



CAGAYAN STATE UNIVERSITY

# LEARNING ENVIRONMENT NETWORK SYSTEM (LENS) MANUAL



# LEARNING ENVIRONMENT NETWORK SYSTEM MANUAL



## Overview

The COVID 19 Pandemic has challenged the educational institutions in the Philippines to adapt to flexible learning. The transformation to virtual learning environment required paradigm shift not only in terms of utilizing internet technology and digitization of lessons but innovation in pedagogies and strategies. The abilities of the teachers to engage the students into the lessons without the usual face to face interactions and on how outcome-based learning could still be achieved in online learning paused a huge challenged to educators and administrators.

Cagayan State University (CSU) envisions to achieve global stature in instruction, research, extension, and production to produce globally competent graduates. It must adopt innovative processes to improve efficiency and cost-effectiveness in the entire value chain of its operation. Learning Management System is an enabler of quality education and excellent delivery of services to the learners. Digital transformation must have a well-thought framework that can create a leap of value for the organization through digitizing the entire value chain, which can result in the interconnection of administration, educator, students and the system through data interchange.

Cagayan State University(CSU) was one of the universities that needed to rapidly capacitate itself in terms of infrastructure and human resource to cope with the demand to shift to online learning. CSU is the biggest University in Region 2 with 8 campuses spread all over the province of Cagayan at an average of 26,000 students and 700 full-time faculty members. Transforming the more than 4,000 classes to online learning environment all at the same time in just less than 3 months caused intense twists and turns for the academic community. The University considered in the choice of pedagogy and learning management system the predicament of the students, their limited resources, and home environment so school administrators and teachers can be more student- centered and responsive to their needs.

Cagayan State University adopted digital transformation not only to respond to the educational needs of the Pandemic but at the same time use this opportunity to respond to the demands for globalization, internationalization, and the information technology revolution. Digitization of processes, using the internet and adopting computers do not result automatically to digital transformation. Digital transformation must have a well-thought framework that can create a leap of value to the organization through digitizing the entire value chain that can result to the interconnection of administration, stakeholders, objects, the system through data interchange.



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## Definition of Terms

**Administrator** is responsible for running the LENS. He is in-charge of creating the accounts of the students.

**Course** is the subject you are enrolled in the program.

**Editing Teacher** is a teacher who can edit or revise the eModule.

**Enrollment Key** is the code given to a student to access the course in the LENS. This key is no longer needed if the professor has manually enrolled the student.

**eModule** is the electronic module in every course.

**Learning Environment Network System** is the Learning Management System of Cagayan State University where lessons and learning activities of the course are delivered online. It has tools such as chat, forum, wiki, quiz, workshop and the like which can be utilized by the professor to develop from the students the required competencies of the course.

**CAGAYAN STATE UNIVERSITY Campus Coordinator** is the IT support personnel who provides technical support to faculty and students on CAGAYAN STATE UNIVERSITY concerns.

**Learning Management System (LMS)** is a software application for the administration, documentation, tracking, reporting and delivery of electronic educational technology (also called e-**learning**) education courses or training programs.

**Module Writer** designs and develops creatively the eModule to meet the required competencies of the course.

**Non-Editing Teacher** is a teacher or facilitator who can deliver the course but cannot edit the eModule.

**Officially Enrolled** refers to the status of the students after he/she has completed all the enrollment processes such as filling up of the required forms, payment of required fees and registration in the Registrar's Office.

**Password** is the user access code which consists of at least 8 letters and 3 of which must be in numerical form.

**Professor / Facilitator** is the teacher of the course. He/she is in-charge of delivery of the course and monitors the students participation and performance.

**Program** refers to the master program or doctoral program where you are enrolled in.

**Username** refers to the student number assigned by CSU to the student.

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## The Road to LENS

The Covid-19 Pandemic has transformed Cagayan State University into digitizing its learning environment. CSU Learning Environment Network System (LENS) is the Moodle platform of Cagayan State University. The Cagayan State University in ordinary term is an optical device in changing the convergence of light rays, as for magnification, or in correcting the defects of vision. At CSU, LENS provides a virtual learning space for learners, teachers, and experts to converge in empowering students to attain the vision-mission of CSU. The Cagayan State University is focused more on the asynchronous types of learning activities to respond to the low internet connectivity of the students. For the past two semesters, a series of training and workshops were conducted to capacitate the faculty members and cope with the learning demands and changes in instructional delivery.

