

Materials Sci & Eng: Interdisciplinary Field



<http://mase.nm-aist.ac.tz>

NM-AIST Arusha

Our Vision

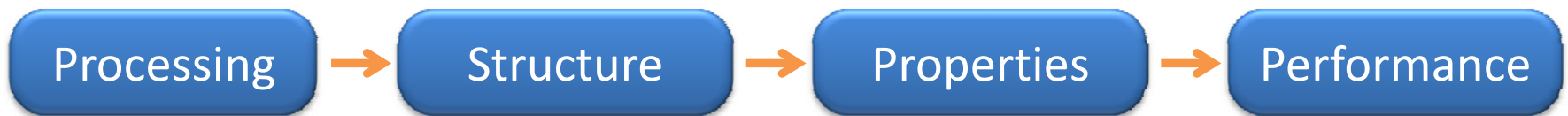
- Frontier research in the field of materials science to contribute to humanity
- Train innovative researchers with convergence of physics, chemistry, biology, and mathematics.
- Globalized research capacity through world wide collaborations with renowned institutes and universities.

Why is MaSE important?

- Throughout history cultures have been defined by their ability to select and modify materials.
- In the converging field of SET, many applications require broad knowledge of materials (ceramic materials, nanostructured materials, polymers, biological materials, etc.)

A Revolutionary Field

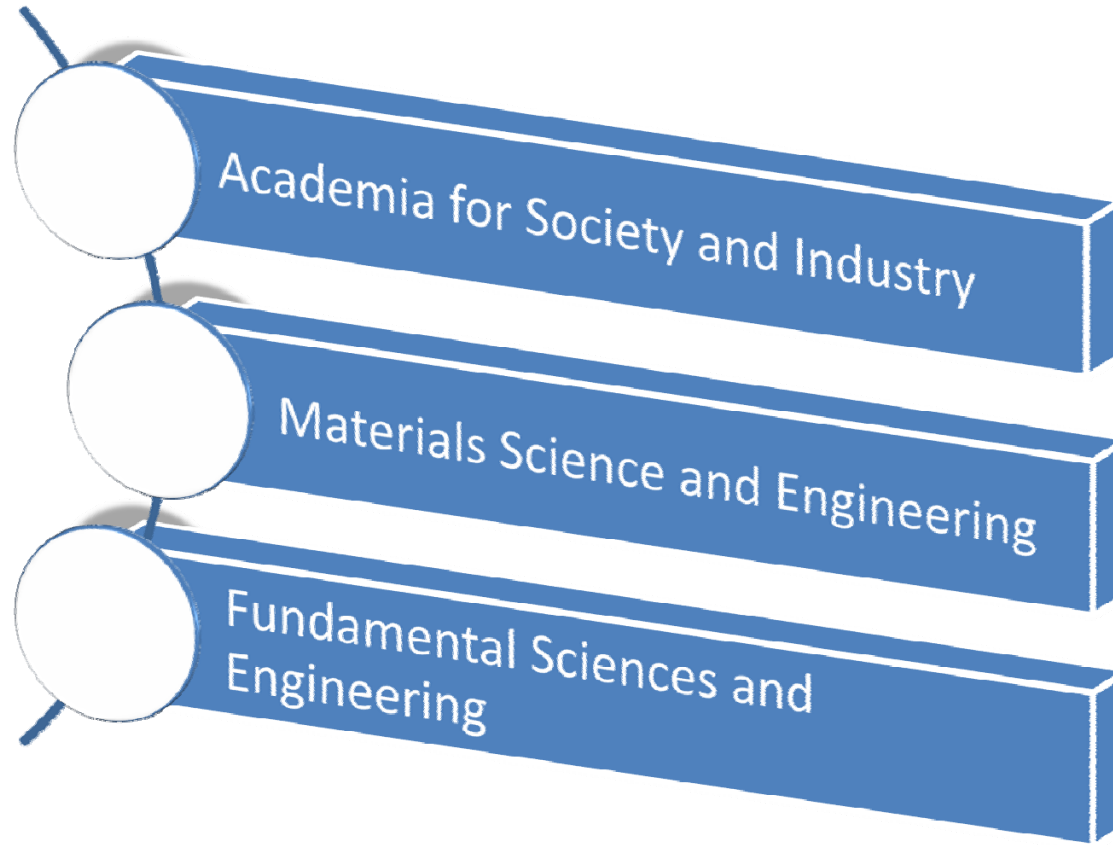
MaSE is an interdisciplinary field. We apply the basic principles of biology, chemistry and physics to understand the properties and structure of materials. We design processes to manipulate materials to meet the needs of modern technology.



