

NTU Education | Building a Culture of Learning and Teaching

NTU Education is dedicated to creating knowledge to meet the global challenges of the 21st century and nurturing innovative and socially responsible leaders to shape the future of Singapore, Asia and beyond. Its essence is encapsulated in this framework.



External Drivers	Why?	
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Global Environment

- Changing Economic Landscape
- Technological Advancements
- Challenges to Sustainability
- Increasing Global Interdependence

Social Transformation

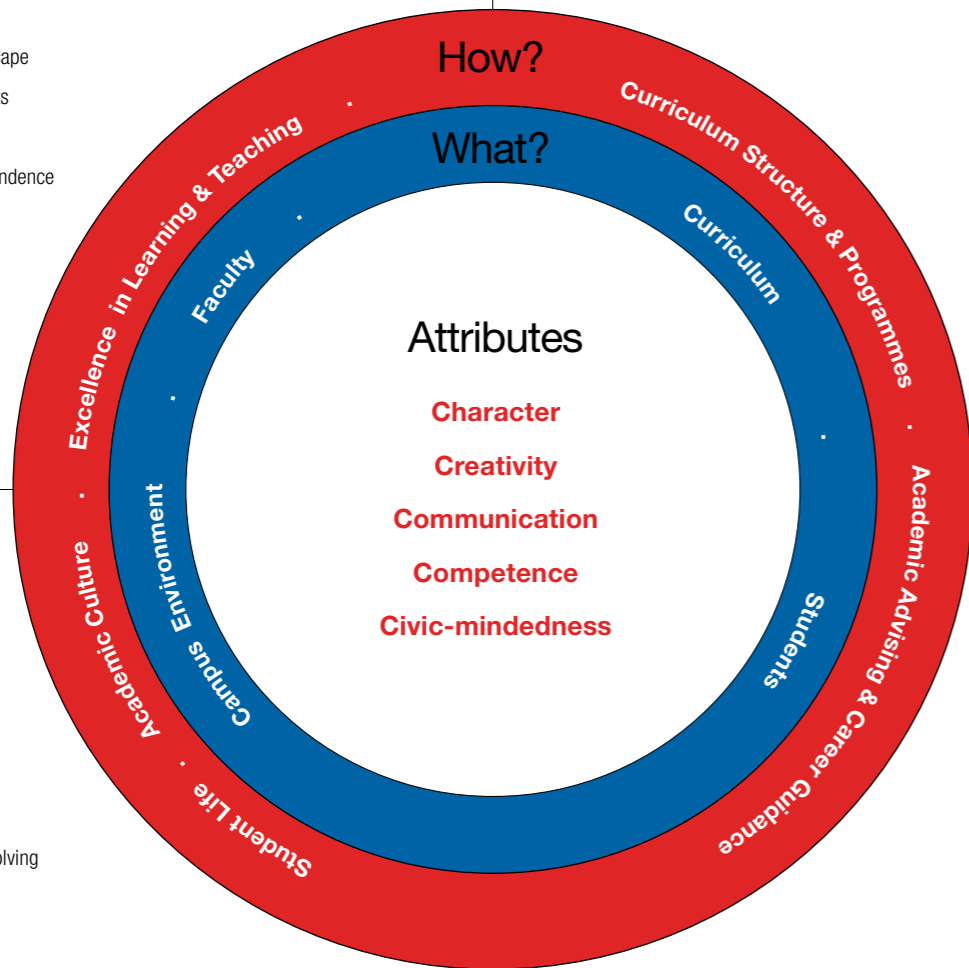
- Speed & Scale of Change
- Cultural Diversity
- Social Media
- Social Inclusiveness
- New Moral Dilemmas

21st Century Skills Needed

- Creative Thinking
- Communication Skills
- Disciplinary Depth
- Interdisciplinary Problem-solving
- Interpersonal Skills
- Professional Integrity
- Collaborative Skills

Learning Needs of the New Generation

- Experiential
- Participatory
- Image-driven
- Connected



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NTU
education

FROM FRESHMAN TO GLOBAL LEADER
Developing graduates for the 21st century workplace



Today's digital and globalised world demands new ways of learning.