Cagayan State University has an existing Learning Management System called Learning Environment Network System powered by Moodle. Cagayan State University housed all programs' learning modules for continuity of instruction during the Pandemic. The LMS is accessible 24/7 and can be utilized without an internet connection. The students learned their lessons and developed their learning competencies through the activities uploaded to the Cagayan State University. Synchronous activities are provided, including assessment of learning and collaboration among learners, are done creatively using the platform.

This Learning Environment Network System (LENS) Manual covers the design, framework, processes and procedures in using LENS at Cagayan State University.

### Enablers of LENS

The implementation of LENS was undertaken and made possible through the presence of the following

#### I. Administration's Leadership and Innovation

Leadership plays a key role in the digital transformation of the organization. CSU's administration is committed to adopt innovation initiatives to make the transition happened in the 9 campuses of University. It has developed an instructional design that is student-centered and Information Technology (IT)- based in its instructional delivery to produce globally competent graduates. It explores various teaching methodologies to develop best practices for sustainable competitive advantage.

#### II. Opportunities to expand to international market

Internet technology has allowed schools to reach to greater market to make it possible to provide education for all (EFA) in response to the Sustainable Development Goals (SDG). CSU Online learning is a 24/7 borderless education allowing the mission of to reach the farthest place of Cagayan Province.



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## III. Student Focus

The LENS allows the University to focus on the nature and needs of the students and customize learning to offer flexibility and convenience. The 24/7 accessibility of the activities and resource materials on line allow the students to do the school activities at their own pace. The students undergo survey of needs and resources. The results are utilized in the development of activities in the module development to suit the students.

## IV. Knowledge Management

The output of the students are documented in the LENS from first year to fourth year to assess how they have progressed in their competencies. The output such as essays, research, short film, and the like are kept in the database for analysis. There are opportunities for collaborative work and exchange of ideas to develop new knowledge in the Wiki, Forum and Chat. The LENS Forum is utilized to form communities or practice for sharing of best practices.

## V. Availability of Open Source LMS (Moodle)

The LENS is developed using Moodle which is an open-source Learning Management System. The available tools are utilized creatively to optimize their functionality.

## VI. eLearning Strategic Direction

CSU's LENS focuses primarily on pursuing online and blended delivery of the graduate and undergraduate programs of the University. This is initially conceptualized to bridge the needs of flexible learning during the pandemic but it has level up to be integrated in the regular academic activities of the University. There is a potential for exploring distance learning delivery through online learning. The identified captive market consists of alumni of CSU who are working in various places in and out of the country who wish to pursue a graduate school degree but cannot come back to CSU because of nature of their work. It is also targeting other professionals who like pursue Graduate School course at CSU.

As CSU is transforming into Smart Campus, LENS serves as a tool to support the a more integrative learning environment.

## VII. Quality Assurance

Cagayan State University has been certified ISO 9001:2015. The University is committed to its quality management system of providing quality education at its best. It adopts quality procedures and processes to ensure quality assurance. It adopts the Total Quality Management(TQM) model of Plan, Do, Check and Act(PDCA). The design process of periodic assessment, benchmarking, curriculum verification and validation is in place to ensure continuous improvement.



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CSU is also a 3-star AUN University. Its programs both in the graduate school and in the undergraduate programs have also undergone accreditation from the AACUP. LENS has become instrument to add value to the educational delivery of the University to achieve global standards.

## Learning Environment Network System (LENS) Delivery Modes

The CSU eLearning Program aims to provide e-learning experience to all students. LENS is delivered in asynchronous mode of learning. This is the mode of e-learning addresses the limited internet resources of the students. A survey conducted on the CSU students revealed that 95 percent of the students are using mobile phone as their gadget for online learning and 88% are using mobile load for internet connection. Asynchronous mode allows the students to perform the learning activities via LENS even with no internet connection. It enables the students to access the resource materials and activities at their own pace. Videos and reading materials can be downloaded when students have internet connection and they can work on their assignments and activities even if they are off line.

### Key Roles & Responsibilities

The following are key positions, roles, and responsibilities in the Learning Environment Network System(LENS).

