College Curriculum Review Committee

Report for the Committee on Academic Planning

May 15, 2019

WAKE FOREST
UNIVERSITY

Contents

College Curriculum Review Committee Report for CAP

Executive Summary

This report is the culmination of several years' work, beginning with the Best Practices Task force charged with reviewing the "state of the field" in general education (spring 2017), followed by the formation of the College Curriculum Review Committee (CCRC) in September 2017 in collaboration with the Committee on Academic Planning (CAP). CCRC's 20 members include 14 faculty representing all divisions of the College, 3 students, and 3 faculty-administrators.

The last comprehensive review of the College's Core Curriculum was completed over twenty years ago (1999). Six years after that CAP conducted a focused review of the Core's size, recommending a reduction in the number of divisional distribution requirements from 12 to 8. In its review, CAP recognized the need for a comprehensive review and recommended forming an ad hoc committee "within 5 years" (by 2010) to consider revisions to the Core's structure.

The CCRC's recommendations fall into two categories: recommendations to be formally adopted and instituted by the Faculty and Administration and recommendations for further development, assessment, and resources (which could be brought forward by CAP for an official Faculty vote at the appropriate time).

The immediate recommendations include three areas that will form the basic structure of the Core Curriculum— Foundational Courses, Area Distribution Requirements, and 21st Century Citizenship requirements.
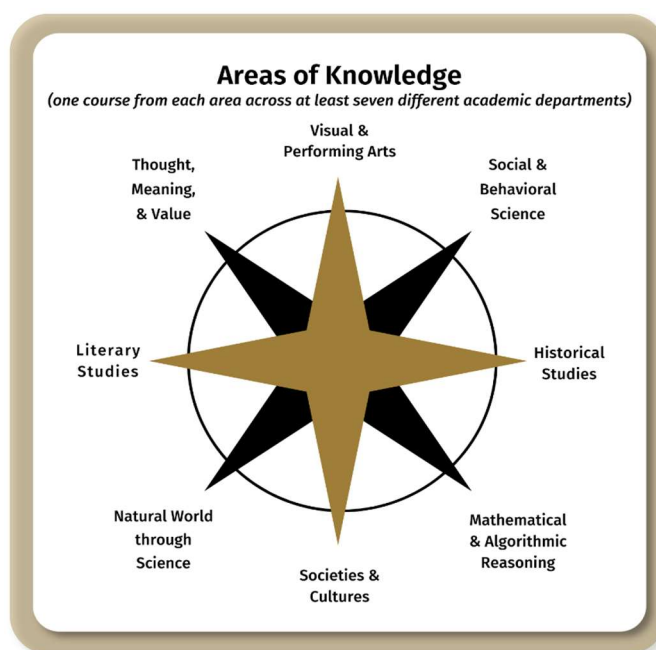
Foundational Courses

The Foundational requirements are equivalent to the current "Basic" requirements. Recommended changes, noted as follows, are relatively minor.

- First-Year Seminar (FYS): No changes recommended in the current requirement

- WRI 111: Phase out AP/IB exemptions over 3 years. AP students could take a (new) WRI course at the 200 level.

- Foreign Language: Maintain 200-level course requirement. Test pass/fail option for students taking 100-level language courses (department optional). This would be carefully assessed after three years.

- HES 100: Maintain requirement for HES 100 (Lifestyle and Health; 1h.). Make HES 101, currently required, an elective.

- Intensive Writing Requirement: Add a second "intensive" writing requirement for all students taken, ideally, in their major. This will require further development and planning. The Committee recommends forming a Task Force to develop the structure and parameters for this requirement.

Area Distribution Requirements

The Committee recommends changing distribution requirements from "divisionals," defined by departmental groupings, to "areas of knowledge" based largely on disciplinary groupings but with some flexibility. This is the most significant change to the Core Curriculum being recommended. Students would be required to take one course from offerings in eight Areas of Knowledge in *at least* seven different academic departments. This change addresses erosion in the coherence of the "divisional" requirements

Areas of Knowledge
(one course from each area across at least seven different academic departments)

Visual & Performing Arts
Social & Behavioral Science
Thought, Meaning, & Value
Historical Studies
Literary Studies
Mathematical & Algorithmic Reasoning
Natural World through Science
Societies & Cultures

over time. The Core distribution requirements have gradually shifted from 12 courses spread across 13 departments to 8 courses over 20-22 departments. The growing number of departments in existing Divisions, coupled with the reduction in the total number of required core courses, proves challenging to divisional coherence and shared purpose.

The Committee recommends that the Curriculum Committee oversee the approval process of courses proposed for each Area of Knowledge. While the Areas of Knowledge are not defined strictly by departments (as they are in current Divisions), there is every expectation that the vast majority of course will come from the "typical" departments listed with the criteria and parameters for each area.

21st Century Citizenship Requirements

In addition to Areas of Knowledge, students will also be required to take at least one course in each of four categories designed to meet learning outcomes important for what we are calling "21st Century Citizenship." 21st Century Citizenship requirements may be met in major, minor, elective, or core courses (with the exception of Foundational Courses).

- Cross-Cultural Analysis (CCA): Through qualifying courses, students will explore and gain insights into cultures and societies from "non-Western" civilizations as a way to prepare for the globalized and interconnected world of the 21st century.

- Diversity and Community in the U.S. (DCUS): In these courses, students will explore the diverse makeup of the U.S. as well as issues in the national community related to social identities, demographic changes, and justice and equity.

- Ethical Inquiry (EI): In these courses, students reflect upon human values, character, and conduct, and are empowered to become ethical agents in their communities, both at Wake Forest and beyond.

- Quantitative Data Analysis (QDA): In qualifying QDA courses, students will develop critical and analytical skills and apply them to the analysis and interpretation of real-world quantitative information from a given area of study.

Recommendations Requiring Further Development

The Committee considered several recommendations that will require further research and development. These include (1) continued development of the First Year Experience (FYE 101) seminar currently in pilot, and (2) further study of an ePortfolio system that would support key learning outcomes of the Core Curriculum. CAP and the ODOC should collaborate with the appropriate standing committees or form ad hoc committees as needed to advance these recommendations.

I. Preface - A Curriculum for the 21st Century

Wake Forest College has a core curriculum structure that has not undergone a comprehensive review in over 20 years. In fact, it has not changed in any significant manner in over 50 years. In that time, much has changed about the world, our society, our departmental offerings, our student body, and the needs of our students. General education best practices in higher education have evolved in significant ways as well.

Wake Forest proclaims its liberal arts tradition proudly, and rightly so. It is the core of our identity. The Core Curriculum—representing 40+ hours of credit in a student's overall degree—lies at the heart of that aspiration. It represents our shared vision and the foundation of every undergraduate degree issued by the University. It should itself have a stand-alone identity as a coherent, connected, and well-defined general education program. It should not be perceived as a mere sampling of introductory courses in several disciplines. The College Curriculum Review Committee's (CCRC) recommended Core structure and the language around each of its requirements present an integrated curriculum based on areas of knowledge and other requirements that together specify what constitutes the College's foundational learning stemming from and also broadening the scope of disciplinary knowledge.

The resulting recommendations outlined in this report fall into two general categories. The first are recommendations to be formally adopted and instituted by the Faculty and Administration. CCRC recommends separate faculty votes on each of these proposals for Fall 2021 implementation unless otherwise indicated. The second set of recommendations will require further development, assessment, and resources. Ultimately, these options could be

brought forward by the Committee on Academic Planning (CAP) for an official Faculty vote at the appropriate time.

Key priorities going into this review included developing:

- Student Learning Outcomes (SLOs) relevant for the 21st century.

- A course distribution structure that ensures engagement with key areas of knowledge, ways of knowing and thinking, and important skills needed for this world. It should also be plainly coherent.

- Cultural diversity requirements that are clear in purpose and relevant to our students.

