Project

Plan

Summary

Emanon College Lab Build Project

|  |  |
| --- | --- |
| Project ID: | 2009-19 |
| Prepared By: | Rebecca Brown |
| Position: | Project Manager |
| Company: | Emanon College |
| Date: | 27 Feb 2009 |

Table of Contents

Project Overview 3

Background 3

Need/Requirement 3

Objectives 3

Project Scope 3

Deliverables 3

Scope Exclusions 5

Updated Detailed Assumptions 6

Constraints 6

Project Approach/Phases 6

High Level Tasks: 6

Project Resources 7

Key Personnel Responsibilities 7

Labour 8

Material 8

Project Schedule 9

Schedule 9

Key Project Milestones 9

Project Budget 10

Task Expense Summary 10

Resource Expense Summary 11

Project Cash Flow Summary 12

Project Risk Management 13

Risk Planning Process 13

Risk Register 13

Communication Plan 13

Project Manager Communications Responsibilities 13

Project Team Communications Responsibilities 14

Reporting 14

Meetings 15

Key Contact Information 15

Change Control 16

Process 16

Project Plan Approval 17

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# Project Overview

## Background

Emanon College’s strategic direction is to promote itself as a top-tier, state-of-the-art business and technical college. There has been a significant shift in the need to use computer systems, even in non-technical subject areas. There are currently only five computer labs on campus, with a total of 100 workstations that are all more than five years old. These labs are all used 14 hours per day; some classes have two students per system, and the intent in the Fall term is to increase course offerings that will require extensive use of computer lab facilities.

## Need/Requirement

The college does not have sufficient computer lab space to handle the increased demand, and the systems in the labs are rapidly becoming obsolete. A feasibility study was conducted to determine the computer lab needs of the college in more measurable terms. The result of this study was a recommendation to undertake a project to double the number of computer labs and computers in the college, and update all of the lab equipment to current technology.

## Objectives

The objective of this project is to build ten computer labs at Emanon College to increase the lab capacity by 100% and equip the labs with technology that is no more than one year old before Fall classes start this year.

# Project Scope

## Deliverables

### Deliverable 1: Project Documentation

#### Description:

Project administration documentation includes the project plan, project reports, quality control and assurance documents, change control documents, project closing documents, and other project information.

#### Acceptance Criteria:

For project documentation to be acceptable, all specifications must be met.

### Deliverable 2: Lab Design Documents

#### Description

#### The design documents are comprehensive room drawings and specifications for all computer labs. They must include detailed, scaled information on all labs, including all furniture, equipment, and hardware to be in each room, furniture specifications, equipment specifications including software, layout/floor plan of the room, and construction specifications.

#### Acceptance Criteria

For the design documents to be acceptable, all specifications must be met, and the following criteria must also be achieved:

* Each room will have its own package of design drawings, and files.
* All drawings will include the scale, drafter, designer, building, room number, symbols, and other key information to provide the user with exact information to be able to follow the drawing to build the facility.
* All construction specifications must meet generally accepted engineering standards as defined in the Project Resource Manual produced by the Construction Specifications Institute.

### Deliverable 3: Ten Computer Labs

#### Description

The primary deliverable of this project is ten new computer labs. Each of these labs will include student workstations, at least one instructor workstation, and at least one digital projector and screen.

#### Acceptance Criteria

For each computer lab to be acceptable, all specifications in its design documents must be met.

### Deliverable 4: Lab Maintenance Documents

#### Description

The lab maintenance documents are complete as-built documents and preventative and corrective maintenance procedures for all computer labs. They must include detailed drawings and specifications that reflect the actual facility conditions after completion.

#### Acceptance Criteria

For the maintenance documents to be acceptable, all specifications must be met, and the following criteria must also be achieved:

* Each room will have its own package of maintenance documents.
* All construction specifications must meet generally accepted engineering standards as defined in the Project Resource Manual produced by the Construction Specifications Institute.
* Hard copy of all drawings and digital documents complying with requirements detailed above.
* A minimum of two (2) printed & bound sets of all maintenance manuals and one (1) set in digital form are provided.

