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Curriculum Outline Yale-NUS College

Yale-NUS College offers an outstanding education in the liberal arts and sciences for 21st-century leaders. Our curriculum is driven by one central question: what does every educated person need to learn in order to contribute effectively to a modern society, culture, and economy, and to live a fulfilled life?

We offer a curriculum that is both broad and deep. The common curriculum, taken by all students in the college, spans the central knowledge and skills of the humanities and arts, the social sciences, the natural sciences, and mathematical and computational sciences. Students then select a major in order to achieve a more in-depth knowledge of one field of study, reaching a level of expertise that will permit them to enter the working world or to pursue graduate or professional education. Many of our courses pay special attention to comparative study of Western and Asian traditions, drawing on the liberal arts tradition of U.S. colleges and universities and taking advantage of the College's location in Singapore and Southeast Asia. More details of the philosophy behind our curriculum can be found in Appendix 1.

Our pedagogy emphasizes critical thinking and discussion in small groups led by outstanding professors. Yale-NUS is a residential college, and students interact with faculty and peers through extensive co-curricular activities while living and learning together. Each student also has the opportunity to study abroad and to pursue research projects or internships in order to gain practical experience outside the classroom. Our approach fosters the innovation and creativity that will be essential to leadership in the 21st century.

Common Curriculum

Each semester, students take four in-depth modules (of 5 modular credits each). In the first two years, a substantial portion of a student's coursework is in the common curriculum, which includes three tracks: Great Works, Individual and Society, and Science. Students take courses in all three tracks, regardless of their eventual major. Each track gives students a broad understanding of the most important issues facing a wide range of disciplines, so that they will develop the flexibility and understanding necessary for confronting the complex challenges of the 21st century. The common curriculum also teaches students the basic scholarly methods—analysis, interpretation, writing, induction, deduction, modeling, quantitative reasoning—that they will develop further in their majors.

The Great Works

In their first year at Yale-NUS College, all students will study the Great Works of East and West in a co-ordinated sequence of four courses (total 20 modular credits). Students will read the books that have answered such questions as: “What is the best way to live my life?”, “What is justice?”, “How can I pursue truth?”, and “How should people live together in a community?”

These are the questions that have shaped the great cultures of the past and present and that remain crucial to living a good life in the twenty-first century.

Students will explore the variety of answers to these questions in cultures including ancient China, India, Greece, and Rome, medieval and Renaissance Italy and Japan, and modern Europe, the United States, and Asia. They will also read the great literary works that treat these questions in the form of enduring stories and will encounter the major works of art and music of both Eastern and Western traditions. Students will learn the methods of interpreting major texts of cultures distant in time and space from our own. They will also develop their writing skills through a carefully planned sequence of writing assignments, ranging from brief response papers to longer essays on literature, art, philosophy and political thought. Rather than reading brief excerpts of many texts, students in each of the Great Works courses will focus on a limited number of works, studying each one in considerable depth. The four required courses in the Great Works sequence are Literature and Humanities I and II and Philosophy and Political Thought I and II (see sample syllabi in Appendix 2).

Individual and Society

What is the relationship of the individual to society? How do institutions, from the family to the ethnic group, the nation-state to the global economy, shape this relationship? Over their first two years at Yale-NUS College, students will take a sequence of three courses about the role of major social institutions in the modern world, both East and West, and about the methods that social scientists have developed for analyzing contemporary society.

Drawing on Psychology, Sociology, Geography, Anthropology, Political Science, and Economics, the initial course in this sequence, “Comparative Social Institutions,” will introduce students to the major institutions of society, government, and economy. This course will train students to think critically and in an informed manner about the way these institutions shape the lives of individuals and groups. It will also introduce students to the challenges of social inquiry: how to judge among competing policies and how to assure that one’s own analysis of a problem is objective. Students will learn about both inductive and deductive approaches to social issues.