#### **Designation: Director for eLearning**

- Champions the use of LENS in the University
- Leads in the training of the module writers
- Leads in the development of e-learning program of the university
- Coordinates with the VP for Academics and Director of Instruction and other concerned staff on the implementation of eLearning
- Ensures development of policies and procedures for e-Learning, course design and development.

#### **Designation: LENS Coordinators**

- Oversees the elearning activities of the campus
- Provides support to faculty and students in the utilization of LENS
- Enrolls faculty and students in the LENS
- Maintains the LENS servers of the campus
- Works collaboratively with the MIS Teams on LENS

#### **Designation: MIS Director/IT Focal Person**

- Makes sure that the IT and Network Infrastructure and resource are deployed.



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- Manages the development of Policies and Procedure (P&P) for specific e-Learning Helpdesk-related. The policies will cover PC compliant configuration, bandwidth requirement and other technical specifications that will be required to set up the backend and the client side workstations.
- Develops backup and disaster recovery procedures.
- Develops policies and procedure for the activation of Help Desk during operational phase.

### **Designation:** Technical Support Staff/MIS Coordinator

- Provides technical expertise to the Project.
- Implements backup and disaster recovery procedures.
- Provides assistance to the Project in terms of Client End-based Software or productivity tools.

### **Designation:** Content Expert/Evaluators

- Manages the development of content (foundation) and delivery process for Classroom course integration and on-line Courses. The classroom course integration covers the implementation of an e-learning tool in a course or subject with classroom lectures. The On-line Courses are those courses that are purely taken on-line.
- Develops or enhances lesson plans that will integrate e-Learning features and delivery approach.  
Ensures that the content and discussion adhere to the core principles and policies of the university

### **Designation:** Core Team Members

- Advocate the development of e-Learning and are the champions of elearning in their respective departments.
- Act as trainers in eLearning Seminar and Training
- Act as consultants and mentors of emodule writers (beginners)

### **Designation:** Module Writer

- Undergoes training in eModule writing
  - Develops quality module for the university
- Presents the emodule developed to panel of experts

### **Designation:** Module Facilitator

- Facilitates the implementation of LENS classes
- Checks the activities and outputs of the students
- In the absence of module facilitator, faculty teaching the course serves as module facilitator.



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## Procedures in Developing e-Module:

In developing e-modules, the following are the procedures to be undertaken:

1. The module writer needs to undergo intensive training in LENS.
2. During the training, the module writer identifies which module he/she can prepare with the approval of the Dean, Director for Instruction, and VP for Academics.
3. The Academic Dean may also assign the course for module development to the module writer;
4. The completed eModule is presented to panel of experts for comments and suggestions;
5. The module must follow the Design Process in its development and policies in instructional material development.

## The Features of the LENS

LENS has become very important tool for flexible learning program and integrative learning to become more effective. It has brought the learner and the teacher to meet in a virtual classroom and make learning environment more interactive. LENS has practically eliminated the common problems of distance learning and integrative learning caused by physical distance such as the delayed in the delivery of modules and very little interactions between teacher and student and among students themselves. LENS provides an interface to make asynchronous interaction between the teacher and students and among the students themselves possible despite the differences in the location and time zone.

LENS provides various tools such as forum, chat, wiki and workshop for students to be able to have interactions with their classmates from different parts of the world and make it possible for them to work together on collaborative projects. Through LENS, the students can perform case study, group debate, and simulated activities as it has interfaces to make these learning experiences possible. Multimedia facilities such as videos are utilized to make the virtual learning space more meaningful and concrete. Relevant links to other sites are made available to the students as references and resource materials. Online quizzes are made available to assess the extent of learning of the students and determine whether competency requirements are met.

The Distance Learning Program(DLP) has become an instrument in making quality learning despite social distancing and absence of face-to-face classes. The activities in the LENS are designed for the learners to reflect on moral, ethical and social justice issues. Forum, chat and wiki are utilized for students to discuss these social issues that are relevant in their fields of specialization with the objective of awakening in them in their mission to make the bit of the world where they are living in become a better place to live in and instilling in them the passion for seeking the truth and what is just.



