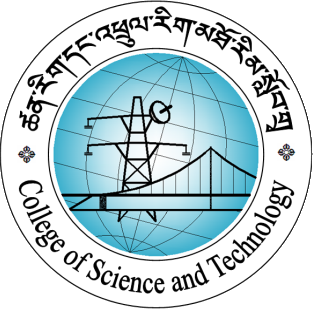
****

**Proposal**

**For**

**Final Year Project**

**Department of Information Technology**

**CST Result Management System**

**Dechen Wangmo**

**Sonam Namgyel**

**Sonam Tobgay**

**Tshewang Rinzin**

**Royal University of Bhutan, College of Science and Technology**

**Guidelines and Forms**

**Introduction**

Considering the geographical terrain, the Royal Government of Bhutan has recognized and endorsed ICT as an enabler of developmental activities. Therefore, installation of ICT infrastructure in the 20 districts with Local Area Network has been initialized and completed at the end of the 9th five year plan implementation phase. The potential of ICT attracted the attention of the development planners in Bhutan and the 10th FYP was designed to fully harness the potential of ICTs to achieve the developmental goal especially of poverty reduction of the Millennium Declaration and Gross National Happiness.

In order to address the IT HR need in the country and to promote and support IT industries in the country, the Information Technology Department (ITD) proposed to introduce a four year Bachelor of Engineering in Information Technology degree in 2009. The College launched BE (IT) with 30 students from the winter semester of 2010. Presently, ITD is supported by 6 teaching faculty, two technicians and two ICT staff (ICT Unit). To support the IT program, the college is constructing a new IT building which will be equipped with the latest IT equipment and facilities.

To provide wholesome IT knowledge and skills to the students, ITD introduced modular courses from 2011 in collaboration with NIIT under Chiphen Rigphel Project. The department is currently working to introduce a testing center at the college.

**Submission Procedure**

Duly filled proposal forms completed in all respects should be submitted in form of soft copy and a hard copy to project guide and project coordinator. On receipt of the applications the proposals will be evaluated by reviewer panel and proposal would then be defended by student groups. The project group may need to revise the proposal in light of the evaluator’s recommendations.

**For further information, please contact:**

Tandin Wangchuk

Project Coordinator

tandin@cst.edu.bt

CST

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**Application for Final Year Project**

# 1. Project Identification

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Reference Number: | | | | | | | |
| (for office use only) | | | | | | | |
| Project Title: | | | | | | | |
| **CST Result Management System** | | | | | | | |
| Project Internal Guide: | | | | | | | |
| Name: | | **Mr. Tshering** | | | | | |
| Designation: | | Dean Research and Industrial Linkages | | | | | |
| Organization: | | College of Science and Technology | | | | | |
| Mobile # : | | +97517807651 | | | | Tel. # : |  |
| Email: | | tshering.cst@rub.edu.bt | | | | | |
| **C1. Project External Guide:** | | | | | | | |
| Name: | |  | | | | | |
| Designation: | |  | | | | | |
| Organization: | |  | | | | | |
| Mobile # : | |  | | | | Tel. # : |  |
| Email: | |  | | | | | |
| **C2. Student Group Lead:** | | | | | | | |
| Name: | | **Dechen Wangmo** | | | | | |
| Roll No: | | EIT2010016 | | | | | |
| Department: | | Information Technology | | | | | |
| Mobile # : | | +97517562780 | | | | Tel. # : |  |
| Email: | | decheyy@gmail.com | | | | | |
| Organizations Involved in the Project: | | | | | | | |
| **D1. Industrial Organizations:** | | | | | | | |
| *#* | *Organization Name* | | | | *Role / Contribution* | | |
|  |  | | | |  | | |
| **D2. Academic Organizations:** | | | | | | | |
| *#* | *Organization Name* | | | *Role / Contribution* | | | |
|  | College of Science and Technology, Royal University of Bhutan | | | Providing the requirements of the Result Management System, give the detailed information about the existing result management system and then evaluate the final system that will be developed at the end of this project. | | | |
|  |  | | |  | | | |
| **D3. Funding Organizations:** | | | | | | | |
| *#* | *Organization Name* | | | | *Role / Contribution* | | |
|  |  | | | |  | | |
|  |  | | | |  | | |
| Key Words: | | | | | | | |
| Result Management System, Student Management System, Exam software | | | | | | | |
| Research and Development Theme: | | | | | | | |
| Result Management System Development | | | | | | | |
| Project Status: (Please mark 🗹)  🗹 New  Modification to previous Project   Extension of existing project | | | | | | | |
| Project Duration: | | | | | | | |
| Expected Starting Date: | | | 8th September, 2014 | | | | |
| Planned Duration in months: | | | 8 months | | | | |
| Executive Summary: | | | | | | | |
| <type here> | | | | | | | |