In their second year at Yale-NUS College, all students will take two courses designed to give them more advanced tools for the analysis of social scientific problems. “Modern Social Thought” will introduce students to the major theories of society of the 19th and 20th centuries (and will draw on students’ first-year training in earlier Philosophy and Political Thought). Students will read the works of the major thinkers who developed Economics, Sociology, and Psychology, and will explore how their insights remain relevant to social problems in the 21st century.

In “Quantitative Methods,” students will develop a familiarity with statistics and probability, required to interpret quantitative data in any field. The course will go beyond traditional “methods” courses by exploring visual representations of data and the use of complex databases, topics that are becoming increasingly important in the 21st century. Both the traditional and

more novel techniques are of great importance for understanding current events as well as for more advanced study in either the sciences or the social sciences.

The Natural Sciences

The common curriculum in the natural sciences will begin with a module called “Scientific Inquiry” taken by all students, regardless of their previous preparation in science. Topics will be chosen from across the experimental and observational sciences, and will be designed to be accessible to all students. “Scientific Inquiry” will emphasize how scientific knowledge is obtained, supported and challenged, an understanding of which is crucial for all citizens of the modern world, rather than focusing on techniques or specific knowledge, as is generally done in introductory science courses (see sample syllabi in Appendix 2).

Following “Scientific Inquiry”, students will choose one of four tracks for an additional two semesters of scientific study. Students who do not expect to major in a science field will choose “Foundations of Science”. This course will necessarily differ in content from introductory courses for potential scientists, as it might well represent the last formal interaction of a student with science, rather than preparing the student for significant further study. “Foundations” will provide a broad introduction to science, focusing on a few key ideas and techniques, rather than the broad background required for further study in the sciences. Alternatively, students may elect one of three “Integrated Science” sequences, which provide preparation for further scientific study by combining basic study of related disciplines. The three sequences are life sciences (which combines biology and chemistry), physical science (which combines physics and mathematics) and mathematics and computer science. The Integrated Science sequences are 10 MC each semester, as they use both the Natural Science common curriculum module and an elective.

Interdisciplinary Courses in Third Year

Students will complete the common Curriculum and select a major by the end of their second year at Yale-NUS College. During their third and fourth years, while focusing their efforts on the major, students will also continue to explore historical and current issues through two interdisciplinary courses.

“Current Issues in Science and Social Science” will offer an array of courses on pressing issues such as Climate Change, Ageing, Public Health, and Electoral Politics. Taught by faculty with a wide range of scientific and social-scientific expertise, these courses will challenge students to put the skills they have developed in the common curriculum and the major to work in the solution of real-world problems.

“Historical Immersion” courses will give students the opportunity to study in depth a particular time and place different from their own. Students will bring their learning from the common courses to bear on a detailed case study, which might include a *historical event*, such as the Lisbon earthquake of 1755 or the Indian Mutiny of 1857; or a *great work of literature, art, or*

music, which would be studied in depth along with investigations of its historical context, including art, philosophy and social trends.

Students will select one “Current Issues” course and one “Historical Immersion” course during their third or fourth year of study.

Majors

Each student at Yale-NUS College pursues a major field of study, which is the focus of their final two years at the college. The majors draw on the material learned in the common curriculum and teach students the skills and expertise to conduct independent research. The tentative roster of Majors to be offered at Yale-NUS College will be:

Anthropology
Arts & Humanities
Economics
Environmental Studies
Global Affairs
History
Life Sciences
Literature
Mathematical and Computational Sciences
Philosophy
Philosophy, Politics, and Economics
Physical Sciences
Psychology
Urban Studies

Appendix 1: Basic Tenets of the Curriculum

The basic premise of the Yale-NUS College (YNC) curriculum is that the advantages of a traditional liberal arts curriculum can be applied in new ways in a new setting to create a uniquely powerful education for 21st century students. We propose to adopt many of the best practices developed over time at liberal arts colleges and universities. Such traditions include a curriculum that is broad, reaching across a variety of disciplines, as well as deep; active student participation in their education through small discussion-based classes and research projects conducted with classmates and faculty mentors; extensive opportunities to learn and work away from the campus; and a vigorous residential-based co-curricular life. We believe that these approaches provide an education that fosters innovation and creativity in ways that will be essential to leadership in the 21st century.