II. Background and Timeline

The last comprehensive review of the College's Core Curriculum[1] was completed twenty years ago (1999). The most significant proposals coming out of that review were for the introduction of Cultural Diversity and Quantitative Reasoning requirements (which are still operative today). No other changes to the basic and divisional distribution requirements were recommended. Six years later (AY 2005-06), the Committee on Academic Planning (CAP) conducted a focused review of the Core's size, ultimately recommending a substantive reduction in the number of divisional distribution requirements from 12 to 8. That recommendation was passed in a close faculty vote. In the course of its review, CAP noted that a number of schools were instituting innovative changes in their general education curriculum requirements. While a comprehensive review was beyond the capacity of CAP at that time, the committee urged forming an ad hoc committee "within 5 years [by 2010]" to consider an assessment and revision of the core structure (April 2006 Report).

In the winter of 2016, Dean Gillespie formed a Best Practices Task Force charged with reviewing the "state of the field" in general education. The Task Force presented its findings to Department Chairs at their May 2017 retreat and recommended forming an ad hoc committee to conduct a comprehensive Core Curriculum review. The Chairs unanimously agreed.

In the September 2017 College Faculty meeting, Dean Gillespie announced the formation of the College Curriculum Review Committee (CCRC). Its 20 members include 14 faculty representing all divisions, 3 students, 3 faculty-administrators, and the ODOC Presidential Fellow each year. See page 15 for a full list of committee members. It was agreed that the CCRC would report its findings and recommendations to the standing faculty Committee on Academic Planning (CAP) and involve CAP members in its process as much as possible.

The CCRC's charge was to "conduct a comprehensive review of the College's general education requirements and recommend revisions that will best serve the interest and needs of our students." While certainly cognizant of and sensitive to the significant ways curriculum changes may affect departments, programs, and faculty, both positively and negatively, the Committee has been resolute in its commitment to the interest and needs of our students throughout its review. The Committee spent most of the 2017-18 academic year gathering data, holding focus groups with students and faculty, and conducting extensive surveys of students, faculty, and alumni in an effort to develop a new set of Student Learning Outcomes (SLOs) to replace the "Core Education Competencies" finalized by Department Chairs in August 2014 (See Table below). These competencies had been developed primarily for the purpose of designing an effective assessment regime in anticipation of the 2016 SACSCOC reaffirmation of accreditation. Put another way, they were developed with the current

Core Educational Competencies for 2016 SACS Review

Fundamental Competencies
- Critical Reading
- Quantitative Literacy
- Communication

Higher-Order Competencies
- Inquiry & Analysis
- Critical Thinking
- Creative Thinking

Global Engagement Competencies
- Intercultural Learning
- Social Relevance

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[1] To be clear about language, the "Core Curriculum" at Wake Forest includes "Basic" requirements (FYS 100, WRI 111, 200-level foreign language, HES 100 & 101), "Divisional" requirements (8 courses in Divisions I-V), and additional requirements (Cultural Diversity and Quantitative Reasoning). Our "Core Curriculum" is equivalent to "General Education" or "Gen Ed" in the parlance of Higher Education. We will utilize all of these terms throughout this document.

Core Curriculum in mind.

The new SLOs, tentatively approved by the Faculty, served as goalposts for considering specific Core requirements. Over the summer of 2018, working groups explored various options and presented these to the larger committee at a retreat in August. The committee spent much of the fall term deliberating and finetuning various options. The structure was then presented to departments and programs in October and November for feedback, followed by further refinement. The committee also consulted closely with the Committee on Academic Planning. The recommendations herein are thus the result of a conscious deliberative process with all core constituencies.

In sum, a Core Curriculum update is warranted for several reasons. First, the Core Curriculum should be designed to meet the needs of students in the 21st century world, one quite different from that of twenty or more years ago. It is the College Faculty's responsibility to keep the Core up to date and to meet the needs of our students. The Leap Campaign report published by the American Association of Colleges & Universities in 2005 makes a convincing case for this. Second, many of our peer and aspirational schools have conducted major general education reviews over the last 10 to 15 years. The Best Practices Task Force noted important trends coming out of those reviews, most particularly a shift toward more explicit distribution requirements and clearer links to student learning outcomes. Finally, it is important to remember once again that CAP, in its 2006 review, recognized the need for a thorough review and update of the Core Curriculum.

To understand the curriculum changes being recommended, it is helpful—indeed imperative—to understand our current Core in historical perspective. Although the structure has not changed in some time, the number of academic departments has grown and the number of Core course requirements has been reduced. The result has been a decided loss of coherence.

III. The Core Curriculum in Historical Perspective (see Appendix 1)

Prior to 1971, students were required to take between 12 and 14 courses in 12 departments. In particular, students were required to take a course in composition, English literature, religion, philosophy, history, mathematics, 2 out of 4 courses in social science departments, and 2 in the natural sciences. Putting aside the priorities reflected in the

specific requirements, what we can say is that this structure had considerable coherence. Students understood what was being required of them and why.

With the adoption of four Divisions in 1971, students were offered greater flexibility. But they were still required to take 12 courses across roughly 13 departments. They still had to take at least one course in each of English literature, history, philosophy, religion, plus a course from each of 2-3 out of 4 science departments, and each of 3 out of 4 social science departments or groupings. Mathematics fell out as a specific requirement; but given that three courses were required between 4 science departments, most students likely still took a math course. In short, the shift to divisions generally maintained the coherence of the structure and the aim for each course requirement was clear.

The addition of a fifth division for the fine arts in 1996 ensured that students took at least one course in the fine arts, which included three departments (art, music, and theater). Prior to this, students might have avoided a course in the fine arts by taking three courses in literature in what was Division I at that time. Faculty obviously concluded that the fine arts deserved its own division/course requirement, which ultimately added greater coherence to the Core requirements. Not much else changed in the 1996 curriculum review.

A vote in 2006 to reduce the number of Core distribution requirements from 12 to 8 offered students greater flexibility and also prohibited AP credit as counting toward the Core. These were positive changes. The downside, however, was a diminished coherence of the general structure. The reduction in requirements, coupled with an increasing number of departments in some divisions meant that now students must take 2 courses out of 4 relatively different departments in Division I; 2 out of 7 departments in the social sciences (now Division IV); and 2 out of 5 (6 if HES is added and 7 if Engineering is added) departments in Division V ("Mathematics and the Natural Sciences"). So, from 1971 to the present, the Core distribution requirements have gradually shifted from 12 courses spread over roughly 13 departments to 8 courses spread over 20 departments (22 if HES and EGR are added). **Several of the Divisions as currently configured lack coherence as a unit because of the growing number of departments lacking a shared learning outcome.** *CAP understood this loss of coherence at the time and also recognized that other schools across higher education were*

developing novel distribution structures to address similar trends. This is precisely why CAP recommended a formal review of the Core curriculum within 5 years—something beyond the capacity of a standing committee to conduct.

We are now 13 years beyond that recommendation. Even without the reduction in distribution requirements, increasing numbers of departments in each of the traditional categories (humanities, fine arts, social sciences, and natural sciences) has resulted in **diminished coherence to the structure of the Core.** A student could navigate the current curriculum without taking a course in history, philosophy or religion, mathematical reasoning, a qualitative social science, or a course that focuses on the scientific method. The result is that **many courses taken within the Core curriculum lack a clear sense of the specific knowledge area or way of thinking that applies to it.** In addition to preserving coverage of knowledge areas such as literature, the fine arts, and the social sciences, the new structure ensures that all students take at least one course in historical analysis, philosophy or religion, mathematical or algorithmic reasoning, a qualitative social science, and the scientific method. The 21st Century Citizenship requirements also ensure that they take a course covering quantitative data analysis, cross-cultural analysis, diversity and community in the United States, and ethical inquiry.

IV. CCRC Recommendations for Adoption

A. Foundational Courses

The proposed "Foundational Courses" are analogous to the current Basic requirements. Essentially, the Committee proposes maintaining First Year Seminars and the 200-level foreign language requirements, strengthening the writing requirement, and reducing the HES course requirements.

1. Writing 111 or Advanced Writing

The Committee recommends (1) gradually removing exemptions for the freshman writing requirement and (2) adding an intensive writing requirement, ideally through a course in the student's major.