# 2. Scope, Introduction and Background of the Project

|  |
| --- |
| Scope of the Project: |
| The scope of the project is as follows:   1. Student management system will include :  * Student admission/registration * Student details * Fee payment records * Student ID generation.  1. Result Management System will constitute the following modules:  * Continuous assessment * Attendance report * Previous academic records * Semester module subscription * Student’s quota validation * Publish / unpublish student results * View results |
| Introduction: |
| B1. Project Background and Literature Review: *(Detailed summary of what all has been done internationally in the proposed area quoting references and bibliography. Please note that this section demonstrates the depth of knowledge of the project team and builds the confidence of the evaluators about capability of the team in achieving the stated objectives.)* |
| <type here> |
| B2. Current State of the Art: *(Please describe the current state of the art specific to this research topic.)* |
| No result management system has been developed so far in the college. This will be the first attempt to develop the fully functioning result management system. |
| Challenges: *(Please describe the challenges, specific to this research topic, currently being faced internationally.)* |
| * New admission/registration are tedious with large number of students. * Difficulties in maintaining correct information about student appearing in a semester and a repeating semester. * No system to keep track of student fee payment records. * Lack of online result viewing system. |
| Motivation and Need: *(Please describe the motivation and need for this work.)* |
| The usage of traditional method such as excel worksheet to manage the result of students of the college has been difficult and it is going to become even more difficult as the number of students increase yearly. The development of result management system would help lecturers and students to easily manage and maintain the results. The Student Management System, being the dependency of Result Management System, would enable the online registration / admission, manage and update the students’ information, get the statistics of students such as number of students passed or failed in certain years, details of students, etc.  Student results can be made available online for viewing, keeping track of the academic performances and attendance reports. |

# 3. Objectives of the Project

|  |
| --- |
| Specific Objectives Being Addressed by the Project: *(Please describe the measurable objectives of the project and define the expected results. Use results-oriented wording with verbs such as ‘to develop..’, ‘to implement..’, ‘to research..’, ‘to determine..‘, ‘to identify..’* ***The objectives should not be statements and should not include explanations and benefits. The objective should actually specify in simple words what the project team intends to achieve (something concrete and measurable/ deliverable). Fill only those objectives that are applicable to the proposed project****.)* |
| **A1. Research Objectives:** *(if any)* |
| 1. <type here> |
| **A2. Academic Objectives:** *(if any)* |
| 1. <type here> |
| **A3. Industrial Objectives:** *(if any)* |
| 1. <type here> |
| **A4. Other Objectives:** *(if any)* |
| 1. <type here> |

