BEng in Computer Science

Dr. Anthony Tam
Academic Advisor

2021/22 Briefing
Computer science is not just about programming and studying the computers, but rather it is about **problem solving** – *the study of algorithms and information representation to solve real-life problems.*

“Almost every major challenge facing our world is **turning to computing for a solution**, from conquering disease to eliminating hunger, from improving education to protecting the environment.” by Prof. Eric Roberts of Stanford University, the co-Chair of ACM’s Education Board at 2007
Programme Structure

Flexibility

BEng(CompSc)

BEng(CompSc) + minor

FE ≥ 36 credits

BEng(CompSc) + 2 minors

72 credits ≤ FE < 90 credits

BEng(CompSc) + 2nd major

(GEBP)

72 credits ≤ FE < 90 credits

BEng(CompSc) + BBA

FE ≥ 54 credits
Minors & 2nd majors

Minor
• Any minor except
  • Minor in CS & DSE

2nd Major
• Any major except
  • Major in CS
  • Major with a total loading of 96 credits
    • E.g., Science Majors, QFin

Check this out: Academic Advising Office (http://aa0.hk/hk/)
Computer Science Focus Areas

- **Theoretical Computer Science**
  - Compiler, Functional programming, Quantum computing, Game theory, Cryptography, Advanced algorithm

- **AI & Robotics**
  - AI, Machine learning, Deep learning, Computer vision, Robotics, Hands-on AI

- **Financial Computing**
  - Cyber security, Blockchain, Cryptocurrency, E-payment, E-commerce, Web technologies, Data mining

- **Big Data Analytics**
  - Statistical learning, AI, Machine learning, Adv DB, Data Mining, Bioinformatics

- **Systems & Networking**
  - Computer architecture, Web technologies, Mobile app design, Distributed computing, Scientific computing, Software systems
Final Year Projects

- Research and development projects
- Industrial / community based projects
Internship
Career – 2020 Graduate Statistics

Where did our 2020 graduates go?

Basic Salary of HKUCS Graduates
Department of Computer Science

• The youngest Department within the Engineering Faculty
  • Formally established in 1988
  • We have 37 full-time teaching members and we are still recruiting more

• Five Research Groups
  • AI, Robotics, & Visual Computing
  • Cyber Security, FinTech, & Blockchain
  • Data Science and Engineering
  • Foundations of Computer Science, and
  • Systems and Networking
Further information

• Academic Advisor of Computer Science department: Dr. Anthony Tam (atctam@cs.hku.hk).
• Computer Science program: http://www.cs.hku.hk/programme/
• To download this briefing note and study plans: https://www.cs.hku.hk/programmes/beng-compsc/academic-advising
• Or access this web page via the QR code
More Information
# Career – Graduate Statistics

<table>
<thead>
<tr>
<th>Positions</th>
<th>IT-related positions</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020</td>
<td>95%</td>
<td>5%</td>
</tr>
<tr>
<td>2019</td>
<td>89%</td>
<td>11%</td>
</tr>
</tbody>
</table>

Examples:
- Business/System/Technical/Technology Analyst
- Consultant/Application Consultant
- IT Officer/Specialist/Technician
- Programmer/Developer/Software Engineer
- IT/Cloud/System Engineer
- Android/Game/Mobile App Developer
- UX Designer & Developer
- Web/Full Stack Developer
- Quantitative Researcher
- Management Trainee
- Program Coordinator
- Financial Consultant
- Officer
- Teacher
# Career – Graduate Statistics

<table>
<thead>
<tr>
<th>Companies</th>
<th>IT/Tech/Engg</th>
<th>Finance/Banking</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020</td>
<td>53%</td>
<td>33%</td>
<td>14%</td>
</tr>
<tr>
<td>2019</td>
<td>45%</td>
<td>38%</td>
<td>17%</td>
</tr>
</tbody>
</table>

**Examples**
- Accenture
- Alibaba
- Amazon
- ASM Pacific Technology Ltd
- Bloomberg
- ByteDance
- ESRI
- GoGoVan
- Google
- IBM China/Hong Kong
- Intel
- Microsoft
- Yahoo! Japan Corporation

- Bank of America Merrill Lynch
- BNP Paribas
- Credit Suisse Group AG
- Deloitte Touche Tohmatsu
- Goldman Sachs (Asia) LLC
- KPMG
- Morgan Stanley
- Société Générale
- UBS AG

- HK Jockey Club
- Hospital Authority
- South China Morning Post
- Cathay Pacific Airways Limited
- OGCIO
- HKU
Career – Useful References

• ACM Careers in Computing Website
  • http://computingcareers.acm.org/

• Target Jobs – IT and Technology
  • Specialisms:
    • https://targetjobs.co.uk/career-sectors/it-and-technology/advice/specialisms
  • Ten typical jobs graduates can do in IT:
    • https://targetjobs.co.uk/career-sectors/it-and-technology/advice/286189-ten-typical-jobs-graduates-can-do-in-it