UTM UNIVERSITI TEKNOLOGI MALAYSIA

FACULTY OF COMPUTING
UTM Johor Bahru

SECP 1513

TECHNOLOGY AND INFORMATION SYSTEM

SKILLS IN UNIVERSITY AND INDUSTRY

LECTURER:

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SUBMITTED BY:

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Semester 1 2024/2025

Speaker 1
Encik Nik Mohd Habibullah
Ketua Pengawai Eksekutif
Micro Semiconductor Sdn Bhd.

Speaker 2
Encik Mohd Hakimi Iqmall
Pegawai Teknologi Maklumat
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1.0 INDUSTRY TALK ON SKILLS IN UNIVERSITY AND INDUSTRY

1. Description of The Speaker Experience

Mr. Muhammad Hakimi Iqmali, a 2018 graduate, offers invaluable insights drawn from his journey at UTMDigital. Beginning as a graphics and multimedia software student in 2014, he has advanced to his current role as a project manager. His career highlights the importance of foundational skills, adaptability, and perseverance in building a successful career in technology. Mr. Iqmali contributed to the development of various systems, including staff movement tracking software and database management at UTMDigital. His journey underscores the crucial role of hands-on learning, particularly in project management and leadership.

2. Basic Skills Required for Computer Science

For computer science students, memorising the syntax of programming languages like C++, Python, and Java is undoubtedly essential, but mastering logic and problem-solving is even more critical. Students also must be familiar with version control systems like Git, as well as platforms like GitHub, for effective collaboration among team members. Furthermore, a deep knowledge in development tools such as Visual Studio Code and a thorough understanding of databases are essential for ensuring peak system performance. Additionally, soft skills such as effective communication and empathy play a vital role in maximising productivity of each team member, leading to successful project management.

3. Skills Required by Industry

Beyond technical skills, industry professionals must excel at project management and leadership. Familiarity with Software Development Life Cycle (SDLC) methodologies such as Agile and Waterfall is required for effective project management. Risk management is also an important skill, as professionals must anticipate potential problems and devise backup plans. Furthermore, clear documentation and testing are critical to ensuring product reliability and performance. As the technological landscape changes rapidly, continuous learning and adaptation to new technology is essential. Aside from that, building connections within industries can lead to valuable opportunities for professional development.

4. References

Presentation Slide: Designing Success: From Graphic Multimedia to Leading Projects. (17/12/2024). Mr Mohd Hakimi Iqmali.

Presentation Slide: Preparing for Entrepreneurship in IT: Essential Skills and Strategies for University Students. (17/12/2024). Mr Mohd Hakimi Iqmali.

Staff, C. (2024, September 16). *12 Key Project management skills*. Coursera. https://www.coursera.org/articles/project-management-skills

Staff, C. (2024b, December 15). 5 Types of programming languages. Coursera. https://www.coursera.org/articles/types-programming-language

2.0 REFLECTION

How will you be successful in computer science in the next four years?

1. **Muhammad Luqman bin Mohd Azmi**

   Within the next four years, I will try my best to develop more interest and knowledge towards the computer science field by doing research towards this field. I can join tons of activities within the university that involve me taking part in computer science such as coding competitions, robotics, and many more programming workshops. I also can complete all my curriculum within the next four years and aiming to achieve the best result possible. To achieve it, it is obvious that some sacrifice has to be made. Last but not least, I also need to have a strong foundation in computer science in order to excel in this field from the beginning.

2. **Nur Athirah binti Abasa**

   Over the next four years, I will focus on building strong programming skills, exploring database management, and staying updated on emerging technologies like AI, blockchain, and cloud computing. Practical experience through internships, projects, and open-source contributions will be key, along with networking at hackathons and seminars. I will also work on improving communication, collaboration, and leadership skills, while staying up-to-date with industry trends through research and hands-on learning.

3. **Batrisyia Amani binti Khairun Haled**

   In order to be successful in computer science, I will focus on building real-world products, contribute to open-source, and continually improve my skills through coding challenges. I plan to actively participate in hackathons and collaborate on team projects to obtain practical experience. By keeping my GitHub portfolio up to date, I can promote my work while still staying connected to the tech community. At the end of semesters two and four, I intend to look for internships to put my knowledge to use in practical situations only after establishing confidence in the tech-industry.

4. **Tan Hui Shan**

   In the next four years, I will focus more on core computer science knowledge. For example, build a solid foundation in programming, algorithms and data structures because it is crucial for any upcoming project. Next, I will stay updated on industry trends, invest time in learning languages like Python, Java and C++, and explore specialized areas like machine learning, cybersecurity or cloud computing. Since practical experience through projects is invaluable, I will likely participate in more workshops or open-source projects within four years. I will learn to use useful platforms like GitHub which serve as a portfolio and find the sea of source of code in the platform.