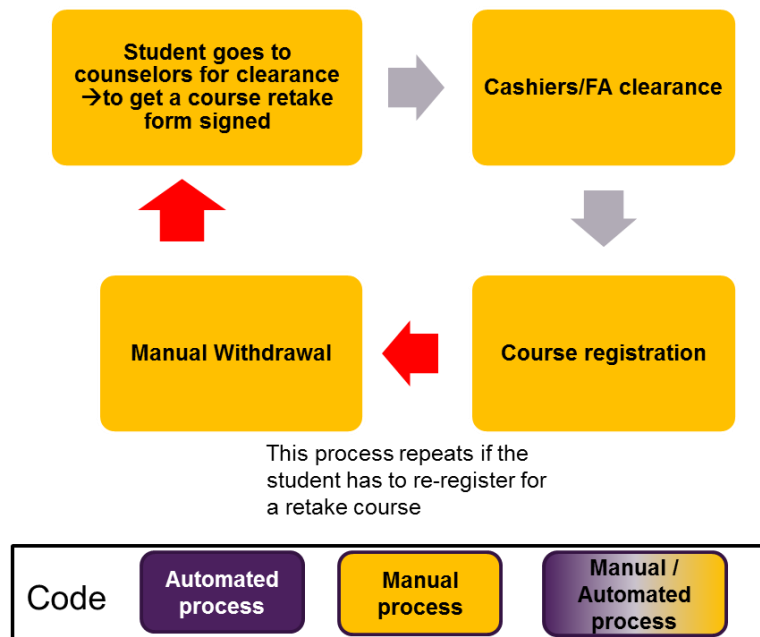


Figure 4. Clearance process for course retake

come to campus. Note that this becomes very problematic if resources were to be loaned to students off-island. Mail delivery can take an extensive amount of time, meaning resources are out of circulation for long periods.

Health services – Currently the college has a requirement that prior to course registration a student has to have a tuberculosis clearance certificate. This policy is a government policy and governs students who are onsite. In the event that a student is fully online and does not come on campus, the college may be able to waive this requirement. Currently a student has a hold on their account until they have provided proof of TB clearance after meeting with the nurse at the health center.

Course Add and Withdrawal

Currently students withdraw or add courses through manual processes. The course drop process is automated. The student who wants to add to a full course has to have a signed approval from a faculty member to allow for them to be manually added to the course at the registrar's office. In the same vein, a student who wants to withdraw from a course does so manually.

Transcript Requests

Currently the college has an online portal for transcript requests, but the student authentication and clearance process is manual. After clearance the student can pay manually at the cashier's office or the payment amount can be manually entered into Banner and the student pays using the E-commerce solutions. Although the clearance process is manual, it was determined that students could probably use email, phone and fax to complete the whole transcript request process.

Staff Capabilities

Staff would like to put in place measures that increase automation and ease student congestion especially during the admissions/registration period. In several instances staff mentioned that they are in the process of improving their processes such as in FA, ID processing, and marketing. Like the faculty, staff will also need to undergo a change management process because they have become familiar with working with inefficient processes, which they could easily lapse into if clear pathways for adopting new processes are not clearly mapped out.

Recommendations on Service Capabilities and Current Resources

- 1) Consider Moodle as an LMS for the whole institution - Due to familiarity, inexpensiveness, and ease of use, GCC should continue using the Moodle environment for distance education delivery. Furthermore, faculty are already primed for Moodle acceptance per their responses to the academic technology survey.
- 2) Consider hosted Moodle Solutions – GCC should consider this as a scalable LMS utility and management option, due to the instability of the Moodle instance, lack of backup, failover, and sandbox, and lack of personnel, hardware, and time to technically host and support this LMS.
 - a. There are a number of companies that host Moodle that would require very little setup for minimal expense compared to what internal hosting would cost. One host company that matches the needs of GCC well, for example, is remote-learner.net. Another is MoodleRooms.
 - b. Factors to take into account when choosing an external hosting provider:
 - i. Level of technical support;
 - ii. Availability/uptime;
 - iii. Plans for integrating Moodle updates;
 - iv. Redundancy;
 - v. Scalability;
 - vi. Sandbox availability;
 - vii. Ease of data migration in case a different solution is chosen;
 - viii. Cost/pricing plan structure.
- 3) Course and program selection for pilot and full DE rollout: Possible options include, but are not limited to:
 - a. Redeveloping the existing Education courses;

