Preparing for an uncertain future. Potential to adapt.

4 Elements:
- Curiosity: wanting to know the unknown
- Insight: solving puzzles
- Engagement: within finite spaces
- Determination: caring, connecting, inspiring

Empathy: social costs are considered.

Resilience: stubbornness.
WELCOME TO OUR FIRST EVER NUS FUTURE-READY REPORT!

Dear students, employers and friends,

When NUS decided to create the Centre for Future-ready Graduates, we knew that we were currently entering an era of rapid change which will continue to disrupt the future of work for years to come.

In a brave new world which some call “the Fourth Industrial Revolution”, we wanted to take a bold approach towards preparing our students for the future, and hence the Centre for Future-ready Graduates (CFG) was born. We absorbed the NUS Careers Centre team of 24 staff and have grown to 50-strong over the past year, adding new Industry Relations and Learning & Development teams to our existing Careers Advisory team.

At CFG, we see ourselves not only as a new-era Careers Centre, but also as a think tank on holistic education, equipping students with “future-ready skills” that will prepare them for success in their future career and allowing them to lead a happy and meaningful life.

Over 5,000 NUS freshmen participated in our groundbreaking Roots & Wings programme which focused on building awareness and resilience through acquiring skills like focus training, empathic communication and developing a growth mindset. (Learn more about Roots & Wings on pages 18-26). Students responded enthusiastically to our programme and our pilot findings were tremendously encouraging, showing a 7-11% increase in emotional intelligence of our participants after the programme.

CFG also plays the role of a bridge – connecting industry to the millennial talent of the future. We are in a very special position of being able to engage with 37,000 students or future global citizens. Every single day we speak to millennials and learn about their hopes, fears and what motivates them; and provide them advice on how to shape their future.

This special double-sided report is our effort to answer some burning questions. One side of the report investigates - What does Future-ready actually mean?

We have drawn on our expertise to collect insights from over 300 leading multinational and local employers to come up with the world’s first “CFG Future-ready Index” which comprises of 9 essential soft skill sets which leading employers today value. Based on these skills, we developed a CFG Future-ready Index Tool comprising of 52 questions that we validated on 4250 students. You can find out more about our results in pages 4-11 in this Report.

If you turn the report around, the reverse side answers the question “What do millennials want from their future career?”, where we have compiled insights from more than 4,000 of our students.

We hope that you will enjoy reading this report and we thank all employers who participated in this year’s survey; please continue to support us in our next one. If you have thoughts and ideas to contribute, do email us. I look forward to hearing from you on how we can play a meaningful role in developing our future global talent!

Best wishes,

Crystal Lim
Director, Centre for Future-ready Graduates
cfghead@nus.edu.sg
The global economy has undergone much turmoil over the past year, with major restructurings across multiple sectors such as banking and finance, energy and shipping to name a few. With the advent of big data analytics, artificial intelligence, robotics, 3D-printing, biotechnology, cloud and mobile computing accelerating the pace of change, companies are scrambling to re-orientate their strategic growth plans or face disruption to their business models.

Millennials – those born between 1982 and 2000 - are facing an increasingly “VUCA” world of volatility, uncertainty, complexity and ambiguity. There are currently about 1.2 million millennials in Singapore comprising 22% of the resident population and forming the largest generation in the workforce today, according to human resource firm Adecco. This segment is estimated to make up 75% of the workforce in the next decade.¹

With a structural shift in technological trends and workforce demographics, what do companies in Asia look for in graduate hires? What do millennials in turn seek and expect in a career and employer? This seminal NUS Future-ready Report is designed to delve deep into these issues to yield relevant strategic insights for all stakeholders – government, employers, students and parents alike.

At the Centre for Future-ready Graduates (CFG), we engage the industry on hiring needs and advise students on career choices. We bridge the gap between what employers want and what millennial talents seek.

**WHAT DO EMPLOYERS WANT?**

According to the report titled “The Future of Jobs” by the World Economic Forum (2016), “the Fourth Industrial Revolution ... will cause widespread disruption not only to business models but also to labour markets over the next five years, with enormous change predicted in the skill sets needed to thrive in the new landscape.”² In the face of increasing automation, soft skills are the key differentiator to cope with these seismic economic shifts.

In order to discover first-hand what employers want, CFG embarked on this research journey in early-2016 by conducting focus groups comprising a mix of 35 C-suite leaders, human resource directors and business heads from diverse organisations across public and private sectors. Through these focus groups, we identified key mindsets and competencies which the industry valued in talents, such as ‘Resilience’, ‘Curiosity’ and ‘Insight’. We further surveyed

**Insight**

> When you’re faced with a lot of information, do you see the things that others don’t? Do you make the connections differently? Do you distill the signal from the noise? Do you see the things others may not have thought about?

> – Elaine Yew, Global Partner, Egon Zehnder
315 industry professionals who confirmed the importance of these soft skills to employers.

We then combed the academic literature to put together a novel assessment tool aimed at evaluating these essential domains. (Please see page 11 for the questionnaires that were used.) We administered this tool to 4,250 NUS undergraduates in order to test its validity and to examine the profiles of our students.

This research process culminated in the creation of our unique CFG Future-ready Index (CFG-FRI), comprising nine domains of soft skills which employers found essential, as shown below.

The CFG-FRI enables us to clearly define the metrics that matter to industry and track the progress of our students.