Hard Facts. Soft Skills. Cross-cultural Knowledge. Versatility

How should students be prepared for the working world?

Two paradigm shifts affecting institutions of higher learning are taking place. One involves the world of work, the other the world of learning.

Employers these days prefer to hire graduates who have the skills to excel in the 21st century. Professional knowledge and competence alone are not enough. There is also a demand for soft skills such as the ability to communicate effectively and work seamlessly across global, multicultural teams. The ability to keep on learning is also highly prized.

The way students learn is changing. Today's students are active learners who are adept at using tools of the digital age to acquire knowledge – something unimaginable just a few years ago. Today's learners are part of what the online Urban Dictionary refers to as the EPIC Generation, who “are experiential, participatory, image-driven and connected”.

In light of these two major trends, NTU retooled its curriculum to instill attributes it considers important for success in the workplace. Besides gaining the competitive edge, NTU students benefit from a satisfying and engaging university experience.



experiential,
participatory,
image-driven,
connected



Depth. **Breadth.**

Lifelong Learning.

Global Relevance

What is NTU Education?

It's often been said that one's university years are the first draft of your future. Like the droplets of water that will eventually fill a pail, all freshmen will soon understand what it means to be NTU students and how they will be prepared for the challenges of a globalised society.

This new world is being driven by dramatic changes in the environment, economics, politics and advancements in technology, resulting in new ways of working, living and playing.

In 2011, NTU introduced a new undergraduate curriculum that puts learning within and beyond the curriculum at its core. Called **NTU Education**, this approach focuses on supporting how students learn and providing them with opportunities to develop skills that will enable them to face the challenges of the 21st century with optimism and confidence.



optimism,
confidence,
perseverance



Footprints around the world: overseas exposure prepares NTU students for the global working world.

Communication

Leadership, Teamwork,
Mutual Respect &
Communication Skills

Civic-mindedness

Professionalism, Public
Service, Social Engagement
& Global Citizenship

Creativity

Entrepreneurship,
Innovation &
Interdisciplinary
Synthesis

Character

Ethical Reasoning,
Integrity & Moral Character

Competence

Self-discipline, Disciplinary
Depth & Lifelong Learning

I am an
NTU student

Character. **Creativity.** Competence. **Communication.** Civic-mindedness

What attributes will NTU graduates have?

By the time a student leaves the university, he or she will understand the importance of ethical reasoning and social responsibility in a world that depends on integrity and good moral character for its continued survival and success.

Creativity is not just about sitting in a corner of the campus dreaming up the next big thing. That mind-blowing idea can only materialise when there is an understanding of societal needs, entrepreneurship and innovation, coupled with the ability to work in teams to find solutions that lie between the boundaries of different fields.

