

BSc Computer Science 2023-2024 literature

The literature list below is indicative and in the module handbooks for each module more optional literature may be suggested.

Module	Core Literature
CTEC1701 Database Design and Implementation	<p>Date, C. J. (2004). An introduction to database systems (8th ed). Pearson/Addison-Wesley</p> <p>Connolly, T. M., & Begg, C. E. (2015). Database systems: a practical approach to design, implementation, and management (Sixth edition, Global edition). Pearson Education</p> <p>Howe, D. R. (2001). Data analysis for database design (3rd ed). Butterworth-Heinemann.</p> <p>Rolland, F. D. (1998). The essence of databases. Prentice Hall.</p> <p>Van der Lans, R. F. (2007). Introduction to SQL: mastering the relational database language (4th ed., 20th anniversary ed). Addison-Wesley.</p>
CTEC1702 Fundamental Concepts of Computer Science	<p>Davis, G., & Pecar, B. (2013). Quantitative methods for decision making using Excel. Oxford University Press.</p> <p>Giannasi, F., & Low, R. (1995). Maths for computing and information technology. Longman</p> <p>Wacks, R. (2015). Privacy: a very short introduction (Second edition). Oxford University Press.</p> <p>Fowler, M. (2004). UML distilled: a brief guide to the standard object modeling language (3rd ed). Addison-Wesley.</p> <p>A list of contemporary articles that are changing over time. Will be updated in due time before module start</p>
CTEC1703 Computer Programming	<p>Alexander, A. (2021). Scala cookbook: recipes for object-oriented and functional programming (Second edition). O'Reilly.</p>

	<p>Lewis, M. C., & Lacher, L. L. (2017). Introduction to programming and problem-solving using Scala: Vol. Chapman & Hall/CRC textbooks in computing (Second edition). CRC Press.</p> <p>Odersky, M. (2016). Programming in Scala. Martin Odersky, Lex Spoon, Bill Venners (Third edition). Artima.</p> <p>Official Scala documentation. (n.d.). https://docs.scala-lang.org/</p> <p>Scala Tutorials by Tutorialspoint. (n.d.). https://www.tutorialspoint.com/scala/</p> <p>The Scala Programming Language. (n.d.). http://www.scala-lang.org/</p>
<p>IMAT5122 Computer Systems and Networks</p>	<p>Blum, R., & Bresnahan, C. (2021). Linux command line and Shell scripting bible (Fourth edition). John Wiley & Sons, Inc.</p> <p>Kurose, J. F., & Ross, K. W. (2017). Computer networking: a top-down approach (Seventh edition, global edition). Pearson.</p> <p>Limoncelli, T., Hogan, C. J., & Chalup, S. R. (2017). The practice of system and network administration (Third edition). Addison-Wesley.</p> <p>Moeller, Jonathan (2019). Windows Command Line Beginner's Guide</p> <p>Patterson, David A., & Hennessy, John L. (2018). Computer organization and design: the hardware/software interface.</p> <p>Silberschatz, A., Galvin, P. B., & Gagne, G. (2014). Operating system concepts (Ninth edition. International student version). Wiley.</p> <p>Advanced Bash-Scripting Guide: https://tldp.org/LDP/abs/html/</p> <p>LinuxCommand.org: Learn The Linux Command Line. Write Shell Scripts: https://linuxcommand.org/index.php</p>