At present, approximately one-third of incoming students are exempted from taking the WRI 111 requirement by

scoring a 4 or 5 on either the AP Language/ Composition exam or the AP Literature/ Composition exam, or by scoring 6 or 7 on the International Baccalaureate (IB) English Language subject test. Following a recommendation submitted by the Writing Program faculty (2013), the Committee concluded that AP/IB work completed while in high school would more appropriately serve for "advanced placement" (as the name suggests) rather than exemption. The great majority of students who are currently exempted from WRI 111 based on AP/IB scores will not take a writing course at Wake Forest before they graduate. Given that surveyed faculty (80% response rate) ranked "writing clearly and effectively" as one of the two most important learning outcomes for our students, the general lack of emphasis on writing instruction in the Core Curriculum seemed an obvious lacuna.

In 2013, the Writing Program faculty recommended dropping these exemptions because AP/IB English exams are not a reliable measure—nor are they intended to be—of student writing abilities. More specifically, the Writing Program faculty recommended revising the College policy so that (a) fewer students receive course credit for WRI 111 and (b) students who earn high scores on the AP Lang/Comp exam or the IB English Language subject test receive advanced placement into a higher-level writing course, specifically WRI 210, WRI 212, or another (new) WRI course at the 200 level. The point of this second recommendation is that "advanced placement" should mean exactly that. CCRC concurs with this recommendation and requests that the Administration augment the Writing Program faculty as quickly as reasonably possible in order to phase out the AP 4 Lang/Comp and AP 4 & 5 Literature exemptions by AY 2022-23 and the AP 5 Lang/Comp

Foundational Courses

(Foundational Courses cannot meet other core requirements; students are encouraged to complete these as early as possible.)

Writing 111 or Advanced Writing
200-Level Global Language
Health & Exercise Science 100
First Years Seminars (FYS)

exemption by AY 2024-25.[2] The Writing Program is completing an additional analysis to determine how IB exemptions should fit into the phased process.

In addition, CCRC supports adding a second "intensive" writing requirement for all students, taken after their first year, preferably in the major. This will require further development, however. Going forward, the Committee recommends forming a Task Force charged with developing the structure and parameters for this intensive writing requirement as well as a plan for implementation. Such a Task Force should consist of faculty representatives from the divisions and faculty from the Writing Program. Its recommendation(s) would be submitted to the Committee on Academic Planning (CAP) for consideration by the faculty.

2. 200-Level Global Language

The Committee recommends maintaining the existing 200-level language requirement. In addition, we recommend giving foreign language departments the discretion to offer students the option to take 100-level language classes pass/fail. This policy would be piloted for three years with a thorough review and assessment taking place in the 4th year.

Among our cross-admit schools, five require 4 semesters of a foreign language and three require 3 semesters. Among "exemplary" schools, there is a greater disparity, from no language requirement to 4 semesters. Based on an analysis of the 2016 and 2017 graduating classes, here are a few relevant statistics:

- 35% of students take 0 or 1 semester of foreign language to meet the current requirement (11% through exemption for native speakers or substitution granted by the Committee on Academic Affairs (CAA); 24% take just one course due to placement).
- 65% of students take an average of between 2.4 (French) and 3.9 (Arabic) courses to meet the requirement.
- Of students taking at least one language course to meet the requirement, 63% do so through Spanish, 15% through French, and 16% through Italian, Latin, or German.

- 6.3% of students take at least one course to meet the requirement through Chinese, Japanese, Russian, or Arabic.

From this we can conclude, first, that WFU is not out of line when compared to our cross-admit schools regarding its 4th semester foreign language requirement. Second, a significant portion of Wake students take considerably less than four semesters of foreign language. And, third, close to 80% meet the requirement in Spanish or French, the two most common languages available at the high school level.

Following discussions, surveys, and reviews of peer institution practices, the CCRC recommends: (1) maintaining our current 4th semester (200-level) foreign language requirement; and (2) giving students the option of taking the first three semesters pass/fail.[3]

Intermediate proficiency at the 200-level is the desired goal, enabling students to interact more effectively with the communities of these languages through written and spoken means. This level of ability to engage directly with the language and cultural heritage of diverse peoples aligns with the values of a liberal arts education and student learning outcomes in the Core Curriculum.

By giving students the option to take the 100-level courses pass/fail, we offer a lower-risk and lower-anxiety environment, which actually benefits any language study. It

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[2] The Writing Program estimates that these changes will require between 6-7 new faculty lines.

[3] Pass/Fail in 100-level languages would (A) be expanded to include first-year students who currently cannot take courses P/F and (B) would not count towards the total 18

hours of P/F credit a student may have on their transcript. Any student could opt to take 100-level language courses for a grade if desired.

may also encourage students to try a new language that was not offered in their high school.

Of course, the concern here is that by taking their 100-level classes pass/fail, students will work less and thereby achieve diminished proficiency. We have data to suggest, however, that this is not the case. The Spanish department has offered this pass/fail option (C- or better) to second year and above students since 2016. Their data suggests a negligible difference between SPA 153 pass/fail students in their 212 class (which must be taken for a grade) and those who took SPA 153 for a grade. Additional data needs to be gathered, however, to study the impact of this policy. Thus, the committee recommends gathering data for three academic years once this policy is in place and conduct a formal review in the 4th year.

3. Health & Exercise Science

The Committee recommends (1) maintaining the requirement for HES 100 (Lifestyles and Health; 1 h) for all students, and (2) changing HES 101 (Exercise for Health; 1 h) to an elective course.

At present, all students are required to take HES 100 (Lifestyles and Health) & HES 101 (Exercise for Health). For varsity athletes and ROTC students, HES 112 (Sports Proficiency) substitutes for HES 101. Relatively few of our peer and aspirational schools have an "Exercise for Health" course requirement. Since opportunities to engage in self-selected physical activity appropriate to the needs, abilities and interests of our students have proliferated on and near our campus, the Committee (with helpful feedback from HES faculty) deems "Exercise for Health" to be best suited as an elective course option. Additionally, research presented by the President's First Year Experience Commission and by HES faculty emphasize the benefits of formal lifestyle and health instruction, and thus, the Committee recommends retaining the HES 100 requirement as part of the Core Curriculum.

4. First Year Seminars (FYS)

The Committee recommends maintaining the current First Year Seminar requirement for all first-year students.
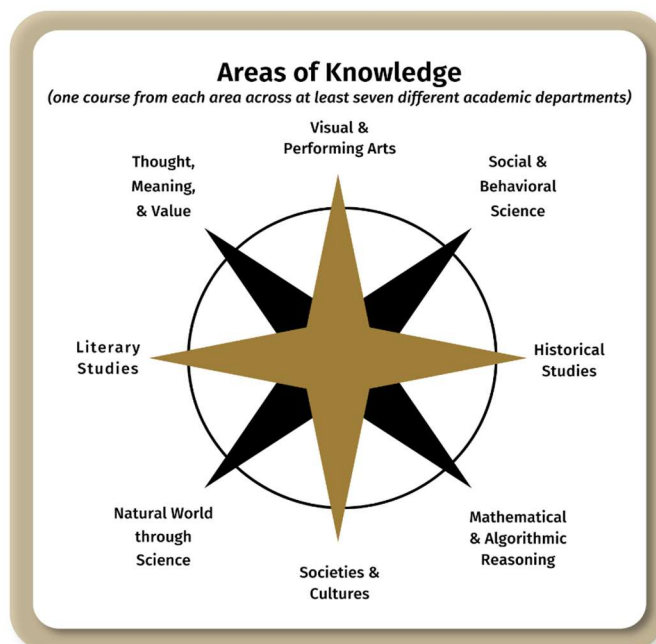
In addition to the current objectives and learning outcomes for FYS, the Committee also recommends that the FYS Committee give serious consideration to adding "oral communication" as an important learning outcome. While "oral and written communication remain targeted student learning outcomes, there is no specific Core Curriculum requirement for oral communication. The Office of the Dean of the College may want to consider working with CAP and the FYS Committee to create an ad hoc committee to explore ways of integrating oral communication into First Year Seminars and the curriculum more broadly.