The CFG Future-ready Index (CFG-FRI) comprises these nine domains of soft skills which employers found essential:

- **Resilience**: ability to bounce back from adversities or stress
- **Emotional Sensing**: ability to read and manage emotions in self and others
- **Curiosity**: desire to seek new experiences, and embracing of novelty, uncertainty, and unpredictability
- **Entrepreneurial Thinking**: an entrepreneurial mindset to spot and seize opportunities
- **Adaptability**: ability to adjust thoughts and behaviors to changing circumstances
- **Pursuing Convictions**: pursuing what you believe in, and overcoming obstacles
- **Insight**: clear understanding of one’s thoughts, feelings, and behaviours
- **Vision**: seeking to contribute and to improve situations of self and others
- **Empathy**: ability to understand and share another’s feelings

**Entrepreneurial Thinking**

*Soft skills are extremely important, and I can’t overemphasise it...be creative, be innovative, try out different things, and don’t worry about failure.*

- Mitesh Patel,
  Managing Director, Black & Veatch

It serves as a benchmark for any organisation looking to assess and enhance the soft skills competencies of their employees.
NUS STUDENT PROFILES

The following are several key findings which we established from our research:

1. Overseas Experiences

Students with overseas experiences had higher scores on “Resilience”, “Curiosity”, “Insight”, “Adaptability”, “Entrepreneurial Thinking”, “Pursuing Convictions” and “Vision”. There were no differences in the domains of “Empathy” and “Emotional Sensing” when comparing students with and without overseas experiences.

Exposure to overseas study or internship programmes provides ample opportunities to develop such key competencies for students, which may explain the findings. It might also be a case that students who scored higher on these competencies were more likely to seek out overseas experiences.

These results reinforce the NUS focus on creating a myriad of opportunities for students to live, study, and work overseas, and make these available to as many students as possible.

Students with overseas experiences had 6.7% higher levels of curiosity.

Pursuing Convictions

When we hire, we look for people with the special spark, with the confidence that comes from personal conviction and a strong point of view. We value people who have opinions because we believe that diversity of ideas will actually strengthen what we create and bring value to our customers.

– Chng Sok Hui, Chief Financial Officer, DBS

The key is how to inculcate self-motivation and passion amongst the students, and for employers to recognize that the next generation of workforce will be different and how we can work in partnership together.

– Aylwin Tan, Chief Customer Solutions Officer, Ascendas Singbridge
2. Top 3 Future-ready Aspects of the NUS Education

Senior NUS students had higher scores on “Entrepreneurial Thinking”, “Pursuing Convictions”, and “Adaptability”.

These results could suggest that an NUS education helps students develop their abilities to become entrepreneurial, adaptable and dynamic - in line with the NUS mission to transform mindsets. We intend to follow-up with a longitudinal study to ascertain this.

CASE STUDY

Luqman-nul Hakim B M Lukman was in Year 3 at the Faculty of Science majoring in Quantitative Finance, when he interned at a global bank in 2016. Luqman had gamely attended all the training workshops as part of CFG’s Global Internship & Mentorship (GIM) Programme, and shared his story with us:

“The sessions you have organized made a big difference with my internship experience. I became more outspoken and willing to try new things. I would also volunteer myself for more assignments. As a result, I have been recognized by my colleagues and Senior Managers. To share, a compliment that I received was: ‘Not only is he doing a great job organizing the other interns, but he is proactive and has shown strong skills in being able to work through challenges. He gave a great presentation to senior management in Singapore, pitched at the right level and responded to questions in a clear and concise manner.’

I attribute the praise given to the training sessions you organized and I attended. I would encourage all students to go through these sessions just before the start of the internships/career. Of course, the students must also be willing to internalize the lessons and act on them.”

Empathy

In a world where robots and computers can do many of the jobs that humans can do, I would “double-down” on the creation of an “empathy economy”. Maybe computers will one day be able to diagnose a medical condition faster and more accurately, but nothing beats being in the care of a caring doctor who sees you as a human being. Flipped classrooms already suggest the value of a teacher is less about imparting knowledge but skillfully getting students to engage with the knowledge and with one another.

In the past, empathy is not something we as a society have put our attention on as much as technical skills, and it’s easy to dismiss it as something you pick up along the way, but it is much more than that. At the heart of the empathy economy, is cultivating the art of having really great human interaction and deliberately practising the mindset of putting yourself in others’ shoes.

- Elaine Yew,
  Global Partner, Egon Zehnder
Research suggests that we have a sense of purpose when we ask the question – how can we be of service to people and to the planet. Passion and Purpose are what studies show drive us forward in these uncertain times.

– Dr. Dan Siegel, Founder, Mindsight Institute

3 CFG PROGRAMMES TO BE INSPIRED BY

1. Future-ready Leaders (FRL) Programme

FRL is the ground-breaking self-development programme aimed at elevating the leadership skills of student leaders through highly interactive and experiential activities. The programme comprises a three-day bootcamp and participants are also required to volunteer 16 hours in areas of planning and facilitating NUS projects under the guidance of mentors.

2. Global Internship & Mentorship (GIM) Programme

GIM is a 12-week internship programme focused on developing regional leaders with a global executive mindset. It offers students important cross-cultural exposure, mentorship from senior management and training in global competencies.

