

4.598_Special Problems in Computation_SYLLABUSMarta Malé-Alemany | ReD, mma@re-d.comMon/Wed from 5-8 (starting March 31st), Room 9-255**Parametric Domes****_CLASS DESCRIPTION**

The seminar will focus on the alternative possibilities for architectural production drawn by parametrics and associative environments, emphasizing their integrative use from conception to construction. With that objective, the class will look into integrated design and fabrication processes to investigate their conceptual and material impact in the discipline. A traditional architectural problem -the dome- will be used as a starting point to research for geometric differentiation in a component-based design approach. In this process, the regularity of this form will serve as a stable background to set-up the emergence of variation in defining building assemblies that have the potential to accomplish specific spatial, constructive and functional goals, while considering their effects as aesthetic and ornamental strategies. Students will thus develop their own 'parametric dome', questioning its geometric attributes while discussing/judging the performative potential behind their design and fabrication solutions.

_ PREREQUISITES

Good knowledge of 3D digital modeling and visualization
Experience in digital fabrication

_ INSTRUCTIONAL METHODOLOGY

This 7-week intensive seminar will combine sessions dedicated to lectures and tutorials with practical, hands-on exercises. The lecture sessions will present the ideas and examples to illustrate the research intentions of the seminar. The practical sessions will be dedicated to the resolution of the parametric dome, according to 3 development phases. In these sessions, students will have the opportunity to discuss their projects with the instructor in a desk crit format. Phases 1 and 2 will be evaluated in the midterm review, while Phase 3 will be assessed in the final review.

All student projects will be framed to be part of a whole class enterprise. Participation, discussion and knowledge sharing will thus be promoted and recognized as the basis of this common agenda. The seminar production will include a series of small prototypes digitally fabricated using the CNC equipment of the school.

_SCHEDULE

3/31	Mon	(MMA) Introduction / intro to Assignment 1 / lecture + tutorial
4/02	Wed	(MMA) desk crits A1 / tutorial
4/07	Mon	Optional desk crits with TA (MMA is out of town)
4/09	Wed	(MMA) Pin-up A1 / intro to Assignment 2 / lecture + tutorial
4/14	Mon	(MMA) desk crits A2 / tutorial
4/16	Wed	(MMA) desk crits A2 / tutorial
4/21	Mon	Optional desk crits with TA (MMA is out of town)
4/23	Wed	Optional desk crits with TA (MMA is out of town)
4/28	Mon	MIDTERM REVIEW: Assignments 1-2
4/30	Wed	(MMA) Intro to Assignment 3 / lecture + tutorial
5/5	Mon	(MMA) Desk crits A3
5/7	Wed	(MMA) Desk crits A3
5/12	Mon	Optional desk crits with TA (MMA is out of town)
5/14	Wed	Optional desk crits with TA (MMA is out of town)
	TBA	FINAL REVIEW

Note: Schedule is tentative and subject to change. Given the seminar interest of generating physical prototypes using the CNC equipment of the school, it may be necessary to allocate a few additional practical sessions to accomplish this objective. If that were necessary, they would be scheduled by general consensus among students and instructor.