

A.P.C.MAHALAXMI COLLEGE FOR WOMEN, THOOTHUKUDI

PG & RESEARCH DEPARTMENT OF MATHEMATICS

Learning Resources

| S. No. | Course | Title of the Paper | Link |
|--------|--------|--|---|
| 1 | B.Sc | Classical Algebra | https://www.britannica.com/science/algebra/Classical-algebra https://www.youtube.com/watch?v=l6lwWq7yFDI https://www.infoplease.com/encyclopedia/science/math/basics/algebra/principles-of-classical-algebra |
| 2 | B.Sc | Calculus | https://d3bxy9euw4e147.cloudfront.net/oscms-prodcm5/media/documents/CalculusVolume2-OP_esPpXTB.pdf http://www.math.harvard.edu/~shlomo/docs/Advanced_Calculus.pdf https://notendur.hi.is/adl2/Calcl_Complete.pdf |
| 3 | B.Sc | Analytical Geometry | http://fhscastormath.weebly.com/uploads/1/2/4/7/12476962/chapter11_precal.pdf https://alagappauniversity.ac.in/uploads/files/3_%20B_Sc_%20(Mathematics)%20-%20113%2023%20-%20Analytical%20Geometry%20and%20Vector%20Calculus.pdf https://www.google.com/url?sa=t&source=web&rct=j&url=http://fhscastormath.weebly.com/uploads/1/2/4/7/12476962/chapter11_precal.pdf&ved=2ahUKEwjf3d7lYXmAhWUX30KHZ26Cz0QFjAAegQIBhAC&usg=AOvVaw0Isw0JIr4jUbrCcc2dbQGV |
| 4 | B.Sc | Differential Equations | http://www.math.toronto.edu/selick/B44.pdf https://www.google.com/url?sa=t&source=web&rct=j&url=http://www.math.toronto.edu/selick/B44.pdf&ved=2ahUKEwjOvZXY24TmA_hVK6nMBHbliBRQQFjAAegQIBBAB&usg=AOvVaw2wK4FhlJq4DZO98A758EDL |
| 5 | B.Sc | Environmental Studies | http://mooc.nios.ac.in/mooc/pluginfile.php?file=/11501/course/summary/UNIT%208%20RESOURCES%20AND%20MATERIALS.pdf |
| 6 | B.Sc | Real Analysis | https://study.com/academy/topic/mathematical-sequences-and-series https://www.stem.org.uk/resources/elibrary/resource/32369/sequences-and-series https://byjus.com/maths/sequence-and-series https://www.jirka.org/ra/realanal.pdf |
| 7 | B.Sc | Abstract Algebra | https://math.stackexchange.com/questions/1357966/online-materials-for-self-studying-introductory-abstract-algebra https://www.reddit.com/r/learnmath/comments/bceh1r/best_resources_for_selfstudying_abstract_algebra/ https://ocw.mit.edu/courses/mathematics/18-703-modern-algebra-spring-2013/related-resources/ |
| 8 | B.Sc | Algebra and Differential Equations | https://www.khanacademy.org/math/differential-equations http://mathforum.org/algebra/alg.lessons.html |
| 9 | B.Sc | Trigonometry, Laplace Transform and Fourier Series | https://www.google.com/url?sa=t&source=web&rct=j&url=http://people.uncw.edu/hermanr/pde1/PDEbook/Fourier.pdf&ved=2ahUKEwi73Lb62ITmAhXQZSsKHegbD38QFjAAegQIARAB&usg=AOvVaw3o0lCgw2idqX1z1eHHtks8 |

