### Web Development with Django (Non-credit Course)



### Organized by:

Sukuna Multiple Campus Sundarharaincha-12, Morang



**Managed By** 

BICTE program

### **Report Prepared by:**

Santosh Dahal

Focal person

BICTE program

2080

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### **Background of Training**

A training entitled "Web Development with Django" was conducted at the Sukuna Multiple Campus [See Annex I for syllabus] as **a non-credit course**. The training was conducted with the technical support from "Huncha Digital" [See Annex VII MOU with Huncha Digital]

A total of 26 participants representing from Sukuna Multiple Campus were enrolled in this training program, aimed at fostering proficiency in Django, a high-level Python web framework, among trainers. The participants were from the different semester of BICTE program. Training was done with the monitory contribution of both the student and the college. Each student contributed Rs.1500 and remaining amount was provided by Sukuna Multiple Campus [See Annex II for decision]. The program was ended by distributing the certificate.

### **Objectives of Program**

The Objectives of the training are as follows:

- > To increase the understanding of the student of modern web development.
- > To introduce students to Django and its role in web development.
- ➤ To enhance students' proficiency in Django CRUD operations.
- To enable students to work with Django templates and static files.
- To instill knowledge of Django Serializer and API development.
- To implement a basic ecommerce website.

These objectives aim to provide students with a comprehensive understanding of Django, emphasizing practical skills and best practices in web development.

### **Participant Profile**

The training participants include the student of Sukuna Multiple Campus from different BICTE programs. The course includes 26 students (21 male & 5 female) [See Annex III for list of students]. As the topic of this course is related to Information Technology the participants were all IT students.

### **Resource Person Profile**

The 10 days noncredit course was hosted and monitored by Bachelor in Information Communication and Technology (BICTE) program and was conducted with technical support from "Huncha Digital". The detail about instructor is as follows [ See Annex V for attendance].

Table 1: List of Trainers for training

Name	Rishi Kesh	Manish Regmi	Amit Karki	Sujan Chaudhary
Designation	Senior Trainer	Trainer	Trainer	Trainer
Institute	Huncha Digital	Huncha Digital	Huncha Digital	Huncha Digital

### **Program Schedule**

Table 2: Program Schedule of Web Design with Django

Starting Date	2080/11/09
Ending date	2080/11/18
No of Hours Per day	4-5 hours
Total No of Days	10
Total No of hours	48

The 48 hours training was conducted 10 days from 2080/11/09 to 2080/11/18 with 4-5 hours daily.





### **Methodology of Program**

**Lab Environment:** The training took place in laboratory setting, providing students with access to necessary resources, equipment, and instructors.

**Task Assignments:** Each day, students were given specific tasks or objectives to complete. These tasks were designed to build upon one another and gradually increase in complexity as the training progresses.

**Guidance and Support:** While students work on their projects, they received guidance and support from instructors who were available to answer questions, provide feedback, and offer assistance as needed.

**Collaboration:** Depending on the nature of the projects, students had the opportunities to collaborate with their peers, fostering teamwork and collective problem-solving skills.

**Project-Based Learning:** Rather than traditional lecture-style teaching, the training is centered around project-based learning. A single vendor ecommerce project was selected and student performed different assignment and task to accomplish it.

**Reflection and Review:** At the end of each day or periodically throughout the training program, there are opportunities for students to reflect on their progress, review what they have learned, and identify areas for improvement.

### **Achievement**

The Django training program yielded significant achievements, enhancing participants' understanding and proficiency in Django web development. Participants gained insights into Django's core concepts and its pivotal role in modern web application development. Practical exercises and interactive discussions facilitated a deepening of skills, empowering participants to build dynamic and scalable web solutions. Furthermore, the training fostered a collaborative environment, enabling peer-to-peer learning and knowledge exchange. At the end of the training student complete a basic single vendor ecommerce website. And now the student has developed the skill and now can work on real world project with more practices.





