

Department of Mechanical and Automotive Engineering,  
Department of Future Convergence Engineering,  
Center for Advanced Materials and Parts of Powder (CAMP<sup>2</sup>)  
College of Engineering, Kongju National University



Engineering Building I,  
1223-24 Cheonandaero, Seobuk-gu,  
Cheonan, 31080, South Korea

PHONE : +82-41-521-9260  
FAX : +82-41-555-9123

To the Department chairs

Dear Sir/Madam:

Please find the attached documents to introduce graduate studies (MS/Ph.D.) at the 'Department of Mechanical and Automotive Engineering' and 'Department of Future Convergence Engineering', Kongju National University (KNU), Cheonan, South Korea.

We welcome and encourage students, who have the degrees of 'Bachelor/Master of Science' and 'Bachelor/Master of Engineering', to apply to graduate studies (MS/Ph.D.).

The disciplines we are interested in are as follows

- Mechanical Engineering
- Manufacturing Engineering
- Metallurgy
- Material and Metal Technology

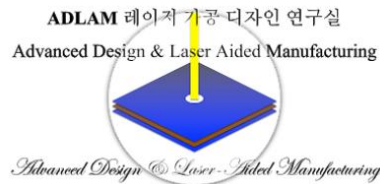
We appreciate your help and look forward to hearing from you. With best wishes

Yours Sincerely

Dongkyoung Lee, Ph.D.

<http://adlam.kongju.ac.kr>

Department of Mechanical and Automotive Engineering,  
Department of Future Convergence Engineering,  
Center for Advanced Materials and Parts of Powder (CAMP<sup>2</sup>)  
College of Engineering, Kongju National University



Engineering Building I,  
1223-24 Cheonandaero, Seobuk-gu,  
Cheonan, 31080, South Korea

PHONE : +82-41-521-9260  
FAX : +82-41-555-9123

# Introduction to Graduate Studies at Mechanical and Automotive Engineering @KNU

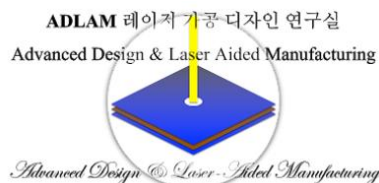
## 1. Objectives

This proposal is suggested to invite self-motivated and hard-working students for graduate studies at the ‘Department of Mechanical and Automotive Engineering (MAE)’ and ‘Department of Future Convergence Engineering’, Kongju National University, Cheonan, South Korea. The Kongju National University (KNU) is one of the top public institutions, or South Korean Government-running University such as Seoul National University and Korean Advanced Institute of Science and Technology, in South Korea. The KNU is a fast-growing university in terms of research achievement and student education. The followings are detailed information for the graduate studies.

## 2. Language Requirements

- The applicant should satisfy one of the following language criteria.
- If the undergraduate course materials were English, the Language requirement is waived
  - 530 or higher on TOEFL PBT, 197 or higher on TOEFL CBT, 71 or higher on TOEFL iBT
  - 5.5 or higher on IELTS
  - B2 or higher on CEFR
  - 326 or higher on NEW TEPS
  - 700 or higher on TOEIC
  - Level 3 or higher on TOPIK

Department of Mechanical and Automotive Engineering,  
 Department of Future Convergence Engineering,  
 Center for Advanced Materials and Parts of Powder (CAMP<sup>2</sup>)  
 College of Engineering, Kongju National University



Engineering Building I,  
 1223-24 Cheonandaero, Seobuk-gu,  
 Cheonan, 31080, South Korea

PHONE : +82-41-521-9260  
 FAX : +82-41-555-9123

### 3. Research output

#### Advanced Design & Laser-Aided Manufacturing Lab. (Dr. Dongkyoung Lee)

<http://adlam.kongju.ac.kr>

#### Representative Papers (5)

Dongkyu Park, Dongkyoung Lee\*, "Nanosecond Laser Structuring for Improving Rate Capability of Lithium Iron Phosphate Cathode", *Journal of Science: Advanced Materials and Devices*, 2025, SCI(E)

Jaegun Shin, Juhee Yang, Dongkyoung Lee\*, "Comparison of Laser Processability for LiFePo4 Cathode Material with Nanosecond and Femtosecond Laser", *Journal of Science: Advanced Materials and Devices*, 2024, SCI(E)