B. Area Distribution Requirements | Moving from Divisions to Areas of Knowledge

The Committee recommends changing distribution requirements from "divisionals," defined by departmental groupings, to "areas of knowledge." This is the most significant change to the Core Curriculum being recommended. Students would be required to take one course in each of eight Areas of Knowledge (AoK). No more than two of a student's eight required AoK courses may be taken in any one department. In other words, students must meet their eight AoK requirements in no fewer than seven different academic departments. Finally, all AoK courses must be taken through departments or programs within the College.

Distribution requirements remain a key feature at the overwhelming majority of colleges and universities. Since the early 20th century, the typical liberal arts distribution requirements have included the humanities, social sciences, and natural sciences. The humanities were variably divided between literature, the fine arts, and humanistic studies of

Areas of Knowledge
(one course from each area across at least seven different academic departments)

Visual & Performing Arts
Thought, Meaning, & Value
Social & Behavioral Science
Literary Studies
Historical Studies
Natural World through Science
Mathematical & Algorithmic Reasoning
Societies & Cultures

history, philosophy, and religion. The general message to students was this, "Take a variety of courses in departments spread out among these broad disciplinary categories. That's a liberal arts education." There was generally little emphasis on the relationship between the various courses a student might take. And the specific aim for each required course is simply that it fits into the general category (humanities, social science, natural science, etc.) of which it is a part.

The current Wake Forest College divisional structure replicates this traditional approach, but with some refinement. Students must take separate courses in literary studies and the fine arts, respectively. At one time, students were required to take a course in each of history, philosophy, and religion. Now it is two out of history, philosophy, religion, and women's gender and sexuality studies (WGS). They must also take two courses from a range of "social science" departments with considerable difference among them, and two from mathematics & natural sciences. *As noted previously, a student could navigate the current structure without taking a course in history, religion or philosophy, mathematical reasoning, a qualitative social science, or a course that focuses on the scientific method.* The result is that many courses taken within the Core Curriculum lack a clear sense of the specific knowledge area or way of thinking that applies to it. Thus, students may be unable to articulate the overarching purpose of this structure except to say that it ensures they take courses in different types of departments.

In recent decades, many of Wake Forest's peers have moved to more clearly delineated course distribution structures (see Appendix 2 for examples) designed to ensure that students (1) are exposed to a broad range of content and ways of thinking, and (2) understand the purpose of each course they take. Such structures also facilitate the student's—and the institution's—ability to articulate the principles and objectives of a liberal arts education.

The distribution structure being proposed by the CCRC is intended to achieve these same objectives. In addition to preserving coverage of knowledge areas such as literature, the fine arts, and the social sciences, the new structure ensures that all students take at least one course in historical analysis, philosophy or religion, mathematical or algorithmic reasoning, a qualitative social science, the scientific method, quantitative data analysis, cross-cultural analysis, the study of human difference, and ethical inquiry. For each requirement, the student (and the instructor) will understand and be able to articulate the specific aim of the course in terms of its

knowledge content and way of thinking or knowing. In short, this structure ensures coherence and coverage in a way that the current divisional structure does not.

The Committee, guided by the College's revised Student Learning Outcomes, explored a wide range of curricular options and distribution categories including some that would have been highly disruptive for faculty and departments. We endeavored to balance the needs and interests of our students in this rapidly changing landscape of higher education and employment with the feasibility of implementing a meaningful change for all involved—students, faculty, staff, and administrators alike. Accordingly, we settled on a curricular framework that more clearly communicates the knowledge content and learning for each distribution requirement.

Based on requests from departments, the Committee is conducting a preliminary review of all classes meeting current divisional requirements. The overwhelming majority of current divisional courses fall under at least one of the proposed Areas of Knowledge. A preliminary list of the CCRC's divisional course analysis has been shared with and is being reviewed by departments. Once this review is complete, the Committee will recommend that these courses be pre-approved by the Curriculum Committee. All other courses must be submitted directly to the Curriculum Committee for review.

C. 21st Century Citizenship Requirements

In addition to Areas of Knowledge, students will also be required to take at least one course in each of four categories designed to meet learning outcomes important for what we are calling "21st Century Citizenship." 21st Century Citizenship requirements may be met in major, minor, elective, or core courses (with the exception of Foundational Courses). These courses may count toward the Areas of Knowledge requirements (i.e., double dipping is allowed), but a course may count toward no more than one of the Citizenship areas. All courses meeting the Citizenship requirements must be reviewed and approved by the College Curriculum Committee.

In Cross-Cultural Analysis (CCA) courses, students will explore and gain insights into cultures and societies from "non-Western" civilizations as a way to prepare for the globalized and interconnected world of the 21st century. These courses include a focus on Africa, Asia, the Caribbean,

Latin America, indigenous cultures of Oceania and North America, stateless or diasporic peoples, or may also take a comparative approach that includes Western and non-Western perspectives.

In courses meeting the Diversity and Community in the U.S. (DCUS) requirement, students will explore the diverse makeup of the U.S. as well as issues in the national community related to social identities, demographic changes, and justice and equity. These courses introduce students to issues across the contemporary United States and to the practices or structures that inhibit and/or foster inclusivity and diversity. Together, CCA and DCUS replace the current Cultural Diversity (CD) requirement.

The Ethical Inquiry requirement addresses a discerned need for a new student learning outcome that many schools have added and one that is also prominent among AAC&U's LEAP objectives. In these courses, students reflect upon human values, character, and conduct, and are empowered to become ethical agents in their communities, both at Wake Forest and beyond. Through engagement with diverse moral and cultural traditions, students will learn to evaluate competing ethical claims, recognize moral complexity, and respond thoughtfully to disagreement. They will also develop the capacities of reasoning, judgment, and character needed to make ethical decisions and lead ethical lives.

Finally, students will be required to take one course in Quantitative Data Analysis. In these courses, students will develop critical and analytical skills and apply them to the analysis and interpretation of real-world quantitative information from a given area of study. These courses will teach students to examine, evaluate, and critique quantitative data; to identify patterns; to summarize features of data sets; to create and interpret visualizations; and to provide interpretive insight into raw data sets. Students will also develop the ability to apply and evaluate quantitative evidence in argumentation in broad contexts. Together, the QDA requirement and the Mathematical and Algorithmic Reasoning area of knowledge replace the current Quantitative Reasoning (QR) requirement.

Departments and Programs will be required to submit 21st Century Citizenship course proposals to the standing College Curriculum Committee for review.

21st Century Citizenship

(21st Century Citizenship courses may come from approved Knowledge Area, major, minor or elective courses.)

Cross-Cultural Analysis
Diversity and Community in the United States
Ethical Inquiry
Quantitative Data Analysis

1. Areas of Knowledge and 21st Century Citizenship Course Approval Process

Divisional courses are currently approved by individual departments. Cultural Diversity and Quantitative Reasoning courses are proposed by departments, but approved by the Curriculum Committee. With this new curriculum structure, CCRC recommends that the Curriculum Committee review and approve all proposed Knowledge and 21st Century Citizenship courses based on the parameters and criteria detailed in Appendix 3. The Curriculum Committee would be divided into 5 "sub-committees," each assigned to a Knowledge or 21st Century Citizenship area.

Following suggestions from faculty, CCRC has conducted a preliminary review of all courses currently meeting divisional requirements according to the proposed Areas of Knowledge. These recommendations are still being reviewed by some departments. The committee has done its best to respond to the input and feedback received and will make its final recommendations to the Curriculum Committee available once they are finalized. If a department wishes to propose other courses or to propose any of the pre-approved courses for an additional Area of Knowledge, they may do so through a formal approval process if and when the distribution structure is approved by the Faculty. The same would hold true for courses meeting the 21st Century Citizenship requirements.

In terms of process, the sub-committees of the Curriculum Committee for each respective Area of Knowledge and 21st Century Citizenship area would review proposals submitted by departments and submit their recommendations, including actual committee vote counts, to the full Curriculum Committee. If there are questions or concerns about the course proposal, the sub-committee may go back to the Department for a response or additional information.

