II **Project Information**	
Project Title (in English) Virtual Classroom and On-Demand Learning System	Project Title (in Chinese) 虛擬課室及隨選學習系統

A.   **Project Summary**

(please provide an executive summary of the project proposal in no more than 500 words).

Academic institutions have started recognizing the need for technology that supports a wide range of learning approaches to meet the needs of teaching and learning, which are ranging from active, blended, hands-on, to self-paced and collaborative. All of such approaches are striving towards the same goal – to help optimize the learning experience and result in better learning outcomes. In addition, today's technology-savvy generation of learners are no longer satisfied with the traditional classroom, they would want leading-edge technology to support their learning experience.

Our proposed project, Virtual Classroom (VClass) and On-Demand Learning System (ODL), aims to provide a blended environment that is able to engage the instructors and students on and off campus. In simple terms, it allows instructors to conduct online class sessions anytime and anywhere by bringing the engaging level of a face-to-face learning experience to the Internet. It also provides a self-paced learning option for students to study on their own interest, progress, pace and time schedule. The students will have a rich, interactive learning experience similar to a physical classroom environment, which includes the following live features:

1. Interactive whiteboards and slide viewer;
2. Multimedia content sharing;
3. Class notes distribution;
4. Online chat (both private ad multi-way chat);
5. Multi-point video conferencing;
6. Online surveys and evaluations;
7. Attendance sheet;
8. On-demand video;
9. Self-paced e-learning courses.

In addition to the physical classroom-alike features, our proposed solution will move one step further. All the configurations and content used in the class are automatically saved for the next session, and thus reduces the course preparation time for recurring events. Besides, the students can access and watch the recorded class sessions via Internet in case of absence or for revision purpose.

We also understand the importance of a unified platform and leveraging of existing developed systems and resources. For this reason, we also plan to integrate the Virtual Classroom and On-Demand Learning system into our existing e-learning platforms, namely the School Portal and the Learning Management System (LMS). After the integration, both the instructors and students will enjoy an one-stop e-learning infrastructure at SCS and only need to login once to the School Portal and be able to access our LMS, where all the Virtual Classroom features and On-Demand resources will be in place that they can make use of easily.

The implementation of the project will be conducted by two phases: Phase I will set up the required platform, systems, tools and facilities; Phase II will integrate the new components with existing components to form a Unified E-Learning Platform and conduct a series of training and promotion activities to encourage the adoption of e-learning delivery.

B.	**Project Objectives**

(please identify the needs of the target recipients and explain how the project aims to address the needs).

The prime objective of this project is to deliver a Virtual Classroom Platform and an On-Demand Learning System for promoting teaching effectiveness of the School and improving learning experience of all sub-degree students. With full-integration with existing e-learning resources, the ultimate goal is to offer a unified e-learning environment to support the teaching and learning needs and activities of the School. Supplement to the traditional learning, e-learning elements provide a self-placed learning option for students who prefer to learn on their own interest, progress and pace. Students can complete the learning at time convenient to individual schedule regardless of geographical and time constraints.

In further elaboration, this project is able to address the needs of our students and instructors as set out below:

Identified Needs	How the Project Addresses the Needs
The need to conduct course / seminar / tutorial / workshop / personal consultancy to students regardless of geographical and time constraints	The solution provides a user-friendly Virtual Classroom Platform with rich classroom management features to get the instructors and students together at anytime and from anywhere of the world.
The need to conduct course / seminar / tutorial workshop in special occasions, e.g. SARS outbreak, to students so that they can keep track of the progress	With the Virtual Classroom Platform, class sessions can be conducted over the Internet and the students need not to be physical present, thus eliminate the risk of being infected. The On-Demand Learning System can provide self-paced courses for meeting the individual study need and schedule.
The need to conduct cross-center course / seminar / workshop / event between our learning centers at different locations	At least one classroom at each center will be equipped with a Virtual Classroom studio so that it is capable to produce online course / seminar / workshop / event between different centers without the need for students to travel around the centers.
The need to provide on-line classroom supplement to traditional classroom sessions	With the Virtual Classroom Platform, some of the class sessions (e.g. small group tutorials) can be conducted online to alleviate the pressure of limited available classrooms.
The need of a cutting edge learning platform of the technology-savvy generation students	The ultimate unified e-learning infrastructure provides user-friendly and rich multi-media features that can satisfy the needs of every technology-savvy student.
The need of an easy accessible resource library (video classes) for absentees as well as for revision purposes. The need of self-paced learning for individual student.	The On-Demand Learning System is able to provide 24x7 access to an online video library for students who missed class or for revision purpose. It also provides a self-paced learning for individual student who prefer to learn on their own interest, progress, time and pace.