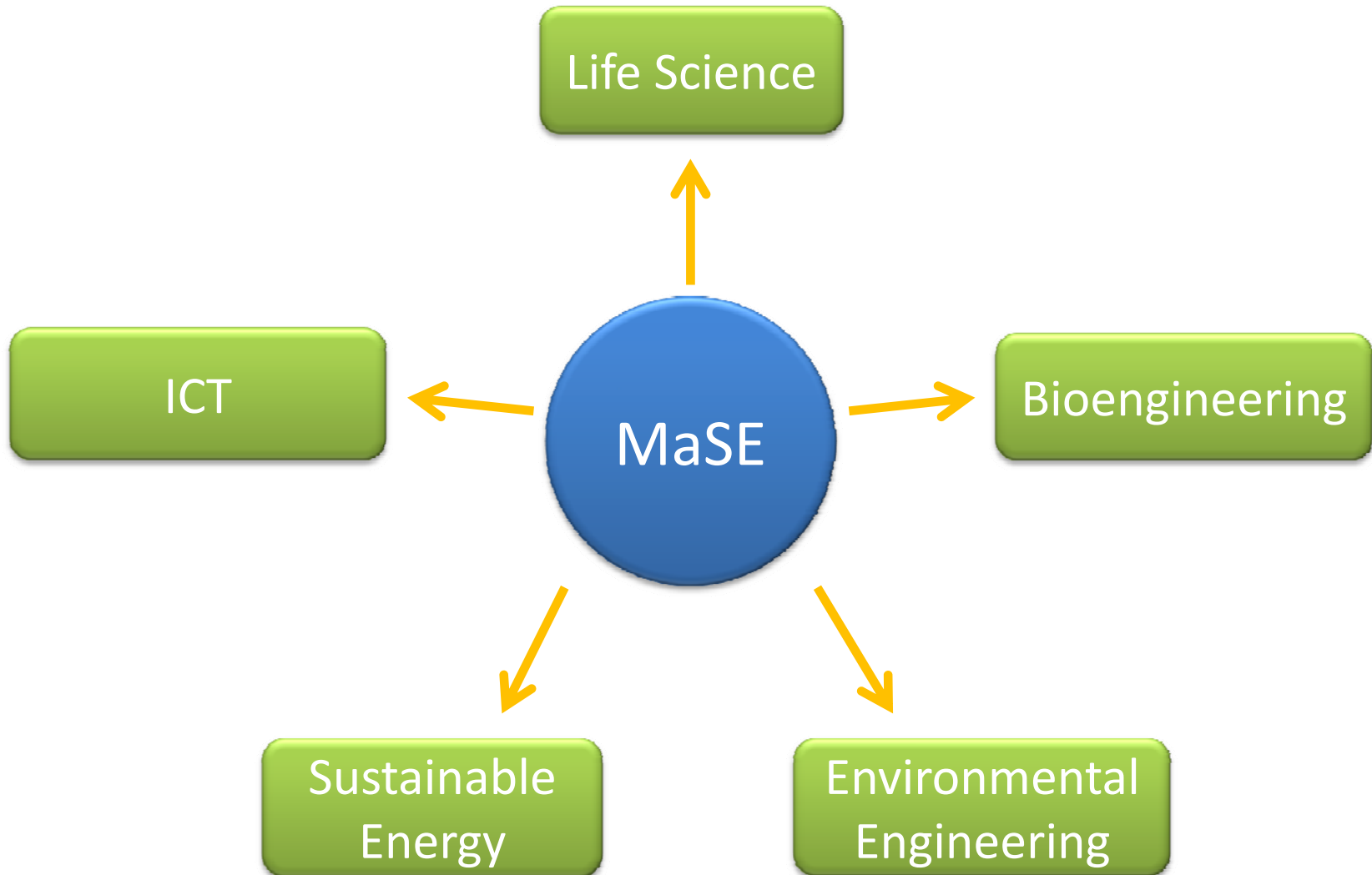
Our Focus

- Industry oriented
 - Training MS and PhD students
 - Sustainability
- Immediate impact to socio-economy through business and job creation by applying science and technology for society and industry
- Human capacity development
 - Platform for Graduate students
 - Skilled labor force for future more advanced opportunities

Broadening of Material Field



Convergence of SET



Our Specialty/Research Plan

- **Structural Materials**
 - Conventional ceramics
- **Electronics Materials**
 - Valuable metals recovery
- **Bio & Polymeric Materials**
 - Natural fiber composites
- **Energy Materials**
 - Nanoparticle solar panel coating
 - Computational

NM-AIST Advantages

We bring solid academics and new paradigm to help you grow into leaders in science and technology.

- Diverse faculty with international experiences
- Hands-on lab projects led by case studies
- Excellent research opportunities
- Outstanding academic support
- Scholarship opportunities
- Variety of career opportunities

Career Prospects

As materials science and engineering is interdisciplinary field, its future career opportunities are very promising in this increasingly competitive global economy. To name a few;

- Ceramic technologist
- Metallurgical technologist
- Materials production researcher
- Materials consultants
- Bioengineer
- Nanotechnology engineer
- Corrosion control engineer
- Nuclear engineer
- Alternative energy engineer
- Patent lawyer

Challenges

- R&D Capacity
- Finding Mechanisms for Sustainable Programs
- Effective Utilization of Resources
 - Natural resources
 - Human resources
- Industry Capacity
- Specialization and Networking

With

MATERIALS

Our future is realized...

“Academia for Society and Industry”

THANK YOU!