## Scope Exclusions

The following deliverables and tasks are excluded from the project:

| Excluded from project: | Reason: |
| --- | --- |
| Developing and administering a college computer usage policy is out of scope for this project. | It is a function of the operations of the Information Systems (IS) Department |
| Software licensing is out of scope for this project. | The IS department procures enterprise licenses for most software, and faculty-specific software is managed through IS. Loading the software on the systems will be the responsibility of IS, yet it will be coordinated during installation of the computers in each lab. |
| Disposal of old furniture and equipment is out of scope for this project. | It is a function of the operations of the Facilities Department. The Facilities Department will remove old equipment and furniture from the existing labs, but the project team will be required to perform any demolition required for the project. |
| Promotion and communication of the new facilities is out of scope for this project. | It is the responsibility of the college administration. |

## Updated Detailed Assumptions

| It is assumed that: | This will be validated by: |
| --- | --- |
| * the existing lab rooms have the electrical, cooling, and network capacity for the new lab equipment. | * conducting a site review during development of the design specifications for each lab. |
| * the existing labs already have security systems installed. | * conducting a site review during development of the design specifications for each lab. |

## Constraints

The following restrictions apply to the project:

| Constraint imposed on project: | Reason: |
| --- | --- |
| The project must be completed no later than August 28 this year. | Because classes begin the following week in the labs. |
| The project must only use approved vendors in accordance with the college’s procurement policies and standards. | Because the college must comply with all government procurement and competition regulations. |

## 

## Project Approach/Phases

The project will be conducted in three major phases:

1. Design – the overall lab requirements will be analysed and the labs will be designed.
2. Construction – the labs will be built.
3. Commissioning – the labs will be tested and operations and maintenance procedures will be established.

## High Level Tasks:

|  |  |
| --- | --- |
| Phase or Summary Task | Work |
| **Lab Build Project - Sample** | **2,864h** |
| Project Management | 792h |
| Design | 808h |
| **Construction** | **1,040h** |
| Borlaug Building | 208h |
| Marquez Library | 208h |
| Salam Center | 320h |
| Sen Building | 304h |
| Commissioning | 224h |

# Project Resources

## Key Personnel Responsibilities

The following resources will be required to complete this project:

|  |  |  |
| --- | --- | --- |
| Name | Role | Responsibilities |
| Kazaki Mikami | Client/Sponsor | Responsible for defining the need for the project and for authorizing the project, defining the project objective, and approving the plan and any changes. |
| Rebecca Brown | Project Manager | Responsible for successful achievement of the project objectives. |
| Dev Nilsson | IS Director | Responsible for providing technological information, and overseeing technical activities as necessary. |
| Dan Woodrum | Facilities Director | Responsible for overseeing facility department personnel. |
| Len Powell | Facilities Manager | Responsible for providing facility-related information, and enabling completion of construction work within the facility. |
| Milena Galván | Senior Purchaser | Responsible for providing guidance and documentation required for the procurement of contractors and materials. |
| Csenger Szatmári | Interior Designer | Responsible for designing interior of the labs |
| Liesbeth Brandt | Architect | Responsible for developing architectural and structural drawings and specs for the labs. |
| Saara Harila | Mechanical Consultant | Responsible for developing mechanical drawings and specs for the labs. |
| Ming Ku | Electrical Consultant | Responsible for developing electrical drawings and specs for the labs. |
| Alterio Lugo | Security Consultant | Responsible for developing security drawings and specs for the labs. |
| Max Jaeger | Communications Consultant | Responsible for developing communications drawings and specs for the labs. |
| Jennifer Lane | General Contractor | Responsible for building the labs. |

## Labour

|  |  |
| --- | --- |
| Personnel | Work |
| Project Manager | 368 hrs |
| Information Systems Director | 208 hrs |
| Facilities Manager | 168 hrs |
| Procurement Manager | 112 hrs |
| Interior Designer | 240 hrs |
| Architect | 216 hrs |
| Mechanical Consultant | 128 hrs |
| Electrical Consultant | 128 hrs |
| Security Consultant | 88 hrs |
| Communications Consultant | 128 hrs |
| General Contractor | 1,080 hrs |

