

In the ME481 end of semester memo and in the background section of your ME482 project report each team is required to include concise descriptions (no more than a few sentences each) of what contemporary issues is addressed by your project, what your responsibility as an engineer is to address that contemporary issue, and what impact the engineering solution may have in a global or societal context.

Consider the following as an example. This example project involves designing an “acoustic wall” that would improve the sound quality of an acoustic guitar, or other instruments, played in a small venue such as a night club. Here is what would be appropriate to include in your report:

Contemporary Issue: People are social and need healthy opportunities to interact. Many modern problems (crime rate for example) can be traced to individuals who lack a sense of belonging. Healthy interactions help build a sense of belonging.

Professional Responsibility: Many people enjoy listening to live music in a night club setting, yet the quality of acoustic music is often degraded by the design of the venue. By applying engineering knowledge of acoustics, such events may be improved.

Global and Societal Context: Improving the sound quality of music played in night clubs increases the attractiveness of such events, and therefore, more people will likely participate in such social activities. It is hoped that this project at least in some small way addresses the contemporary issue of building a stronger and healthier social community.

Here is another example to consider. This project involves re-designing and modifying an existing small single family residence to reduce the energy consumption by its occupants.

Contemporary Issue: Energy consumption is a critical contemporary issue. Energy production may have significant impact on the world’s environment by producing greenhouse gasses and other pollutants, and may cause damage to local environments due to raw material extraction. Energy production and consumption is believed to be a major contributor to global climate change.

Professional Responsibility: Engineers exhibit professional responsibility when they make advances in reducing energy consumption. This project evaluates the energy consumption for a single family residence with the goal of reducing HVAC total energy usage by 20% over the next 10 years.

Global and Societal Context: Reduced energy consumption of an HVAC system in a single family residence reduces the environmental impact associated with energy production.