

Course Title	Course Code	References
Pre-Calculus	MTH1100	- S. James, R. Lothar and W. Saleem . (2010) Precalculus:Mathematics for Calculus (6th Edition) - Purcell, E. J., Varberg, D. and Rigdon, S. E. (2007). Calculus (9th Edition).
Linear Algebra 1	MTH1401	- R. Larson, B. Edwards and D. C. Falvo. (2008). Elementary Linear Algebra (6th edition). Brooks Cole. - Assiry, A. Baklouti. (2024). Simplicity in Linear Algebra (1st edition). Umm Alqura University. - G. Strang. (2016). Introduction to Linear Algebra (5th edition). Wellesley, MA: Cambridge Press.
Calculus 1	MTH1101	- Purcell, E. J., Varberg, D. and Rigdon, S. E. (2007). Calculus (9th Edition). Pearson/Prentice Hall. - George B. T. Thomas' Calculus (14th Edition).S. James, R. Lothar and W. Saleem . (2010) Precalculus: Mathematics for Calculus (6th Edition)
Elementary Statistics and Probability	MTH2601	- Bluman, A. G. (2018). A Brief Version: Elementary Statistics: A Step by Step Approach. McGraw-Hill Education: eleventh edition, ISBN: 1259755339. - Probability and statistics for engineers and scientists, Ronald E. Walpole, Prentice Hall (2012).
Introduction to Real Analysis	MTH2301	-Bartle, R. G & Sherbert, D. R. (2011). Introduction to Real Analysis, Fourth Edition. New York: Wiley. - Binmore, K. G. (1982). Mathematical Analysis: A Straightforward Approach, Second Edition. Cambridge: Cambridge University Press.
Analytic Geometry	MTH2202	-Riddle, D. F. (1995). Joseph's Universitt and Huron University Japan, Analytic Geometry 6th Edition, An International Thomson Publishing Company, 1995.
Calculus 2	MTH1102	- Purcell, E. J., Varberg, D. and Rigdon, S. E. (2007). Calculus (9th Edition). Pearson/Prentice Hall. - George B. T. Thomas' Calculus (14th Edition).S. James, R. Lothar and W. Saleem . (2010) Precalculus: Mathematics for Calculus (6th Edition)
Combinatorics	MTH2203	- Rosen, K. H. (2019). Discrete Mathematics and Its Applications. New York: McGraw-Hill Education.

Ordinary Differential Equations	MTH2104	- Rainville E. D. AND P. E. Bedient,(1981), Elementary differential equations,New York, USA, MacMillan.s sixth edition. - Boyca W. E. and Diprima R. C. ,(2000)Elementary Differential Equations and Boundary Value Problems, New York, USA ,John wiley &son Inc. - Fundamentals of differential equations and boundary value problems,(2004), Nagle R. K. , Saff E. B. and Snider A. D. ,2004, USA,Pearson.Education, Inc.
Numerical Analysis 1	MTH2501	- Burden, R. L., & Faires, J. D. (2011). Numerical Analysis, 9th international edition. Brooks/Cole, Cencag Learning.
Multivariable Calculus	MTH2103	Purcell, R. Varberg.(2006). Calculus.
Probability Theory	MTH2602	- Ross, S. M. (2014). Introduction to probability models (11th ed.).Academic Press. - Ross, S. M. (2018). A first course in probability (10th ed. ed.). Pearson.
Applied calculus	MTH3105	- Purcell, R. Varberg.(2006). Calculus. - Alrasheed, S. (2019). Principles of mechanics: Fundamental university physics (p. 173). Springer Nature. - Gray, G. L., Costanzo, F., & Plesha, M. E. (2010). Engineering mechanics: dynamics. McGraw-Hill. - Meriam, J. L., & Kraige, L. G. (2011). Engineering Mechanics: Dynamics: Statics. Wiley Global Education.
Linear Algebra 2	MTH3402	- Hoffman, K. M., & Kunze, R. (1971). Linear Algebra (2nd ed.). Englewood Cliffs, NJ: Prentice-Hall. - Lay, D. C. (2011). Linear Algebra and Its Applications (4th ed.). Boston, MA: Pearson. ISBN-10: 0321836146. ISBN-13: 978-0321836144. - Lipschutz, S., & Lipson, M. L. (2012). Schaum's Outline of Linear Algebra, 5th Edition: 612 Solved Problems + 25 Videos (Schaum's Outlines). New York, NY: McGraw-Hill Education. ISBN-10: 0071794565. ISBN-13: 9780071794565.