### **Conclusion**

With the completion of the Django course participants students are now equipped with a wealth of knowledge and skills essential for modern web development. Having undergone this intensive training, Sukuna Multiple campus should capitalize on the newfound expertise gained in Django development. This course has provided invaluable insights into building robust web applications, implementing Django's security features effectively, and designing scalable and high-performance systems. This type of training can increase the skill, confidence and capacity of student so, more courses are to be designed according to the interest and need of the student.

### Recommendation

After successful completion of Django training program, it is recommended that the education institute continues to prioritize skill development training in emerging technologies such as Django. These training initiatives play a pivotal role in preparing students for the rapidly evolving landscape of the tech industry. Furthermore, the institute should actively motivate students to apply their newly acquired skills by undertaking projects that demonstrate their proficiency in Django web development. Encouraging participation in software competitions focused on Django would further bolster students' confidence, foster innovation, and provide valuable networking opportunities. To ensure the continued relevance and effectiveness of the training program, it is recommended that the institute integrates industry-relevant practices and solicits feedback from students and industry experts for continuous improvement. By promoting collaboration, networking, and a culture of lifelong learning, the institute can empower students to excel in the competitive field of web development and meet the demands of the modern workforce.

### Annexes

**ANNEX I:** Syllabus

Course Title: Web Development with Django 2080

### **Course Description:**

This course is designed to equip students with fundamental skills in web development using the Django framework. Django is a high-level Python web framework that encourages rapid development and clean, pragmatic design. Throughout the course, students will delve into the essential components of web application development, gaining hands-on experience with Django's powerful features.

### **Objective of Course:**

- To introduce students to Django and its role in web development.
- ➤ To enhance students' proficiency in Django CRUD operations.
- To enable students to work with Diango templates and static files.
- ➤ To instill knowledge of Django Serializer and API development.
- To implement a basic ecommerce website.

These objectives aim to provide students with a comprehensive understanding of Django, emphasizing practical skills and best practices in web development.

### **Chapter 1: Introduction to Python (3 hours)**

Overview of Python and its features.

Installing Environment for python

Basic syntax, data types, and control structures.

Introduction to functions and modules.

# SETTO. 1802



### **Chapter 2: Virtual Environment and Pip (1 hour)**

Understanding the importance of virtual environments.

Creating and activating virtual environments.

Introduction to Pip for package management.

### Works:

Introduction to the single vendor e-commerce project and their component (user, product, cart, order)

### **Chapter 3: Introduction to Django and Project Setup (2 hours)**

### **Django Framework**

Overview of Django and its MVC architecture.

Installation of Django using Pip.

Introduction to Django projects and apps.

### **Project and Folder Structure**

Creating a new Django project.

Understanding the default project structure.

Creating a Django app within the project.

### Works:

- > Creating a project and app for ecommerce.
- Configure the project settings, including database settings and static files for ecommerce.

### Chapter 4: Django Models and ORM (4 hours)

Introduction to Django models.

Defining models, fields, and relationships.

Creating database tables using migrations.

Creating Model for ecommerce website

### Works:

- > Creating different models of product, cart, order, category, subcategory
- Demo of Using Chatgpt for creating models.

### Chapter 5: Django View, URL, Templates and static files (6 hours)

Introduction to Django Views, templates and static files.

Creating template files for rendering HTML.

Building views to handle requests and responses.

Creating templates for rendering dynamic HTML content.

Template inheritance and inclusion.





Managing static files in Django.

Configuring URL patterns for views.

Linking templates to URLs.

### Works:

- > Creating simple ecommerce home pages in a template
- Connecting views to URLs using Django's URL patterns
- Creating views for homepage, product description, cart, order and connecting with URLS

### **Chapter 6 : Implement User Authentication: (4 hours)**

Setting up the Django admin panel.

Creating a superuser for admin access.

Customizing the admin interface.

Utilize Django's built-in authentication system to manage user accounts.

Allow users to register, log in, and log out

Works: Admin and superuser setup for ecommerce

Creating register, login, Logout for ecommerce website.

