* **First Year (60 credits)**

**First Semester (30 credits)**:

The first semester of year one will focus on building core computer science competencies through the following courses:

* **CSM13001 Distributed Systems (5 credits):** This course will provide crucial foundations in decentralized computing architectures, enabling me to architect robust large-scale systems.
* **CSM14101 Software Architectures (5 credits):** Studying various architectural patterns and analyzing tradeoffs between qualities like performance and maintainability will prepare me to make key design decisions.
* **DATA11002 Introduction to Machine Learning (5 credits):** Getting an overview of core machine learning techniques involving classification, regression, clustering, etc will equip me to apply AI solutions.
* **CSM141081 Full Stack Web Development (5 credits):** Developing full stack web development abilities with front-end, backend and database skills will be pivotal for rapid prototyping.
* **CSM13204 Cyber Security II (5 credits):** Learning principles for securely designing systems resistant to common threats will inform protection of user privacy and system integrity.
* **DATA11001 Introduction to Data Science (5 credits):** Using tools like Python, SQL and visualization libraries to gather and analyze datasets in real-world contexts establishes data fluency.

**Second Semester (30 credits):**

Building on the first semester, I will expand practical software development abilities and begin synthesizing knowledge through projects:

* **CSM20016 Computer Vision (5 credits):** Understanding algorithms for image processing, detection, segmentation and recognition will enable developing solutions leveraging visual data.
* **CSM141091 Full Stack Web Development Project (5 credits**): Applying full stack knowledge to complete an end-to-end customized web platform project will accelerate hands-on abilities to architect complete systems.
* **BSCS2015 Data Analysis with Python (5 credits):** Using Python for data cleaning, analysis, modeling and visualization will advance data manipulation skills for impactful insights.
* **CSM14103 Software Architecture Project (5 credits):** Creating architectures optimized for criteria like usability and testability through team collaboration will improve architectural decision-making proficiency.
* **CSM132042 Cyber Security Base:** Course Project II (1 credit): Implementing secure development best practices will reinforce skills for preventing vulnerabilities in practice.
* **Full Stack Development Courses (9 credits):** Building on core full stack foundations, these specialized courses on TypeScript, React Native, CI/CD, GraphQL and databases provide a tailored skill boost aligned with project needs.
* **Second Year (60 credits)**

**First Semester (30 credits):**

In year two, I will focus on synthesizing knowledge from foundational and specialized courses by undertaking projects and research:

* **CSM13105 Introduction to the Internet of Things (5 credits):** Studying embedded devices, communication protocols and data analytics architectures will enable developing smart systems leveraging IoT.
* **TKT50005 Professional IT Working (5 credits):** Gaining experience collaborating within a real-world information systems team will provide vital perspective for my transition to industry.
* **CSM14211 Introduction to the Programming of Quantum Computers (5 credits):** Understanding principles of quantum computing will allow me to innovate solutions utilizing cutting-edge paradigm shifts in high performance computing.
* **CSM90003 Leadership Training (5 credits**): Developing people management, ethics and communications skills will equip me to guide teams and stakeholders through complex technical initiatives.
* **CSM14209 Seminar in Novel Software Architecture Design (5 credits):** Researching innovative architectures for emerging domains like cloud, AI and blockchain will enable me to craft optimized next-generation platforms.
* **CSM11002 Computer Science Colloquium (5 credits): Connecting** with a potential thesis supervisor to start planning research topics aligned with my interests will enable jumping swiftly into the thesis project.

**Second Semester (30 credits):**

The final semester will wrap up with executing the thesis research project and completing the graduation requirements:

* **CSM11001 Master's Thesis in Computer Science (30 credits):** Diligently implementing methodology from proposal through writing will demonstrate ability to conduct independent rigorous research advancing the field's knowledge.
* **CSM11003 Maturity Test (0 credits):** Passing this test will validate mastery of core computer science skills, knowledge and critical thinking ability.
* **CSM11004 Master's Thesis Presentation (0 credits**): Successfully presenting thesis outcomes will complete the graduation requirements and equip me to discuss technical research clearly and professionally.