**Documentation: Compliance with specific admission requirements for Computer Science***Upload this document with the rest of your application for the MSc programme in Computer Science at ITU.*

 **PART ONE**

**All applicants must fill in part one.**

|  |  |
| --- | --- |
| Applicant |  |
| Name |  |
| Date of birth |  |
| Name of bachelor programme |  |
| Name of university where you studied the bachelor programme |  |

**Programmes that automatically meet the specific requirements:**ITU compiled a list of Danish bachelor programmes that automatically meet the specific requirements for MSc in Computer Science:

* Datalogi (AAU – Aalborg University)
* Software (AAU – Aalborg University)
* Datalogi (AU – Aarhus University)
* Datalogi (KU – University of Copenhagen)
* Softwareteknologi (DTU – Technical University of Denmark) – Bachelor of Science in Engineering (Software Technology)
* Datalogi (SDU – University of Southern Denmark)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|

|  |
| --- |
| **YES** |
|  |

 |  |

|  |
| --- |
| **NO** |
|  |

 |

 Mark if you have one of the degrees above:

If you mark ‘no’, please fill in part two, see below.

**PART TWO
This part must be completed by applicants who do not automatically meet the admission requirements.**

Please, read this instruction carefully before you complete the form below.

**Requirements:**
to be eligible, you must meet both of the following criteria:

* Fulfill all requirements 1 to 5.
* Satisfy 2 of the requirements 6 to 8.

**How to complete the form:**For each requirement, please provide the activity or activities where you achieved the requirement, along with the number of ECTS earned for each course or activity.
We will only consider activities for which you have earned ECTS or other university-level credits.

**Required additional information:**You must also include the following documents with your application, as we cannot process your application without them:

* **Course Descriptions:** Attach the official course descriptions for all the courses you have listed. Links to these descriptions are acceptable.
* **Project Description:** If you met some of the requirements through a project, please include a brief description of the project (maximum ½ page).
* **ITU Courses:** If you completed some of the courses at ITU, you are not required to include course descriptions for those specific courses.
* **Conversion to ECTS:** If your credits are not in the ECTS format, you must provide an official explanation of how these credits convert into ECTS.
In some cases your university may be able to help you with an official conversion of your current courses into ECTS. If your university cannot help, you must instead enclose an official document stating how many credits covers a full-time semester at your home university, and how many years your programme takes to complete by being a full-time student.

Please proceed with your application, ensuring that you meet these criteria and provide the requested information and documentation.

**We will only handle your application if all documentation is enclosed.**

|  |  |
| --- | --- |
| **Requirements:**  |  |
| **1: Imperative/Object-Oriented/Functional Programming - 30 ECTS** You must fulfill all requirements 1 to 5. |   |
| You must have a medium level of ability to program in an imperative/OOP programming language. Additionally, you must have been exposed to a mainstream functional programming language. These requirements are usually met by taking an introductory course on programming and working on a medium-sized project. |  |
| **I meet this requirement by the following course(s)/projects:** | ECTS |
|     |  |
| **2: Discrete Mathematics - 5 ECTS**You must fulfill all requirements 1 to 5. |  |
| You must have taken an introductory course on discrete math. The course must include most of the following: propositional and predicate logics, induction principles, basic counting, discrete probability, sets, functions, graphs, trees. |  |
| **I meet this requirement by the following course(s)/projects:** | ECTS |
|     |  |
| **3: Algorithms and Data Structures - 5 ECTS** You must fulfill all requirements 1 to 5. |  |
| You must have taken an introductory course on algorithms, which includes most of the following: big-O notation, basic analysis of algorithm correctness and complexity, hashing, basic data structures, quicksort, mergesort, DFS, BFS, Dijkstra, Kruskal, Prims (MST), priority queues, binary search trees, red-black trees, tries, union-find.  |  |
| **I meet this requirement by the following course(s)/projects:** | ECTS |
|   |  |
| **4: Databases - 5 ECTS**You must fulfill all requirements 1 to 5. |  |
| Basic concepts of databases, relational databases, basic data analytics. |  |
| **I meet this requirement by the following course(s)/projects:** | ECTS |
|   |  |
| **5: Software Engineering - 5 ECTS**You must fulfill all requirements 1 to 5. |  |
| Introductory course on software engineering. The course must include most of the following: software processes, requirements, software architecture, testing, version control, development tools.  |  |
| **I meet this requirement by the following course(s)/projects:** | ECTS |
|   |  |
| **6: Computer Security - 5 ECTS**You must satisfy 2 of the requirements 6 - 8 |  |
| You must have some basic knowledge of computer security. This must include most of the following: adversarial environments, security principles, basic methods for preventing cyberattacks, including cryptography, authentication, authorization. |  |
| **I meet this requirement by the following course(s)/projects:** | ECTS |
|    |  |
| **7: Programming Language Design and Implementation - 5 ECTS**You must satisfy 2 of the requirements 6 – 8 |  |
| The prerequisite includes most of the following: regular expressions, finite state machines, parsing techniques, type checking and inference, garbage collection techniques. |  |
| **I meet this requirement by the following course(s)/projects:** | ECTS |
|    |  |
| **8: Operating Systems - 5 ECTS**You must satisfy 2 of the requirements 6 – 8 |  |
| You must have some knowledge of how operating systems work. This includes most of the following: some knowledge of a low level programming language such as C, basic system programming concepts (I/Os, network programming, concurrent programming), reflect on the impact of hardware, operating system and compilation process on application programs. |  |
| **I meet this requirement by the following course(s)/projects:** | ECTS |
|    |  |