

Recommendations to the Core Planning Committee
Multi-disciplinary Clusters Small Group
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Core Proposal Principle - Multi-disciplinary Clusters: Student learning is greatly enhanced by broad faculty collaboration across disciplines that will expand teaching and research horizons. Part of the new Core should make use of clusters. These are groups of courses taught by individual professors but linked together by common themes. Clusters are flexible and, could be designed in order to maximize multiple disciplinary connections while maintaining freedom for students and faculty.

Introduction

The University of San Diego (USD) has long valued interdisciplinary learning as a high-impact practice that directly contributes to student learning. The Honors Program, Preceptorial Program, and Social Issues Committee have offered multi-disciplinary team-taught and “cluster” courses for over three decades. In 2010, USD expanded the commitment to multi-disciplinary learning by introducing themed clusters to all first-year students through the Living Learning Community Program (LLC). By 2013, all entering first-year students will take a course and live in a residence hall tied together by a common theme or “big question.”

The Multi-disciplinary Cluster Small Group, understanding USD’s strong support of multi-disciplinary learning, recommends that our core curriculum reflect this commitment and offer the experience to all undergraduate students. After exploring cluster models from a variety of different universities, reviewing the results of the USD Core Survey administered in Fall 2011, and conducting an open forum to ask for faculty feedback, **we recommend that our core include a first-year and “advanced cluster” requirement.** A broad-based first-year cluster or LLC will encourage students to explore multiple perspectives across disciplines as an introduction to the liberal arts and sciences. An advanced cluster, taken between the sophomore and senior year, will enhance complex thinking and the integration of knowledge at a higher level. LLC participation will expand the benefits of our successful preceptorial program to all entering students, while an advanced cluster will expand the opportunities for inter-disciplinary thinking to students outside of the Honors program. Such inter-disciplinary exploration is critical to a modern liberal arts education and cannot be fully achieved in the first year or with only one experience.

Our working group unanimously agreed on the set of principles described below to structure a multi-disciplinary cluster requirement as part of the USD undergraduate core curriculum. We

recommend that USD expand this form of multi-disciplinary learning across campus to ensure all undergraduates benefit from integrated curricular programming. Our research indicates that clusters support deeper engagement in learning, greater intellectual flexibility, greater student engagement, and complex interpretations of multiple realities. Further, many of our peer and aspirational institutions have successfully implemented cluster models. We understand that implementation of a two-tier cluster requirement is a major structural change to our core and outline potential concerns and solutions at the end of this report. The Core Planning Committee (CPC) should note that the solutions we suggest do not offer alternatives to a two-tier cluster requirement for USD students. We firmly believe that multi-disciplinary learning has been at the heart of USD's success and should be codified in our revised core curriculum. We understand that implementation may prove logistically difficult and that resources will be needed to assure success of a USD two-tier cluster program. But, we believe that the benefit of multidisciplinary learning is critical to the success of student learning and far outweighs the cost.

Basic Principles for Multi-disciplinary Clusters in the Core:

1. Students should be required to enroll in two multi-disciplinary clusters as part of the new core, given that a majority of USD faculty agree interdisciplinary approaches broaden teaching and research horizons as reported in the 2011 Core survey.
2. A "first-year" and "advanced cluster" will encourage the integration of learning across disciplines and should be sequenced to enhance student intellectual development.
3. Living Learning Communities (LLC) which link students, courses and residence halls to broad themes or "big-questions" should be required in both the Fall and Spring semesters of the first-year. A one semester cluster is inadequate to introduce students to multiple disciplines that make up a "theme" or "big question."
4. LLC should continue to be linked to the preceptorial program, but they should also be structured around the core curriculum and ideally a theme. In other words, courses linked to the first-year Living Learning Communities should all count as core courses and relate to the theme. By linking LLCs to the core and a theme, students will engage in the USD intellectual experience throughout their first-year.
5. In the second, third, or fourth year, an advanced cluster should be required.
6. As part of the advanced cluster, students should be required to integrate their multi-disciplinary learning experience through a mechanism that verifies successful completion of integration (i.e., credit, pass/fail, portfolio, essay).
7. A committee that implements and evaluates the clusters should be established to maintain the vitality and sustainability of multi-disciplinary learning in the core. This committee can conduct assessment of clusters, recommend future clusters, and approve proposed clusters as part of the core curriculum.

Possible Issues and Possible Solutions

Issue 1: What will be the timing, structure, and content of an “advanced cluster”?

