DEED Paper Guidelines

The purpose of DEED is to share knowledge, learning, and best-practice experience that improves the quality of engineering design education skills within our community.   This division strives to be relevant and inclusive to both instructors in engineering design and engineering educational research practitioners.

Authors are encouraged to submit work that could be useful to others in design education and to suggest strategies for transferability and/or implementation. Proposals for new session topics and new session formats are always encouraged. Session submission details and timeline may be found in the DEED Call for Papers.

A. Submission Requirements for Conference Work

DEED accepts both completed research efforts and those that are a work in progress for inclusion as peer-reviewed papers in the annual conference.

"Work in Progress" is a mechanism/forum for authors to share and receive feedback on preliminary work. "Work in Progress" submissions are identified in their title, included in the conference proceedings, and are typically presented in the DEED poster session.

DEED submissions tend to fall into four general areas. The following sections should be reviewed and used to guide the development of DEED manuscript submissions as they will be used as a basis for all manuscript reviews.

1. **Pedagogy (or Intervention) and Assessment:** These papers tend to provide an ***evaluation of methods and practice*** impacting design education and design learning. Papers in this category represent efforts toward demonstrating evidence-based pedagogy, and would typically be considered as research publications. These papers motivate a research question and provide a hypothesis, describe a repeatable methodology, and provide an analysis and discussion of results.

2. **Survey Papers:** These papers provide a comprehensive review of the literature on a relevant topic. DEED welcomes survey papers on topics of general interest to the DEED audience. In addition to providing the survey of literature, these papers should motivate the effort and provide a summary discussion of topic based on the literature survey.

3. **Design Methodologies:** These papers tend to describe new methodologies in engineering design **and** engineering design education. DEED welcomes the presentation of significant new design methodologies, techniques or tools. Papers in this category should provide significant contextual background information demonstrating the novelty and utility of the new design methodologies, techniques or tools in engineering design **and** engineering design education. Additionally, the basis of the method / technology should be well detailed, include example applications and a discussion of the impact of this idea.

4. **Academic Practice/Design Interventions:** These papers tend to ***describe*** new design courses, new course activities related to engineering design, or new programs related to engineering design. DEED has a long tradition of supporting ***curricular practice papers*** that document academic innovation and best practice in the classroom.   In order to support the most effective transfer of knowledge and experience of new curricular practices, papers should provide context of the work through a review of relevant practice literature and/or benchmarking of common and standard practices. Details including context, unique aspects, and an overview of the methods and materials should be provided. Results (i.e., the impact of

the innovation) and lessons learned should be provided and discussed. As results, consider one or more of the following:

- Documented improvement in learning outcomes through pre- and post-assessment of learning outcomes utilizing validated instruments;
- Results of standard institutional course evaluation surveys compared with departmental averages and/or previous versions of the course; and/or
- Comparison of results with prior practice or previous course structures.

Detailed reflection on course effectiveness from course instructors is not a sufficient result for DEED manuscripts.

DEED encourages submission of any other areas of interest to the community. Beyond dissemination via traditional papers, we encourage novel, engaging presentation methods for the conference (e.g., workshops/tutorials, case studies, demonstrations).

B. Expectations for DEED division submissions

As a division we exist to disseminate high quality research in the field of engineering design education and to inform the ASEE community on engineering design education issues. We expect all conference submissions (Completed AND Works in Progress) to (i) address the interests, problems, and needs of the engineering design education community, (ii) reference literature and/or current best practice in relation to content presented, (iii) provide sufficient documentation of methods and results such that results could be replicated, and (iv) provide evidence and reasoned support for all conclusions.

ALL DEED submissions will be considered on their basis of providing the following:

- **Broad Applicability:** Present findings that DEED members could either learn from or apply.
- **Evaluation of Impact:** Present a detailed description of the specific reasoning, observations, evaluation methods, and data leading to the work's conclusions. Conclusions must include a discussion of the expected impact of the work.
- **Innovative Practices:** Present the novelty of the work within its context (i.e., new methods/design intervention/course/program).
- **Grounded in Literature/Experience/Current Practice:** Provide the context of the work in literature AND/OR standard practice of peer institutions.

In addition to DEED division-specific guidelines, the ASEE paper guidelines should be followed for all submissions. The 2018 Conference Authors Kit is available on this link:
https://www.asee.org/documents/conferences/annual/2018/2018-Authors-Kit.pdf.