Number Theory	MTH3205	- Apostol, Tom M. Introduction to analytic number theory. Springer Science & Business Media, 1998. - Koshy, Thomas. Elementary number theory with applications. Academic press, 2002 - Tattersall, James J. Elementary number theory in nine chapters. Cambridge University Press, 1999.
Real Analysis 1	MTH3302	- Muscat, J. (2014). Functional Analysis An Introduction to Metric Spaces, Hilbert Spaces, and Banach Algebras. Springer. - Shirali, S. and Vasudeva, H. L. (2006). Metric Spaces. London: Springer- Verlag.
Partial Differential Equations	MTH3106	- Raisinghanian M.D., (2008), Advanced differential equations, S. Nirja publishers, New Delhi. - STRAUSS W.A., (2009), Partial Differential Equations: an Introduction, John Wiley & Sons, Ltd.
Graph Theory	MTH3204	Rosen, K. H. (2019). Discrete Mathematics and Its Applications. New York: McGraw-Hill Education.
Group Theory	MTH3403	- Fraleigh, John, B. A first Course in Abstract Algebra. 7th edition, publisher: Pearson; 7 edition (November 16, 2002) ISBN-10: 0201763907; ISBN-13: 978-0201763904. - Durbin, John, R. Modern Algebra: An Introduction 6th Edition. Publisher: Wiley; 6 edition (December 31, 2008) ISBN-10: 0470384433 ISBN-13: 978-0470384435. - Ayres, Frank., & Jaisingh, Lloyd, R. Theory and Problems of Abstract Algebra. Schaum's Outlines Series, Second Edition.
Mathematical and Computational Statistics	MTH4603	- MARIO F. TRIOLA (2019), Essentials of Statistics. 6 addition, ISBN: 0134685776. - Rice, J. A. (2006). Mathematical statistics and data analysis. Cengage Learning; Third addition, ISBN: 9788131519547. - S. Ross, A first course in probability, third edition, Macmillan Publishing company, New York, 1988.
Real Analysis 2	MTH3303	- Weiss, I. (2015). A course in real analysis-book review. - Ross, K. A. (2013) Elementary Analysis: The Theory of Calculus. New York.

Numerical Analysis 2	MTH3502	- Burden, R. L., & Faires, J. D. (2011). Numerical Analysis, 9th international edition. Brooks/Cole, Cengage Learning.
Complex Analysis	MTH4304	- Walter Rudin (1987), Real and Complex Analysis, McGraw-Hill International Editions, 3/e. S.Ponnusamy (1997): Foundations of Complex Analysis, Narosa Pub. - Kasana H.S. (2005), Complex Variables: Theory and Applications, Prentice-Hall of India Pvt. Ltd, 2nd edition.
Topology	MTH4311	- Sharma J. N. and Chauhan J. P. (2019). Topology general and algebraic, Krishna Prakashan Media. - Munkres J. R. (2000). Topology . Second Edition. Prentice Hall, Incorporated. New York. - Sidney A. M. (2007). Topology without Tears.
Rings and Fields theory	MTH4404	- Fraleigh, J. B. (2002). A First Course in Abstract Algebra. Pearson. - Dummit, D. and Foote, R. (2003). Abstract Algebra. Wiley. - Matsumura, H. (1987). Commutative Ring Theory. Cambridge University Press. - Burton, D. M. (1970). A first course in Rings and Ideals. Addison-Wesley Pub. Co.
Linear Programming	MTH4407	- Taha, H. A. (2013). Operations research: an introduction. Pearson Education India. - Chvátal, V. (1983). Linear programming. Macmillan. - G. Hadley, linear programming, Addison-wesley
Mathematical Biology	MTH3709	- Britton, N. F., & Britton, N. F. (2003). Essential mathematical biology (Vol. 453). London: Springer. - Murray, J. D. (2007). Mathematical biology: I. An introduction (Vol. 17). Springer Science & Business Media.
Financial mathematics	MTHF3708	- Olivier, J. Business Math: A Step-by-Step Handbook. Calgary, Alberta: Lyryx Learning, 2019.
Measure and Integration	MTH4305	Donald L. Cohn. (2012). Measure Theory: Second Edition. ISBN: 9781461469568. New York. Springer .
Advanced Algebra	MTH4404	- Derek J.S. Robinson A Course in the Theory of Groups Second Edition, Springer - Rotman, J. J. (1995). "An Introduction to the Theory of Groups, springer

Differential Geometry	MTH4107	- Manfredo P. do Carmo. (1976). Differential Geometry of Curves and Surfaces, Prentice Hall. - Barrett O'Neill. (1997). Elementary Differential Geometry, Academic Press.
Modern Geometry	MTH4203	- Introduction to Geometry by Richard Rusczyk (The art of problem solving), January 1, 2007. - Euclidean and Non-Euclidean Geometries. By Greenberg, Marvin Jay, fourth edition 2007. - Plane and solid geometry by, J.M. Aarts: Publisher: Springer-Verlag New York Language: English Pages: 349 / 357 ISBN 10: 0387782400 ISBN 13: 9780387782409
Foundations of Mathematics	MTH1201	- Fraleigh, J. (2003). A first Course in Abstract Algebra. Pearson. - Modern Algebra: An Introduction 6th Edition, by John R. Durbin; Publisher: Wiley; 6 edition (December 31, 2008) - Theory and Problems of Abstract Algebra by Frank Ayres and Lloyd R. Jaisingh, Schaum's Outlines Series. Second Edition.