Departments and divisions with heavy major requirements expressed concern about the timing of an advanced cluster in a student’s curriculum. For example, Engineering students have little leeway after their first year to take anything other than core requirements, while Business Administration students have little leeway by their third-year. There are inter-disciplinary majors in the College that face similar limitations. Our working group discussed a variety of solutions, which included allowing divisions to “opt-out” of an advanced cluster or allowing students to select an enhanced component (such as a major capstone) or an advanced cluster. The working group strongly recommends that all students experience multi-disciplinary learning and propose the following solutions:

Solutions:

a. Sophomore cluster based on diversity, CIT, or writing

Rather than require an advanced cluster related to a student’s major or general area of specialization in the third or fourth year, all students could be required to participate in a second-year (sophomore level) cluster. Ideally this cluster could tie together core requirements for areas such as diversity, the catholic intellectual tradition (CIT), or writing. For example, students could select two courses out of five that were linked together as a set of core requirements for diversity. Here they would explore a variety of interpretations of power and privilege across disciplines. Similarly, students could select two courses out of five that were linked together as a core CIT requirement. Here they would explore theology and ethics across disciplines. Attachment A diagrams a simple first and second year cluster model based on a linkage of key core courses.

b. Core cluster or advanced cluster

Although we like the second-year core cluster model, we also want to see faculty develop innovative third-and fourth-year clusters that require both students and faculty to think about their area of specialization across disciplines. Rather than limit all USD students’ opportunities to experience more complex integrations because of students in majors with heavy course requirements, we propose an advanced cluster with two options: 1) students can select a sophomore core cluster (described above) or 2) students select an advanced cluster based on a theme related to their area of specialization (i.e. climate change; environmental ethics; death and dying; art and the urban core; the business of politics). This option allows intellectual exploration at all levels of the core and with any departments or faculty who choose to participate. Students would pick the core cluster or the advanced cluster sometime during their second, third, or fourth year to graduate. Attachment B diagrams a cluster model which provides options through the fourth year.

Issue 2: What mechanism can we use to integrate student learning in the advanced cluster?

In our review of peer and aspirational institution cluster models, we found that the most successful cluster programs include a component requiring students to think purposefully about the connections they are making across disciplines. Our working group agrees that integration in a cluster must occur, at the very least, with common learning outcomes and possibly common

assignments. However, we also agree that a structured integration experience is ideal. We have itemized some suggestions for a mechanism to integrate student learning. We have listed our suggestions for integration in order of group preference, but understand that some divisions are concerned about adding a unit to a student's major course of study as an option.

Solutions (in order of preference)

a. 1 unit course attached to cluster

One option is one-unit course integrating the first-year (LLC) theme and a one-unit course integrating the advanced cluster. If resources are an issue, the one unit course for the advanced cluster is the most important. In this course, faculty and students will work together to make connections across disciplines through discussion, written assignments, and co-curricular experiences. See Attachment C for the two-tier cluster model linked to 1 unit integration courses.

b. Integrative essay

Another option is to require students to write an essay after the completion of the cluster course at both the first-year and the advanced cluster stages. Other universities, who require an integrative essay from students after the completion of a cluster, either hire staff to evaluate the essays or provide faculty with compensation for the change in workload. Santa Clara University requires students to complete their advanced cluster courses and write an integrative essay at the end of the third year about their cluster or pathway experience before they can petition to graduate. We recommend consulting with faculty, administrators, and students from Santa Clara to benefit from their lessons learned in implementing such a program. This could involve members of the USD community traveling to Santa Clara and/or vice versa.

Issue 3: How can we implement LLCs across two semesters? The working group has discussed concerns about the potential scheduling difficulty that implementation of a two-semester LLC requirement might cause different divisions. Although we sympathize with logistic concerns, we agree that the core should be guided by principles first. Research indicates that a full year living learning community is a more effective model for enhancing first-year student intellectual and community engagement. USD already assigns all first-year students to a "Spring Companion Course"; however, this course is currently not linked to the LLC theme. We propose that the companion course be intentionally linked to the theme or to another core requirement. The following solutions might help ameliorate any scheduling difficulties.

Solutions:

a. Include additional core courses in LLC during the second semester.

If the Fall semester links 8-9 courses under an LLC theme, the Spring semester could link 10-15 to provide multiple course options for students with heavy major requirements as early as the second semester of their first-year.

b. Link an English writing course to the LLCs.

Link several first-year English writing sections to each LLC (i.e., English 121). Require students to take their first-year writing class during the Fall or Spring of their first year. This will provide students with more scheduling options to link required courses to their LLC theme.

c. Pre-planning course schedules and creative advising.