## Material

|  |  |
| --- | --- |
| Material | Amount |
| Chairs | 260 chairs |
| Student workstations | 250 desks |
| Instructor workstations | 10 desks |
| Whiteboards | 40 boards |
| Screens | 20 units |
| Tables | 20 tables |
| Projectors | 20 units |
| PC systems | 239 PCs |
| Displays | 239 monitors |
| Mac systems | 21 Macs |
| Scanners | 10 scanners |
| Printers | 10 printers |

For detailed resource assignments see the master MS Project file (Lab Build Project.mpp) located in the main project folder.

# Project Schedule

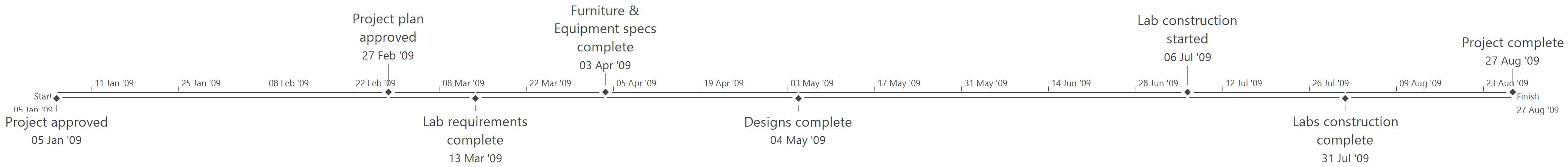
## Schedule

The project started on 5 January 2009. It is expected to take 8 months to complete on 28 August 2009.



|  |  |  |  |
| --- | --- | --- | --- |
| Summary Task | Duration | Start Date | Finish Date |
| Lab Build Project | 166 days | Jan 5 '09 | Aug 28 '09 |
| Project Management | 166 days | Jan 5 '09 | Aug 28 '09 |
| Design | 45 days | Mar 2 '09 | May 4 '09 |
| Construction | 21 days | Jul 6 '09 | Aug 4 '09 |
| Commissioning | 86 days | Apr 21 '09 | Aug 21 '09 |

## Key Project Milestones



| Milestone | Date |
| --- | --- |
| Project approved | 05 Jan '09 |
| Project plan approved | 27 Feb '09 |
| Lab requirements complete | 13 Mar '09 |
| Furniture & Equipment specs complete | 03 Apr '09 |
| Designs complete | 04 May '09 |
| Lab construction started | 06 Jul '09 |
| Labs construction complete | 31 Jul '09 |
| Project complete | 27 Aug '09 |

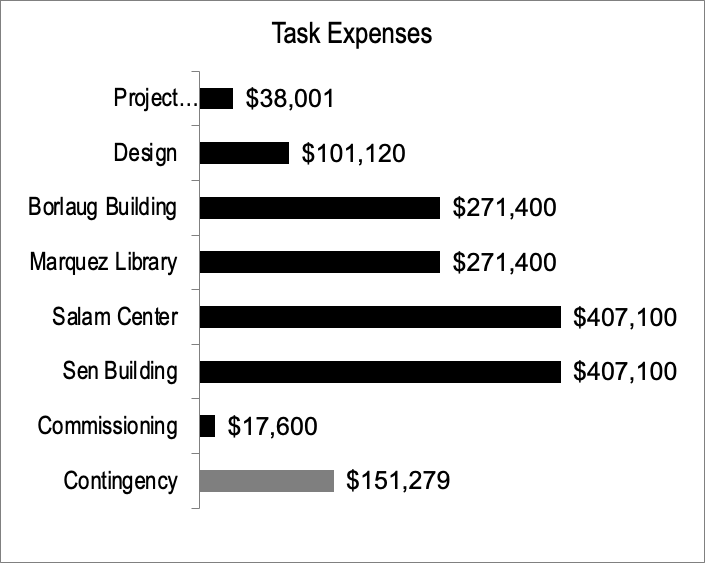
# Project Budget

The total budget for this project is $1,665,000. This includes a 10% contingency reserve amount and only reflects the direct costs associated with this project. This budget specifically does not include the overhead costs associated with labour or materials.