### **Chapter 7: Django CRUD Operations (5 hours)**

### **CRUD Operations**

Overview of CRUD (Create, Read, Update, Delete) operations.

Creating views and templates for CRUD operations.

Implementing Create and Read functionality.

### **Implementing Update and Delete**

Adding update and delete functionality to the Django app.

Handling forms for data input and update.

Implementing delete views.

Works: Creating a category and subcategory manager page.

*Inserting a product through a form.* 





### **Chapter 8: Ecommerce functionality** (14 hours)

Creating product display page, Product description page

Product management

Cart implementation

Order management

### Chapter 9: Django Serializer and API (2 hours)

### **Serializers**

Introduction to Django serializers.

Serializing and deserializing data.

Using serializers in views.

### **Building a Simple API**

Creating API views in Django.

Configuring URLs for API endpoints.

Testing the API using tools like Postman.

### **Chapter 9: Environment Variables and Django Settings (3 hours)**

### **Environment Variables**

Understanding the importance of environment variables.

Creating an env file for configuration.

Using the python-decouple library for configuration.

### **Advanced Django Settings**

Exploring Django settings and configurations.

Customizing settings for various environments.

Handling sensitive information securely.

### **Chapter 10: Introduction to Pip and Dependency Management (2 hours)**

### **Hour 1: Introduction to Pipenv**

Overview of Pipenv for managing project dependencies.

Installing and configuring Pipenv.





Adding and removing packages.

### **Hour 2: Managing Dependencies**

Understanding the Pipfile and Pipfile.lock.

Installing and upgrading packages.

Freezing and exporting dependencies.





### **Chapter 11: Project Implementation and Deployment (2 hours)**

### **Evaluation Schema**

### 1. Attendance and Participation (10%)

- Attendance in lectures, labs, and workshops.
- Active participation in class discussions and group activities.

### 2. Assignments and Homework (20%)

- Regular completion of assigned readings and exercises.
- > Timely submission of homework assignments related to Django concepts and practices.

### 3. Midterm Examination (20%)

A comprehensive examination covering Django fundamentals, models, views, templates, and basic CRUD operations.

### 4. E-commerce Project (30%)

- ➤ Project Proposal (5%): Submission and approval of a detailed project proposal outlining the e-commerce project's scope, features, and technologies.
- ➤ Implementation (15%): Evaluation of the implementation of the e-commerce project, including functionality, code quality, and adherence to best practices.
- ➤ Documentation (5%): Quality and completeness of project documentation, including README files, code comments, and any additional supporting documentation.
- ➤ Presentation (5%): A live or recorded presentation demonstrating the e-commerce project, including features, functionalities, and lessons learned.

### 5. Final Examination (20%)

A cumulative examination covering the entire Django course, emphasizing advanced topics, project-related concepts, and best practices.

### 6. Continuous Assessment (5%)

➤ Continuous assessment of student engagement, improvement, and responsiveness to feedback throughout the course.

### **Grading Scale:**

- > A: 90-100%
- ➤ B: 80-89%
- > C: 70-79%
- > D: 60-69%
- > F: Below 60%



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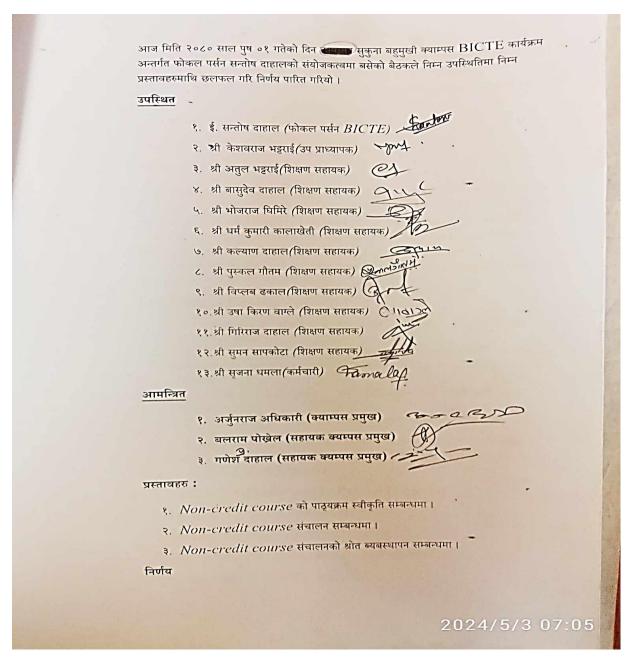
### **Notes:**