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In the light of modern times, the LENS through LMS has become a very effective medium for innovative pedagogies such as differentiated learning and multiple intelligences strategies that can address the learners from diverse culture. When enrolling into the program, the students are conditioned to have an open mind to learn and respect one another's diversity. The sharing of experiences on social justice issues among the learners in the electronic forum allows them to be aware and conscious of the plights of other people and becoming more active in instituting change and development in their respective work places.

### LENS Framework

CSU is committed to produce an integrated professionals and globally competent who can be successful and productive in the 21<sup>st</sup> Century Workplace. The virtual environment at CSU includes the following key areas:

- CSU's Core Competencies. The primary key areas for integrated learning environment are the competency requirements of the Programs and the core competencies of competence, social responsibility, and unifying presence.
- Corporate Governance. It is very significant for top management to institute policies, measures and support mechanism to make the integration process possible. Strategic and operational plans are developed and implemented to align with the strategic direction of the University as state university.
- Training. The faculty must undertake training on how to facilitate and handle students from various disciplines for integration. Online Training Modules are provided to support the learning needs of the faculty members. He/She must also attend training-workshop on utilizing LENS as a tool for e-Learning.
- Design( Curriculum). The online module considers the environment and resources of the students. As most of the students are using only mobile phone and mobile load to connect to internet facility, there is a need to adopt lean strategies in instructional development
- Syllabus. The syllabus becomes the teaching guide for the facilitators and students. It is designed and implemented to support the learning process. Innovative strategies are emphasized and rubrics must be developed to support the activities in the LENS.
- eLearning Space. Since virtual learning environment is adapted in LENS, it is pervasive that there must be a virtual space where students and teachers can work anytime when they are available. Forum serves as effective tools for posting of ideas, insights and information which can be accessible 24/7. WIKI serves as a common notepad for the team where each member can contribute to the team's output. The member of the team can also edit one another's work while the teacher can monitor anytime the output of the team . The teacher can also give timely comments and corrections in the Wiki.



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- Performance Measurement System. The extent of the utilization of the elearning space can be tracked easily since the Moodle has electronic log of the user's activities. There must be student-centered assessment with rubrics that must be developed with the e-learning modules.
- Supporting Mechanism. This includes schedules, incentives, organizational structure and facilities that are set up to promote and support the integrative eLearning environment. These constitute the management leadership and responsibilities to provide enabling environment to ensure that the e-learning activities are carried out in the University.
- Solid Technology Infrastructure. This refers to the quality system of ICT support which must be customer focused. Measures must be adopted to ensure that the system is user friendly and supportive of the elearning environment.

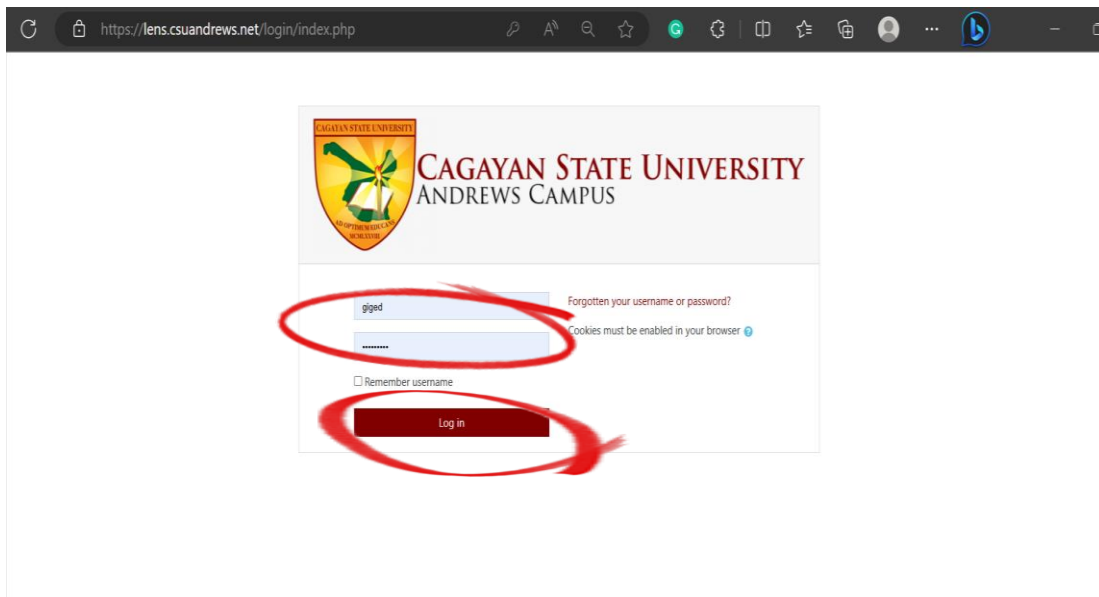


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## Getting Started with LENS