B.	Project Objectives

Identified Needs	How the Project Addresses the Needs
The need to produce high-quality e-learning courses and contents rapidly and easily that can be replayed on demand.	Content authoring tools and facilities will be included to produce high-quality e-Contents by reusing existing training contents rapidly and easily which will be stored in the On-Demand Learning System for the access by SCS students.
The need to train up the SCS instructors and administrators for producing the multimedia e-contents for promoting e-learning and self-paced study.	Professional training on courseware production will be budgeted for the SCS instructors and course coordinators for helping them to development e-learning contents. Some existing course contents will be selected to deploy into e-learning courses.

C.	Outcomes and Deliverables of Project

(please include the expected number of target beneficiaries and explain how they will benefit from the project).

Upon completion of the project, the following outcomes and deliverables are expected:

1. A Virtual Classroom Platform (VClass Platform);
2. An On-Demand Learning System (ODL System);
3. Integration with existing resources to form a Unified e-Learning System;
4. Tools and Facilities for conducting Virtual Classes, authoring new e-learning courses and converting existing materials into e-contents;
5. Training and promotion activities to encourage the adoption of e-learning delivery.

For full details of functions and services provided by this project, conceptual and equipment diagrams of the proposed system, please refer to **Appendix I, II and III.**

The following table explains how the target beneficiaries will be benefited from the project:

Outcomes /Deliverables	How Beneficiaries Can Be Benefited	Target Beneficiaries
Virtual Classroom Platform	• The instructors and course coordinators are able to design and schedule their classes in a more flexible manner because the Virtual Classroom solution can overcome the geographical and time constraints. • The students will be able to learn more from the classes in a more interesting manner as the Virtual Classroom can deliver the course content in multi-media format with ease. The classes can be recorded for revision purposes. • The school will further improve its teaching quality with the availability of this edge-cutting and user-friendly platform. • The course coordinators can be able to design and develop high quality e-learning materials for students as supplement to traditional learning resources.	All School members – Students – Course Coordinators – Instructors ,

Outcomes /Deliverables	How Beneficiaries Can Be Benefited	Target Beneficiaries
On-Demand Learning System	• The virtual classes can be recorded automatically and published to the e-Learning platform which can be accessed conveniently by the SCS users. • This learning resource library will cater different student needs such as make-up lesson due to absence or revision purpose. • Students can arrange the learning on their own interest, progress, pace and time schedule. • The school resources (such as instructor time, classroom) can be better utilized, e.g. make-up classes will not be required as the students can access the recorded class they missed. • With the content authoring tools, the existing the learning contents can be converted into this On-Demand Learning System easily and rapidly that create a huge and useful learning resources for enhancing the teaching effectiveness of the School and the learning effectiveness of the students.	All School members
Unified e-learning Platform (Integration with existing resources)	• As the proposed solution will be integrated to our existing resources, such as the Learning Management System (LMS) and the School Portal, it will reduce the uncertainty of where to get the appropriate information and minimize the possibility of missing out important information or notification published from other existing platforms/systems. • The solution will enhance the e-learning features by leveraging the existing resources, e.g. users can use the features of the virtual classroom platform and the on demand learning system by accessing the LMS conveniently.	All School members
Tools and Facilities for Virtual Classroom Usage and Courseware Creation	• LCD tablets and video splitters will improve the efficiency and effectiveness of delivering a virtual classroom session. • Digital video equipment will be used to produce courses in digital video format, which will be stored in the On Demand Learning Resources Library. • Multi-media authoring & editing tools will be used for the creation of e-contents and e-learning courses.	All School members
Training and Promotion to Encourage Utilization	• Professional training will be offered to the instructors on how to run a virtual classroom successfully with the built-in features. • Professional training will be offered to the instructors on how to create attractive multimedia courseware and videos to enhance the teaching and learning. • We will work with different divisions to nominate instructors to produce the multimedia courseware as a pilot implementation.	All School members

D.   Implementation Details

The project will be implemented in five key stages, namely the Define stage, the Secure stage, the Design stage, the Deploy stage, and the Operate stage.