- ➤ All assessments will be based on individual performance.
- Regular feedback will be provided to aid in continuous improvement.
- > The project evaluation includes both individual and group components, depending on the nature of the project.

### References

Vincent, W. S. (2018). *Django for Beginners: Build websites with Python and Django*. Vincent, W. S. (2020). *Django for Professionals*.

### ANNEX II: COPY OF THE DECISION



Picture 1: Minute to make decision for Django training



F: Below 60%

### Notes:

All assessments will be based on individual performance. Regular feedback will be provided to aid in continuous improvement.

The project evaluation includes both individual and group components, depending on the nature of the project.

### REFERENCES

Vincent, W. S. (2018). Django for Beginners: Build websites with Python and Django.

Vincent, W. S. (2020). Django for Professionals.

- २. प्रस्ताब न २ माथि छलफल गर्दा, क्याम्पस पदाधिकारीबाट NON-CREDIT स्वीकृत भएपछि, स्वीकृति भएको Web Development with Django course BICTEमा अध्यान गर्ने विद्यार्थीमा संचालन गर्ने निर्णय पनि गरियो।
- ३. प्रस्ताब न ३ माथि छलफल गर्दा माथि उल्लेखित गरिएको course संचालनका लागि श्रोत व्यवस्थापन तपसिल बमोजिम गर्ने र क्याम्पस प्रशासनलाई जानकारी पठाउने पनि निर्णय गरियो ।

# तपसिल > विद्यार्थीबाट प्रति विद्यार्थी १५०० लिने। > अपुग रकम क्याम्पस बाट माग गर्ने - स्विकारिक स्वित स्विकारिक स्विकारिक स्वित स्वित स्वित स्वित स्वित स्वित स्वि

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Picture 2: Minute Decision for Web Development with Django Training