## Task Expense Summary

The following is a breakdown of the estimated costs by project phase including labour and material costs and contingency reserves:

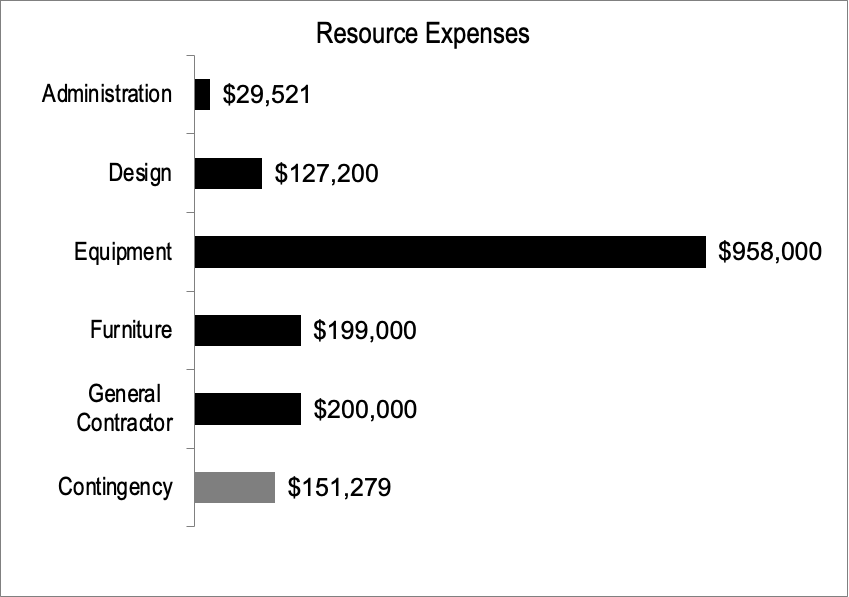
|  |  |
| --- | --- |
| **Summary Tasks** | **Costs** |
| Project Management | $38,001 |
| Design | $101,120 |
| Construction |  |
| Borlaug Building | $271,400 |
| Marquez Library | $271,400 |
| Salam Center | $407,100 |
| Sen Building | $407,100 |
| Commissioning | $17,600 |
| **Sub-total** | **$1,513,721** |
| Contingency | $151,279 |
| **Total** | **$1,665,000** |



## Resource Expense Summary

The following table and chart represent the project baseline costs by resource type:

|  |  |
| --- | --- |
| **Resource Group** | **Costs** |
| Administration | $29,521 |
| Design | $127,200 |
| Equipment | $958,000 |
| Furniture | $199,000 |
| General Contractor | $200,000 |
| **Sub-total** | **$1,513,721** |
| Contingency | $151,279 |
| **Total** | **$1,665,000** |

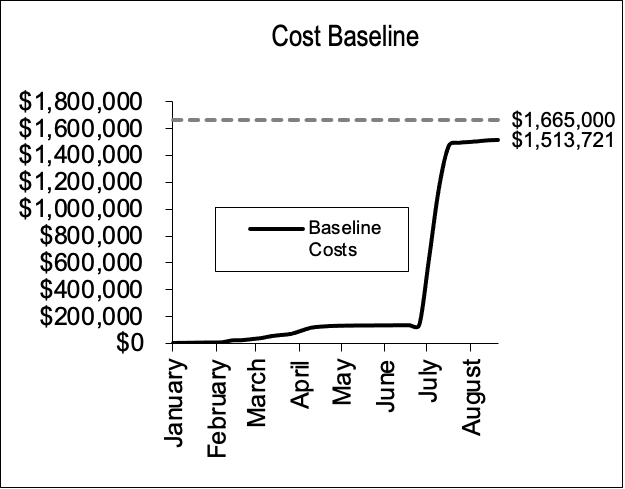


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## Project Cash Flow Summary