<p>CTEC2710 Object Oriented Design and Development</p>	<p>Java Tutorials hosted by Oracle: https://docs.oracle.com/javase/tutorial/reallybigindex.html</p> <p>Official Java API Specification: https://docs.oracle.com/en/java/javase/11/docs/api/</p> <p>Java Fundamentals Tutorials: https://www.protechtraining.com/bookshelf/java_fundamentals_tutorial/object_oriented</p> <p>Chua Hock-Chuan's Java Programming notes: https://personal.ntu.edu.sg/ehchua/programming/index.html</p>
<p>CTEC2711 Data Structures and Algorithms</p>	<p>Goodrich, Michael T., Tamassia, Roberto, & Goldwasser, Michael H. (2015). Data structures and algorithms in Java. John Wiley & Sons Singapore.</p>
<p>CTEC2712 Web Application Development</p>	<p>Rees, Dayle. PHP Pandas: The PHP programming language for everyone. Available online: https://daylerees.com/php-pandas/</p> <p>Welling, Luke (2016). PHP and MySQL Web Development</p>
<p>CTEC2713 Agile Development Team Project</p>	<p>Valacich, Joseph S., & George, Joey F. (2020). Modern systems analysis and design</p>
<p>CTEC3701 Software Development: Methods and Standards</p>	<p>Farley, D., (2021). Modern Software Engineering: Doing What Works to Build Better Software Faster. Addison-Wesley Professional.</p>
<p>CTEC3702 Big Data and Machine Learning</p>	<p>Sathi, Arvind (2012). Big data analytics. MC Press</p> <p>Theobald, Oliver (2017). Machine learning for absolute beginners: a plain English introduction. scatterplotpress.com</p> <p>Singh, Pramod (2021). Machine learning with PySpark: with natural language processing and recommender systems. Apress.</p> <p>Dean, Jared (2014). Big data, data mining and machine learning: value creation for business leaders and practitioners. John Wiley and Sons, Inc.</p>
<p>CTEC3451 Development Project</p>	<p>There is no set literature list for the Bachelor project. Students are expected to use literature from the courses they have followed so far and/or find literature relevant for the project by themselves.</p>

<p>CTEC3704 Functional Programming</p>	<p>Why Functional Programming Matters: https://www.cse.chalmers.se/~rjmh/Papers/whyfp.html</p> <p>Keynote: Why Functional Programming Matters - John Hughes, Mary Sheeran (Lambda Days 2017): https://www.lambdadays.org/lambdadays2017/mary-sheeran</p> <p>Hu, Z., Hughes, J., & How, Meng Wang (2015). How functional programming mattered. In National Science Review</p> <p>Hoare, Charles Antony Richard (1981). The emperor's old clothes. In Communications of the ACM</p> <p>Programming Loops vs Recursion - Computerphile – YouTube: https://www.youtube.com/watch?v=HXNhEYqFo0o</p> <p>What on Earth is Recursion? - Computerphile – YouTube: https://www.youtube.com/watch?v=Mv9NEXX1VHc</p> <p>The Scala Programming Language. (n.d.). http://www.scala-lang.org/</p> <p>Haskell Language. https://www.haskell.org/</p> <p>Urma, Raoul-Gabriel, Fusco, M., & Mycroft, A. (2015). Java 8 in action: lambdas, streams, and functional-style programming. Manning.</p> <p>Maiorano, Nick (2014). Functional Java: A Guide to Lambdas and Functional Programming in Java 8. Thoughtflow Solutions, Inc</p> <p>Saumont, Pierre Yves (2017). Functional programming in Java: how to improve your Java programs using functional techniques. Manning.</p>
<p>CTEC3705 Advanced Web Development</p>	<p>Stuttard, Dafydd, & Pinto, Marcus (2011). The Web application hacker's handbook: finding and exploiting security flaws. Wiley.</p> <p>Shema, Mike, & Ely, Adam (2010). Seven deadliest Web application attacks. Syngress.</p>

	<p>Hoffman, Andrew (2020). Web Application Security: Exploitation and Countermeasures for Modern Web Applications. O'Reilly Media.</p> <p>Welling, Luke (2016). PHP and MySQL Web Development. Pearson Australia</p> <p>php [architect] Magazine: https://www.phparch.com/magazine/</p>
IMAT3722 Fuzzy Logic and Inference Systems	<p>Peckol, J.K. (2021). Introduction to fuzzy logic. John Wiley & Sons.</p> <p>Singh, H., & Lone, Y.A., 2020. Deep neuro-fuzzy systems with python. Apress, Berkeley.</p>
IMAT3711 Privacy and Data Protection	<p>Keshav, S. (2007). How to read a paper. In ACM SIGCOMM Computer Communication Review.</p> <p>The Futuremakers podcast Research University of Oxford: https://podcasts.ox.ac.uk/series/futuremakers</p> <p>Petzold, Charles (2008). Annotated Turing: A Guided Tour Through Alan Turing's Historic Paper on Computability and the Turing Machine. John Wiley & Sons, Inc.</p> <p>Blackburn, Simon (2003). Ethics: a very short introduction. Oxford University Press.</p> <p>Wacks, Raymond (2015). Privacy: a very short introduction. Oxford University Press</p> <p>Wooldridge, Michael J. (2020). The road to conscious machines: the story of AI. Pelican Books.</p>