### ANNEX III: LIST OF ENROLLED STUDENTS

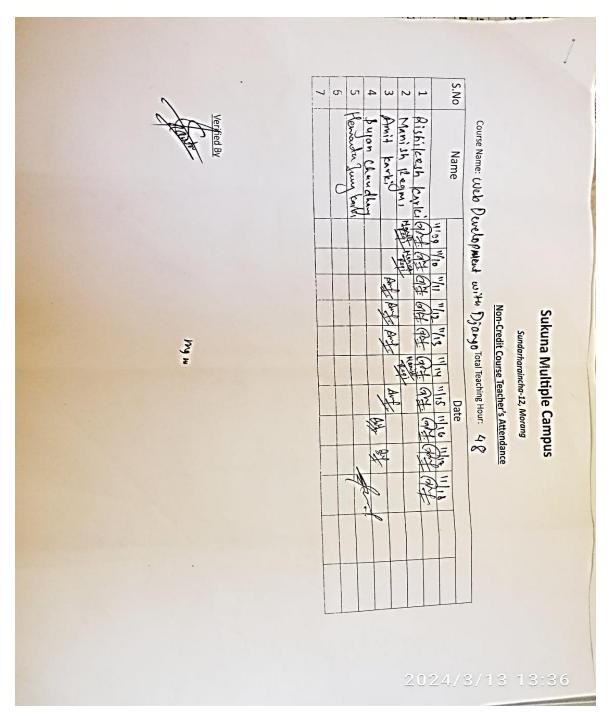
Table 3: List of Student

S.NO	Name	Semester
1	Suyog Bhandari	3 <sup>rd</sup>
2	Amin Nepali	4 <sup>th</sup>
3	Darpan Limbu	4 <sup>th</sup>
4	Sanam Rijal	3 <sup>rd</sup>
5	Prajal Ghimire	3 <sup>rd</sup>
6	Anjan Adhikari	3 <sup>rd</sup>
7	Nikesh Adhikari	3 <sup>rd</sup>
8	Bishal Pandey	3 <sup>rd</sup>
9	Pawan Subedi	7 <sup>th</sup>
10	Sudikshya Basnet	7 <sup>th</sup>
11	Binita Luitel	7 <sup>th</sup>
12	Aliza Shrestha	4 <sup>th</sup>
13	Subash Giri	4 <sup>th</sup>
14	Sudip Koyong	4 <sup>th</sup>
15	Yamnath Khadka	4 <sup>th</sup>
16	Abishek Khawas	4 <sup>th</sup>
17	Nirajan Subedi	4 <sup>th</sup>
18	Aswasan Khadka	4 <sup>th</sup>
19	Sugam Pokhrel	4 <sup>th</sup>
20	Aashutosh Khatiwada	4 <sup>th</sup>
21	Sarjan Rai	5 <sup>th</sup>
22	Ajay B.K	4 <sup>th</sup>
23	Sanjana Rai	4 <sup>th</sup>
24	Sanam Tamang	7 <sup>th</sup>
25	Milan Kumar Karki	3 <sup>rd</sup>
26	Shobha Sanjel	3 <sup>rd</sup>
	1	





