

A Vision and Growth/Visibility Strategy for
Aerospace Engineering
New Mexico State University

Context

NMSU is a space-grant university, and Aerospace Engineering at NMSU has the opportunity and responsibility to provide regional and national leadership in research and education. Regional engineering enterprises are increasingly dominated by Aerospace industry making it even more important to provide a strong leadership at NMSU. No other university in New Mexico has an Aerospace Engineering program.

What it is now?

Aerospace Engineering is now housed as a “program” within the Department of Mechanical and Aerospace Engineering. The traditional and broader scope of Mechanical Engineering programs in that department has not allowed growth and visibility for the Aerospace Engineering program. Data for the last two decades suggest that faculty hires, and student recruitment/retention efforts in that department, were predominantly driven by Mechanical Engineering program needs. The department has only three faculty members designated as Aerospace Engineering faculty and about fifteen faculty members in research areas traditionally labeled Mechanical Engineering. There are endowed professorships available to be given exclusively to Aerospace faculty yet we do not have qualified faculty members to award these to. New leadership at all levels at NMSU, and increased contacts in the recent past with regional aerospace industries, encouraged us to question whether we have realized our full potential in this area and brought us to the conclusion that we haven’t. We are now at risk of losing our leadership in this program to other schools in the region.

Where could we go?

Cursory analyses, anecdotal accounts, and conversations with local industries and with college leadership, suggest that we should explore creating a separate department to allow growth and visibility for the program. It is clear that Aerospace Engineering has now evolved to be a broad-based discipline and it can no longer be served as a sub-specialty area under the historical discipline of Mechanical Engineering. As an example, CoE advisory board members from two prominent companies (Raytheon and Boeing) suggest that our Aerospace Engineering curriculum has evolved as an offshoot of Mechanical Engineering curriculum whereas it is designed at other universities as an independent curriculum representing dynamic evolution of aerospace research. A department head selected to represent fifteen faculty members and diverse disciplines in Mechanical Engineering cannot be expected to contribute aggressively to the growth and visibility of Aerospace Engineering program.

NMSU Engineering Leadership and its Advisory Board are exploring the possible recommendation of a new Department of Aerospace Engineering with current Aerospace-faculty from MAE and others engaged in Aerospace research from Klipsch School, etc. Some are optimistic that the new Department could be named and endowed given the prominence of aerospace industries in the region. A nationally recognized leader should be hired to lead the department, and the department should have its own advisory board to help guide its exclusive vision and strategies in education and research.