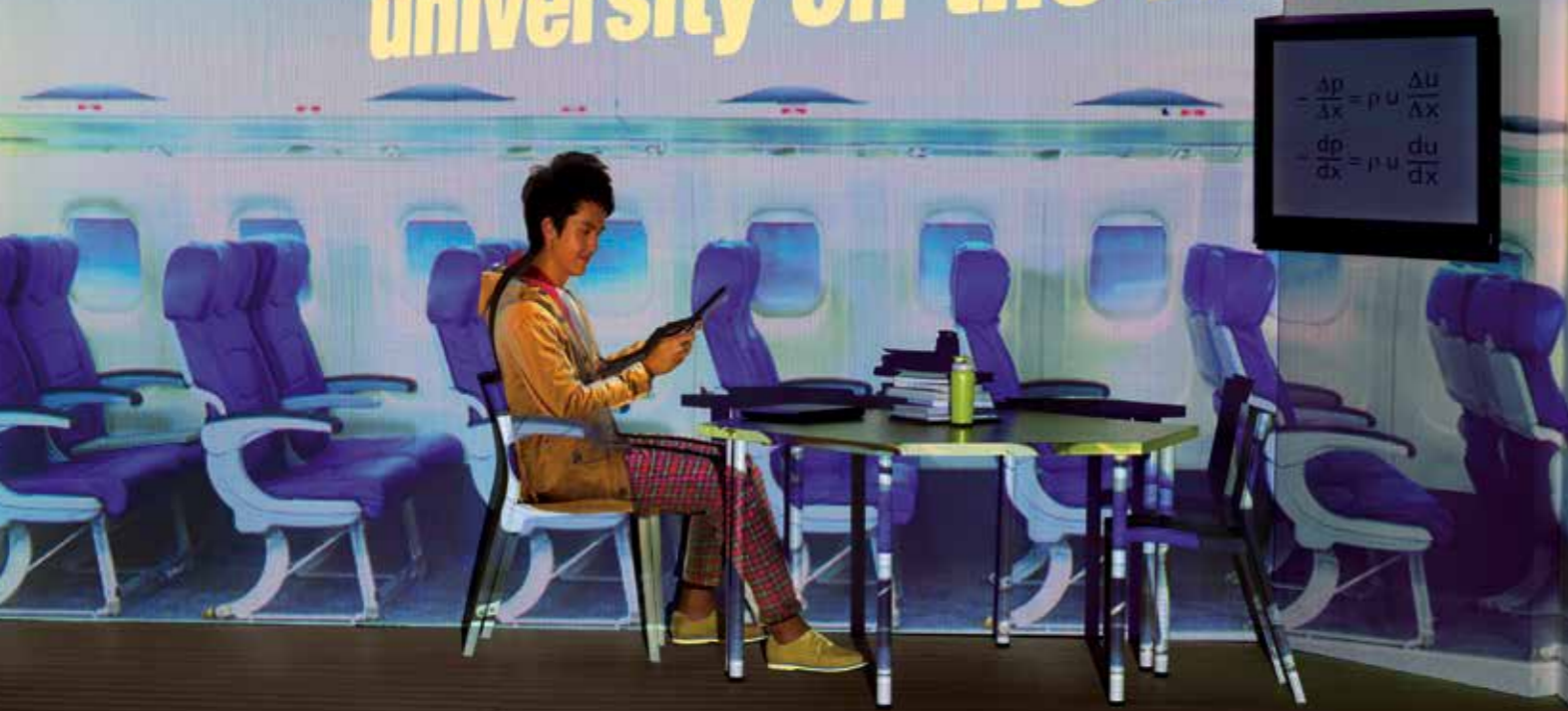
Competence takes on an entirely different meaning with the emphasis on self-discipline, depth of knowledge, intercultural competence and lifelong learning.

The ability to convey ideas and information across different platforms is a critical skill for any graduate and community leader. Students will have opportunities to hone their communication skills through leadership and group work, developing mutual respect along the way.

To thrive in a community without borders, they must also have qualities like civic-mindedness, professionalism and global understanding. Socially engaged, they will readily contribute to the greater good of society.



Take flight with a
university on the rise.



From smart classrooms to the halls of top overseas universities, NTU students get to venture globally while studying locally.

Generalist. **Specialist.** **Scholar.** Thinker

How will the NTU curriculum shape undergraduates?

There are two key components of an NTU education – an enriching academic life and an active student life that encompasses learning beyond the formal curriculum. These in turn shape the NTU student experience.

Students undergo a broad education with at most 70% of courses from their main discipline and at least 30% of courses from other fields. Three core modules are taken by all students, underscoring their importance. These are:

- Communication skills
- Singapore studies
- Environmental sustainability

As part of “general education”, students pursue modules in business management, humanities and social sciences, technology and society, and liberal studies.

They also broaden their horizons by taking a range of free electives, which can be grouped into minors. They can choose from among 35 modules outside their discipline.

In addition to a series of double degree and double major programmes, NTU offers three specialised programmes for high-calibre students looking to stretch themselves through cross-disciplinary learning:

- The **Renaissance Engineering Programme**, a dual-degree residential programme that combines engineering and business to groom future industry leaders. It includes a year-long attachment to another top university like the University of California, Berkeley, and a stint as an intern in Silicon Valley during the summer break.
- The **University Scholars Programme**, offering multi-disciplinary courses and experiences to produce versatile thinkers and leaders. Besides taking customised courses, students enjoy opportunities to interact with renowned professors, artists, writers and Nobel laureates.
- The **CN Yang Scholars Programme**, which prepares students for graduate studies and research in science and engineering. After pursuing advanced physics, chemistry, biology and mathematics in the first three semesters, they go on to specialise in science or engineering and can accelerate their PhD studies with a top scholarship and overseas attachment.