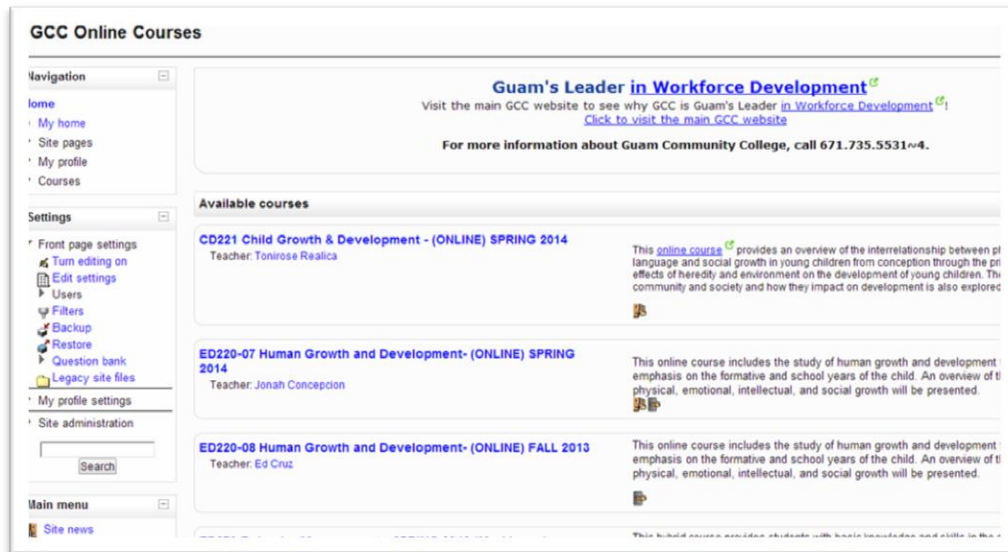
- b. Identifying courses that suffer from limited availability of large labs on campus, and running them as hybrid, meeting half as often and doubling the availability of lab time;
 - c. Developing GED completion and/or Continuing Education courses to reach the adult population of Guam that may desire high school degree completion;
 - d. Expansion of Math courses that utilize Math XL to fully online offerings;
 - e. Selecting general education required course that would hold value as a stand-alone course to non-GCC students (for example, a Microsoft Office proficiency course).
 - f. Identifying courses that affect student completion rates but that have enough volume per year to remain viable for online delivery.
- 4) Offer training for students and faculty - Within the context of the adopted LMS environment, design and offer training courses for both students and faculty who would participate in distance education.
- 5) Partner an Ellucian instructional designer with selected faculty to develop selected courses and train on instructional practices.
- 6) Investigate the feasibility of adding Ellucian DBA support to address shortcomings in Banner support at GCC that would enable the integration of Banner and Moodle, as well as potentially automating other manual processes (e.g. Banner integration with bookstore software).
- 7) Develop a long-term plan to integrate Banner and Moodle, to provide SSO access to Moodle via MyGCC, and utilize a Moodle course shell to supplement every residential course to provide a cohesive and easy-to-access resource for instructors to share content and materials with students.
- 8) Review of student advising: Faculty at the departmental level are assigned advisees, however both the counselors and students indicated that very few faculty actually advise the students and in most instances the students go to counselors for advising support.
- 9) Review process for course retake and the role that counselors play in this process.
- 10) Review student admissions and course registration process to enable more automation that can support remote student application and admissions processes.
- 11) Review policy compliance especially as relates to student payment deferral systems. Inconsistent approval of payment plans to students can pose a risk to the college in the event that a student is denied access while others are being granted deferrals.
- 12) Review automation of add/drop and withdrawal from courses.
- 13) Consider including "prior online instruction experience" in the job descriptions for faculty seeking to teach online courses at GCC. Especially relevant for the adjunct faculty.
- 14) Develop procedures for remote transcript request completion.
- 15) Develop a communication and change management plan for the college so that there is transparency in DE implementation and environmental impacts.

Recommendations on Pilot

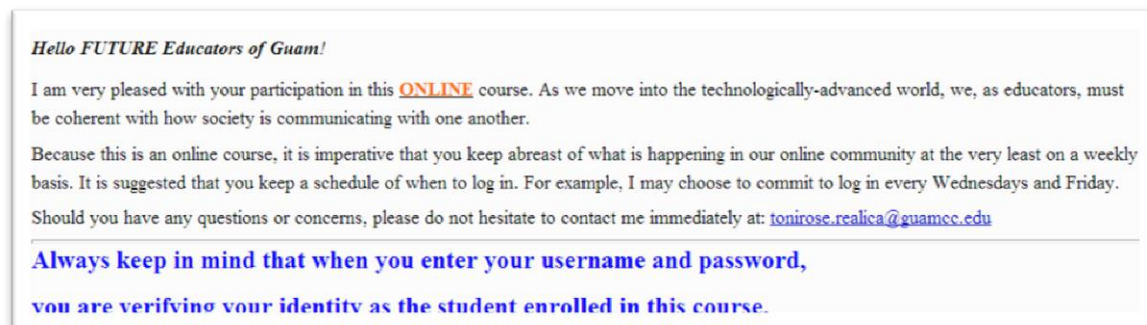
- ✓ Review service capabilities and resources to determine if Fall '14 remains feasible for pilot of courses.
 - Prioritize tasks per recommendations and determine which will be critical in supporting pilot.
- ✓ Develop an organizational structure that oversees the functioning of DE at GCC.
- ✓ Develop policies and procedures that will guide DE pilot and future DE offerings.
- ✓ Determine the Key Performance Indicators for the pilot and set benchmarks- this will help gauge the success of the pilot.
- ✓ Develop an aggressive marketing and fulfillment plan for the pilot courses so as to minimize cannibalization of current students.
- ✓ Develop courses and train faculty who will be engaged with the pilot project.
- ✓ Train DE course evaluators.

Appendix 1 –Moodle Courses

Text-Enhance Adware creates hyperlinks to external sites that show up when you hover over the links. These were seen from mainland computers but not on Guam.



Serif fonts are not ADA compliant.



Shading, bold, colors, and highlighting should be used judiciously for ADA compliance.

