

Yale College welcomes Class of 2016

August 22, 2012

Yale College welcomes the 1,356 members of the Class of 2016 to the University's Old Campus on Friday, Aug. 24.

The freshman class was selected from a record applicant pool of 28,977. Of the new students, 57% come from public high schools, 10% are international citizens, and 40% are U.S. citizens or permanent residents who identify themselves as students of color. Over 12% of the incoming class will be the first individuals in their family to graduate from a four-year college or university.

Half of the class has qualified for Yale's generous financial aid program. Yale admits students without regard to their ability to pay for their education, an admissions policy called "need blind," and meets the full demonstrated financial need of all admitted students. The average Yale scholarship for an eligible freshman this year is \$41,230, or about 70% of the total cost of attendance.

A record 42.5% of the incoming class has expressed an interest in majoring in one of Yale's 26 different science, technology, engineering, and mathematics majors (STEM). As recently as six years ago, only one-third of the entering class intended to major in one of the STEM disciplines.

"More of the strongest students in the world now recognize that Yale undergraduates engage in cutting-edge science and engineering here through research opportunities and mentorships with senior faculty," notes Jeff Brenzel, dean of undergraduate admissions.

All incoming undergraduates are assigned to one of Yale's 12 residential colleges. The residential colleges allow students to experience the cohesiveness and intimacy of a small school while still enjoying the cultural and scholarly resources of a large university. Students remain affiliated with their residential college for all four years. Yale makes every effort to represent the diversity of the entire undergraduate community within the residential colleges so that each college is a microcosm of the larger student population. The residential college system offers students a familiar, comfortable living environment; personal interaction with faculty members and administrators; and exciting opportunities for academic and extracurricular exploration. Every residential college has its own master and dean, both of whom are Yale faculty members. The master and dean live in the college with their families and eat their meals with students in the dining hall.

Yale's expectation is that all undergraduates have at least one international experience during their time at Yale. About one-quarter of the students set out across the globe each year to experience other

cultures through study, work, and research abroad. Yale supports all undergraduates in planning their activities abroad and in finding ways to finance these activities. Students receiving financial aid from Yale are eligible for aid to support a summer experience abroad.

University President Richard C. Levin and Yale College Dean Mary Miller will address the freshmen on Saturday, Aug. 25, at 9 a.m. and 10:30 a.m. in Woolsey Hall. Classes in Yale College begin Aug. 29.

Freshman address by Yale University president

From

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Undergraduate Education and the Research University by President Richard C. Levin

August 25, 2012



President Richard C. Levin

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Freshman Address

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I am delighted to join Dean Miller in welcoming you, the Class of 2016, to Yale College. I want to welcome also the relatives and friends who have accompanied you here, and especially your parents. As a father of four college graduates, I know how proud you parents are of your children's achievement, how hopeful you are for their future, and how many concerns - large and small - you have at this moment.

Let me try to reassure you. Your children are going to love it here! And I expect that you are going to enjoy your association with Yale, whether you are a returning graduate or one of the vast majority of parents who never set foot in New Haven until your children started to think about where to go to college. You may take comfort in learning that surveys have shown that Yale parents are the most satisfied in the Ivy League. So, welcome to the Yale family! We are so pleased to have your children with us, and we will do our best to provide them with abundant opportunities to learn and thrive in the four years ahead.

And to you, Class of 2016, welcome. I suspect that you have many reasons for being here. You may have chosen to attend Yale College because you heard that it was a place that attracted unusually talented and interesting students. Perhaps you were impressed by the depth and breadth of our 2000 course offerings. You may have been drawn to the idea of residential colleges, communities that are microcosms of the student body and inspire

lifelong loyalty. You may have learned about the diverse array of undergraduate organizations devoted to politics, debate, journalism, and community service - organizations that will give you a chance to develop your skills as leaders and as collaborators. You may have been drawn by Yale's superlative undergraduate arts organizations: from chamber orchestras to dramatic societies, from dance ensembles to a cappella singing groups. You may have been recruited to one of our thirty-five varsity athletic teams, with their outstanding coaches and facilities. You may have learned about our commitment to sustainability, and been interested in joining one of our environmental groups or working on the Yale Farm. Or you may have been excited by the extensive array of international experiences open to you as students in Yale College.

