

# 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	<a href="https://www.britannica.com/science/algebra/Classical-algebra">https://www.britannica.com/science/algebra/Classical-algebra</a> <a href="https://www.youtube.com/watch?v=l6lwWq7yFDI">https://www.youtube.com/watch?v=l6lwWq7yFDI</a> <a href="https://www.infoplease.com/encyclopedia/science/math/basics/algebra/principles-of-classical-algebra">https://www.infoplease.com/encyclopedia/science/math/basics/algebra/principles-of-classical-algebra</a>
2	B.Sc	Calculus	<a href="https://d3bxy9euw4e147.cloudfront.net/oscms-prodcm5/media/documents/CalculusVolume2-OP_esPpXTB.pdf">https://d3bxy9euw4e147.cloudfront.net/oscms-prodcm5/media/documents/CalculusVolume2-OP_esPpXTB.pdf</a> <a href="http://www.math.harvard.edu/~shlomo/docs/Advanced_Calculus.pdf">http://www.math.harvard.edu/~shlomo/docs/Advanced_Calculus.pdf</a> <a href="https://notendur.hi.is/adl2/Calcl_Complete.pdf">https://notendur.hi.is/adl2/Calcl_Complete.pdf</a>
3	B.Sc	Analytical Geometry	<a href="http://fhscastormath.weebly.com/uploads/1/2/4/7/12476962/chapter11_precal.pdf">http://fhscastormath.weebly.com/uploads/1/2/4/7/12476962/chapter11_precal.pdf</a> <a href="https://alagappauniversity.ac.in/uploads/files/3_%20B_Sc_%20(Mathematics)%20-%20113%2023%20-%20Analytical%20Geometry%20and%20Vector%20Calculus.pdf">https://alagappauniversity.ac.in/uploads/files/3_%20B_Sc_%20(Mathematics)%20-%20113%2023%20-%20Analytical%20Geometry%20and%20Vector%20Calculus.pdf</a> <a href="https://www.google.com/url?sa=t&amp;source=web&amp;rct=j&amp;url=http://fhscastormath.weebly.com/uploads/1/2/4/7/12476962/chapter11_precal.pdf&amp;ved=2ahUKEwjf3d7ljYXmAhWUX30KHZ26Cz0QFjAAegQIBhAC&amp;usg=AOvVaw0Isw0JIr4jUbrCcc2dbQGV">https://www.google.com/url?sa=t&amp;source=web&amp;rct=j&amp;url=http://fhscastormath.weebly.com/uploads/1/2/4/7/12476962/chapter11_precal.pdf&amp;ved=2ahUKEwjf3d7ljYXmAhWUX30KHZ26Cz0QFjAAegQIBhAC&amp;usg=AOvVaw0Isw0JIr4jUbrCcc2dbQGV</a>
4	B.Sc	Differential Equations	<a href="http://www.math.toronto.edu/selick/B44.pdf">http://www.math.toronto.edu/selick/B44.pdf</a> <a href="https://www.google.com/url?sa=t&amp;source=web&amp;rct=j&amp;url=http://www.math.toronto.edu/selick/B44.pdf&amp;ved=2ahUKEwjOvZXY24TmAhVK6nMBHbliBRQQFjAAegQIBBAB&amp;usg=AOvVaw2wK4FhIjq4DZO98A758EDL">https://www.google.com/url?sa=t&amp;source=web&amp;rct=j&amp;url=http://www.math.toronto.edu/selick/B44.pdf&amp;ved=2ahUKEwjOvZXY24TmAhVK6nMBHbliBRQQFjAAegQIBBAB&amp;usg=AOvVaw2wK4FhIjq4DZO98A758EDL</a>
5	B.Sc	Environmental Studies	<a href="http://mooc.nios.ac.in/mooc/pluginfile.php?file=/11501/course/summary/UNIT%208%20RESOURCES%20AND%20MATERIALS.pdf">http://mooc.nios.ac.in/mooc/pluginfile.php?file=/11501/course/summary/UNIT%208%20RESOURCES%20AND%20MATERIALS.pdf</a>
6	B.Sc	Real Analysis	<a href="https://study.com/academy/topic/mathematical-sequences-and-series">https://study.com/academy/topic/mathematical-sequences-and-series</a> <a href="https://www.stem.org.uk/resources/elibrary/resource/32369/sequences-and-series">https://www.stem.org.uk/resources/elibrary/resource/32369/sequences-and-series</a> <a href="https://byjus.com/maths/sequence-and-series">https://byjus.com/maths/sequence-and-series</a> <a href="https://www.jirka.org/ra/realanal.pdf">https://www.jirka.org/ra/realanal.pdf</a>
7	B.Sc	Abstract Algebra	<a href="https://math.stackexchange.com/questions/1357966/online-materials-for-self-studying-introductory-abstract-algebra">https://math.stackexchange.com/questions/1357966/online-materials-for-self-studying-introductory-abstract-algebra</a> <a href="https://www.reddit.com/r/learnmath/comments/bceh1r/best_resources_for_selfstudying_abstract_algebra/">https://www.reddit.com/r/learnmath/comments/bceh1r/best_resources_for_selfstudying_abstract_algebra/</a> <a href="https://ocw.mit.edu/courses/mathematics/18-703-modern-algebra-spring-2013/related-resources/">https://ocw.mit.edu/courses/mathematics/18-703-modern-algebra-spring-2013/related-resources/</a>