In the Define stage and Secure stage, upon kick-off of this project, a Project Steering Committee and a Project Team will be formed to oversee the implementation of this project. The Committee will comprise of the senior management and user representatives of the School to get the management support and users' feedback throughout the whole implementation cycle. During these stages, the technical requirements, business needs, and the system adaptability would be analyzed. After these requirements and specifications are developed by the Project Team and endorsed by the senior management, the users will be informed in advance about the benefits and potential impacts to their daily operations.

Based on defined project requirements and specification, SCS will engage a Contractor to supply and set up the equipments and other related services of the proposed project. In accordance with CUHK's procurement guidelines, SCS will conduct tendering to select the most suitable Contractor for implementation of this project.

In the Design stage, a holistic governance model will be developed with the Contractor that would cover the following:

1.   Sets the best practices, processes and rules for each user category, e.g. students, instructors and administrators.
2.   Defines the process rules for how and why groups and user roles are created and modified.
3.   Defines the technical standards for the implementation of the unified online learning platform.
4.   Ensures that the unified online learning platform is configured to provide user segmentation to eliminate/minimize content distribution bottlenecks.
5.   Ensures the infrastructure is able to deliver quickly, scale easily, and provide long-term flexibility.

In the Deploy stage, the implementation will be conducted by two Phases: Phase I will set up the required platform, systems, tools and facilities; Phase II will conduct a series of training and promotion activities to encourage the adoption of e-learning delivery.

Lastly, in the Operate stage, SCS will maintain on-going operation of the system while exploring the enhancement possibilities that can create new solutions and extending the platform's functionality.

E.	**Implementation Schedule** *(Please extend this table if necessary.)*

Estimated start date of project: _____1 December 2010_____

Action *(please indicate key milestones)*	**Timeframe**	**Cashflow Requirement**
● Project Organization and Planning ■ Formation of the Project Team ■ Determination of initial development requirements, including e-systems prioritization, formation of a project team and selection of team members. ■ Further research, discussion, and formulation of design recommendations. ■ Further software, hardware, and service research and recommendations Milestone: 1. Formation of project team 2. Tendering specification, technical specification and tendering procedure and timeframe	Dec 2010 – Jan 2011	60% of funding $1,039,800
● Tendering and Procurement of Equipment ■ Invite bids from qualified tenders ■ Evaluate the bids based on the predefined evaluation criteria ■ Award Contractor for this project Milestone 1. Submitted Tender Proposals from tenderers 2. Tender Evaluation and results 3. Awarded Contractor upon completion of tendering	Feb – Mar 2011	Nil
Pre-implementation Preparation ■ Order and deliver of equipment and facilities ■ Construction of prototype.	Apr – May 2011	Nil

Implementation	Jun – Nov 2011	40%
■ Construction of the unified online learning platform.		$693,200
■ Pilot implementation in testing environment.		
■ Knowledge transfer training for SCS ITS division.		
■ User Acceptance testing.		
■ Promotion of the new platform to ALL students and instructors		
■ Provision of intensive user training sessions to ensure the users will be familiar with the new platform.		
■ Final delivery of the Unified Online Learning Platform.		
 Phase I (Jun – Aug 2011) **Milestones:** 1. Virtual Classroom Platform 2. On-Demand Learning System 3. Tools and facilities for conducting virtual classes and authoring e-contents **Phase II (Sep – Nov 2011)** **Milestones:** 1. Unified E-learning Platform (integration with existing e-learning resources) 2. Training and promoting activities to create e-learning courses and contents		