All of these are good reasons to find Yale a school worthy of four years of your time. But I thought that I might focus this morning on an aspect of Yale that you might not have considered: the special advantages of your having chosen to attend a college situated within one of the world's great research universities. This distinction means, first, that the faculty who will teach you are leading scholars in their respective fields, and, second, that you will have access to virtually unmatched library and museum resources.

Consider the extraordinary collections that are available to you in the Yale University Art Gallery, the Yale Center for British Art, and the Yale

Peabody Museum of Natural History. Dozens of your professors in literature, history, the history of art, anthropology, geology, ecology, and evolutionary biology will make use of these museum resources in your courses, and perhaps some of you will join with other students in curating your own museum exhibit. Last spring, four undergraduates collaborated with curators and conservators at the Yale Center for British Art to study the materials and techniques used in the creation of early English wood panel paintings. They created an exhibit that was on display at the Center from April through July. A year earlier, Yale students collaborated with others at the University of Maryland to create an exhibit on African American art drawn from Yale's collections that was shown at both at our Art Galley and on the Maryland campus. Even if you do not engage quite so deeply as to curate an exhibit, I would urge you to visit our museums. You may discover a love of art or a love of nature that enriches your life.

Our libraries are an endless source of discovery for students who wish to engage in archival research. You will find materials there that allow you to undertake projects that go far beyond what might be possible elsewhere. Some years ago, one undergraduate discovered in the un-catalogued papers of a deceased professor that a faculty organization called the Yale Library Project had provided cover for an important World War II intelligence mission. Just this week, I learned from a high school student working in the archives of the Beinecke Library about his

discovery of the methods used by late 19th century railroads to finance their sale of farmland to settlers in the northern plains of the United States. It turns out that the railroads' strategies for helping landowners remain on their farms during periods of financial hardship were much more effective than our efforts to protect homeowners from foreclosure during the current recession.

Consider next some examples of the astonishingly creative and original work of the faculty who will be teaching you:

Earlier this year, John Lewis Gaddis, a professor of history, won the Pulitzer Prize for his brilliant biography of George Kennan, the diplomat and architect of U.S. strategy in the Cold War.

A group of scientists led by Rick Prum, a professor of ecology and evolutionary biology, was able to deduce from fossils the colors of feathers on a dinosaur.

Geologist Zhengrong Wang has demonstrated that carbon can be captured from the atmosphere and sequestered not in gaseous or liquid form beneath the earth's surface, but in solid form, by catalyzing a reaction to transform subsurface rocks into calcium and magnesium carbonate. This is one of several technologies that Yale scientists are pursuing in the hope of finding solutions to the problem of global warming.

Historian Timothy Snyder has shown in his recent book, *Bloodlands*, the ideological and practical connections between the Nazi extermination of

Jews and other east Europeans and the Soviet extermination of the same populations.

In her path-breaking work, *The Ornament of the World*, Maria Rosa Menocal demonstrated that the Middle Ages in Spain were not a time of darkness and superstition, but a period in which Muslim, Christian, and Jewish literature, philosophy, and architecture flourished and profoundly influenced one another.

In the Western desert of Egypt, archaeologist John Darnell has unearthed a lost city - the site of a massive bread-making industry more than 3,500 years ago.

And finally, your Dean, Mary Miller, has just given you a glimpse of her immense knowledge of Mesoamerican history, art, and culture. In her own work of re-discovery, she has employed infrared photography to produce enhanced, high-definition images of the Mayan murals at Bonampak, and used these images as a platform for her seminal reinterpretations of Mayan art, architecture, and civilization.