3. Innovation Generation (iGEN) Programme

The iGEN programme seeks to develop the innovation capacity of our students through internship attachments during the three-month summer vacation period. Students are selected from a variety of disciplines to form project groups assigned to tackle real-world case challenges at participating companies; and will present their solutions to management at the end of their stint.
3. Gender

Between genders, we found that there were significant differences across all the domains except for the “Vision” construct. Male students had higher scores on “Resilience”, “Curiosity”, “Insight”, “Adaptability”, “Entrepreneurial Thinking”, and “Pursuing Convictions”. Female students had higher scores on “Empathy” and “Emotional Sensing”. While these results appear to be in line with stereotypical notions of gender strengths, they might also allow us to tailor our developmental workshops to suit the growth needs of different student segments. With regard to these observed gender differences, for example, we could break down stereotypes by empowering female students to be more resilient and display entrepreneurial thinking, while teaching male students the language and skills of empathy and emotional sensing.

**Male students had 7% higher entrepreneurial thinking scores**

**WHAT DO MILLENNIALS WANT?**

Millennials are looking for more than just pleasant working conditions and a good salary from their employers - these factors have become an expectation, rather than a motivator. According to Deloitte (2015), millennials are seeking organisations with “a strong sense of purpose that is also closely linked to positive organizational performance”.

From our meta-analysis undertaken of existing research combined with student interviews, several factors were identified as being the most important factors for millennials in choosing a career and staying with an employer:

**Purpose**

- Millennials want to be engaged in meaningful work that resonates with them personally

**Growth**

- Millennials want to work for organisations that support their desire for continued life-long learning and personal development

**Corporate Social Responsibility**

- Millennials value organisations that impact communities and balance environmental, social and governance aspects, apart from financial imperatives

**Challenge**

- Millennials are not content with roles that are too comfortable. They look to be stretched, and to take on opportunities to innovate and be creative

**Autonomy**

- Non-hierarchical organisational structures facilitate a sense of freedom to choose the way millennials like to work and achieve outcomes

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**Curiosity**

The first driver (of potential) and probably the most important of all in our view, is curiosity. We are not just talking about the curiosity to learn more about the world around you, or about other people. It is also the curiosity about yourself - the quest to understand more about yourself, and to keep learning both about yourself and the world.

- Elaine Yew, Global Partner, Egon Zehnder
In our survey of students, we found that they most valued a workplace culture of “Purpose”, “Growth”, “Well-being”, and “Trust”. NUS millennials want to do meaningful work that allows them to grow personally and professionally, within an organisational culture that they can trust, be engaged and feel valued.

The key question for employers to ask themselves is, “Are we providing a culture and climate that will attract and retain top talent?” This Future-ready Report and the CFG-FRI have been developed specifically to help answer this question and for students as well as employers be more future-ready. We seek to shed more light on this important theme through follow-up research by collaborating closely with industry partners and continuing our research with students.

**NEXT STEPS**

We plan to undertake further research to replicate the above findings, and better understand how various aspects of the NUS educational experience impact upon students’ future-readiness. Based on our pilot findings, for example, it would be useful to further emphasise the importance of overseas exposure to students across Faculties, especially those with lower FRI scores.

Furthermore, our findings allow us to tailor our developmental workshops to suit the growth needs of different student segments, for example, across different faculties or genders.

We also intend to follow-up with students who participated in this research survey, as part of a longitudinal study to better understand both the individual and environmental factors that determine their progress in life and career. These steps would give us additional data sets to yield deeper insights into the determinants of career success and future-readiness.

We seek to deepen our engagement with the industry, by collaborating with employers who are keen to leverage upon our unique CFG-FRI tool to measure soft skill competencies. Our tool would enable organisations across sectors to develop niche programmes to enhance these competencies. The tool serves as an indicator of the future-readiness of companies, which rely on high levels of soft skill competencies in employees to thrive in a VUCA world.

The NUS Future-ready Report (FRR) and in it, our featured CFG Future-ready Index (CFG-FRI), offer a unique understanding into the minds of millennials – qualities that inspire them in their search for future employers and insights into retaining them. The nine dimensions highlighted in the CFG-FRI serve as a means to assess as well as guide the development of key skills that are more pivotal than ever in the workplace of the future.

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**References**

WHAT IS THE CFG FUTURE-READY INDEX?

Culminating from a rigorous research process, the CFG Future-ready Index (CFG-FRI) comprises nine domains of soft skills that employers found essential. We invite all valued industry partners to try out our CFG-FRI tool and assess how your staff measure up. This tool is made available on our website at www.nus.edu.sg/cfg/fri or via this QR code.

CFG first ran two focus groups with leading Singapore-based employers in early 2016. Our focus groups comprised a mix of 35 C-suite leaders, human resource directors and business heads from organisations across people, public and private sectors. In these focus groups, we asked employers to identify key mindsets and competencies which they valued in employees.

The responses were consistent across sectors and industries. The employers expressed that while technical skills were necessary, attributes such as ‘Resilience’, ‘Curiosity’, ‘Insight’, ‘Adaptability’, ‘Empathy’, and ‘Proactivity’ were key differentiators.

We further surveyed 315 industry professionals who confirmed the importance of these soft skillsets to employers. These constructs were rated on a five-point scale (from “not important” to “very important”). On average, the employers rated all six constructs as being “important” to “very important”.

We also combed the academic literature to find the following instruments suited to assess these constructs:

- Brief Resilience Scale: assesses the ability to recover from adversities
- Curiosity and Exploration Inventory: assesses the desire to embrace uncertainty and seek new experiences in order to grow
- I-ADAPT (Uncertainty Subscale): assesses the ability to act without full information and adjust to changing circumstances
- Proactivity Personality Inventory: assesses a disposition towards effecting change in the environment by showing initiative, taking action, and persevering
- Self-Reflection and Insight Scale (Insight Subscale): assesses clarity in understanding one’s thoughts, feelings, and behaviors
- Toronto Empathy Scale: assesses the ability to understand and share feelings of another

We then administered an assessment tool comprising these measures to 4,250 NUS students (comprising 2021 males and 2229 females from all years of study with an average age of 21.2 years) in order to test the validity of the survey instruments. The tool consisted of 66 items in total.