We envision this being a collaborative, not adversarial, process that will hopefully lead to an approved course that meets the objectives and criteria for the Area of Knowledge in question. If a course proposal is rejected, the Department will have an opportunity to make its case in an appeal to the larger Curriculum Committee. Finally, the Committee envisions an easy to manage web interface for departments and faculty to submit courses for approval. There are several good examples from other schools that could serve as models. Preliminarily, required information might include:

- Course title

- Knowledge or 21st Century Citizenship Area

- Brief course description

- Support for why it meets the stated criteria for the Knowledge or 21st Century Citizenship Area in question (scope, learning objectives, readings, assignments, etc.)

- Qualifications of faculty who will teach this course

2. Aspirational Learning Outcomes

Last May (2018), CCRC presented a new set of Student Learning Outcomes to faculty for tentative approval. In a straw poll, faculty approved these SLOs, which served as goals and yardsticks for considering possible new Core Curriculum requirements. Association of American Colleges & Universities is the leading national association concerned with the quality of student learning in college. With over 1,300 institutional members, it launched the LEAP campaign (Liberal Education and America's Promise) in 2005, which identified critical learning outcomes essential for students in the 21st century. The LEAP essential learning outcomes have served as a template for many schools in recent years in their Gen Ed curriculum reviews. Appendix 4 shows two slides from CCRC's May 2018 presentation to faculty. One compares our current Core Education Competencies to the LEAP essential learning outcomes; the other compares those same Core Competencies to CCRC's proposed learning outcomes. These learning outcomes were aspirational, since the Committee was well-aware that some might be impossible to achieve for any number of reasons. Hence the following qualifying statement was included in the proposal: "If all SLOs cannot be addressed given the limited parameters of a Core Curriculum, the Faculty will have an opportunity to review and approve any changes when a new Core Curriculum is brought forth for a final vote."

The Committee made every effort to formulate curriculum requirements to achieve the SLOs tentatively approved by the Faculty last May. Unfortunately, the Committee concluded that several SLOs, or elements within them, are not achievable at this time given available resources. For example, despite strong support and considered consultations, the Committee could find no way to ensure that all students would fulfill a "creative expression" requirement prior to graduation given the limited course offerings and seats currently available in courses that would support this student learning outcome. Information literacy and civic knowledge/engagement are two other learning outcomes that we were unable to ensure for ALL students. The key hurdle here is "all students." There is little question that the vast majority of our students acquire important skills and learning abilities related to all of these outcomes. But without specific Core Curriculum requirements linked to each of these learning outcomes, there is no way to ensure that every student is covered.

It is worth remembering that these new SLOs will replace our current Core Competencies, which have served to define the assessment regime instituted and required for the University's SACSCOC accreditation (See page 5 of this report). Accordingly, it is essential that the College measure and assess achievement for every student with respect to each stated learning outcome that we adopt through this CCRC process.

Instead of abandoning these few learning outcomes (which cannot be achieved directly by completion of one of the currently recommended areas of knowledge, 21st century citizenship, writing, foreign language, or HES course

requirements), the Committee recommends shifting them to a list of "aspirational" learning outcomes to be tracked, assessed, and creatively pursued for as many students as possible. The list of aspirational learning outcomes would become:

- Information literacy
- Creative expression
- Civic knowledge & engagement

For example, appropriate designations such as IL (information literacy), CE (creative expression), and CKE (civic knowledge & engagement) could be linked to qualifying courses and faculty could be incentivized to add these outcomes to classes they are already teaching. More work is needed on how to institute such a system without it becoming bureaucratically onerous. But the Committee and many of our colleagues within the College feel that these learning outcomes, while perhaps not universally achievable at this time, remain important and worth tracking over time. The final recommended SLOs are shown below with full descriptions in Appendix 5.

Proposed Student Learning Outcomes

Intellectual Abilities, Competencies, Skills
- Written & oral communication
- Critical & analytical thinking
- Quantitative literacy & applied data analysis
- Arts literacy

Personal and Social Responsibilities
- Intercultural knowledge & cultural competence
- Ethical reasoning

Integrated and Applied Learning

V. CCRC Recommendations Requiring Further Development

The Committee considered several recommendations that will require further research and development. The Committee on Academic Planning (CAP) and the Office of the Dean of the

College should collaborate with the appropriate standing committees or form ad hoc recommendations.

A. First Year Experience FYE Seminar

The First Year Experience (FYE 101) two-year pilot course was created by the Office of Academic Advising under the Dean of the College with extensive collaboration with Campus Life partners as part of a broader effort to extend the incoming student orientation experience and make learning about the transition to college more meaningful and enduring. The course is organized around three "pillars" for smooth transitioning: academic success; wellbeing; and living in community.

In Spring 2016, the College Faculty approved a two-year FYE 101 pilot of up to 10 sections, each capped at 20 students, with a maximum total enrollment of 200, to be co-taught by permanent faculty and staff from Campus Life and the Office of Diversity & Inclusion.

Longstanding research in higher education documents that while the tradition of providing a formal Orientation for new students is well intended, Orientation is short-lived and occurs before new students have any real college experience. Extending orientation goals through credit-bearing learning opportunities facilitates more successful transitioning. In the FYE 101 pilot courses, students focused on core issues: how to be a good student in the classroom; how to promote and achieve wellbeing as a college student; how to live in a diverse community (political, cultural, socio-economic, religious, racial, ethnic, gendered, etc.); and how to find the resources they need (counseling, academic, financial, etc.). Students also explore the meaning and value of a liberal arts education, as well as learn and practice deliberative dialogue as a method of discussing differences and exploring solutions to problems across difference.

Overall student satisfaction with the FYE 101 course was high in both years of the pilot. Students believed the course better prepared them to be successful in their academics, to be able to take care of themselves emotionally and physically, to find the campus resources they needed, to understand themselves and others and deal with difference, and to use deliberative dialogue methods to build stronger relationships with others.

The President's First Year Experience Commission reviewed the FYE 101 seminar extensively in its charge to review program options that would foster academic success,

personal wellbeing, and community enrichment, ultimately recommending that FYE 101 become a requirement for all first-year students. CCRC was equally impressed with the FYE 101 pilot and its fit with the revised SLOs. Questions remain with respect to how this course would be delivered, its ultimate curriculum structure, and resources needed to accommodate approximately 1400 students each year. Given these unresolved questions and the likely multi-year build-up that would be required to accommodate all incoming students, CCRC concluded that future development of this seminar should be the purview of a collaborative effort between CAP and the Office of the Dean of the College. At the appropriate time and with additional information and detail, CAP may consider proposing to make FYE 101 a requirement of all first-year students. Based on the information in hand, CCRC strongly supports such an effort. At that time, it would be appropriate to consider if FYE 101 and HES 100 might be merged or linked so that all students would take it in the first year. Since these courses share a limited number of objectives in terms of student wellbeing, they may reinforce each other.

B. ePortfolio

An ePortfolio is a collection of texts, images, media, and other electronic evidence of learning that is assembled and managed by each student with guidance and coaching by faculty and the institution. Well-designed ePortfolio systems serve four overlapping functions over time. Initially they document individual students' personal learning goals and early skills development. As students progress, ePortfolios document their skills and competencies in one or more topics or domains. When students approach graduation, their ePortfolios showcase exceptional work for potential employers or professional schools. Finally, an ePortfolio is a space for self-realization and self-expression throughout a student's college career.

Besides the materials selected by students, robust ePortfolios have "private reflections"—each with prompts or scaffolding questions as a starting point—that students complete at specific points in their college career. These reflections can be essential components to help students build bridges between prior and current learning, across semesters and among courses and disciplines. Making the self-reflection process explicit promotes integrated learning and the construction of meaning across the curriculum.

The President's 2018 First Year Experience Commission included ePortfolios among its key recommendations. Accordingly, an ePortfolio Interest Group, consisting of faculty and staff from across the College, is beginning a process of examining the pros/cons, options, and opportunities for adopting an ePortfolio system at Wake Forest. The CCRC Committee supports this pursuit largely because many of the potential benefits of ePortfolios support key learning outcomes of our Core Curriculum. In particular, ePortfolios, managed effectively, have enormous potential to foster integrative learning, perhaps the most important new student learning outcome identified by CCRC. Greater research is needed, however, to determine the most effective and efficient way to implement ePortfolios into the curriculum.