Learning Environment Network System(LENS) is the Learning Management System(LMS) of Cagayan State University where lessons, activities and requirements in your course can be performed and completed online. You need to be **officially enrolled** first at Cagayan State University to get an account.

To proceed to the LENS site, please click on of these sites where you are enrolled or teaching: <http://Cagayan State Universityandrews.net> for Andrews Campus, <http://Cagayan State Universityaparri.net> for Aparri Campus, <http://Cagayan State Universitygonzaga.net> for Gonzaga Campus, <http://Cagayan State Universitysm.net> for Sanchez Mira Campus, <http://Cagayan State Universitypiat.net> for Piat Campus, and Lallo Campus at <http://Cagayan State Universitylallo.net> You will be directed to the site below where you are asked to enter your username and password. Please type your **student number** for your **Username** and the **password assigned to you by the your CAGAYAN STATE UNIVERSITY Campus Coordinator**. Do not forget to read the CSU Moodle Acceptable Use Policy and click the box after you have read it.





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## LENS as a Tool in Flexible Learning

Through CAGAYAN STATE UNIVERSITY, flexible learning complements outcomes-based education approach which allows flexibility for the academic programs to employ various means of delivery and assessment for each course or subject for the program. In terms of Learning Content, the program dean and department chair shall review all their curricular offerings and make the necessary adjustments or modifications in the curricular structures or program of study considering the prerequisites and co-requisites, determine alternative options in the design, delivery, pedagogy, and assessment mechanisms that can be delivered to the students through various modalities in CAGAYAN STATE UNIVERSITY. The faculty members implementation of its flexible learning strategy must be anchored with the University's institutional objectives which is to produce graduates who are globally competitive, locally responsive, innovative, and technologically driven. The use of CAGAYAN STATE UNIVERSITY should provide a virtual learning platform for 21<sup>st</sup> century skills to be developed.