Estimated completion date of project: 30 November 2011

F.	Project Budget

Projected Expenditure *(Please provide detailed breakdown under each item)*	Amount in HK$					
	Year 1	Year 2	Year 3	Year 4	Year 5	Total
a. Manpower						
b. Equipment / Facilities	$762,400					$762,400
c. Services	$950,600					$950,600
d. General Expenses						
e. Others (e.g. auditor's fee)	$20,000					$20,000
Total Expenditure :	**$1,733,000**					**$1,733,000**

Projected Income	Amount in HK$					
	Year 1	Year 2	Year 3	Year 4	Year 5	Total
a. (e.g. fees received)						
Total Income :						$0

For detailed cost breakdown, please refer to **<u>Appendix IV.</u>**

Sources of Funding

a.   Amount of grant sought under this application: _____HK$1,733,000_____

b.   Other sources of funding *(this may include donations, contributions from the applicant/its parent organization, etc.   Please give the name(s) of the sponsor(s), the amount of funding, and indicate whether the funding has been secured.)*:

(i)   NIL _____

(ii) _____

(iii) _____

… _____

G. Monitoring and Self-evaluation Mechanism

Monitoring will be supported by our implementation framework as outlined in implementation plan, funding strategies, work plans, progress reports and any other tools which may be developed during the project implementation.

Self-evaluation will be reviewing in a systematic and regular manner progress in alignment with the objectives of the project. It will be a process of continuous improvement and will take place during the implementation as well as completion. Mid-term evaluation will focus on possible modifications to the project implementation (quantitative) while terminal evaluation will focus on the desirability and feasibility of future activities (qualitative).

H.	Management Support and Key Personnel Involved

A Project Steering Committee on implementation of this project will be formed to monitor and ensure that all milestones and deliverables are completed and delivered satisfactorily. The Committee will be composed of the senior management and representatives from all end-users. The roles and responsibilities of this Committee include:

- to authorize commitment of project resources;

- to provide overall guidance and direction to the project;

- to review and approve resource plans of individual project stages;

- to authorize the start of the next stage; and to endorse each completed stage;

- to ensure that all products are completed and delivered satisfactorily;

- to ensure that all acceptance criteria have been met or otherwise agreed upon;

- to decide on the recommendation for follow-up actions and the passage of them to the appropriate authority; and

- to authorize project closure.

In addition, a Project Manager will lead a Project Team to implement the project. The roles and responsibilities of PM and his team include:

- formulate project plan and monitor progress;

- manage the delivery, installation, integration, testing and training of the products;

- ensure that risks are being tracked and mitigated;

- ensure that any outstanding issues are documented and passed on to the appropriate body;

- manage the project team, and monitoring project finance and payments;

- implement change control and any required Configuration Management procedures;

- resolve crisis and conflicts during the entire project life cycle;

- ensure that all deliverables are produced to the required level of quality and are delivered on time and within budget;

- conduct post-implementation review after system production;

- prepare recommendation for follow-up actions; and

- any other activities which are necessary for satisfactory completion of the project.

For detailed technical, management capacity and experience of the Project Team, please refer to **Appendix V**.

I.	Special Justifications if the Grant Sought Exceeds $2 million

N.A.

III Other information

1   Project Sustainability *(If applicable, please describe how the recurrent expenditure involved will be met after completion of the proposed project)*

The project has to be sustainable with the human and financial resources available. Criteria for success are not only linked to institutional resources but also the availability of expert know-how and the skills to motivate key participants in the project.

SCS would strive to ensure the project sustainability in the human and technological aspects. Upon completion and delivery of the project, SCS would ensure the Unified Online Learning Platform can be supported and maintained efficiently and effectively internally by the IT Services Team. With strong commitment to sustaining the Virtual Classroom Platform and On-Demand Learning System in the long run, SCS would also absorb the recurrent expenditures in operation the systems after completion and delivery of the project.

2   Preparatory work done *(If any)*

3   Past experience in organizing projects of similar or relevant nature and achievements *(If any)*

With the funding support of EDB through QEGS, the SCS Project Team has successfully launched the School Portal System for delivering on-line school information and services to all sub-degree students in September 2009.   For the past experience of the Project Team, please refer to **Appendix V**.