Among other skills and learning outcomes, ePortfolios develop and create opportunities for student reflection, allow students to demonstrate learning through multiple modes—visual, oral, and written—and promote development of technology literacy skills. In short, ePortfolios provide all students with a scaffolded process for discovering and exploring their role as a learner, making connections, and more intentionally connecting and applying their learning. Students can construct a view of their learning that is integrated, personal, and relevant to their lives.

An effective ePortfolio system will, however, require considerable administrative support, faculty buy-in, and student engagement. These are challenges beyond the scope or expertise of CCRC and will require time to thoroughly investigate and perhaps even pilot. Where it is done well, the impact on students is significant. Should the College ultimately decide to adopt ePortfolios, it should be rigorous, academically focused, and substantially more than a repository for student work or a student marketing tool for potential employers.

College Curriculum Review Committee Members
(AY 2017-18 & 2018-19)

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Appendix 1

WFU Core Curriculum History Summary

Core Before 1971	1971 Core (Basic & 4 Divisions)	1996 Core (Basic & 5 Divisions)	2007 Core (Basic & 5 Divisions)
1. English 111 2. English 112 3. English 153 4. English 156 5. Religion 100 level 6. Religion 200 level 7. Philosophy 111 8. History 111 9. History 112 10. Social Science—2 courses from 3 areas (Econ, Pol Sci, Soc/Ant) 12. Mathematics—one course 13. Natural Sciences—2-4 courses under 3 depts (Bio, Chem, Physics)	**Basic Requirements** (Eng Comp, Foreign Lang, Phys. Ed.) **Division I**—Language, Literature, and the Arts (3 crses./4 groups) • Eng. Lit • American Lit • Literature in translation • Fine Arts (Humanities 111) **Division II**—Nat. Sciences & Mathematics (3 crses/5 groups) • Biology • Chemistry • Physics • Physics-Chemistry • Mathematics **Division III**—History, Philosophy, Religion (3 crses in 3 depts) • History • Philosophy • Religion **Division IV**—Economics, Pol. Sci., Psych., Soc., Anthro. (3 crses from 4 groups) • Economics • Political Science • Psychology • Sociology & Anthropology	**Basic Requirements** (FYS, Eng. Comp., For. Lang., HES) **Division I**—Literature (2 crses/3groups) • Eng. Lit • American Lit. • Literature in translation **Division II**—Nat. Sciences & Mathematics (3 crses/4 groups) • Biology • Chemistry • Physics • Mathematics **Division III**—History, Philosophy, Religion (3 crses in 3 depts) • History • Philosophy • Religion **Division IV**—The Social & Behavioral Sciences (3 crses./5 depts) • Anthropology • Economics • Politics • Psychology • Sociology **Division V**—Fine Arts (1 crs./3 depts) • Art • Music • Theater Arts	**Basic Requirements** (FYS, WRI 111, For. Lang., HES) • Quant. Reasoning • Cultural Diversity **Division I**—Humanities (2 crses, 4 depts) • History • Philosophy • Religion • WGS **Division II**—Literatures (1 crs.) • English • English translation **Division III**—Fine Arts (1 crs) • Art, Music, Theater, Dance **Division IV**—Social Sciences (2 crses./7 depts.) • Anthropology • Communication • Economics • Education • Politics & Int'l. Affairs • Psychology • Sociology **Division V**—Natural Sciences (2 crses/5 depts) • Biology • Chemistry • Comp. Sci. • Physics • Mathematics & Statistics

Appendix 2

Course Distribution Models

The Traditional Department/Discipline-Centered Approach (e.g., Tufts, Emory, WFU, and others)

Humanities • Arts • Social Sciences • Natural Sciences • Mathematical Sciences

Contemporary Revisions to this Model

("cross-disciplinary" categories in red)

Cornell

(1 course in each of 10 areas; no double dipping)

Arts and Literature

Global Citizenship

Ethics and the Mind

Biological Sciences

Physical Sciences

Science and Society

Historical Analysis

Statistics and Data Science

Human Difference

Symbolic and Mathematical Reasoning

Dartmouth

World Culture Requirement—1 course in 3 areas: Western Cultures, Non-Western Cultures, Culture and Identity

Arts (1)

Literature (1)

Systems and Traditions of Thought, Meaning and Value (1)

International or Comparative Study (1)

Social Analysis (2)

Quantitative and Deductive Sciences

Natural Sciences (2)

Davidson

(1 course in each of 8 areas)

Historical Thought

Literary Studies, Creative Writing and Rhetoric

Mathematical and Quantitative Thought

Natural Science

Philosophical and Religious Perspectives

Social-Scientific Thought

Visual and Performing Arts

Liberal Studies

Duke

(2 courses in each in Knowledge Area and Mode of Inquiry

Areas of Knowledge

Arts, Literatures, and Performance (ALP)

Civilizations (CZ)

Natural Sciences (NS)

Quantitative Studies (QS)

Social Sciences (SS)

Modes of Inquiry

Cross-Cultural Inquiry (CCI).

Ethical Inquiry (EI).

Science, Technology, and Society (STS)

Emory

(2 courses each)

Math & Quantitative Reasoning (MQR)

Science, Nature, Technology (SNT)

History, Society, Cultures (HSC)

Humanities, Arts, Performance (HAP)

Humanities, Arts, Language (HAL)

Harvard

Gen Ed Program (beginning Fall, 2018)

4 Gen Ed Courses--1 from each of 4 perspectives

Aesthetics & Culture

Histories, Societies, Individuals

Science, Technology in Society

Ethics & Civics

1 Course from each of 3 main divisions of Arts & Sciences

Arts and Humanities

Science

Social Science

1 Course that demonstrates quantitative facility

Middlebury

Academic Categories (8)

Literature

The Arts

Philosophical and Religious Studies

Historical Studies

Physical and Life Sciences

Deductive Reasoning and Analytical Processes

Social Analysis

Princeton

Epistemology and Cognition (EC)—1

Ethical Thought and Moral Values (EM)—1

Historical Analysis (HA)—1

Literature and the Arts (LA)--2

Quantitative Reasoning (QR)—1

Science and Technology (STL/STN)—2

Social Analysis (SA)—2

Stanford

Thinking Matters Requirement (1st yr. students only)

Aesthetic and Interpretive Inquiry (2)

Social Inquiry (2)

Scientific Method and Analysis (2)

Formal Reasoning (1)

Applied Quantitative Reasoning (2)

Engaging Diversity (1)

Ethical Reasoning (1)

Creative Expression (1)

UNC

Physical and Life Sciences (PL, PX)—2

Social and Behavioral Sciences (SS, HS)—3

Humanities and Fine Arts (PH, LA, VP)—3

Communication Intensive (CI)—1

Quantitative Intensive (QI)—1

Experiential Education (EE)—1

U.S. Diversity (US)—1

North Atlantic World (NA)—1

Beyond the North Atlantic World (BN)—1

World before 1750 (WB)—1

Global Issues (GL)—1

U. Penn

Foundational Approaches

Writing

Foreign Language

Quantitative Data Analysis

Formal Reasoning and Analysis

Cross-Cultural Analysis

Cultural Diversity in the U.S.

Sectors of Knowledge

Society

History and Tradition

Arts and Letters

Humanities and Social Sciences

Living World

Physical World

Natural Sciences and Mathematics

Vanderbilt

Humanities and the Creative Arts (3)

International Cultures (3)

History and Culture of the United States (1)

Mathematics and Natural Sciences (3)

Social and Behavioral Sciences (2)

Perspectives (1)

William & Mary

Mathematics and Quantitative Reasoning (1)

The Natural Sciences (2)

The Social Sciences (2)

World Cultures and History (3)

Literature and History of the Arts (1)

Creative and Performing Arts (1)

Philosophical, Religious, and Social Thought (1)

Appendix 3

Areas of Knowledge and 21st Century Citizenship Requirements
Definitions and Course Parameters

<u>Areas of Knowledge</u>

Literary Studies (LIT)

Students read, analyze, and interpret significant creative texts; engage with aesthetics, literary history, and the placement of literature within its contemporaneous cultural contexts. Courses in this area:

- Introduce students to a significant body of creative writing organized by author, nation, culture, historic period, or theme

- Train students to write analytically using well-defined arguments based on creative texts, and to defend those arguments using appropriate textual support

- Explore the relationships between literature and linguistic complexity, aesthetic experience, history and place, and/or the cultural conditions of its creation

Typically includes courses in English, Classics, Foreign Languages, and the Interdisciplinary Humanities.