The following table and chart represents the project expenses over time.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Tasks** | **Jan** | **Feb** | **Mar** | **Apr** | **May** | **Jun** | **Jul** | **Aug** |
| Project Management | $4,100 | $17,700 | $2,097 | $2,002 | $1,907 | $2,065 | $1,985 | $6,143 |
| Design |  |  | $40,016 | $59,664 | $1,440 |  |  |  |
| Construction |  |  |  |  |  |  | $1,357,000 |  |
| Commissioning |  |  |  | $1,120 | $1,680 | $0 | $0 | $14,800 |
| **Sub-total** | **$4,100** | **$17,700** | **$42,113** | **$62,786** | **$5,027** | **$2,065** | **$1,358,985** | **$20,943** |
| Cumulative total | $4,100 | $21,800 | $63,913 | $126,700 | $131,726 | $133,792 | $1,492,777 | $1,513,721 |
| **Total with contingency** | **$1,665,000** | **$1,665,000** | **$1,665,000** | **$1,665,000** | **$1,665,000** | **$1,665,000** | **$1,665,000** | **$1,665,000** |



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# Project Risk Management

## Risk Planning Process

This project followed a systematic, proactive approach to risk planning, which involved as many stakeholders as feasible. The processes for risk planning was:

1. Risk identification – identified possible risk events that could occur on the project, the triggers that could precipitate the risk, and the symptoms that would indicate that the risk occurred.
2. Risk qualification – determined the qualitative probability and impact of the risks, based on stakeholders’ input, to prioritize the risks for further planning actions.
3. Risk quantification – high score risks were analysed further to quantify their probability in percentage and their impacts in cost, time or quality measures. The result of quantification is the risk exposure, which is the product of the probability and impact values.
4. Risk response development – proactive risk response strategies were developed reduce, transfer or eliminate unfavourable risks and exploit, enhance or share favourable risks. Some risks had contingency plans and fallback plans developed in case the risks occur.

## Risk Register

The following table represents only the highest exposure risks on this project.

| Risk Event | Exposure | Response Strategy | Responsibility |
| --- | --- | --- | --- |
| Project funding is reduced by more than 25% during project planning. | $75,000 | Establish full project funding approval as early as possible, with commitment to contracts as top priority. | Sponsor |

# Communication Plan

## Project Manager Communications Responsibilities

The project manager will manage all project communications, including any internal and external communications. The project manager will provide templates for reports to the appropriate project team members to report their progress.

The project manager will also provide task assignment lists to each of the resources with the upcoming tasks assigned to each resource.

The project manager will communicate any critical changes and risks impacting project scope, cost, and schedule, to the project sponsor. The project manager will meet the project sponsor monthly, or as needed. The project manager will communicate to the sponsor via monthly progress reports and variance reports.

The project sponsor and the project manager will communicate any changes requiring approval and any impacts related to changes to the Steering Committee. The sponsor will also communicate project status to the committee via quarterly reports presenting progress, variance, trends and forecast as required.

## Project Team Communications Responsibilities

The project team will ensure the project status is reported to the project manager on a weekly basis, or immediately for critical issues. The project team will be critical in assisting the project manager with the development, maintenance, and final closing of the Communications Management Plan. They will be responsible for providing the project manager input towards the Communications Management Plan.

Each project team member will be responsible for communicating the status of his or her assigned tasks within the project on a weekly basis. Each team member will be assigned tasks from the project schedule depending on their expertise from the project manager. Any issues or requests must be communicated to the project manager as soon as possible.

Teams will meet bi-weekly with project manager and/or project sponsor (as appropriate) and present information related to assigned tasks and present any new related identified tasks.

The Team members will communicate via their weekly status reports, and verbally during status meetings any issues that may impact project cost, schedule, scope, and/or quality.

