**SCHEDULE OF THE COURSE**

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| *Week* | *Topic* | *Time* | |
| 1 | Course introduction and syllabus overview.  Discussion of the basic ideas of the Computation Theory. | 27/9/2023 | |
| 2 | Finite Automata, Deterministic Finite Automata, Nondeterminism | 4/10/2023 | |
| 3 | Closure Properties of Regular Languages, Regular Expressions, Equivalence between Regular Expressions and Finite Automata | 11/10/2023 | |
| 4 | Regular Pumping Lemma, Non Regular Languages, Context Free Grammars | 18/10/2023 | |
| 5 | Pushdown Automata-CF Pumping Lemma Non Context Free Languages | 25/10/2023 | |
| 6 | Turing Machines | 1/11/2023 | |
| 7 | TM Variants, Church-Turing Thesis | 8/11/2023 | |
| 8 | **Midterm Exam** | 15/11/2023 | |
| 9 | Decision Problems for Automata and Grammars | | 22/11/2023 |
| 10 | Undecidability, Reducibility | | 29/11/2023 |
| 11 | Post’s Correspondence Problem, Recursion Theorem | | 6/12/2023 |
| 12 | Time Complexity | | 13/12/2023 |
| 13 | P and NP, SAT, Poly-time Reducibility | | 20/12/2023 |
| 14 | NP-Completeness | | 27/12/2023 |
| 15 | **Final Exam** | | 3/1/2023 |