# 4. Research Approach

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Development / Research / Test Methodology: *(Please describe the technical details and justification of your development and research plan and test plan and testing strategies. Identify specialized equipment, facilities and infrastructure which are required for the project and their utilization plan. The block diagrams, system flow charts, high level algorithm details etc. have to be provided in this section.)* | | | | | | | | |
| **Methodology for Development**  The methodology for our project is based on the ***Systems Development Life Cycle (SDLC)*** We use a methodology that helps us design and develop complex systems using phased approach. This approach is designed to make sure that we don’t move from one phase to another before we have assessed and verified the results of the current phase, and that we have all the necessary information to move on. This methodology also makes the software project management much simpler.  The SDLC helps us to define the ***what***, work out ***how***, and then develop and deliver a quality product by the ***when***. System development as defined in SDLC version we are adopting methodology consisting of seven key phases. Following is a brief introduction to these key phases :   * **Phase 0: *Literature Reviews*** *–* This phase will consist of doing the background research, exploring the past research works and do the comparative studies on various methodologies and approaches. * **Phase 1:** ***Capturing the Requirements*** – This phase will involve sitting down with the college exam controller and the focal person who looks after the overall academic matters (Dean Academic Affairs), student management body (Dean Student Affairs) and do lot of listening, followed by a lot of writing. The end result will be a document that defines what the college management requires in terms that the college management can understand. * **Phase 2: *Analyzing the Requirements*** – In this process, we will develop a deeper understanding of the requirements and will gather as much data we can to help while designing the solution. * **Phase 3: *Designing a Solution*** – After we understand the requirements and have analyzed them in detail, we will produce a design. This phase defines how the system will be built. * **Phase 4: *Coding*** – From the “what” and the how, we will produce and test the individual, self-contained modules that will make up the solution. * **Phase 5: *Testing*** – We will now take all the modules developed in Phase 4 and put them together as a complete solution. For the first time, we can test the entire system as a cohesive entity. “We will confirm that we have a solid product that meets all the original requirements. * **Phase 6: *Implementation and Acceptance by College Management*** – In this phase, we will implement the solution and prove, confirm with the college management that we have met the original requirements. (We are confident from the results of Phase 5 that this is a mere formality.) * **Phase 7: *User Manual Documentation and Training*** – The final phase of the project will include writing the manual for the system and training the users of the system   User Manual Documentation and Training  Deploy  Capturing Requirements  Analyze Requirements  Design  Coding  Testing  Literature Review | | | | | | | | |
| Project Team: *(Please attach the curriculum vitae (CV) of PI and CPI(s). Also attach the CVs of key research/ development personnel if available. Please follow the format included in Annexure A.*  ***The numbers in the table below must tally with the HR Cost sheet in the Budget file.****)* | | | | | | | |
| ***Title / Position*** | | | | | | | ***Number*** |
| Project Internal Guide | | | | | | |  |
| Project External Guide | | | | | | |  |
| Student Team Members | | | | | | |  |
| Others (please specify) | | | | | | |  |
| Add more rows if required | | | | | | |  |
| Team Structure: *(Please define the team structure (organogram) and role/key responsibilities of each member. If in collaboration with another partner, the division of manpower at various locations of partners be provided.)* | | | | | | | | |
| |  |  |  | | --- | --- | --- | | **Name**  **(of each member including internal and external project advisors)** | **Role/Key Responsibilities** | **Expertise / Background** | |  |  |  | |  |  |  | |  |  |  | |  |  |  | |  |  |  | |  |  |  | |  |  |  | | | | | | | | | |
| Project Activities: *(Please list and describe the main project activities, including those associated with the transfer of the research results to customers/beneficiaries. The timing and duration of research activities are to be shown in the Gantt chart in Section 8.)* | | | | | | | | |
| <type here> | | | | | | | | |
| Key Milestones and Deliverables: *(Please list and describe the principal milestones and associated deliverables of the project. A key milestone is reached when a significant phase in the project is concluded, e.g. selection and simulation of algorithms, completion of architectural design and design documents, commissioning of equipment, completion of test, etc.) The timing of milestones is also to be shown in the Gantt chart in Section 8.* | | | | | | | | |
| The information given in this table will be the basis of project monitoring and marks assignment to the project group. | | | | | | | | |
| *No.* | | *Elapsed time from start (in months) of the project* | | *Milestone* | | *Deliverables* | | |
|  |  | |  | |  | | |
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|  |  | |  | |  | | |
| (Please add more rows if required.) | | | | | | | | |

# 5. Benefits of the Project

|  |
| --- |
| Direct Customers / Beneficiaries of the Project: *(Please identify clearly the potential customers/beneficiaries of the research results and provide details of their relevance, e.g. size, economic contribution, etc.)* |
| College of Science and Technology and other institutes under RUB |
| Outputs Expected from the Project: |
| * Result Management System * Student Management System |

# 6. Risk Analysis

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Risks of the Project: *(Please describe the factors that may cause delays in, or prevent implementation of, the project as proposed above; estimate the degree of risk.)*   |  |  |  |  | | --- | --- | --- | --- | | (Please mark 🗹 where applicable) | Low | Medium | High | | * Technical risk | 🗹 |  |  | | * Timing risk |  |  | 🗹 | | * Budget risk | 🗹 |  |  | |
| A1. Comments: |
| No technical risk as such but timing risk are expected. No budgets are required. |

# 7. Project Approval Certificate

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| *(Approval of Project Proposal by the Competent Authority (Department Chairman) is mandatory before start of project execution****.****)*  ***Project Internal Guide***   |  |  |  |  | | --- | --- | --- | --- | | Name: |  | | | | Designation: |  | | | | Email: |  | | | | Date: |  |  | Signature: |   ***Project External Guide***   |  |  |  |  | | --- | --- | --- | --- | | Name: |  | | | | Designation: |  | | | | Email: |  | | | | Date: |  |  | Signature: |   ***Project Coordinator***   |  |  |  |  | | --- | --- | --- | --- | | Name: |  | | | | Designation: |  | | | | Email: |  | | | | Date: |  |  | Signature: |   ***Competent Authority – Head of Department***   |  |  |  |  | | --- | --- | --- | --- | | Name: |  | | | | Designation: |  | | | | Email: |  | | | | Date: |  |  | Signature  & stamp: | |