Upon factor analysis, we shortened the instrument to 52 items and expanded the constructs to 9 because we had found that “Proactivity” could be replaced by the three more specific constructs of “Entrepreneurial Thinking”, “Pursuing Convictions” and “Vision”, whilst “Empathy” could be expanded to include “Emotional Sensing”.

Adaptability

What we’re looking for is adaptability, embracing change and being able to influence others

– Aileen Low, Talent Acquisition Manager, GE

Emotional Sensing

When we taught basic listening and emotional sensing skills, that was really profound and earthshaking for a lot of people. Close to 2,000 people inside of Google will now be trained this year

– Marc Lesser, CEO, Google Search Inside Yourself Leadership Institute

References

7 EVENTS TO SHOWCASE YOUR BRAND
1. Career Fair | February
More than 250 employers and over 9,000 students participate in the annual NUS Career Fair, our flagship campus recruitment event for employers to establish their corporate presence and engage with students across NUS.

2. STEM Week | August
STEM Week serves to promote career opportunities in science, engineering and technology-related sectors which fuel Singapore’s transition towards becoming a SMART nation. Employers share industry insights and career pathways through panel discussions, company visits and networking events.

3. Public Service Networking Day | September
This is a key platform for government agencies to meet and network with students exploring a career in the public service. At this event, public service officers can share major government initiatives and a diverse range of employment opportunities.

4. ArtsConnect | October
Featuring prominent industry heavyweights from the arts and creative sectors, this event attracts students keen to join the Arts & Culture sectors as practitioners, interns or volunteers. Speakers share unique insights on the experiences of independent artists and organisations.

5. Postgraduate Career Fair | October
Attended by more than 700 postgraduate students each year, the Postgraduate Career Fair showcases around 30 major organisations seeking to connect and recruit from our diverse pool of Masters and PhD talents.

6. Career Talks | January-March & August-October
Organised throughout the academic semesters, career talks are most suited for companies looking to fill a critical mass of ready internship and graduate job positions. Employers usually arrange for a Q&A or mini-networking session after the talks to engage further with students.

7. Mind/Shift | December
This annual event seeks to promote awareness among industry partners of our unique Roots & Wings foundational life skills programme and thought leadership on future-ready mindsets and skills. We also partner PeaceJam Foundation, a global leader that engages youths on social justice issues.

Please contact us for collaboration opportunities!
ABOUT CENTRE FOR FUTURE-READY GRADUATES (CFG)

Centre for Future-ready Graduates (CFG) is a first-of-its kind centre and think tank on holistic education, equipping students for successful future careers and enabling them to lead happy and meaningful lives. Formerly known as the NUS Career Centre with no more than seven employees when it began back in 2004, it evolved into CFG in 2014. Today, CFG has a team of 50 people from diverse backgrounds, with our new Industry Relations and Learning & Development teams added to our existing Careers Advisory team. CFG offers a wide range of personal development programmes and industry engagement events for undergraduates and postgraduates across NUS.

CFG LEARNING & DEVELOPMENT (L&D)

The L&D team was formed to develop, teach, evaluate, and promote holistic education programmes for NUS students, such as the groundbreaking Roots & Wings module. The team works closely with faculty and other internal and external stakeholders, such as industry or government. We aspire to be the thought leader in education and human potential, offering a suite of programmes, based on latest findings in psychology, neuroscience, and leadership.

About Gregor – Head of Learning & Development

As a clinical psychologist for more than 15 years, I am inspired by the latest brain research that helps us understand how we can maximize our human potential by developing healthy mental and behavioural habits that can lead to success at work, meaningful relationships, and increased happiness. It gives me a great sense of satisfaction to share this knowledge with students and see them develop.

CFG INDUSTRY RELATIONS (IR)

In line with NUS being consistently ranked among the world’s top universities, our Industry Relations team continues to position NUS as the top choice for graduate employment, internships and collaborations, and we do this by working closely with employers to strategize and meet their talent recruitment needs. The team also advises on various branding and collaboration opportunities in NUS for employers and serves as the bridge that connects the industry with NUS to facilitate innovation and growth.

About Paul – Head of Industry Relations

What inspires me is knowing that we are doing something meaningful every day to help push our university forward, by helping our students get exposure to different kinds of companies and to help industries to tap on our talent. I am a firm believer in life-long learning and am currently pursuing my second master’s degree in marketing and consumer insight. In my spare time, I enjoy circuit training to keep me alert.

CFG CAREER ADVISORY (STEM FACULTIES)

Over the past decade, STEM (science, technology, engineering and mathematics) occupations have become an integral part of a nation’s advancement, enabling businesses to evolve and progress. At CFG, we thrive to equip students with the necessary career skills and better understanding of how knowledge and career preferences can be integrated. As such, the STEM career advisory team was formed to customise career services and unlock students’ potential for

THE FUTURE-READY REPORT TEAM

Professor Bernard CY Tan
Vice Provost (Undergraduate Education & Student Life), NUS

Ms Crystal Lim Leahy
Director, CFG

Dr Gregor Lange
Head (Learning & Development), CFG
the NUS School of Computing, Faculty of Engineering and Faculty of Science, covering over 13,000 undergraduates.