What is remarkable about studying in Yale College is that you will have direct access to the scholars I have mentioned, among many others. Distinguished as they are in research, they are also committed to teaching. You will take their courses, participate in their seminars, and have the opportunity to work as their research assistants or do independent research under their supervision. Most of the projects I just

described involved students in some capacity, but here are a few more in which the role of undergraduates is central:

Consider, for example, Professor Scott Strobel's course in which undergraduates travel over spring break to a tropical rain forest to gather endophytes, microorganisms that are found in abundance on plants. The students then return to Yale, where they work for the balance of the spring semester and throughout the summer to characterize the organisms that they have found and discover their properties. On recent rain forest expeditions, students have found several organisms that effectively degrade plastic. One in particular is capable of breaking down polyurethane in the absence of oxygen, holding promise for practical use in the biodegradation of buried trash.

Or perhaps you will be intrigued by the opportunity to hunt for exo-planets - bodies that orbit around stars other than our own sun - under the supervision of Professor Debra Fischer and her colleagues in astronomy. Professor Fischer helped to launch the online citizen science project called Planet Hunters, which engages 40,000 web users in the search for exo-planets using data gathered from a NASA space mission. Three Yale College students collaborated on the first published paper from the Planet Hunter project, announcing the discovery of two previously unidentified exo-planets. Two other undergraduates are co-authors on a paper describing another discovery that is soon to be

published. One of the students involved in the first paper is now working on a team that has developed a new device capable of doubling the precision of the Keck Telescope, making the world's largest telescope even more powerful.

Finally, if you would like to combine an interest in the performing arts with serious study, you might consider participation in the Yale Baroque Opera Project. Conceived by the eminent musicologist Ellen Rosand, who has made major contributions to our understanding of early music, the Baroque Opera Project introduces students to the historical, aesthetic, and performance issues related to Italian Opera of the 17th and early 18th century in their coursework, and mounts two full-scale productions each year.

These examples illustrate how you might benefit from participating in the work of a university committed to path-breaking research. I encourage you in the strongest terms to take full advantage of the people and resources available here. Don't be shy! Yale's faculty, libraries, and museums are here for you. If you want to get engaged with the amazing research activities that go on here, do not hesitate to ask a professor, a librarian, or a museum curator. They will welcome your interest.

Let me go one step further. If you want to get the most from your Yale education, be adventurous. Do not content yourself with a familiar path. As you choose your courses, try something different - an expository

or creative writing class, statistics instead of more calculus, or a new language, even as you pursue further study of one you already know. Sign up for courses and projects that will challenge you. You may never again have so much opportunity to explore new ideas, to test out new directions, to pursue different routes to discovering your true passion. Stretch yourself.

I offer the same advice in connection with your activities outside the classroom, libraries and museums. Seek out the unfamiliar. If the friends you make here are exclusively those who come from backgrounds just like your own and who went to high schools just like your own, you will have forfeited half the value of a Yale education. You come from 54 nations, from a wide range of racial, religious, and socio-economic backgrounds. Each of your residential colleges contains within itself that rich diversity. Seek out friends with different histories and different interests; you will find that you learn the most from the people least like you.

In the same way, as you choose extracurricular activities, try to move beyond the familiar; try at least one extracurricular activity that is brand new to you. Volunteer for community service and begin to understand how what you have learned here might be of value to others. Work or study abroad on one of our many summer programs, and see the world from a different perspective.

Women and men of the Yale College class of 2016: You may have come here for many different reasons. But now that you are about to begin your four-year journey of discovery, take note that you have come to one of the world's great centers of learning. This presents you with very special opportunities. Learn from your teachers the joy of participating in the advancement of human understanding of nature and culture. Draw upon the abundant resources of our libraries, museums, and laboratories. Stretch to your limits intellectually and interpersonally. Your effort will be richly rewarded.

