Crop Circles
ARCHITECTURAL DESIGN
WORKSHOP

MIT Architecture
arch 4.182 | SPRING 2020
M 4:00 - 7:00
RM 5-216
CREDITS: 9 (S-O-S) G

Syllabus

INSTRUCTOR
Brandon Clifford
bcliffor@mit.edu
Office - 10-422m
Office Hours - by appointment

Introduction

In an era where GPS, laser measurements, and lidar equipment are ubiquitous, little knowledge exists surrounding the task of scaling up precise geometric operations with the scale of architectural construction. What could we learn today by looking back to moments of the past that were forced to deploy string-based geometries to address landform survey? This workshop is dedicated to measuring, decoding, and developing survey recipes that produced landform constructions of the past. These include the stone circles of northern Europe, the Nazca lines of South America, the Celestial alignments of Mayan cenotes, or even the crop circles of the previous century. Students will first trace and decode how these precedents were constructed, or the invisible devices used to generate these complex geometries. They will then analyze those devices to develop a recipe that could produce other variations of the precedent. Finally, they will employ those recipes to develop their own landform geometry that can be deployed at scale in an open field. The final review of these results will be documented through aerial drone footage.

Students will develop analysis and recipes that will be compiled together into a collective cookbook of these ancient methods. Additionally, students will produce a crop-circle of their own at scale that will be documented and verified through aerial drone footage.

Evaluation Criteria and Grading

The following criteria will be used for the evaluation of your work, both in terms of helping your progress and in final grading:

- Investigation: How rigorous are your investigations into the precedents?
- Translation of Investigation: How clear are your findings communicated in your presentation of your investigations?
- Presentation Quality: To what degree do your presentations convey what they ought to?
- Participation in Discussions: How actively and how constructively are you involved in class discussions?
- Contribution: To what degree do your findings constitute a contribution to the class, field, or larger context? To what degree are those findings novel?

A: Excellent - Project surpasses expectations in terms of inventiveness, appropriateness, verbal and visual ability, conceptual rigor, craft, and personal development. Student pursues concepts and techniques above and beyond what is discussed in class.
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B: Above Average - Project is thorough, well researched, diligently pursued, and successfully completed. Student pursues ideas and suggestions presented in class and puts in effort to resolve required projects. Project is complete on all levels and demonstrates potential for excellence.

C: Average - Project meets the minimum requirements. Suggestions made in class are not pursued with dedication or rigor. Project is incomplete in one or more areas.

D: Poor - Project is incomplete. Basic skills including graphic skills, modelmaking skills, verbal clarity or logic of presentation are not level appropriate. Student does not demonstrate the required design skill and knowledge base.

F: Failure - Project is unresolved. Minimum objectives are not met. Performance is not acceptable. This grade will be assigned when you have more than two unexcused absences.

Policies

Attendance at all class meetings is mandatory. If any meeting (lecture or workshop session) is to be missed, please notify the instructor prior to the scheduled class. Do not photograph or record any component of the course without express permission. Please remember to silence cell phones, and be courteous when using laptops in class. Most importantly, be respectful and engage during fellow students’ pin-ups.

The MIT online course management system, aka Stellar, will be used exclusively in the course. Handouts and exercise descriptions will be available there shortly after class is held. Students will also be submitting exercises and materials through this system, and must do so by the assigned due date.

Readings


Schedule

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<tr>
<th>Date</th>
<th>Event</th>
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<tr>
<td>2/10</td>
<td>Introduction &amp; Parametric Primer</td>
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<td>2/17</td>
<td>HOLIDAY – President’s Day</td>
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<td>2/24</td>
<td>Exercise 1 Due</td>
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<td>3/2</td>
<td>Precedent Group 1 Presentations</td>
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<td>3/9</td>
<td>Live Drawing Session</td>
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<td>3/16</td>
<td>Precedent Group 2 Presentations</td>
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<tr>
<td>3/23</td>
<td>Spring Break</td>
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<td>3/30</td>
<td>Live Drawing Session</td>
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<td>4/6</td>
<td>Precedent Group 3 Presentations</td>
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<tr>
<td>4/13</td>
<td>Live Drawing Session</td>
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<td>4/20</td>
<td>HOLIDAY – Patriot’s Day</td>
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<td>4/27</td>
<td>Precedent Group 4 Presentations</td>
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<tr>
<td>5/4</td>
<td>Dead Week (BC available for office hours)</td>
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<td>5/?</td>
<td>Final EXAM</td>
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