Together. Anywhere. Anytime. Click and Learn

How will NTU's pedagogy support new ways of learning?

The learning experience has been rebooted to give students more opportunities to discuss, debate and develop ideas with their peers and professors.

Traditional university lecture rooms with all students facing a single lecturer are on their way out. At NTU, seminar and tutorial rooms are being converted into spaces that support peer-based interactive learning in small groups. Each room has facilities such as movable furniture, electronic white boards, multiple LCD screens and various wireless communication tools.

A centrepiece of this learning evolution is a new learning hub that will be ready by December 2013. Not just an architectural icon with a distinctive look, it supports learning within and beyond the curriculum. As a 24/7 meeting point for all students, it will have the larger mission of bringing people and their ideas together.

A dedicated writing and communication centre will be housed in the learning hub. There, students can receive

personal coaching on presenting their ideas and thoughts succinctly and with impact, so they can become better communicators. A library outpost that blends seamlessly with the surrounding learning and recreational spaces will also be set up.

E-learning anywhere, anytime is the buzz phrase. Using electronic clickers, students can simultaneously respond to questions posed in class, so their lecturers get instant feedback on the effectiveness of learning activities.

Pushing ahead on this front, NTU has formed a task force to harness new learning technologies and recommend strategic moves to be ahead of the e-learning curve.



collaborate,
discuss, develop,
reflect



Teacher. **Researcher.** **Mentor.** Supporter

How will NTU achieve teaching excellence?

Every member of the university faculty is both a researcher and teacher, creating new knowledge and sharing it. Equal emphasis is placed on research and teaching performance in faculty appraisal.

Awards will be given out at both the college and university levels to recognise outstanding teaching practices and to encourage professors to implement teaching innovations.

A teaching excellence academy will be set up to recognise the winners as Fellows, uplifting their status as great teachers. The academy will also organise events and conduct classes at the Master's level to promote good teaching.

All new faculty members take a foundation course in university learning and teaching soon after joining the university. To ensure they are kept current with the latest developments in education and learning, NTU runs courses and workshops in areas such as new teaching and learning technologies and tools, and presentation and communication skills.

Grants will also be awarded to faculty members who wish to raise the bar in teaching through research in instruction and learning. The results of their efforts will be shared university-wide.





A vibrant campus experience like no other.

Campus Vibrancy. Health and Wellbeing. Leadership. Internationalisation

What about life outside the classroom?

On campus, academic life is complemented by Student Life – learning beyond the curriculum.

It entails a willingness to try something new – to develop new skills, discover new interests and make new friends.

The philosophy of NTU Student Life is easily summarised. NTU students are valued members of the campus community. Each and every student is a co-owner, co-creator and co-driver of the NTU Student Experience.

With a student population of 34,000, NTU buzzes with cultural, social, intellectual, sporting and recreational activities all year round. There are about 120 clubs and societies run by students.

NTU helps students overcome any challenges they may face. Through the Campus Community Approach to Student Health and Wellbeing, students will get the support and advice they need in diverse areas such as health, time management, relationships and financial and living arrangements.

Students are encouraged to come together and make a difference. Through joining clubs or starting and leading their

own special interest groups, they learn how to think through issues that affect others and come up with creative solutions.

For example, student leaders are consulted on important areas that affect academic and campus life. Through this process, they gain insight into the strategies of the university leadership and other management matters. They hone their leadership and communication skills, developing that extra edge that will serve them well when they graduate.

To succeed in a multicultural environment, intercultural competence is a must. At NTU's residential campus where more than 100 nationalities are represented, students work and play in culturally-diverse groups. Through these interactions and programmes that enhance inter-cultural skills, they develop cultural sensitivity and learn to appreciate differences and respect others.

With seven in ten NTU undergraduates going abroad for exchange, internships and other global programmes, learning truly takes on an international dimension.

