



Consumer research firm ValuePenguin compared tuition fees of different majors at National University of Singapore with annual starting salaries of students who graduated last year, adjusted for employment rates of different graduates. The study showed that general science and arts degrees were ranked among those with the lowest returns on investment. ST FILE PHOTO

# Specialised degrees give best returns on uni fees: Study

## Computing courses reap the most financially in first year of graduation for NUS students

Amelia Teng

Specialised majors such as computing may give the most bang for your buck, according to a new study.

Computing and computer engineering courses took the top three spots in a study done last month on which university majors reaped the most financially in the first year of graduation.

Consumer research firm ValuePenguin compared tuition fees of different majors at the National University of Singapore (NUS) with annual starting salaries of students who graduated last year, adjusted for the employment rates of different graduates.

For \$8,150 in annual tuition fees, graduates from the three computing-related courses can expect to earn gross median monthly incomes of \$3,900 to \$4,000.

Degrees with high tuition fees had the least immediate returns. For instance, medicine and dental surgery students pay \$27,400 per year in tuition fees, and earn \$4,000 to \$5,000 in median gross income monthly in their first year after graduation.

The study showed general science and arts degrees were ranked among those with the lowest returns on investment.

ValuePenguin senior vice-president Duckju Kang said: "The fact that the top three courses are all related to computing speaks of how much demand there is for talent in this field. The fastest-growing companies today are tech companies."

"We see the same trend happening in Asia and across the world. Governments are looking at tech solutions and there is a growth in start-ups."

Tech companies such as Facebook, Google and Twitter can offer six-figure annual salaries to new graduates, he said.

The study used only NUS figures for ease of comparison across majors as each university defines its specialisations slightly differently, Mr Kang added.

Some 6,300 NUS graduates were

### COVETED SKILLS

Specialised skill-sets require more training, and if they align with industry demand, tend to have higher returns of investment.



VALUEPENGUIN'S SENIOR VICE-PRESIDENT DUCKJU KANG

surveyed by the university in last year's graduate employment survey. NUS computing science graduate Rey Neo, 26, landed a job at online payment service PayPal as a software engineer during his internship with the company.

"I took the offer because I liked its work culture – friendly, open and flexible," said Mr Neo, who started work in June last year and is earning a monthly sum that is above the median gross salary of \$4,000 for his peers.

Architecture, pharmacy, civil and electrical engineering, law and nursing courses were among the top 10 majors with the highest returns.

Said Mr Kang: "Specialised degrees are increasingly becoming more valuable and they definitely make more money than general ones as they help to differentiate you in the job market."

"Specialised skill-sets require more training, and, if they align with industry demand, tend to have higher returns on investment."

But these figures may not reflect the worth of a medical degree in the long run, as their graduates' pays typically pick up and become more stable five to 10 years down the road, said Mr Kang.

Mr David Leong, managing director of recruitment firm People Worldwide Consulting, shared the view.

"You need to invest more to earn a medicine degree, but the pay of a doctor will increase over the course of his career," he said, adding that there are pay variations even within the same industry.

Mr Leong said that the returns on investment "will improve over time, on their own momentum, not on the basis of a graduate's first degree".

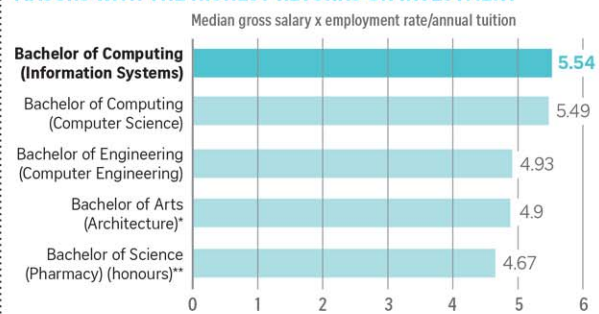
"Education is a continuous effort and the basic university degree is just a starting point."

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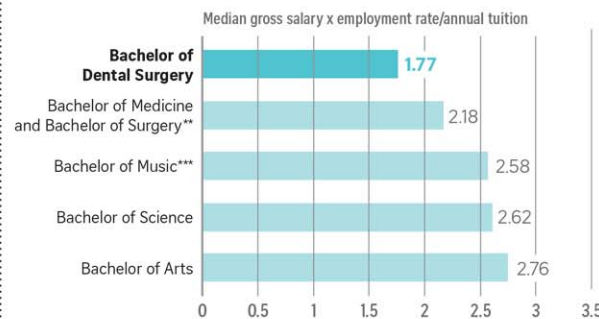
## Payoff for the paper chase

Specialised degrees in majors like computer science have the highest immediate returns, while general science and arts degrees do not fare as well, according to ValuePenguin's study.

### MAJORS WITH THE HIGHEST RETURNS ON INVESTMENT



### MAJORS WITH THE LOWEST RETURNS ON INVESTMENT



### HIGHEST EARNERS

	Degree	Median gross monthly salary (\$)	Annual tuition fees (\$)
1	Bachelor of Medicine and Bachelor of Surgery	5,000	27,400
2	Bachelor of Laws (honours)	4,900	12,600
3	Bachelor of Dental Surgery	4,050	27,400
4	Bachelor of Computing (Computer Science), Bachelor of Computing (Information Systems) and Bachelor of Arts (Architecture)	4,000	8,150 for computing, 8,800 for architecture
5	Bachelor of Engineering (Computer Engineering)	3,900	8,150

\*Data from a follow-up survey on 2013 architecture graduates after their practical training.

\*\*Data from a follow-up survey on 2015 graduates after their one-year practical law course/pupillage/housemanship/first-year residency/practical training.

\*\*\*For whom the vast majority of employment was part-time, part-time employment rate is used instead of full-time employment rate.

### NOTES:

• Figures are based on NUS data from the graduate employment survey conducted in November 2016, and the latest NUS annual tuition fees in the academic year 2017/2018.

• Gross monthly salary pertains only to full-time permanently employed graduates. It comprises the basic salary, overtime payments, commissions, fixed allowances and other regular cash payments, before deductions of the employee's CPF contributions and personal income tax. Employer's CPF contributions, bonuses, stock options, lump sum payments, and payments-in-kind are excluded.

Source: VALUEPENGUIN STRAITS TIMES GRAPHICS