## LENS Student's Registration

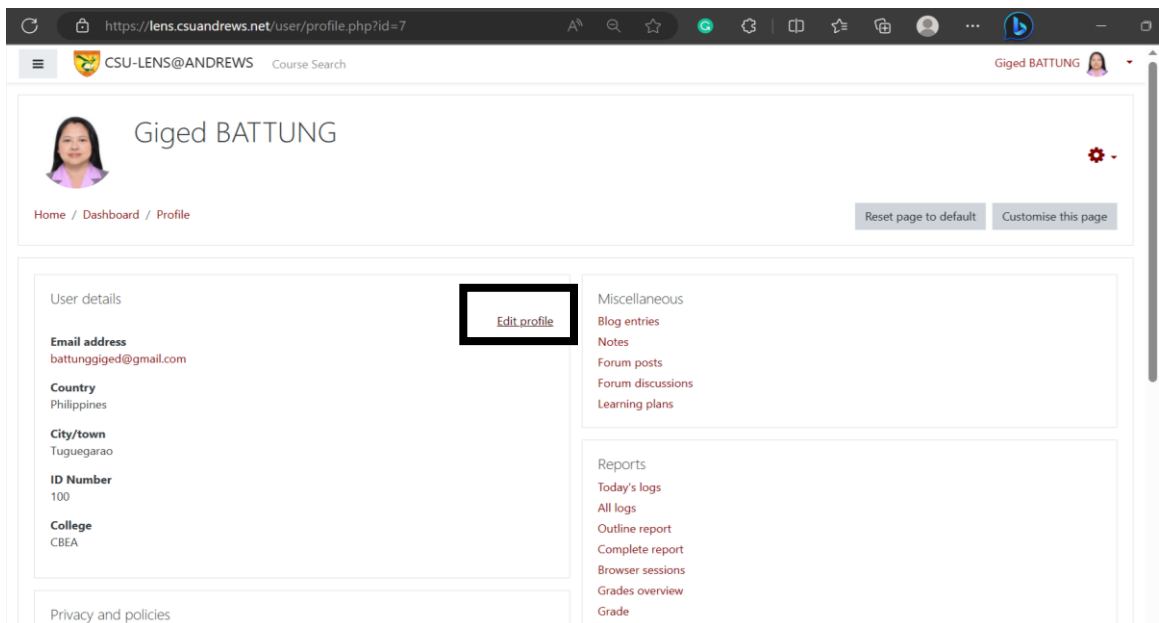
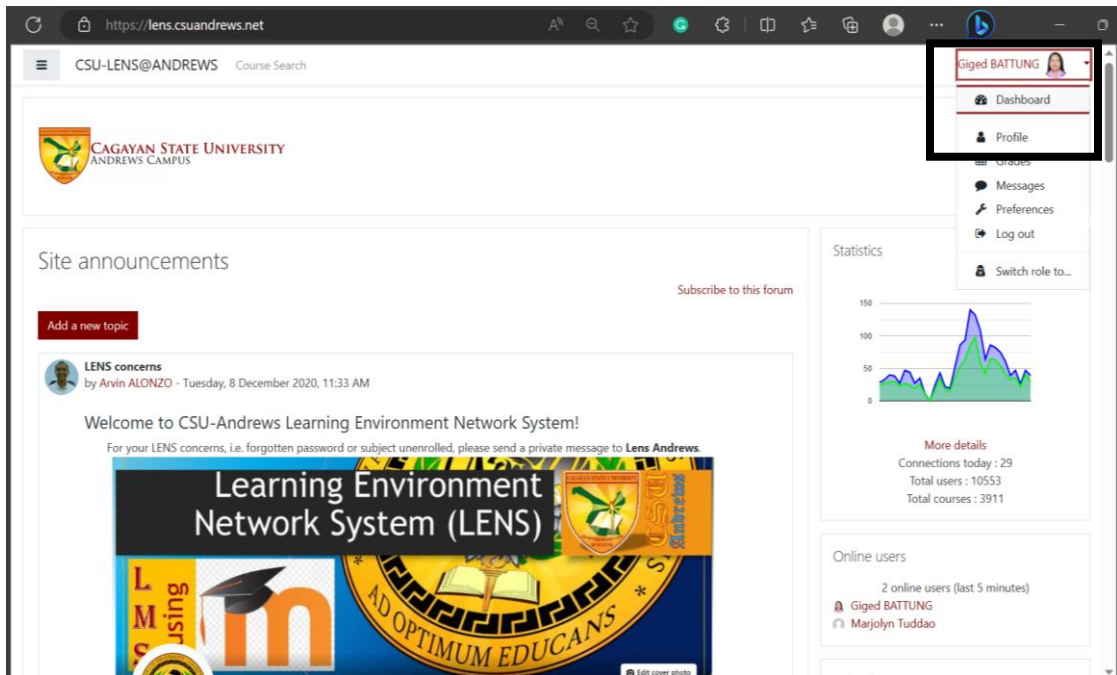
The student upon enrolment is provided an account in the LENS. The ICT department creates an account upon the release of the enrolment list from the Registrar's Office. The LENS can be accessed through the <https://lensandrews.net>. Each student uses his student number as username and is given a generic password. The password must be changed upon the first access of the student. There are two ways how the student can be enrolled in the course. He can be given an enrolment key by his professor through email or he can be manually enrolled by his professor in the course. When the professor manually enrolls the student, the student can automatically open the eModule without the enrolment key. All courses in which the student is enrolled can be viewed when he clicks "My Courses" menu.

## Editing the Profile

If it is your first time to use CAGAYAN STATE UNIVERSITY, you need to proceed to your "My Profile Setting" to change your **password**. You need to change your password for the protection of your account. From the "My Profile Setting", you also need to edit your "Profile" and upload your **profile picture**.