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| 10 | B.Sc | Fundamental of Mathematical Statistics | https://drive.google.com/file/d/1S5kzE3v-bBJuUP7dyJNNByhSnSDJEsE/view |
| 11 | B.Sc | Vector Analysis | https://math.libretexts.org/Bookshelves/Calculus/Supplemental_Modules_(Calculus)/Vector_Calculus https://math.oregonstate.edu/home/programs/undergrad/CalculusQuestStudyGuides/vcalc/vcalc.html https://brilliant.org/courses/vector-calculus/ |
| 12 | B.Sc | Statistics | https://www.dictionary.com/browse/statistics https://www.springer.com/gp/book/9781461471370 https://www.analyticsvidhya.com/resource-statistics/ https://elitedatascience.com/learn-statistics-for-data-science |
| 13 | B.Sc | Graph Theory | https://www.scoop.it/topic/ibigrfj/p/4099002899/2018/07/04/graph-theory-by-narsingh-deo-pdf |
| 14 | B.Sc | Combinatorial Mathematics | https://www.google.com/url?sa=t&source=web&rct=j&url=http://www.ma.rhul.ac.uk/~uvah099/Maths/Combinatorics11/MT4542011Slides.pdf&ved=2ahUKEwjC_IK30YTmAhuHs48KHVjZAVoQFjAHegQICRAB&usg=AOvVaw2VILKtWZ66thFp4K4OF5H_&cshid=1574660158916 |
| 15 | B.Sc | Operations Research | https://www.scoop.it/topic/biebsdt/p/4099414796/2018/07/17/operations-research-by-kanti-swarup-pdf |
| 16 | B.Sc | Statics | https://physics.info/statics/ https://www.engineer4free.com/statics.html http://oli.stanford.edu/engineering-statics |
| 17 | B.Sc | Complex Analysis | http://www.maths.lth.se/matematiklu/personal/olofsson/CompHT06.pdf |
| 18 | B.Sc | Dynamics | https://www.merriam-webster.com/dictionary/dynamics https://www.dictionary.com/browse/dynamics https://www.britannica.com/science/dynamics-physics |
| 19 | B.Sc | Fuzzy Mathematics | https://www.mdpi.com/books/pdfdownload/book/1028 https://pdfs.semanticscholar.org/a31d/fa5eb97fced9494dfa1d88578da6827bf78d.pdf |
| 20 | B.Sc | Numerical Methods | https://www.google.com/url?sa=t&source=web&rct=j&url=https://www.math.ust.hk/~machas/numerical-methods.pdf&ved=2ahUKEwiA4YrD2YTmAhuYheYKHRafCF8QFjABegQIBhAB&usg=AOvVaw2XYqzDmJzupEa79S98dhiS |
| 21 | B.Sc | Transforms and its applications | https://see.stanford.edu/materials/lsoftae261/book-fall-07.pdf |
| 22 | M.Sc | Algebra | https://marinazahara22.files.wordpress.com/2013/10/i-n-herstein-topics-in-algebra-2nd-edition-1975-wiley-international-editions-john-wiley-and-sons-wie-1975.pdf http://abstract.ups.edu/download/aata-20110810.pdf |
| 23 | M.Sc | Analysis | https://notendur.hi.is/vael11/%C3%9Eekking/principles_of_mathematical_analysis_walter_rudin.pdf |
| 24 | M.Sc | Analytic Number Theory | https://www.google.com/url?sa=t&source=web&rct=j&url=https://faculty.math.illinois.edu/~ford/Math531_Notes_Hildebrand.pdf&ved=2ahUKEwix27X7ioXmAhuVPU30KHVXZAd8QFjAJegQIAxAB&usg=AOvVaw2PSSHNd84Zp2QLQ-7pydSo&cshid=1574675465067 |