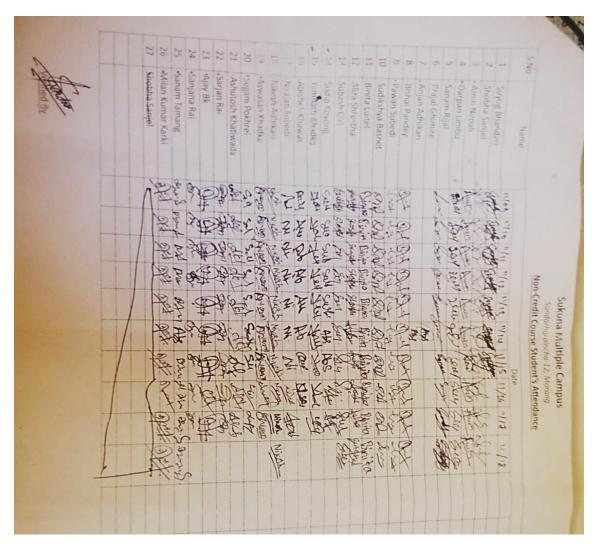
### ANNEX IV: TRAINER ATTENDANCE





Aanta

### ANNEX V: STUDENT ATTENDENCE



Picture 3:Student Attendance





### ANNEX VI: SAMPLE CERTIFICATE



Picture 4: Sample Certificate



### ANNEX VII: PHOTOGRAPH OF TRAINING



Picture 5: Student Training in Computer Lab



Picture 6: Certificate Distribution for participant



autor

### ANNEX VIII: MOU BETWEEN HUNCHA DIGITAL

सुकुना बहुमुखी क्याम्पस र Hunchha Digital Pvt. Ltd. बिचको सम्झौता।				
१. सुकुना बहुमुखी क्याम्पस, सुन्दरहरैँचा, मोरङपहिलो पक्ष।				
२. Hunchha Digital Pvt. Ltd. Itahari दोस्रो पक्ष ।				
लिखितम जिल्ला मोरङ सुन्दरहरैँचा नगरपालिका  वडा नं. १२ स्थित सुकुना बहुमुखी क्याम्पस (पहिलो पक्ष) र इटहरी				
उपमहानगरपालिका ६, सुनसरीको हुन्छ डिजिटल प्रा.लि. (दोस्रो पक्ष) का बिच Web Development with Django कोर्स				
सञ्चालनका विषयमा देहायबमोजिम शर्तअनुसार सञ्चालन गर्न यो सम्झौता गरिएको छ।				
तपिसल				
१. दोस्रो पक्षले बिआईसिटिईका विद्यार्थीहरूलाई ननक्रेडिट कोर्स Web Development with Django) कोर्स सञ्चालन गर्ने।				
२. दोस्रो पक्षले सञ्चालन गर्ने उक्त कोर्स ३ क्रेडिट आवरको ४८ घण्टा शिक्षण भारको हुने छ।				
३.  दोस्रो पक्षले क्याम्पसलाई विषयविज्ञ उपलब्ध गराई भौतिक रुपमा क्याम्पसमा नै कोर्स सञ्चालन गर्नु पर्ने छ।				
४.  दोस्रो पक्षले प्रत्येक दिन ५ घण्टाको कक्षा लिई कम्तिमा १० दिन कोर्स सञ्चालन गर्नु पर्ने छ।				
५.   दोस्रो पक्षले उक्त कोर्स दिवासत्रमा सञ्चालन गर्नु पर्ने छ ।				
६. दोस्रो पक्षले उक्त कोर्स सञ्चालन गर्दा प्रयोगात्मक र परियोजनात्मक विधि प्रयोग गर्नु पर्ने छ।				
७. दोस्रो पक्षले ननक्रेडिट कोर्समा भर्ना भई समावेश भएका विद्यार्थीहरूको प्रयोगात्मक र परियोजना कार्यका आधारमा मूल्याङ्कन				
गरी प्रत्येक विद्यार्थीको प्रगति विवरण पहिलो पक्ष समक्ष पेस गर्नु पर्ने छ।				
८. पहिलो पक्षले उपलब्ध गराएको कोर्स र कोर्सका विषयबस्तुहरू दोस्रो पक्षले अनिवार्य पूरा गराउनु पर्ने छ र यस कोर्समा				
समसामयिक विषयबस्तु छुटेका भए थप गरी कोर्स सञ्चालन गर्नु पर्ने छ।				
९. पहिलो पक्षका बिआईसिटिईमा अध्ययनरत विद्यार्थीहरूले दोस्रो पक्षको कम्पनीमा इन्ट्रनिसिप गर्न चाहेमा दोस्रो पक्षले सो कार्यमा				
पहिलो पक्षलाई सहयोग गर्नु पर्ने छ।				
१०. दोस्रो पक्षले उक्त कोर्स मिति २०८०/११/०९ गते बुधबारका दिन देखि सञ्चालन गर्नु गराउनु पर्ने छ।				
११. दोस्रो पक्षले सञ्चालन गरेको उक्त कोर्समा भर्ना भएका विद्यार्थी र प्रशिक्षकको हाजिरी लगत पहिलो पक्षले लिने छ।				
१२. दोस्रो पक्षले सञ्चालन गरेको उक्त कार्यक्रमको पहिलो पक्षले निरिक्षण तथा अनुगमन कार्यक्रमलाई प्रभावकारी र फलदायी				
बनाउन सुझाव तथा निर्देशन दिन सक्ने छ ।				
१३. कार्यक्रम समापन दुबै पक्षको संयुक्त सहभागितामा हुने छ र उक्त अवसरमा पहिलो पक्षले कार्यक्रममा सहभागी विद्यार्थीहरूलाई				
प्रमाणपत्र (Certification) गर्ने छ। १४. दोस्रो पक्षले कोर्सको कार्यक्रम समापन गरेपछि पहिलो पक्षले दोस्रो पक्षलाई कोर्स सञ्चालन वापत एकमुष्ट रु. ५५,०००/-				
४४. दक्षि पक्षल कासका कायक्रम समापन गरपछि पहिला पक्षल पास्रा पक्षलाई पगत सञ्चारान पानत एन पुट ४. ५५,०००/-				
अक्षरपा पंचपन्न हजार मात्र मुकान पन छ । १५. शर्त नं. १४ मा तोकिएको रकममा १५ प्रतिसत कर कट्टा गरिने छ ।				
१५. रात न. ५४ ना ताजिएका रचनमा ५५ प्रातित्व कर कहा गाउँ छ। १६. पहिलो पक्षले अनुगमन गर्दा कार्यक्रम प्रभावकारी नदेखिएमा दोस्रो पक्षले कोर्स सञ्चालन गरेको कार्यक्रमको सम्झौतालाई				
पहिलो पक्षले भङ्ग गर्न सक्ने छ।				
ईति संवत २०८० साल फागुन ०९ गते रोज ४ शुभम्।				
पहिलो पशको तर्फक्षर 🔾				
हस्ताक्षरः पहिलो पक्षः क्याम्पसको छाप हस्ताक्षरः				
नामः सन्ताम दाहाल नामः हेमन्त कार्की				
पदः फोकल पर्सन (BICTE) 🚜 पदः अध्यक्ष				
रोवहर दोस्रो पक्षको नामः हुन्छ डिजिटल प्रा.लि.।				
हस्ताक्षरः ७ ० ७ ७ के वहमुखा वर्षः दोम्रो पक्षको ठेगानाः इटहरी ६, सुत्तसरी के				
नामः अर्जुनराज अधिकारी ना २०४८ दोस्रो पक्षको छापः				
पदः क्याम्पस प्रमुख				