After clicking "Edit Profile", you may upload your picture either by **dragging and dropping** your photo or by clicking this **button** and then choose "upload a file" then find the file where your photo is located in the directory and press enter key. Click "Update Profile" at the bottom page to save your updates

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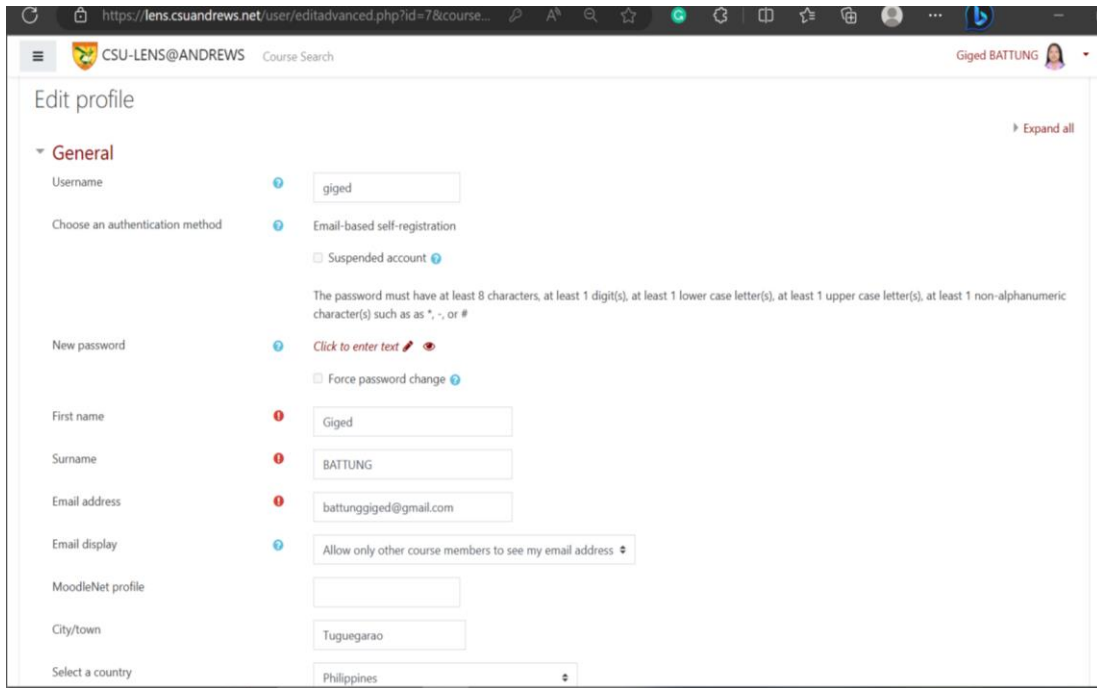


## How to Change Password?

From the “**Administration**” menu, click “**Change Password**”. Enter your current password then enter your desired new password. The password must be at least 8 characters and have at least 3 digits(number). Type again your new password. Please make sure to keep or remember your password so you can access your account on LENS.

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In case, in the future you will forget your password, you have to contact the CAGAYAN STATE UNIVERSITY **administrator** to reset your password back to the generic password.



The screenshot shows a web browser window displaying the Moodle user profile editing page for a user named 'Giged BATTUNG'. The page title is 'Edit profile' and the user's name is 'Giged BATTUNG'. The page is divided into sections: 'General', 'MoodleNet profile', and 'City/town'. The 'General' section includes fields for 'Username' (giged), 'Choose an authentication method' (Email-based self-registration), 'New password' (with a 'Click to enter text' button), 'First name' (Giged), 'Surname' (BATTUNG), 'Email address' (battunggiged@gmail.com), 'Email display' (Allow only other course members to see my email address), 'MoodleNet profile', 'City/town' (Tuguegarao), and 'Select a country' (Philippines). There are several error messages (red exclamation marks) next to the 'First name', 'Surname', and 'Email address' fields, indicating that these fields are required and currently empty or invalid. A 'Suspended account' checkbox is also present and unchecked. A password strength indicator is visible below the 'New password' field, showing a red 'X' icon.