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| 25 | M.Sc | Ordinary Differential Equations | https://www.cs.bgu.ac.il/~leonid/ode_bio_files/Ionascu_LectNotes.pdf |
| 26 | M.Sc | Numerical Analysis | http://www.ikiu.ac.ir/public-files/profiles/items/090ad_1410599906.pdf |
| 27 | M.Sc | Graph Theory | http://www.zib.de/groetschel/teaching/WS1314/BondyMurtyGTWA.pdf https://www.google.com/url?sa=t&source=web&rct=j&url=http://www.zib.de/groetschel/teaching/WS1314/BondyMurtyGTWA.pdf&ved=2ahUKEwj02sr1i4XmAhXaeisKHTtxDYAQFjAJegQIAxAB&usg=AOvVaw15e3Z0Jx0pzFHMjk9KOaRy |
| 28 | M.Sc | Programming in C++ | https://www.cs.colorado.edu/~kena/classes/5448/f12/presentation-materials/torpe.pdf http://www.mldcollege.com/panel/programs/Object%20Oriented%20Programming%20with%20C++-Bal%20-%20E.Balagurusamy.pdf https://mcdtu.files.wordpress.com/2016/09/e_balagurusamy-object_oriented_programming_with_c.pdf |
| 29 | M.Sc | Mechanics | http://www.freebookcentre.net/physics-books-download/Lecture-notes-for-Mechanics-[PDF-76p].html |
| 30 | M.Sc | Measure and Integration | http://www.math.utoronto.ca/almut/MAT1000/LL-1.pdf |
| 31 | M.Sc | Topology | https://www.academia.edu/23504055/Topology_Second_Edition |
| 32 | M.Sc | Complex Analysis | https://www.coursera.org/learn/complex-analysis http://www.maths.lth.se/matematiklu/personal/olofsson/CompHT06.pdf https://www.britannica.com/science/analysis-mathematics/Complex-analysis |
| 33 | M.Sc | Calculus of Variations and integral equations | https://www.google.com/url?sa=t&source=web&rct=j&url=https://nptel.ac.in/courses/111104025/&ved=2ahUKEwj04NfAjlXmAWhWFV30KH Y8mDJgQFjAEeqQIBhAC&usg=AOvVaw1-JQ5rarlotsIIAxCcLWSD&cshid=1574675973936 https://www.google.com/url?sa=t&source=web&rct=j&url=https://freevideolectures.com/course/3077/calculus-of-variations-and-integral-equations&ved=2ahUKEwj04NfAjlXmAWhWFV30KH Y8mDJgQFjAKeq QICBAB&usg=AOvVaw0plqKkVtqXaqSAND4bxzaw&cshid=1574675973936 |
| 34 | M.Sc | Research Methodology | https://www.msuniv.ac.in/images/academic/academic_affairs/M.Phil-Research&TeachingMethodology.pdf https://www.semanticscholar.org/paper/Research-methods-in-(mathematics)-education-Schoenfeld/67ed862c1883fa6b2f5dbd9011d95335aa45c3f0 https://www.researchgate.net/publication/282370187_e-textbooks_infor_Teaching_and_Learning_Mathematics_A_Disruptive_and_Potentially_Transformative_Educational_Technology |
| 35 | M.Sc | Operations Research | https://thalis.math.upatras.gr/~tsantas/DownloadFiles/Taha%20-%20Operation%20Research%208Ed.pdf |
| 36 | M.Sc | Advanced Algebra | https://www.chilimath.com/lessons/advanced-algebra/ https://accuplacer.collegeboard.org/accuplacer/pdf/next-generation-sample-questions-advanced-algebra-and-functions.pdf http://www.mathematik.uni-muenchen.de/~pareigis/Vorlesungen/01WS/advalg.pdf |

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| | | | https://machinelearningmastery.com/resources-for-linear-algebra-in-machine-learning/ https://analyticsindiamag.com/7-top-linear-algebra-resources-for-machine-learning-beginners/ https://www.khanacademy.org/math/linear-algebra |
| 37 | M.Sc | Functional Analysis | http://susanka.org/HSforQM/%5BSimmons%5D Introduction to Topology and Modern Analysis.pdf |
| 38 | M.Sc | Differential Geometry | https://www.google.com/url?sa=t&source=web&rct=j&url=http://strangebeautiful.com/other-texts/spivak-intro-diff-geom-v1-3ed.pdf&ved=2ahUKEwjUquiCkIXmAhWSdn0KHQHGAcQQFjAJegQICBAB&usg=AOvVaw0l9chHUATReR4ewH9GqHTg |
| 39 | M.Phil | Advanced Analysis | https://59clc.files.wordpress.com/2011/01/real-and-complex-analysis.pdf |
| 40 | M.Phil | Teaching and Research Methodology | http://www.math.toronto.edu/jcarlson/A--M.pdf http://gtu.ge/Agro-Lib/RESEARCH%20METHOD%20COHEN%20ok.pdf |
| 41 | M.Phil | Banach Algebra & Spectral Theory | https://59clc.files.wordpress.com/2012/08/functional-analysis- -rudin-2th.pdf |