Visual and Performing Arts (VPA)

Students develop their ability to encounter confidently, interact with openly, and respond knowledgeably to the arts. These courses provide students with a vehicle for creativity, risk-taking, discipline, and profound inner reflection and communication.

Guided by professors who are artists/art scholars, courses in this area:

- Cultivate students' ability to engage with an artistic medium in intellectual and/or creative ways

- Allow students to engage with an artistic medium as a creator, performer and/or scholar

- Develop students' historical and/or analytical skills so they can demonstrate an understanding of the methods, traditions, materials, and current development of one or more of the arts

- Ask students to engage in and understand fundamental "creative practices" for the arts: creative thinking, imagination, investigation, practice, and reflection--including an appreciation of ambiguity and the important role of interpretation

Typically includes courses in Art, Music, Theater, and Dance.

Historical Studies (HIS)

Students engage in historical analysis that fosters an understanding of continuities and changes—political, social, economic, diplomatic, cultural, intellectual, artistic, scientific—through time. Courses in this area:

- Emphasize change over time

- Explore the transformation of institutions, ideas and behavior

- Recognize that the categories of social analysis are historical and historically contingent

- Enter imaginatively into languages, institutions and worldviews different from the present day

- Interrogate evidence as a central approach to historical analysis

- Engage in the analysis of the methods and theories with which scholars interpret the past

Most typically includes courses in History and Art History, but may also include a variety of courses from different disciplines.

Thought, Meaning, & Value (TMV)

In Thought, Meaning and Value, students develop a systematic and critical understanding of the philosophical issues or religious beliefs and practices that underpin systems or traditions of thought and meaning. Courses may focus on specific philosophical problems or religious issues, trace the history of particular schools or traditions or their appearance in specific periods of history or geographical contexts, or be more comparative in their approach. Courses in this area:

- Examine and develop an understanding of one or more religious tradition or philosophical area, topic, or figure, past or present

- Examine ways these systems or traditions influence individual beliefs, provide meaning, and/or shape social norms and values

- Introduce students to the primary texts, ritual practices, and/or other forms of discourse rooted in these systems and traditions

Typically includes courses in Philosophy, the Study of Religions, and Anthropology.

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Societies and Cultures (SAC)

Students examine social and cultural systems in order to understand how behaviors, ideas, and practices are socially organized. Courses in this area cover societies, theories, and methods of inquiry that explain the complex relationships between individual and social human behavior, including cultural, political, religious, linguistic, and economic institutions, systems, processes, and other issues of civic and public life. Students gain an understanding of the various factors that shape social and cultural outlooks.

Courses in this area:

- Describe different theories of how social institutions, systems, or processes work
- Explain the historical and cultural contingencies of the descriptions of human behavior, institutions, or systems through specific course content
- Demonstrate connections between societies and/or across historical periods in a single society

Typically includes courses from a wide range of disciplines, including Anthropology, Communication, Education, Politics and International Affairs, Sociology, Study of Religions, and Women's Gender and Sexuality Studies.

Social and Behavioral Sciences (SBS)

Students learn about scientific methods and knowledge in the area of social and behavioral dynamics. Students acquire skills in scientific discourses concerning the logic of questions and answers on human behavior: the ways in which facts and explanatory models are acquired, tested, challenged, and applied to individuals and social groups.

Courses in this area:

- Expose students to research-based empirical knowledge on human cognitive, communicative, social, and emotional processes and/or immerse students in empirical studies of the effects of cultural, economic, political, and social forces on human relationships and behavior both local and global
- Educate students with respect to the research methods and critical analytic tools for evaluating research findings in the social and behavioral sciences
- Critically evaluate the implications of scientific data and the relevance of social and behavioral research findings to individuals and societies.

Typically includes courses from Anthropology, Communication, Economics, Education, Politics and International Affairs, Psychology, and Sociology.

Mathematical and Algorithmic Reasoning (MAR)

Students focus on logical thinking, including the ability to draw deductive conclusions and to perform multi-step mathematical operations using quantitative operations, algorithmic reasoning, and/or symbolic logic. These courses emphasize the application of mathematical, deductive, and/or algorithmic methods.

Courses in this area develop students' ability to:

- Apply formal deductive reasoning methods to reach conclusions.
- Work competently with the language of mathematical symbols, especially numbers, and variables. Students may also learn to work competently with the language of algorithmic design, especially conditional decisions and iterative processes.
- Make multi-step inferences based on logical deduction, use algorithmic reasoning and abstraction, and/or draw statistical inferences.
- Combine skills in mathematical thought, algorithmic reasoning, or technical knowledge to apply these methods to theoretical and/or real-world situations and problems to reach conclusions.

Courses in this knowledge area are most commonly drawn from Computer Science, Engineering, and Mathematics and Statistics.

The Natural World through Science (NWS)

Students explore the world we inhabit—from the microcosm of the atom to the expanses of the universe—using experimentation, theory, and the scientific method. These courses may explore living and/or non-living systems, the human body, physical and chemical forces, the environment, climate and weather, geographic and geological principles, astronomical bodies and objects, engineering systems, or other principles of the physical, chemical, and biological world. Courses must include a laboratory component.

Courses in this area:

- Allow the student to answer scientific questions through investigation, experimentation, or modeling using the scientific method and laboratory skills;
- Provide insight into the structure and process of the natural world- physically, chemically, biologically, environmentally, and/or astronomically

Typically, courses come from Biology, Chemistry, Engineering, Health and Exercise Science, and Physics.

21st Century Citizenship (4)

The courses with attributes focusing on 21st century citizenship meet the following descriptions and may be carried by any 3-4-hour knowledge area, major, minor, or elective courses with the equivalent of at least 1 credit hour devoted to the area in question.

Cross Cultural Analysis (CCA)

Students explore and gain insights into cultures and societies from non-Western civilizations as a way to prepare for the globalized and interconnected world of the 21st century. These courses include a focus on Africa, Asia, the Caribbean, Latin America, selected indigenous cultures of Oceania and North America, stateless or diasporic peoples, or may also take a comparative approach that includes Western and non-Western perspectives. Courses in this group:

- Focus on any number of possible human endeavors, including economic, political, social, ideological, religious, and artistic ones;

- Involve the analysis, interpretation, and evaluation of differences between and within cultures, in historical and/or contemporary perspective;

- Encourage students to critically reflect on their own values, attitudes, and perceptions relative to the culture under study—that is, such courses should endeavor to both "familiarize the alien" and "alienate the familiar."

Diversity and Community in the United States (DCUS)

Students explore the diverse makeup of the U.S. as well as issues in the national community related to social identities, demographic changes, and justice and equity. These courses introduce students to issues across the contemporary United States and to the practices or structures that inhibit and/or foster inclusivity and diversity.

Courses in this group:

- Address at least one major dimension of identity in US communities from the following categories: race/ethnicity, women in the U.S., gender identity and sexual orientation, socioeconomic status, disability, religion, immigration status

- Explore primarily the contemporary United States, though relevant histories and/or global comparisons may also constitute part of the course

- introduce concepts such as structural impediments to equity, unconscious bias, cross-cultural communication, and/or disciplinary approaches to such topics

- Foster discussion and disagreement by recognizing that students come from a variety of experiences and backgrounds and seeking to engage students in these important discussions, not to discourage them from dialogue.

