

# The Department of Materials and Production

Materials and Production is a deep and wide department.

We excel in deep scientific fields defined bottom-up by specialized research groups, and we apply our knowledge to the solution of global challenges.

We derive much of our strength from the spectrum we span. From fundamental physics and nanotechnology to microstructures and onwards to solar power systems and the mechanics of enormous wind turbines. From neurophysiology over biomechanics to exoskeletons. From engineering to industrial products. From manufacturing processes to sustainable production systems. From science to business. The breadth of the department enables societal exploitation of vertical research.

## Value statements

The department strategy is rooted in the following beliefs:

- We respect the expertise of individual researchers and research groups, and we believe that they are the roots of the most fruitful ideas that bring science forward. We recognize the value of diverse research traditions, scientific topics and methods - from fundamental research to applied transdisciplinary research.
- We acknowledge that science is an elitist activity subject to fierce international competition, and deep, vertical competencies are necessary. However, large progress in single disciplines by single scientists is rare. There remains an unexploited opportunity in interdisciplinary cooperation and teamwork to address the greatest challenges. As a part of Aalborg University's tradition for problem-based learning and as a department with an exceptionally broad range of competencies, Materials and Production is particularly well-positioned to pursue this opportunity.
- Education is important and respectable, and the greatest immediate benefit to society of the department's activities is the well-qualified candidates we produce.
- The department is an integral part of society, and we thrive on cooperation with industry and other societal and academic institutions and rely on their input to our work.
- We all have a responsibility for the long-term sustainability of our research fields and the relevance of the department. We strive to continuously develop our fields, extend our knowledge, improve our skills, and to give back more than we take.
- We support diversity, and we will look for ways to leverage its strengths and remove obstacles for inclusion.

## Vision statements

We envision:

- Workspaces such as offices and labs that are technically suitable for teamwork and experiments and are geographically positioned to support interdisciplinary cooperation and peer learning.
- Good conditions for research-based teaching, for instance by inclusion of students into research activities and by optimization of study curricula and guidelines.
- A culture of peer-support of the careers of young researchers.

- A division of tasks to optimize the contribution of each colleague, leveraging the difference in skills and interests to cover all the working tasks of the department.
- Working environments that promote continuous improvement of skills and competencies of individuals and groups.
- A balanced portfolio of externally funded projects across the Department to support continuous development and maintain stable conditions for long-term efforts.
- A lab that is tailored and agile to meet the needs of the users (researchers, students, external companies)
- An administration that efficiently and professionally supports the department's core tasks and contributes to a holistic and coherent AAU administration.

## Mission statements

- We will unite the department's physical premises to a single geographical location to promote cooperation between individuals and groups and exploitation of resources.
- We will continuously develop our education portfolio to the societal development and to harvest the benefits of research-based education
- We will strengthen the peer support culture and emphasize the obligation of experienced and successful employees to support and train their younger colleagues to ensure succession of the scientific and operational competencies.
- We will create a well-described and transparent infrastructure for funding support that encourages researchers to boost their activities by external funding from an early stage in their careers, supported by senior colleagues.
- We will launch initiatives to encourage cooperation across research fields and contribute to the achievement of important societal goals.
- We will continuously develop the lab facilities to meet future needs in coordination with lab services across AAU, and we will improve the lab's visibility as an internal and external resource.
- We will develop the administration to continuously adapt to challenges and needs in the best possible way, and we will critically assess and prioritize the administrative tasks and resources.

## Guiding Stars

- Research should constitute a larger and more stable portion of the departments overall activities.
- Enrollment and retention of students should be strengthened by ensuring that the content and teaching methods of the programs are developed and aligned with the technological development.
- The department should become an even more attractive workplace where we look forward to coming to work.