# 8. Reviewers Panel Comments

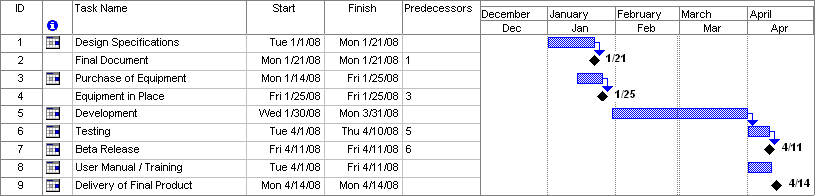
# 9. Project Content Change Request

|  |
| --- |
| *(Project Contents – Topic/Milestones can be changed at any time during project life with consent of reviewing committee. Indicate the reasons to change the contents)* |
| <type here>  ***Project Internal Guide***   |  |  |  |  | | --- | --- | --- | --- | | Name: |  | | | | Designation: |  | | | | Email: |  | | | | Date: |  |  | Signature: |   ***Project External Guide***   |  |  |  |  | | --- | --- | --- | --- | | Name: |  | | | | Designation: |  | | | | Email: |  | | | | Date: |  |  | Signature: |   ***Project Coordinator***   |  |  |  |  | | --- | --- | --- | --- | | Name: |  | | | | Designation: |  | | | | Email: |  | | | | Date: |  |  | Signature: |   ***Competent Authority – Head of Department***   |  |  |  |  | | --- | --- | --- | --- | | Name: |  | | | | Designation: |  | | | | Email: |  | | | | Date: |  |  | Signature  & stamp: | |

# 10. Project Schedule / Milestone Chart

***(Project schedule using MS-Project (or similar tools) with all tasks, deliverables, milestones, clearly indicated are preferred. Task should be measured in terms of hours)***

***Example:***



**SPECIMEN**

# 12. Project Assessment Criteria/Project Execution Flow

The final year project will be assessed by following guidelines during its lifetime.

|  |  |  |  |
| --- | --- | --- | --- |
| **Areas to be evaluated** | | | **Marks** |
| **1** | **Regular Work (Continuous Assessment by Project Guide)** | | **50** |
|  | i | Actual work involvement | 5 |
| ii | Team sprit & work culture | 5 |
| iii | Conceptual understanding | 5 |
| iv | Punctuality | 5 |
| v | Planning & execution/ compliance in carrying out guides | 5 |
| vi | Technical background materials collection | 5 |
| vii | Analysis & interpretation capability | 5 |
| viii | Time Management | 5 |
| ix | Technical writing skills | 5 |
| x | Computational/logical ability | 5 |
| **2** | **Report Evaluation (External)** | | **20** |
|  | i | Theme of the project/ originality of the idea | 4 |
| ii | Realisability/ Practicality | 3 |
| iii | Format & presentation/description style | 2 |
| iv | Abstract/ Introduction | 1 |
| v | Reasons for specific mode of implementation | 3 |
| vi | Information content | 4 |
| vii | Conclusion/ analysis & finding | 3 |
| **3** | **Project Presentation (External)** | | **30** |
|  | i | Introduction | 1 |
| ii | Presentation Techniques | 2 |
| iii | Content | 5 |
| iv | Response to questions | 20 |
| v | Language | 1 |
| vi | Confidence | 1 |
|  | **Total Marks** | | **100** |

Project Meetings Schedule:

Project Advisors Meetings (at least 5 meetings per project)

|  |  |  |  |
| --- | --- | --- | --- |
| S/N | Date | Time | Deliverables/Milestones |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
| (Please add more rows if required.) | | | |

# 13. Report Writing Guidelines

Project report will be written under the specified guidelines.

# Annexure A – Curriculum Vitae

|  |  |
| --- | --- |
| Please provide relevant information and also attach CVs of Project Guide and team lead. | |
| 1. **Professional Information** | |
| 1. Name : |  |
| 1. Title or Position Held : |  |
| 1. Experience : (yrs) |  |
| 1. Email Address : |  |
|  |  |
| 1. **Research Papers in Relevant Area** | |
| <type here> | |
| 1. **Modules Taught in Relevant Area** | |
| <type here> | |
| 1. **Thesis / Projects Supervised in Relevant Area** | |
| <type here> | |
| 1. **Grants Received in Relevant Area** | |
| <type here> | |
| 1. **Industrial Work Done in Relevant Area** | |
| <type here> | |
|  | |

|  |  |
| --- | --- |
| Please provide relevant information and also attach CVs of Project advisors and team lead. | |
| 1. **Professional Information** | |
| 1. Name : |  |
| 1. Title or Position Held : |  |
| 1. Experience : (yrs) |  |
| 1. Email Address : |  |
|  |  |
| 1. **Research Papers in Relevant Area** | |
| <type here> | |
| 1. **Modules Taught in Relevant Area** | |
| <type here> | |
| 1. **Thesis / Projects Supervised in Relevant Area** | |
| <type here> | |
| 1. **Grants Received in Relevant Area** | |
| <type here> | |
| 1. **Industrial Work Done in Relevant Area** | |
| <type here> | |
|  | |

# Bibliography

<type here>