Picture 7: MOU between Sukuna Campus and Huncha Digital





### **ANNEX IX: Program Ending**

आज मिति २०८० साल फागुन २० गतेको दिन सुकुना बहुमुखी क्याम्पस BICTE कार्यक्रम अन्तर्गत फोकल पर्सन सन्तोष दाहालको संयोजकत्वमा बसेको बैठकले निम्न उपस्थितिमा निम्न प्रस्तावहरुमाथि छलफल गरि निर्णय पारित गरियो ।

### प्रशिक्षक

🐫 श्री विप्लब ढकाल

### उपस्थित:

- १. ई. सन्तोष दाहाल (फोकल पर्सन *हाटाट)*
- २. श्री केशवराज भट्टराई (क्र-प्राध्यापक)
- श्री अतुल भट्टराई (शिक्षण सहायक)
   श्री बास्देव दाहाल (शिक्षण सहायक)
- ५. श्री भोजराज घिमिरे (शिक्षण सहायक)
- ६. श्री धर्म कुमारी कालाखेती (शिक्षण सहायक)
- ७. श्री कल्याण दाहाल (शिक्षण सहायक)
- ८. श्री पुस्कल गौतम (शिक्षण सहायक)
- ९. श्री उषा किरण वाग्ले (शिक्षण सहायक)
- १०. श्री गिरिराज दाहाल (शिक्षण सहायक)
- ११. श्री सुमन सापकोटा (शिक्षण सहायक)
- १२. श्री सृजना धमला (कर्मचारी)

### आमंत्रित:

- अर्जुनराज अधिकारी (क्याम्पस प्रमुख)
- २. बलराम पोखेल (सहायक क्याम्पस प्रमुख)
- ३. गणेश प्रसाद दहाल (सहायक क्याम्पस प्रम्ख)

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### प्रस्ताव:

१. Non-क्रेडिट कोर्स समापन सम्बन्धमा।

minute

Picture 8: Ending Minute of course







### निर्णय:

१. प्रस्ताव नम्बर १ माथि छलफल गर्दा मिति 2080/10/11 देखि 2080/11/20 सम्म सन्चालन भएको "Basic Computer Literacy Training" तालिम समापन गर्ने निर्णय गरिएको छ। बैठकमा मा तालिमको फाइदाको बारेमा छलफल गरी आगामो दिनमा यस्तै तालिमहरु संचालन गर्ने निर्णय गरिएको छ।

यो तालिमबाट विद्यार्थीले Computer सम्बन्धि जानकारी तथा computerमा MS Word, MS Excel, MS Powerpoint , Adobe PhotoShop जस्ता software चलाउन सिके।

Picture 9: Ending Minute of course