**About Desmond – Head of Career Advisory (STEM)**

What inspires me are the different career perspectives of people I converse with. A career means more than merely securing a job. It is a process where individuals figure out what aligns them with their passion and aspirations – and that can change over time. I am a firm believer that everyone is unique. With my background in psychology and human capital management, I look forward to continue my work with students and help them discover what makes them happy with their careers. I also have an interest in the Internet of Things (IoT) and technology at large.

**CFG Career Advisory (Professional Services & Research)**

As a global hub, Singapore aggregates demand for regional business services, augmented by the governmental push to drive research and innovation. Our team takes care of students from Arts & Social Sciences, Design & Environment, Law and Medicine disciplines; and all Postgraduates, covering a total of 15,000 students. We offer services such as careers advisory, resume critique, interviewing techniques and a range of workshops and tools to help students prepare themselves for their future career.

**About Ryan – Head of Careers Advisory (Professional Services & Research)**

What inspires me are people driven by passion and vision. In my career, I have come across leaders and change agents who believe deeply in what they do and will try against all odds to attain what they set out to achieve. My personal mission is to help students to find that alignment between what inspires them and what they aspire to do for a living. I believe everyone has their own strengths and passions and the best way to utilize and express them is at your workplace!

**CFG Operations**

The CFG Operations Team was set up to support the various sections to ensure on time and quality execution and delivery of CFG’s programmes and services. It is responsible for internal functions such as Finance, Human Resources, Information Technology, Administration and ensuring that the department complies with University policies in these aspects. The team also partners the various sections to identify and implement initiatives to improve the efficiencies of CFG.

**About Venetia – Head of Operations**

I enjoy travelling and have an interest in arts and culture as it gives me new knowledge and perspectives. Learning to me never ceases as everything and every situation we experience has a learning opportunity. The next generation of youth has huge potential to do great things if they are armed with the right mindset, attitude and life skills.

**CFG Communications**

CFG’s team of communicators is made up of dynamic, creative and fun-loving eccentrics who enjoy engaging multi-stakeholders on multiple platforms. In cooperation with the NUS’ Office of Corporate Relations, we strategically, digitally and internally build the reputation of the CFG brand leadership and management.

**About Sue Meng – Head of Communications**

I am passionate about making a difference to society, and supporting others to realise their philanthropy aspirations. I am a willing speaker on corporate social responsibility and cultural heritage preservation. My research about a slice of Ipoh’s history was published by the Sun Yat Sen Nanyang Memorial Hall (an institution of the National Heritage Board Singapore), and in my leisure time, I am developing a marker trail there to bring joy of discovery to heritage lovers around the world.
PURPOSE OF ROOTS & WINGS – UNLOCKING HUMAN POTENTIAL

By Dr. Gregor Lange

Roots and Wings is NUS’ groundbreaking programme centering on personal and interpersonal effectiveness skills, which is based on the science of human potential. This article provides you with an overview of this exciting new course for students.

The world that we live in today is more volatile, uncertain, complex, and ambiguous (VUCA) than ever before. To fortify and prepare yourself for this fast changing world, you need to deliberately work on upgrading your humanistic “inner technology” and develop foundational personal and interpersonal effectiveness skills. The personal “Roots” skills will enable you to discover your strengths and unique potential, while the interpersonal “Wings” skills will help you connect with others and contribute to the world in a meaningful way.

Roots & Wings aims to provide you with a range of practical tools such as focus and attention training techniques. These are essential for effectively dealing with all the constant distractions you are facing. You will also learn interpersonal communication skills that are useful for building strong relationships. Another key component of this module is to enhance your career preparedness. For example, creating a personal brand and improved industry awareness will enable you to be better prepared for what lies ahead of you upon graduating.

What you will learn in Roots & Wings is based on the latest findings in neuroscience, psychology, and leadership research, so that you can maximise your potential in your academic journey, career, and personal life.

DOUBLE-SIDED REPORT!
Turn the report over to find out insights from employers on what Future-ready means

Join us on our Facebook and Linkedin pages:
Facebook.com/nuscfg
Linkedin.com/company/centre-for-future-ready-graduates

Visit us at our website: nus.edu.sg CFG
STRUCTURE – YOUR ROOTS & WINGS JOURNEY

UNLOCKING HUMAN POTENTIAL

Topics Covered

FOCUS

To begin your journey, you will firstly learn how to tap into your strengths and potential by developing your ability to focus, your awareness of who you are and what you stand for, and your understanding of how your mind operates.

SELF & INTERPERSONAL AWARENESS

Through sharpening your levels of awareness, you will become more mindful of yourself, others, and your environment in order to make more considered responses rather than automatic reactions.

WHAT’S MY OS?

You will learn to shape a healthy mindset; what Dr Carol Dweck (2006) calls a ‘Growth Mindset’ which will allow you to view failure as a temporary and surmountable setback, rather than something to be feared and avoided.

SENSEMAKING

The programme then teaches you about how your brain works and developed a preferred mindset through past experiences, thoughts, feelings and behaviours. You will learn about the neuroscience behind your operating systems, and how to overcome the negativity bias by hardwiring habits of positivity into your brain.

EMPATHY

In the sensemaking piece of the programme, you will learn to examine your self-narratives, challenge your limiting beliefs, and then let go of them. You will learn that thoughts are not facts, and that you can overcome old and unhelpful stories that may have been running your life unconsciously.

Roots and Wings also teaches you practical ways to empathize and connect with others on a deeper level, and to shift your lenses on the world in order to adopt different perspectives. It helps you to understand and build healthy
relationships, and guides you to use your strengths in service of others and the wider community.