Beyond these traditional components of the liberal arts approach, there are also special features that make the YNC project unique. These include the active participation of two dynamic universities that evolved in very different educational and cultural settings. We hope that this collaboration will enable us to develop a global curriculum that combines Asian and Western experiences in a profound way. We will also be able to create a physical space that is designed for recent technological and pedagogical innovations, rather than using preexisting facilities that do not necessarily adapt smoothly to modern practices. We also expect to recruit a faculty selected specifically to develop and implement new curricular and pedagogical approaches, in order to avoid the barriers to innovation sometimes imposed by long-standing habits and embedded traditions.

Here we outline some basic ideas about how such a curriculum might be structured, as articulated by faculty committees at Yale and NUS who have considered the shape of the curriculum.

1. Both in substance and structure, the curriculum should be designed to engage students, from the start of their college careers, in the dynamic, interactive processes of learning that are essential to the development of those intellectual habits that liberal education seeks to foster: curiosity; creativity; critical (including self-critical) independence of mind; the ability to move nimbly from one field to the next; and a proper (though not slavish) regard for the achievements of others, including those living in the remote past and in civilizations distant from one's own. The cultivation of these intellectual and moral qualities requires that most, if not all, of the teaching in the College be in small seminar-like classes, where students are encouraged, indeed required, to interact with teachers and classmates in a collegial but critical way.
2. Broadly speaking, the first two years of the educational program should be heavily weighted toward a required core curriculum that gives all the students in the college a common educational foundation on which to build their more specialized work in the junior and senior years.
3. Students should be required from the start to engage in independent research (which will of course take different forms in different fields). Research work ought to continue

throughout the four year program, at increasingly challenging levels, culminating in a senior project of some kind.

4. The ability to explain the meaning and value of one's work to others in different fields is an important component of leadership in every area of life today. It is a skill whose development the College ought to make a priority at every level of instruction.
5. Though students will, in the course of their education, pursue different subjects of special interest to them, the sense of the College as a community of common endeavor to which all the students and faculty in the college belong, should be encouraged from the start and repeatedly reinforced throughout the four year program.
6. The experience that each student has of his or her education at Yale-NUS should not be a disjointed one but ought to have a high degree of coherence and continuity instead.

Appendix 2: Sample Syllabi

Literature and Humanities I

Ancient Epic: The Stories that Shaped Ancient Cultures

Homer, *Odyssey* (read over summer)

Book of Songs (Chinese Classic of Poetry)

Mahabharata (excerpts, plus see performance)

Excerpts from South-East Asian epic

The Axial Age: The Rise of the Major Ancient Cultures

Lao Tzu, *Dao De Jing*

Fire Sermon of the Buddha

Greek Tragedy

Latin and Medieval West

Virgil, *Aeneid*

Dante, *Inferno*

Rise of Modern Drama

Shakespeare, *King Lear*

Japanese Noh Drama

Kong Shangren, *The Peach Blossom Fan*

Philosophy and Political Thought I

Ancient Ethics, Politics, and History

Confucius, *Analects*

Sima Qian, *Records of the Grand Historian*

Bhagavad-Gita

Sun Tzu, *Art of War*

Plato, *Republic*

Aristotle, *Nicomachean Ethics*

Thucydides, *History of the Peloponnesian War*

Towards the Modern State

Neo-Confucianism

Augustine, *City of God*

Machiavelli, *The Prince*

Marco Polo, *The Diversity of the World*

Locke, *Two Treatises on Government*

Scientific Inquiry

Topics in physics:

- Planetary orbits and the nature of physical law
- Foundations of Relativity – was Newton wrong?
- Foundations of Quantum Mechanics – empirical problem to fitting formula to physical theory to philosophical conundrum
- Is String Theory science?

Topics in evolutionary biology:

- Botany and Zoology: collections, taxonomy and the nature of observational science
- Natural Selection – what is a “theory”?
- Mendel to Watson & Crick – discovering the mechanism
- Modern Genetics: science or technology?