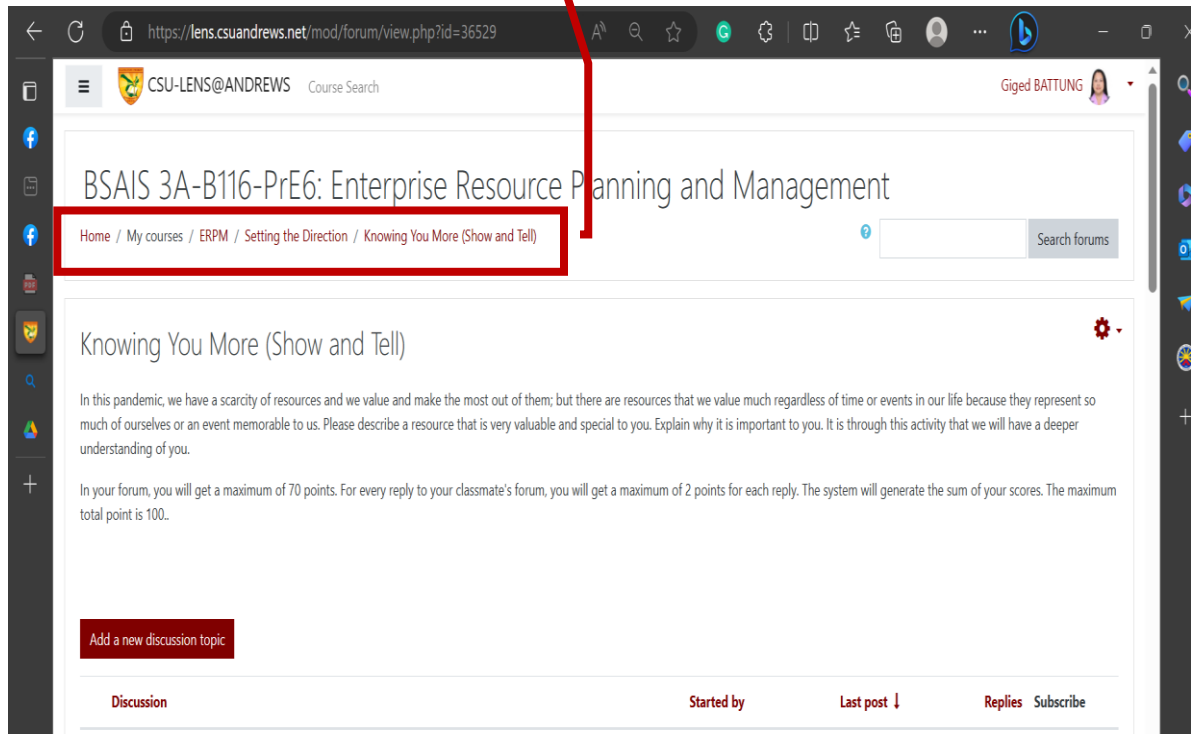
## Accessing the Course eModule

You may access your **Course eModule** in **two ways**. **First**, your professor may manually enroll you in his/her class or **second**, you may be given an **Enrollment Key** by your professor. This key is the code that you need to enter upon visiting your course for the first time. Your teacher has manually enrolled you when the course title can be found when you click “My Courses”. If you cannot find the course title on the list of “My Courses” then you need to go to and click “**All Courses**”. This is found at the bottom most part of your screen. Double click the **College or Program** folder.

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## Navigating Around the LENS Module

To navigate to and from the Course and program in the LENS, you just need to click the items on the menu bar.



After which, double click the folder of the program where you are enrolled.

From the list of course titles, choose the course you want to open. You can only open the course which you are officially enrolled.

### Sending Messages to your Teacher or Classmate

From “My Dashboard” , choose “Messages”.

Choose the course and the person you want to send the message

Type your message and click “send message”. The message will pop up on the screen of the recipient of the message when he/she will access the EDIP. You may also see the messages sent to you when you click “Messages” from the Dashboard. Click “Reply” to type your reply to the message.



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## Viewing Upcoming Event/s from the Calendar

When the professor sets an event such as Chat, Workshop or deadline of submission of requirement, these will automatically be posted on the Calendar found at the student's and teacher's Dashboard.

When the user will mouse over the cursor on the date , the user will view the description of the activity. Please check on the Student's Orientation Module for more guidance on how to use the eModule.

## Technical Requirements

LENS is utilizing the Moodle software that is housed in the local server of each campus of CSU. Each student can use any mobile phone and download the App from Google Store. The Moodle App allows the LENS to run even offline or without internet connection so the students can work on their modules and then later upload their requirements when they get internet connection.

## LENS Activities

Moodle offers wide choices of activities that the teacher can use to deliver online learning. Creativity and innovation are important in using these tools for more engaging learning experience for the students.