The Honors Program already works with departments on scheduling the timing of their courses to avoid student conflict. LLC faculty directors can begin to work with departments concerned about student schedules as early as a year in advance to assure minimal conflicts between that major and the linked courses.

Issue 4: If the LLCs are linked through the preceptorial program and tied to the core, will departments/divisions lose majors? The working group held a second open forum on November 9, to discuss the relationship between the preceptorial program, the core and the LLCs. At that meeting, forum participants all recommended that the preceptorial program be linked to the LLCs. Participants also recommended that future LLCs be linked to the core curriculum and be adaptable to a broad-based theme. A few faculty expressed concern that departments who recruit majors through the preceptorial program, and who need to teach standard introductory major courses would be disadvantaged in a core-based LLC. After hearing these concerns, the working group reviewed data on the correlation between a student's preceptorial advisor and their major. Although it is clear that a majority of students who major in the sciences or engineering started in a science or engineering preceptorial, the correlation between the department (major advisor) and student major was fairly weak for USD undergraduates. The working group concluded that if there is adequate breadth in the core and that all majors work to offer preceptorial courses that there should be no problem linking LLCs to the core. We recommend that students intended to major in science or engineering be directed to a science/engineering LLC to assure departments can still "recruit" majors and students will have proper preparation for the major.

Solutions

- a. Make sure there is breadth in the core**

- b. All majors should try to offer core preceptorial courses.**

Attachment A: Simple First and Second Year Cluster

| First Year | Sophomore Cluster |
|--|---|
| <p data-bbox="345 615 605 846">Living Learning Community (Fall) Cluster of 7-8 linked courses</p> | <p data-bbox="760 594 1190 678">Possible Cluster Type (One or more of below available)</p> <p data-bbox="784 730 1166 772">Catholic Intellectual Tradition</p> <p data-bbox="914 825 1036 867">Diversity</p> <p data-bbox="922 919 1027 961">Writing</p> <p data-bbox="849 1014 1101 1056">Methods of Inquiry</p> <p data-bbox="930 1108 1019 1150">Other</p> |
| <p data-bbox="329 972 621 1203">Living Learning Community (Spring) Cluster of 10-15 linked courses</p> | |

Attachment B: Two-Tier Cluster Model

First Year Full-Year LLC (6 units, Fall and Spring)

- Students take 3-unit LLC class and 1-unit LLC seminar each semester of freshman year.
- Seminar brings together everyone in the LLC and includes field trips, guest speakers, discussions about LLC theme as well as university life, etc. Seminar also includes at least 1 final writing project.
- *Each LLC should include at least 1 writing course OR seminar should be more writing intensive

2nd, 3rd, or 4th year Advanced Cluster

Option 1: Core Cluster – (3)

Courses fulfill at least one of core requirements
(catholicity, diversity, breadth, writing)
Example: Ethics & Philosophy in Business

Option 2: Program-Specific Cluster (3)

courses fulfill requirements for specific majors
Example: The Energy Crisis
PHYS: Energy & the Environment
MARS: Impact of Energy Sources on Environment
ECON: Economics of Energy Production/Use
ENGR: Engineering next generation of Energy Sources
POLS: Impact of Policy on Energy Production/Use

Attachment C: Cluster Model with 1 unit integration course

Freshman Year: Full-Year LLC + Seminar (4 units/semester = 8 units)

-Students take 3-unit LLC class and 1-unit LLC seminar each semester of freshman year.
-Seminar brings together everyone in the LLC and includes field trips, guest speakers, discussions about LLC theme as well as university life, etc. Seminar also includes at least 1 final writing project.
*Each LLC should include at least 1 writing course OR seminar should be more writing intensive

Advanced Cluster + Seminar (4 units): Two Options

Core Cluster – (3)

Courses fulfill at least one of core requirements
(catholicity, diversity, breadth, writing)
Example: Ethics & Philosophy in Business

Program-Specific Cluster (3)

courses fulfill requirements for specific majors
Example: The Energy Crisis
PHYS: Energy & the Environment
MARS: Impact of Energy Sources on Environment
ECON: Economics of Energy Production/Use
ENGR: Engineering next generation of Energy Sources
POLS: Impact of Policy on Energy Production/Use

Project-Based Seminar (1)

Students work in small interdisciplinary groups to integrate different perspectives and develop a final project that synthesizes ideas and delves deeper into specific aspect of cluster topic. Guest speakers, possible field trips and discussions/debates will aid in project development.