



No. 362/UN41.1/Kim.S1/2026

**IMPLEMENTATION AGREEMENT  
BETWEEN  
BACHELOR OF CHEMISTRY, FACULTY  
OF MATHEMATICS, NATURAL  
SCIENCES, AND EARTH SCIENCES  
UNIVERSITAS NEGERI MANADO  
WITH  
CHEMISTRY DEPARTMENT, COLLEGE  
OF NATURAL SCIENCE SOGANG  
UNIVERSITY  
ON  
INTERNATIONAL WORKSHOP ON  
CHEMISTRY EDUCATION INNOVATION  
" Fablab Innovation, EtnoStem and  
Microscale Chemistry Development  
Workshop"**

**PERJANJIAN IMPLEMENTASI  
ANTARA  
PROGRAM STUDI S1 KIMIA,  
FAKULTAS MATEMATIKA, ILMU  
PENGETAHUAN ALAM, DAN  
KEBUMIHAN UNIVERSITAS NEGERI  
MANADO  
DENGAN  
CHEMISTRY DEPARTMENT, COLLEGE  
OF NATURAL SCIENCE SOGANG  
UNIVERSITY  
TENTANG  
INTERNATIONAL WORKSHOP ON  
CHEMISTRY EDUCATION  
INNOVATION  
" Fablab Innovation, EtnoStem and  
Microscale Chemistry Development  
Workshop"**

On this day, Wednesday, the twenty nine of July, two thousand and twenty-six (29-07-2026), at Universitas Negeri Manado, the undersigned:

Name : Prof.Dr.Mokosuli Yermia

Semuel.M.Si

Position : Dean

Address : Jalan Kampus Unima, Tonsaru  
Village, Tondano Selatan  
District, Minahasa Regency,  
North Sulawesi, Indonesia

In this matter acting for and on behalf of the Bachelor of Chemistry, Faculty of Mathematics, Natural Sciences and Earth Sciences hereinafter referred to as the **FIRST PARTY**.

Pada hari ini, Rabu, tanggal dua puluh sembilan, bulan Juli, tahun dua ribu dua puluh enam (29-07-2026) bertempat di Universitas Negeri Manado yang bertanda tangan di bawah ini:

Nama : Prof.Dr.Mokosuli Yermia

Semuel.M.Si

Jabatan : Dekan

Alamat : Jalan Kampus Unima,  
Kelurahan Tonsaru,  
Kecamatan Tondano Selatan,  
Kabupaten Minahasa,  
Sulawesi Utara.

Dalam hal ini bertindak untuk dan atas nama Program Studi S1 Kimia, Fakultas Matematika, Ilmu Pengetahuan Alam dan Kebumihan, Universitas Negeri Manado selanjutnya disebut **PIHAK KESATU**

Name : Prof. Dr. Won Koo Lee  
Position : Professor  
Address : Chemistry Department, College  
of Natural Science (CNS),  
Sogang University (SU), South  
Korea

In this matter acting for and on behalf of the Chemistry Department, College of Natural Science (CNS), Sogang University (SU), hereinafter referred to as the **SECOND PARTY**

The **FIRST PARTY** and the **SECOND PARTY**, hereinafter collectively referred to as the **PARTIES**, hereby agree to jointly implement the cooperation concerning the execution of educational activities, which shall be carried out by the **PARTIES** as stipulated in the following articles.

#### Article 1

##### Purpose and Objectives

1. This Implementation Agreement serves as the foundation for conducting the International Workshop on Chemistry Education Innovation, jointly prepared by the **PARTIES** in accordance with the scope of cooperation.
2. The objectives of this Agreement are:
  - a. To advance education innovation through FabLab-Based Chemistry Education, EthnoSTEM approaches, and microscale experimentation.
  - b. To provide international exposure for faculty members and students through workshops involving experts from global partner universities.

Nama. : Prof. Dr. Won Koo Lee  
Jabatan : Professor  
Alamat. : Chemistry Department, College  
of Natural Science (CNS),  
Sogang University (SU), South  
Korea

Dalam hal ini bertindak untuk dan atas nama Chemistry Department, College of Natural Science (CNS), Sogang University (SU), selanjutnya disebut **PIHAK KEDUA**.

**PIHAK KESATU** dan **PIHAK KEDUA** selanjutnya disebut **PARA PIHAK**. Dengan ini sepakat untuk bersama-sama melaksanakan implementasi Kerja Sama mengenai Implementasi Pelaksanaan Kegiatan Pendidikan dilaksanakan oleh **PARA PIHAK** seperti diatur dalam pasal sebagai berikut

#### Pasal 1

##### Maksud Dan Tujuan

1. Implementasi Kerja Sama ini dimaksudkan sebagai landasan pelaksanaan kegiatan International Workshop on Chemistry Education Innovation yang disusun oleh **PARA PIHAK** sesuai ruang lingkup kerja sama.
2. Tujuan Implementasi Kerja Sama ini adalah:
  - a. Mengembangkan inovasi pembelajaran melalui pendekatan FabLab-Based Chemistry Education, EthnoSTEM, dan eksperimen mikroskala.
  - b. Memberikan paparan internasional kepada dosen dan mahasiswa melalui workshop yang melibatkan pakar dari universitas mitra global.