**HAPPINESS & RESILIENCE**

Roots & Wings then unpacks and introduces the psychology behind happiness, and helps you to recognize and utilize your unique strengths and vision, plus develop positive habits including gratitude and perspective taking. The programme also delves into the concept of resilience and teaches practical tools to enhance your physical, emotional, cognitive, and social resiliencies.

**COLLABORATION & NETWORKING**

You will then learn the principles and practise the skills of collaboration and networking. These skills are immediately practicable to you – even in your university years and will help to maximise your learning and peer-interactions.

**INDUSTRY AWARENESS**

Armed with these skills, you can start to build your understanding of the career and life that awaits you through the seminar on industry awareness. You will also be challenged to explore different opportunities throughout your university years and consciously shape your aspirations for your future.

**PERSONAL BRANDING & STORYTELLING**

The programme then familiarises you with how to create a personal brand for yourself that is authentic – based on your insights about yourself that you have gleaned from the programme. You will then learn how to effectively ‘share’ your personal brand with the world through storytelling – an age-old and powerful communication skill.

**VISION & PURPOSE**

By the end of Roots & Wings, you would have become clearer about your values and understand how to cultivate a happy and resilient mind. You will possess a basket of practical tools to overcome challenges and adversities, and develop a personal vision to carry you through your academic journey and beyond.

**References**

1. Don’t give directions, grow a compass.

Truth be told, it took me a while to realise or even recognize the flaws within me. They say the first step to solving a problem is recognising that you have one.

- Arts & Social Sciences student

It’s a well-worn lament that our youth need spoonfeeding. Employers complain that new hires seem to want a template for everything and ask their managers trivial questions that drive them crazy. Why can’t they just figure things out for themselves?

Our take on this is that the problem lies in how we train our youth. In Singapore, our education system places emphasis on structure, specific directives and instructions, which encourages linear thinking and an overreliance on external authority and extrinsic motivation. Students learn to ask – “How many words should I write? Single or double spaced?” instead of developing their own sensing and decision making ability, skills which are so vital in a future of ambiguity and change.

The catch is, giving linear directions is easy at first, but it doesn’t work in the long term.

For example, telling all students to be more assertive isn’t always good advice. Some may actually need to be less assertive and better listeners instead. What’s better is to ask students - when does their communication style work for them? When does it create problems?

When you develop a culture of asking “What’s working? What’s not working? What can we change?”, this reflective ability builds up your internal compass. Think of it as upgrading your sensors. We go deeper into how to do this in our seminar on Awareness.

Along with a greater level of awareness comes the ability to break out of linear thinking and to be more creative. Instead of thinking “It can’t be done” in black and white, we start to wonder “Which part of this is possible?”

Another awareness technique we use comes from mindfulness – it is the ability to zoom out of a situation and simply to observe yourself. This meta-cognitive ability has the potential to change your life fundamentally, and is essential in a world where things are shifting so fast, we need to constantly re-evaluate our priorities and strategies.

Going for the first session of Roots & Wings literally sent me a wake-up call. During the life domain activity, I realized there was absolutely nothing I could say I was putting much effort into in my life. My worksheet seemed to resemble binary code, as it was solely made up of 0s and 1s. It made me question my very sense of existence. Was I making full use of the life that I possessed?

- Arts & Social Sciences student
2. In a world of tech addiction, we need to double down on focus and attention training.

In our opening workshops, one of the most common fears students brought up was that they don’t have enough time in a day. However, when we dug a little deeper, we found that the problem wasn’t so much the lack of time but rather, it was the increasing arduous battle against tech distraction, the inability to control “mind-wandering” and bring the mind back to focus on the task at hand.

Social Media – Weapons of Mass Distraction

Students likened social media and mobile phones to fast food: Impossible to resist, but you felt disgusted afterwards. They also talked about social media creating a pervasive sense of FOMO (Fear Of Missing Out), this generation’s version of being “kiasu”.

Many of our youth also discussed the phenomenon of comparing your insides to everyone’s outsides – people post only the best 1% of their lives on social media, the most flattering, exciting photos – which sets up unrealistic expectations and drives depression.

The Roots & Wings seminars brought the problems of mind-wandering and multi-tasking to my active attention, as I do find myself jumping from task to task on the surface without really engaging with them fully. They made me realise that I could probably complete the work I had in much less time were I to really focus on the task at hand and not halfheartedly attempt them.

I was constantly distracted by things on the web, my phone and even random Youtube videos. Utilising the focusing skills that I learnt, I managed to take part in Career Talks and Hackathons more efficiently and became more receptive to what was being shared, as compared to my “zombie mode” in the past where I would just be physically present but my mind would be elsewhere.

I felt inferior and lonely and it did not help when the first thing I see on my Facebook feed every morning were pictures of my secondary school classmates who were either enjoying themselves overseas on exchange, or doing something fun with their friends. After taking this course, I realised that I was actually experiencing FOMO. It reminded me that those Facebook pictures might not necessarily portray a well-rounded summary of their lives. I learnt to live for myself rather than to become so fixated on comparing myself with others, and also learned to be grateful rather than living my life in self-wallow.

I consciously made sure to “disconnect to connect”. In addition, I realised that many of the skills are linked to one another. By practising effective listening and disengaging from my phone, I can direct more of my attention to my friends, which then allows me to be more empathetic, in conjunction with increased mindfulness and awareness of their body language and behaviour.