## Reporting

The following table outlines the reports to be generated and distributed throughout this project:

|  |  |  |  |
| --- | --- | --- | --- |
| Report Type | Timing | Recipients | Responsible |
| Periodic Task Progress Reports | Bi-weekly | Project Manager | Team, Sub-contractors |
| Project Performance Reports | Monthly | Management | Project Manager |
| Upcoming Activity Report | Weekly | Team, Sub-contractors | Project Manager |
| Project Closeout Report | On Close | Management | Project Manager |
| Lessons Learned Report | On Close | All Stakeholders | Project Manager |

## Meetings

The following table outlines the meetings to be held throughout this project:

| Meeting Type | Timing | Participants |
| --- | --- | --- |
| Initiating/Planning meetings | As necessary | PM, IS Director, Fac. Mgr., Procurement Mgr., Consultants |
| Project Kick-off meeting | Execution Start | PM, Management, Team |
| Project Progress meetings | Bi-weekly  As necessary | PM, Team |
| Project Status meetings | Monthly | PM, Sponsor |
| Closeout meetings | On Phase close  On Project close | PM, Team, Management |

## Key Contact Information

The following table outlines the key contacts on this project:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Contact | Role | E-mail | Telephone | Urgent |
| Kazaki Mikami | Sponsor | kmakami@emanon.edu | 604-555-4321 | 778-555-4321 |
| Rebecca Brown | Project Manager | rbrown@emanon.edu | 604-555-7625 | 778-555-7625 |
| Dev Nilsson | IS Director | dnilsson@emanon.edu | 604-555-7633 | 778-555-7633 |
| Dan Woodrum | Facilities Director | dwoodrum@emanon.edu | 604-555-7651 | 778-555-7651 |
| Len Powell | Facilities Manager | lpowell@emanon.edu | 604-555-7653 | 778-555-7653 |
| Milena Galván | Senior Purchaser | mgalvan@emanon.edu | 604-555-7646 | 778-555-7646 |
| Csenger Szatmári | Interior Designer | csenger@idesign.fic | 604-126-3953 | 778-126-3953 |
| Liesbeth Brandt | Architect | liesbeth.brandt@arch.fic | 604-124-4222 | 778-124-4222 |
| Saara Harila | Mech. Consultant | s.harila@mechanical.fic | 604-123-5627 | 778-123-5627 |
| Ming Ku | Electrical Consultant | mku@electriciansrus.fic | 604-125-5511 | 778-125-5511 |
| Alterio Lugo | Security Consultant | alterio@secureicon.fic | 604-129-6134 | 778-129-6134 |
| Max Jaeger | Comm. Consultant | mjaeger@comcom.fic | 604-127-8945 | 778-127-8945 |
| Jennifer Lane | General Contractor | jlane@laneconstruction.fic | 604-128-9407 | 778-128-9407 |

# Change Control

## Process

The following process will be used to manage change and change requests/orders:

1. Any potential change that impacts the project’s scope, schedule, cost, or resulting deliverables will be documented on a Change Control Form.
2. The change Initiator or Discoverer prepares the Change Control Form and documents the impact the change will have on the project.
3. The Project Manager and Sponsor review the Change Control Form and decide if the change is in or out of the agreed project scope. The Sponsor determines if the scope revision should be approved and seeks additional funding if required.
4. Approved changes will be grouped into a formal Contract Amendment as needed.
5. Once accepted, the Project Manager will revise the project plan baseline to reflect the accepted change. Any deliverable content that is expected to change will be documented in the Change Control Form. The contents of the Change Control Form (and any related documentation) will signify an official amendment to the relevant sections of the plan or charter.

# Project Plan Approval

The following signature indicates approval of the information, terms and conditions, and specifications presented in this document and all supporting documents. This document is supplemental to the contract and will be considered part of the agreement between the parties. Any amendments to the services provided under this project plan must be documented and accepted by both parties using change control.

|  |  |  |
| --- | --- | --- |
| *Kazaki Mikami* |  | *13 March 2009* |
| Kazaki Mikami |  | Date |
| President, Emanon College |  |  |