Freshman Address by Yale College Dean Mary Miller

August 25, 2012



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Freshman Address

Aug. 25, 2012

Yale College Dean Mary Miller

Good morning! Good morning President Levin, Provost Salovey, Secretary

Goff-Crews, Chaplain Kugler, Masters, Deans, and honored guests. And welcome, women and men of the Class of 2016! Welcome to Yale University, and welcome to Yale College. I'm—we're-- so excited to have you here. We've been thinking about you since April 1, when Dean Brenzel of Yale Admissions told us your names. Then we met some of you during Bulldog Days, we met a few more of you this week in orientation programs, but at last, Class of 2016, you are here. Welcome inside the walls, onto the playing fields, into the classrooms and the residential colleges—welcome. Welcome to the spaces and places you will soon call home.

And welcome to all of the families and friends who have brought you to this day. You've come from Gibraltar and New Haven, from California and China, from Berkeley, Brookline, and Brooklyn. Thanks for having helped 1354 of the world's most interesting and smartest young women and men find their way to today. We are going to have exceptional encounters with them over the next years—in the classroom, in the dining halls, on the intramural courts, in extracurricular activities. Let me add that we will have plenty of fun along the way.

But, 2016, back to you:

You have just walked past the Beinecke Library, and you will walk past it several times a day over the next four years. There is a map inside it that comes from the capital of New Spain, Mexico City, and you have in your lap

a drawing of the left-hand side of the Mapa, as I will call it, where discs count off years, taking the observer from the Spanish invasion to 1565. Footprints orient the reader to time and descent, running top to bottom, starting with two seated lords who are depicted as if they were prehispanic Aztec rulers. But then we come to two figures who face one another. At left is the Viceroy—the Spanish king's avatar, if you will—who arrived in New Spain in 1550, and he faces Esteban de Guzmán, an Aztec noble who had adopted a European surname, whom the Viceroy appointed to serve as local ruler during a crisis of rulership. When you take time to walk into the Beinecke to see the Mapa you'll see that there are also fields and orchards, with the glyphic names of the men and women who came to own those fields and the crops they raised, all framed by bands of water.



As a scholar of the ancient New

World, I have been studying this Mapa for years, working with a team of colleagues to unlock the Mapa's story. It turns out that the object itself

had a life, and it's also quite a story. When you look at it, it will look seamless, as if made at one time, once and for all. Yet scientific examination by specialists in the library and museums here reveals that it was cut and remade at least three times, and at least four artists worked on it in those campaigns. Expensive and rare pigments were acquired from 800 miles away rather than use European ones. What we see in Guzman today—his prominence and role in mid 16th century—might have been created only in retrospect, in the Mapa's final version, when his role in shaping the course of history could be seen as established. Folded and put away, the Mapa was then hidden from view for most of its history, and perhaps stored in a monastery. A bookdealer brought it to Chicago in 1893, whence it passed through a series of private hands. In 1974, a Yale freshman saw the listing of a "map" in a sales catalogue of a New York auction house, and he scraped together money from family and friends to make a bid. And then he kept it rolled up under his bed in Timothy Dwight College for a few months, while he negotiated with the Beinecke Library to purchase it from him—for an amount that paid for his remaining three years of tuition!

On the Mapa, Guzman looks beyond the Viceroy: he looks at the crown that floats over the Viceroy's head. Do their two worlds converge? We know so little about the difficulties and challenges to survival in those years. Plagues ravaged indigenous populations, cutting them in half, time

and again. The rapacious practices of the colonists to extract wealth were an assault on the environment. It would take nimble responses from indigenous peoples not to be crushed, nimble responses to swim in a changing sea whose depth and complexity they could not fathom—and ultimately, to make a record like this one. The Viceroy and Guzman lived in two different worlds in the middle of the 16th century, perhaps communicating in Latin, in which they were both educated. Guzman knew nothing of Iberia or Rome; the Viceroy's brief was to keep order and to make the colony productive for Spain. On the Mapa, both men speak, and they spoke for different constituencies. Both lived, simultaneously, in two different worlds, yet in one physical space.

Do you? Will you?