However, there is hope! Over 75% of our students tell us that the most important skill that they have learned from Roots & Wings was the ability to train their brain to focus better and to develop awareness of their surroundings and others.

In our seminars on Focus and Attention, we use secular mindfulness-based techniques to train your “puppy mind” from jumping about hyperactively, and learn to gently tug on the leash to bring it back to the subject at hand.

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– Computing student

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– Science student

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– Arts & Social Sciences student
Looking back, I think CFG sparked something else in me beyond helping me find my core. This semester’s journey has been an enlightening and fruitful one that has opened my eyes to the importance and beauty of human connection, and has inspired me to start a blog with my stories and thoughts...

- Arts & Social Sciences student

3. Everyone feels like they’re not good enough. And that’s normal.

In our opening workshop, one of the most powerful moments is when we get students to whip out their mobile phones and post one of their biggest limiting beliefs about themselves on a special wordcloud website. In a matter of minutes, the blank screen on stage gets populated by a sea of words. The more entries, the bigger the word.

It’s always an emotional moment for students to see all their limiting beliefs up there and to know that they are not alone. “Wow, I thought I was the only one who felt this way!” is what many of them say. And for our team, it never fails to amaze us that NUS is one of the top Universities in the world, but almost every single class tells us that they feel “not good enough”.

I learned that my constant negative thoughts are unhelpful and are most certainly not facts. Applying the exercise taught in the seminar, I named my mind’s running commentary about me being a social failure as the “Here comes the social loser” story. This naming definitely helped me tremendously in shutting out my own false belief about myself by recognising that it is just an irritating story that my mind likes to tell.

- Arts & Social Sciences student

One of the “Limiting Belief” clouds from our workshops
4. Happiness is worth spending some time understanding!

Is success the same as happiness? Many of our students tell us before that our seminar on Happiness, that they had never spent any time thinking about what it means to be happy.

We use psychologist Martin Seligman’s PERMA model to break down happiness into five key ingredients - Positive emotions, Engagement, Relationship, Meaning and Achievement, and then get students to build a vision of what a truly happy life would mean to them.

One of the most important practices for a happy and successful life is gratitude. As someone wise once said, success is wanting what you have. When we are grateful, we move from a mindset of scarcity to a mindset of abundance and become more productive and more interested in contributing to the world.

Our parents, schools and society in general are constantly emphasising the importance of excelling. However now that I am in university and am closer than ever to realising my goals, in fact, I am more unhappy than ever as I constantly compare myself to my fellow peers. The skills I have learned in the Happiness seminar have been immensely helpful to me in this aspect.

I learnt that happiness is more than just ‘feeling good’ because I did well academically or lived up to my parents expectations. More important than ‘feeling good’, which is a temporary emotion that would dissipate once I failed to achieve a particular something, is the experience of joy and contentment about life, and knowing I am living my life meaningfully.

Internalising this, I am able to see the importance of appreciating the little things in life. At once, being happy becomes a seemingly effortless task – being alive, having a roof over my head, supportive parents and friends, the good weather and countless other things make me happy.

- Arts & Social Sciences student

5. Millennials need challenge and provocation, more than they need nurturing.

What are you going to choose? Comfort or growth? If you’re growing, it’s not comfortable. If you’re comfortable, you’re not growing. That’s one of the first things we tell our students.

Do they like it when we separate them from their friends when they come into our workshops? Do they like it when we come at them with microphones and ask them to share their hopes and fears? Not at all! But afterwards, most of them tell us that they were so surprised by what they learned, and proud of themselves for being able to engage a stranger in a meaningful conversation.

"I remembered how lost I felt upon entering the class. I was separated from my friend and felt very insecure without her as I knew no one else. The unique setting of the class where we sat on legless chairs somehow made it easier for me to make friends with others through the activities given and I was able to step out of my comfort zone and share my thoughts comfortably. I realised I’m not alone in this struggle and it gave me the courage to prioritise my time more wisely on things that are important to me.

- Engineering student"
6. Empathy is more than a powerful tool, it’s a way of life.

We believe that in a future of robotics and automation, most of the jobs that will be left for humans will be the ones requiring the quintessentially human skill of empathy. Yet, many studies suggest that our youth are declining in empathy rapidly (Konrath et al., 2010; Konrath, 2012). Such changes have been hypothesized to be related to increasing use of screen time and information overload.

References

7. Social change matters to millennials.

Hundreds of students spoke about how they wanted to make a meaningful difference to the world and do work that resonates with their values. Here’s one particularly touching story.

As of July, I began my work as a tutor in Boys’ town where I was assigned to ‘Boy’. When I first met him, it was gutting to hear about how much he missed his family and how he dreamed about simply being together with them once more. It was a poignant contrast to my own life of relative comfort and lack of incident. It wasn’t right that something so fundamental, the right to be with someone’s own family, could be denied to anyone, let alone a child.

I was both moved by his simple desire and indignant at the relentlessness of circumstance. My official assignment was to tutor my Boy in Maths, but I realised that no matter how well I did my job, it would not be enough to release him from Boys’ Town. So I decided I would try to tutor him in all his subjects.

Every lesson was an engaging (and admittedly) thrilling race for the both of us, right up to the week before his exams. Having practiced the relationship building techniques I learned in Roots & Wings, I was beginning to develop a strong bond with my Boy. He would talk animatedly to me and we would often be the last to leave the designated tuition area. His final exams are now past and I recently had word that he is no longer under the charge of Boys’ Town. Roots & Wings has truly enabled me to make the most of my time by making a difference in someone else’s life.