Ethical Inquiry (EI)

Students reflect on human values, character, and conduct, and are empowered to become ethical agents in their communities, both at Wake Forest and beyond. Courses in this group are devoted to the study of ethics and morality in at least one tradition or cultural context. Through critical inquiry, dialogues, and discussion, courses in this group equip students to:

- Engage diverse moral and cultural traditions, evaluate competing ethical claims, recognize moral complexity, and respond thoughtfully to disagreement;

- Understand important ethical issues, concepts, and practices, their relevance to daily life, and their implications for society;

- Develop the capacities of reasoning, judgment, and character needed to make ethical decisions and lead ethical lives;

- Identify, analyze, and evaluate their ethical values, commitments, and traditions.
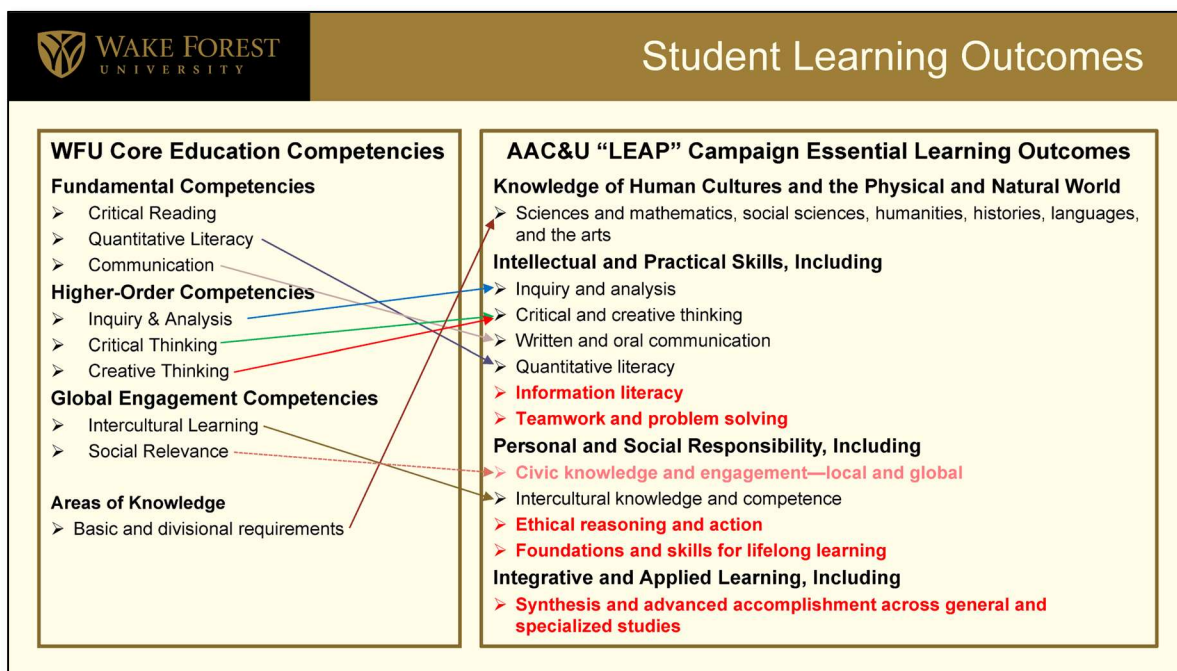
Quantitative Data Analysis (QDA)

Students develop critical and analytical skills and apply them to the analysis and interpretation of real-world quantitative information from a given area of study. These courses teach students to examine, evaluate, and critique quantitative data; to identify patterns; to summarize features of data sets; to create and interpret visualizations; and to provide interpretive insight to raw data sets. Students develop the ability to apply and evaluate quantitative evidence in argumentation in broad contexts.

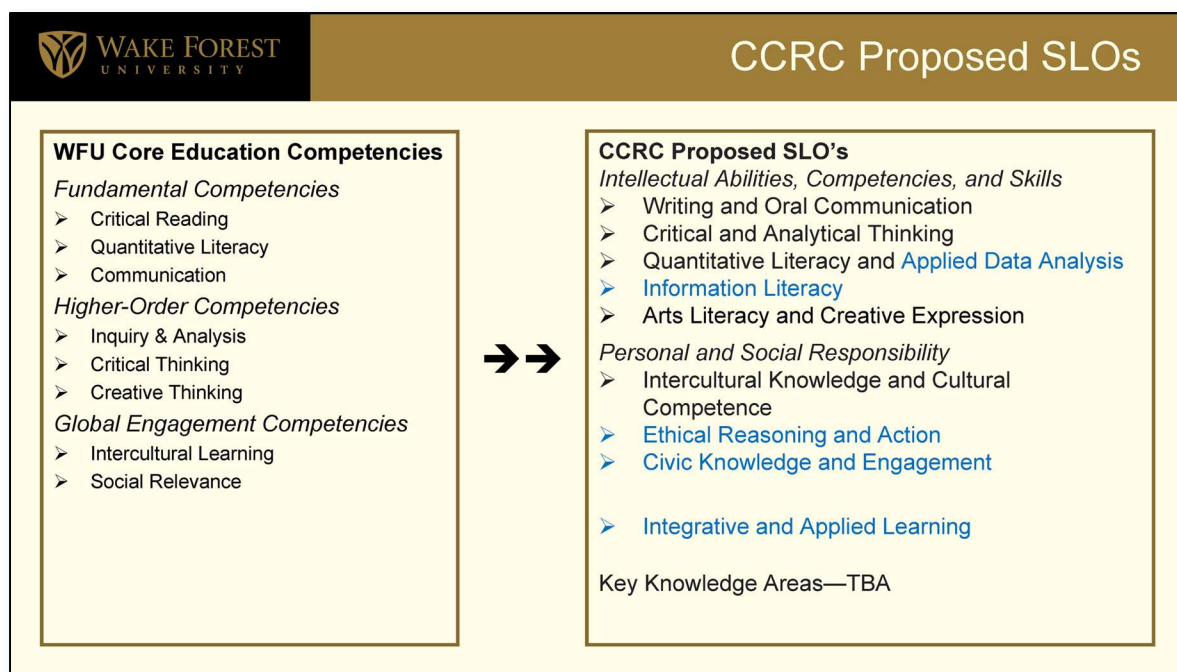Courses in this group ask students to:

- Analyze at least one important form of quantitative information and summarize the results of an analysis in ways that provide insight

- Perform analysis using mathematical methods and/or computational tools

- Evaluate choices made in selection, analysis, and presentation of quantitative information

- Apply these methods and evaluative skills to theoretical and/or real-world examples

- Examine some of the mistakes typically made in reasoning and problem solving.

Appendix 4

WFU Core Competencies and AAC&U "LEAP" Essential Learning Outcomes

WFU Core Competencies and CCRC Proposes SLOs (May 2018)

Appendix 5

Defined Student Learning Outcomes

Written and Oral Communication:

Students learn to communicate clearly, foster understanding and the exchange of ideas with others through effective use of writing and speaking as well as intentional listening practices. Students also have the opportunity to deepen communication skills through iterative experiences throughout the curriculum, developing conventions for writing and oral presentations appropriate to major fields of study.

Critical and Analytical Thinking:

Comprehensive exploration of questions and issues which require analysis, and on which reasoned reflection is called for; collection and evaluation of evidence; testing alternate points of view before formulating a conclusion; interpretation, construction, and evaluation of a wide range of discursive materials. Accordingly, critical thinking includes critical reading (texts), critical viewing (television, film, documentaries, art, visual media), and critical listening (presentations, speeches, etc.).

Quantitative Literacy and Applied Data Analysis:

An understanding of numerical data and the ability to work with it to reason, solve quantitative problems, and create and communicate evidence in support of an argument.

Arts Literacy:

An understanding of the arts and artistic practices, and/or engagement in and completion of a creative process.

Intercultural Knowledge and Cultural Competence:

A set of cognitive, affective, and behavioral skills and characteristics that support effective and appropriate interaction in various cultural contexts including different customs, values, modes of communication, and experiences.

Ethical Reasoning/Inquiry:

In the spirit of Pro Humanitate, the Ethical Reasoning/Inquiry requirement encourages students to reflect on human values, character, and conduct and empowers them to become ethical agents in their communities, both at Wake Forest and beyond.

Integrative and Applied Learning:

Teaches students to identify and use connections between and beyond areas of knowledge. This ability and tendency to synthesize knowledge enables them to assess and manage complexity, collaborate across difference, and transfer learning to practical solutions for novel problems.

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