## **Article 2**

### **Scope of Activities**

1. The implementation of the Curriculum Focus Group Discussion (FGD) for the Chemistry Program includes:
  - a. Reviewing the existing curriculum of the Chemistry Education Study Program.
  - b. Discussing the strengthening of learning outcomes (CPL) based on global and national needs.
  - c. Preparing curriculum recommendations for implementation in the upcoming academic year.
2. FIRST PARTY:
  - a. Provide expert speakers from international partner universities. The curriculum FGD speakers are as follows :
    - Prof.Dr. Fitri Khoerunnisa (Universitas Pendidikan Indonesia)
    - Prof.Dr. I Nyoman Suardana ( Universitas Pendidikan Ganesha)
    - Cepi Kurniawan, Ph.D. ( Universitas Negeri Semarang)
  - b. Provide materials, modules, and examples of best practices in FabLab-based and EthnoSTEM-oriented chemistry curriculum development.
  - c. Assist in the process of preparing curriculum recommendations.
3. SECOND PARTY:
  - a. Provide curriculum documents, CPL data, and course structures for analysis.
  - b. Prepare FGD participants (lecturers, students, and stakeholders).
  - c. Draft curriculum recommendations based on the results of the FGD.
4. The PARTIES shall conduct monitoring and evaluation of the FGD outcomes and produce outputs in the form of:
  - a. A curriculum recommendation document.
  - b. A draft revision of the Chemistry

## **Pasal 2**

### **Ruang Lingkup Kegiatan**

1. Pelaksanaan FGD Kurikulum Program studi Kimia mencakup:
  - a. Review kurikulum eksisting Program Studi Kimia.
  - b. Diskusi penguatan capaian pembelajaran (CPL) berbasis kebutuhan global dan nasional.
  - c. Penyusunan rekomendasi kurikulum untuk implementasi tahun akademik berikutnya.
2. PIHAK PERTAMA :
  - a. Menyediakan narasumber ahli dari universitas mitra internasional. Narasumber FGD Kurikulum adalah sebagai berikut :
    - Prof.Dr. Fitri Khoerunnisa (Universitas Pendidikan Indonesia)
    - Prof.Dr. I Nyoman Suardana ( Universitas Pendidikan Ganesha)
    - Cepi Kurniawan, Ph.D. ( Universitas Negeri Semarang)
  - b. Memberikan materi, modul, dan contoh best practices kurikulum kimia berbasis FabLab dan EthnoSTEM.
  - c. Mendampingi proses penyusunan rekomendasi kurikulum.
3. PIHAK KEDUA :
  - a. Menyediakan dokumen kurikulum, data CPL, dan struktur mata kuliah untuk dianalisis.
  - b. Menyiapkan peserta FGD (dosen, mahasiswa, dan pemangku kepentingan).
  - c. Menyusun draft rekomendasi kurikulum berdasarkan hasil FGD.
4. PARA PIHAK melakukan monitoring dan evaluasi hasil FGD serta menyusun luaran berupa:
  - a. Dokumen rekomendasi kurikulum.
  - b. Draft revisi kurikulum S1 Kimia.

### **Article 3 Funding**

Expenses arising from the implementation of this workshop shall be borne by each Party according to mutual agreement and shall not impose additional financial obligations beyond the agreed scope of activities.

### **Article 4 Duration**

This Implementation Agreement is effective from the date of signing until the completion of all workshop activities and the preparation of recommendations, covering the period July 2026 to July 2027.

### **Article 5 Closing**

1. Any amendments to this Implementation Agreement may be made upon the mutual consent of the PARTIES.
2. This Implementation Agreement may be considered void if either Party fails to comply with the agreed provisions.
3. Matters not yet regulated in this Agreement shall be determined later through deliberation and subsequently documented in an Addendum, which will form an integral part of this Agreement.
4. This Implementation Agreement is prepared in two (2) original copies, duly stamped, each bearing equal legal force.

**First Party/PIHAK KESATU**



**Prof. Dr. Mokosuli Yermia Samuel, S.Si, M.Si**  
Dean/ Dekan Fakultas Matematika, Ilmu  
Pengetahuan Alam dan  
Kebumian, Universitas Negeri Manado

### **Pasal 3 Pembiayaan**

Biaya yang timbul dari pelaksanaan workshop ini ditanggung oleh masing-masing pihak sesuai kesepakatan PARA PIHAK dan tidak mengikat pada pembiayaan tambahan di luar ruang lingkup kegiatan.

### **Pasal 4 Jangka Waktu**

Perjanjian Implementasi ini berlaku sejak tanggal ditandatangani hingga selesainya seluruh rangkaian workshop dan penyusunan rekomendasi, yaitu pada periode Juli 2026 sampai Juli 2027.

### **Pasal 5 Penutup**

1. Perubahan atas naskah Implementasi Kerja Sama ini dapat dilakukan atas persetujuan PARA PIHAK.
2. Implementasi Kerja Sama ini dapat dianggap batal apabila salah satu pihak tidak memenuhi ketentuan yang telah disepakati.
3. Hal-hal yang belum diatur dalam naskah ini akan ditetapkan kemudian melalui musyawarah dan dituangkan dalam Adendum.
4. Naskah Implementasi Kerja Sama ini dibuat dalam rangkap 2 (dua), bermeterai cukup, dan memiliki kekuatan hukum yang sama.

**Second Party/PIHAK KEDUA**



**Prof. Dr. Won Koo Lee**  
Chemistry Department, College of Natural  
Sciences, Sogang University