- Arts & Social Sciences student

In an effort to practice empathic listening, I tried to pay attention to the words my family members were using and how they were being expressed. This was particularly helpful especially since my parents are not the emotive sort. For example, if my dad enunciates his words faster with a hint of sarcasm, he could be moody over a past grudge or simply tired from work. Instead of responding with frustration, I got my mom to skip the gossip from my friends and instead ask my dad if there was anything he would like to talk about. In essence, I got my family to try not only to lend a listening ear, but to contribute their own opinions on each others’ affairs and understand the underlying context which we had missed so often in the past.

- Arts & Social Sciences student

Students are encouraged to share their perspectives in a safe environment

- Engineering student
8. Take tiny risks. The effects will surprise you.

Just one small change or step outside the comfort zone can often make a huge difference.

We encourage our students to take tiny steps at first, whether it’s just 3 refocusing breaths before a presentation, or to talk to someone with a beginner’s mind, or to change the path that they take to walk home. All these small new habits start to burn new neural pathways in our brains and allow us to grow our new “muscles” and skills which may pay big dividends in the future.

We have heard such touching stories that arose from baby steps and this is one of our favourites.

Opening up and being more actively involved around my family was tough. I suggested we go eat at some fancy place but at the start of dinner, there was almost radio silence. It was a problem that probably stemmed from not spending enough time with each other in the first place.

Thus I broke the silence by sharing what I’ve been doing the past few days and both of them were spooked at the start, seeing as to how I’ve never been this open before. Eventually a proper conversation was had, and we had a good time together.

Sadly (or not) it seems we’ve learnt more about each other in this one dinner sharing session than during our entire lives together. Through this one conversation that seemingly broke the ice in our family, we’ve noticeably become warmer towards each other and don’t simply ignore our existence when we’re together anymore. Interesting to see how such a small event can bring such a big change in my family.

- Joint Multi-Disciplinary Programmes student

At the end of Roots & Wings, we always tell students that it is a course in gardening. All we are doing is planting seeds. It is up to them to water them with practice and effort. Some of our students see radical change immediately while others take more convincing.

Ultimately, social emotional skills have to be practiced throughout your life and even us teachers struggle to walk the talk everyday. Nevertheless, we hope that every seed that we plant will one day blossom from dormancy when it is most needed, bringing our youth a step closer to realising their fullest potential.

The truth is I’m always skeptical of such courses, I’m never too fond of following the so-called ‘tips’. This does not mean that I find this course entirely useless. I see this as a beginning for my own research and further studies. Have I changed for the better since the start of the module? I’m afraid not. I won’t lie by saying the tips are not useful because as explained, I did not really practice them. What has this course given me? I would say: an introduction. My baby steps in becoming a better person. Thank you for the introduction.

- Design & Environment student

To all graduates I sincerely urge you to read the course materials and give it some thought, say scribble some points down on a notebook and think through them on the bus ride home from campus. You will find new things not just about yourself but also your beliefs and outlooks in life.

- Arts & Social Sciences student

Throughout the module, the skills taught came in handy. It was almost as if I was healing as the weeks went by. The seminars helped me to recover from my negativity step by step. It made me believe that I was capable of change and taking control of my life.

- Arts & Social Sciences student
TEST YOUR EMOTIONAL INTELLIGENCE!

In a world of robotics and automation, it is more important than ever to advance your humanistic skills such as Empathy, which is a key component of Emotional Intelligence (EQ). Test your EQ by deciphering which emotion is displayed in each picture below:

1. A. Suspicion
   B. Contempt
   C. Pride
   D. Agreeableness

2. A. Happiness
   B. Satisfaction
   C. Fear
   D. Surprise

3. A. Anxiety
   B. Confusion
   C. Disagreement
   D. Sadness

4. A. Fear
   B. Disbelief
   C. Hurt
   D. Sad

5. A. Shocked
   B. Disgusted
   C. Withdrawn
   D. Confused

6. A. Optimistic
   B. Flirtatious
   C. Contemplative
   D. Relieved

7. A. Happy
   B. Satisfied
   C. Peaceful
   D. Curious

8. A. Surprised
   B. Determined
   C. Mischevous
   D. Excited
WHAT REALLY MATTERS

Instructions: For each of the ten life domains, rate how important this area is to you on a scale of 0 (low importance) to 10 (high importance) at this moment.

It’s okay to have several life domains scoring the same number. Your task is to rate, not rank the domains.

Next, rate how much time & effort you have invested into each life domain during the past 2 months on a scale of 0 (no investment) to 10 (high investment).

<table>
<thead>
<tr>
<th>Life Domain</th>
<th>Importance</th>
<th>Time &amp; effort invested in the past 2 months</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Couples / Romantic relationships</td>
<td></td>
<td></td>
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<tr>
<td>Social relationships / Friendships</td>
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<td></td>
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<tr>
<td>Career</td>
<td></td>
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<tr>
<td>Education</td>
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<td>Recreation / Leisure</td>
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<td>Religion / Spirituality</td>
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<td>Community involvement</td>
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<tr>
<td>Health / Physical well-being</td>
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<tr>
<td>Emotional well-being</td>
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</tr>
</tbody>
</table>

Notice the gap (if any) between what you value as priorities, versus how you have actually allocated your time, energy and resources.

What will you commit to working on?

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References
Emotional Intelligence Quiz – Greater Good Science Centre, University of California, Berkeley http://greatergood.berkeley.edu/ei_quiz/

*Scoring is the subjective opinion of the CFG Learning & Development team