Mulugeta Gebrekiros Berhe, Dawit Musse Yasin, Hong Geun Oh, Seung-Keun Park, Dongkyoung Lee\*, "Development of Laser Structured Three-dimensional Patterns for Improved Wettability and Performance of Electrodes for Lithium-Ion Batteries", *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, 2024, SCI(E)

Dawit Musse Yasin, Dongkyoung Lee\*, "Computational Evaluation of PEMFC Performance Based on Bipolar Plate Material Types", *Energy Reports*, 2024, SCI(E)

Lanh Ngoc Trinh, Dongkyoung Lee\*, "Effect of welding path on the weld quality of aluminum tab and steel battery case in lithium-ion battery", *Journal of Mechanical Science and Technology*, 2024, SCI(E)

#### Representative Projects (5)

**Support Program for Specialized University of Semiconductor, ₩23,130,000,000, 2024.03.01~2028.02.28**

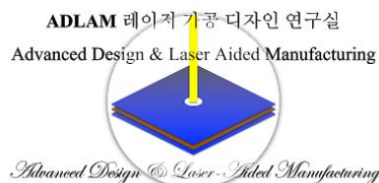
**Fundamental study on the effect of laser processing in the controlled external environment for secondary battery performance, ₩383,140,000, 2023.03.03~2027.02.28**

**Global Human Resources Program for Core Technology of Future Mobility, ₩3,258,000,000, 2024.03.01~2027.02.28**

**Software Forefront University, ₩18,000,000,000, 2024.05.01~2031.12.31**

**Distributed energy response regional specialization future energy talent training, ₩28,957,560,000, 2024.05.01~2029.12.31**

Department of Mechanical and Automotive Engineering,  
 Department of Future Convergence Engineering,  
 Center for Advanced Materials and Parts of Powder (CAMP<sup>2</sup>)  
 College of Engineering, Kongju National University



Engineering Building I,  
 1223-24 Cheonandaero, Seobuk-gu,  
 Cheonan, 31080, South Korea

PHONE : +82-41-521-9260  
 FAX : +82-41-555-9123

#### 4. Laboratory information

Laboratory name	Research Topic	Current students
Advanced Design & Laser-Aided Manufacturing <a href="http://adlam.kongju.ac.kr">Adlam.kongju.ac.kr</a>	<ul style="list-style-type: none"> <li>• Understanding of Engineering Physics, Heat engineering, Material Science, and Metal Science during laser-aided manufacturing</li> <li>• Laser-aided manufacturing for secondary batteries to enhance battery performances</li> <li>• Laser-concrete composites interaction for nuclear decommissioning</li> <li>• Laser surface treatment for functional surface</li> <li>• Application of laser processing for semiconductor/display industry</li> </ul>	5 Ph.D. candidate 2 MS candidates 7 BS candidates (Spring 2025)
<b>Advisor</b>		
Dongkyoung Lee, Ph.D.		

#### 5. Requirement for application

**Advanced Design & Laser-Aided Manufacturing Lab. (Dr. Dongkyoung Lee)**

<http://adlam.kongju.ac.kr>

We are looking for graduate and undergraduate students, and postdoctoral fellows with backgrounds in mechanical engineering, advanced manufacturing, thermal science, material science and engineering, and civil engineering with demonstrated ingenuity, productivity, and ability to work in a diverse, high-energy environment.

**Please contact by email to Prof. Dongkyoung Lee ([ldkkinka@kongju.ac.kr](mailto:ldkkinka@kongju.ac.kr)) with a CV and transcript.**

Department of Mechanical and Automotive Engineering,  
Department of Future Convergence Engineering,  
Center for Advanced Materials and Parts of Powder (CAMP<sup>2</sup>)  
College of Engineering, Kongju National University



Engineering Building I,  
1223-24 Cheonandaero, Seobuk-gu,  
Cheonan, 31080, South Korea

PHONE : +82-41-521-9260  
FAX : +82-41-555-9123

## 6. Scholarship information

Full stipend and tuition fees will be given to the qualified students. The starting scholarship total will be **KRW 14,400,000** per year for **master** students and **KRW 18,000,000** ~ per year for **Ph.D.** students (tuition will be waived and the scholarship can be increased depending on the paper publications).

Scholarships will increase depending on scholarly performance. (**One of the best and most hard-working Ph.D. students gets paid KRW 36,000,000 per year now**)