Viceroy Velasco and Esteban de Guzman

We, too, find ourselves in parallel universes, sometimes in what seem to be

different worlds. You, the Class of 2016, were born—most of you—in 1994. In the world of 1994, we waited for the arrival of the mail carrier and smooth white envelopes, not the ping of arriving email, tweets, and texts; a student's phone was in his or her dorm room and nowhere else. Research could only be done by showing up some place, in the library or the lab or the museum. All of the capacity of that world still exists, and yet much of it is, for you, like Latin for Guzman, Aztec noble, an archaic and foreign language.

And until very recently you have all been living very intensely in your home town, among your high school friends, and over the past few days you have been in constant touch with them, texting, posting pictures on Facebook, rolling over out of sleep to look at your phone and to see that world that may still seem more real than this one. In fact, is your phone buzzing in your pocket or lap? Are your fingers are even itching for your phones right now...even as you sit here among the young women and men who will be your classmates for four years and potentially your friends for life. How do you leave the past 18 years behind and find your new world? For the Viceroy to succeed in New Spain, he had to trust his knowledge and his training from Madrid and immerse himself in his new world, trusting a man like Guzman to be his guide.

What does he see, as he looks into the future? What do YOU see, when you look into your future, our future? You arrive here with expectations,

some of them your own, some of them your family's, others from your larger community, or from the groups you believe you will affiliate with, whether a sports team or a theater group, a religious denomination or a political organization—and these expectations can overtake your ability to explore the opportunities here at Yale. But you, like Guzman, need to look beyond the obvious. You need to look into the unknown. Our goal is for you to leave the expectations of others behind: you've worked so hard to get here, and you've done so much of what others have asked of you, yet making independent choices and charting your own future here at Yale must be a first step toward becoming an independent and autonomous person. You may think of the choices you're going to be making as largely about your courses, or your extracurricular—what we often call a co-curricular—life. But these choices also pertain to many other aspects of your life.

By and large, most of you have filled almost every waking minute with school, lessons, sport, performance, service, and other activities. And although you grumbled a bit about some of it, you measured up to all of it. And it may be easier to think that these choices now are yours, more so than academic ones. But now you will need to own the decisions behind saying yes and no: you won't be able to do everything that calls to you. Decide carefully, consciously, and ethically; recognize the impact and responsibility you bear if you make decisions to consume alcohol and other

drugs. Decide carefully, and recognize how poor decisions jeopardize the integrity of friendships and our community.

Guzman and the indigenous communities he represented commissioned native artists to paint the Mapa, to argue for their autonomy, integrity and maturity, their ability to manage their own affairs, their recognition that they deserved fairness in the assignment of land to grow maize. Even Guzman's image tells us that he was the new, autonomous man of his century. The viceroy appears in perfect Spanish attire, but Guzman has adopted a ruffled Spanish shirt to wear under a brilliant indigenous garment, the new hybrid dress of the native elite. Riding the wave of the future, he has already changed, and the artist captures it by showing him moving into three dimensions, unlike the formal indigenous rulers who precede and succeed him.

Look again, now, at Guzman, staring off at the distant crown. And hear these words, from John Keats. He wrote these lines on a night in 1816, in response to his astonishment of discovery in reading radiant translations, previously unknown to him, of Homer's Iliad and Odyssey:

Then felt I like some watcher of the skies

When a new planet swims into his ken;

Or like stout Cortez when with eagle eyes

He star'd at the Pacific ...

You, too, are about to look into the unknown, to swim or sail from the known

world into an uncharted future. As you do so, you will discover new worlds, in history, science, technology; in works of art, in the written word, and in the sea and sky.

The Beinecke Library has brought the remarkable Mapa up to the first floor this weekend, and I invite you to walk across the quadrangle today or tomorrow to see it in person. Like many treasures at Yale, this map was here for some years before it came to my attention—and I say with confidence that you, too, can discover extraordinary and surprising things here, things that no one—quite literally, no one—knows about. Look beyond the obvious. Set your gaze on what you cannot see—yet—and start looking for new worlds.