8	B.Sc	Algebra and Differential Equations	<a href="https://www.khanacademy.org/math/differential-equations">https://www.khanacademy.org/math/differential-equations</a> <a href="http://mathforum.org/algebra/alg.lessons.html">http://mathforum.org/algebra/alg.lessons.html</a>
9	B.Sc	Trigonometry, Laplace Transform and Fourier Series	<a href="https://www.google.com/url?sa=t&amp;source=web&amp;rct=j&amp;url=http://people.uncw.edu/hermanr/pde1/PDEbook/Fourier.pdf&amp;ved=2ahUKEwi73Lb62ITmAhXQZSsKHegbD38QFjAAegQIARAB&amp;usg=AOvVaw3o01Cgw2idqX1z1eHHtks8">https://www.google.com/url?sa=t&amp;source=web&amp;rct=j&amp;url=http://people.uncw.edu/hermanr/pde1/PDEbook/Fourier.pdf&amp;ved=2ahUKEwi73Lb62ITmAhXQZSsKHegbD38QFjAAegQIARAB&amp;usg=AOvVaw3o01Cgw2idqX1z1eHHtks8</a>

10	B.Sc	Fundamental of Mathematical Statistics	<a href="https://drive.google.com/file/d/1S5kzE3v-bBJuUP7dyJNNByhSnSDJEsE/view">https://drive.google.com/file/d/1S5kzE3v-bBJuUP7dyJNNByhSnSDJEsE/view</a>
11	B.Sc	Vector Analysis	<a href="https://math.libretexts.org/Bookshelves/Calculus/Supplemental_Modules_(Calculus)/Vector_Calculus">https://math.libretexts.org/Bookshelves/Calculus/Supplemental_Modules_(Calculus)/Vector_Calculus</a> <a href="https://math.oregonstate.edu/home/programs/undergrad/CalculusQuestStudyGuides/vcalc/vcalc.html">https://math.oregonstate.edu/home/programs/undergrad/CalculusQuestStudyGuides/vcalc/vcalc.html</a> <a href="https://brilliant.org/courses/vector-calculus/">https://brilliant.org/courses/vector-calculus/</a>
12	B.Sc	Statistics	<a href="https://www.dictionary.com/browse/statistics">https://www.dictionary.com/browse/statistics</a> <a href="https://www.springer.com/gp/book/9781461471370">https://www.springer.com/gp/book/9781461471370</a> <a href="https://www.analyticsvidhya.com/resource-statitics/">https://www.analyticsvidhya.com/resource-statitics/</a> <a href="https://elitedatascience.com/learn-statistics-for-data-science">https://elitedatascience.com/learn-statistics-for-data-science</a>
13	B.Sc	Graph Theory	<a href="https://www.scoop.it/topic/ibigrfj/p/4099002899/2018/07/04/graph-theory-by-narsingh-deo-pdf">https://www.scoop.it/topic/ibigrfj/p/4099002899/2018/07/04/graph-theory-by-narsingh-deo-pdf</a>
14	B.Sc	Combinatorial Mathematics	<a href="https://www.google.com/url?sa=t&amp;source=web&amp;rct=j&amp;url=http://www.ma.rhul.ac.uk/~uvah099/Maths/Combinatorics11/MT4542011Slides.pdf&amp;ved=2ahUKEwjC_IK30YTmAhUHs48KHVjZAVoQFjAHegQICRAB&amp;usg=AOvVaw2VILKtWZ66thFp4K4OF5H_&amp;cshid=1574660158916">https://www.google.com/url?sa=t&amp;source=web&amp;rct=j&amp;url=http://www.ma.rhul.ac.uk/~uvah099/Maths/Combinatorics11/MT4542011Slides.pdf&amp;ved=2ahUKEwjC_IK30YTmAhUHs48KHVjZAVoQFjAHegQICRAB&amp;usg=AOvVaw2VILKtWZ66thFp4K4OF5H_&amp;cshid=1574660158916</a>
15	B.Sc	Operations Research	<a href="https://www.scoop.it/topic/biebsdt/p/4099414796/2018/07/17/operations-research-by-kanti-swarup-pdf">https://www.scoop.it/topic/biebsdt/p/4099414796/2018/07/17/operations-research-by-kanti-swarup-pdf</a>
16	B.Sc	Statics	<a href="https://physics.info/statics/">https://physics.info/statics/</a> <a href="https://www.engineer4free.com/statics.html">https://www.engineer4free.com/statics.html</a> <a href="http://oli.stanford.edu/engineering-statics">http://oli.stanford.edu/engineering-statics</a>
17	B.Sc	Complex Analysis	<a href="http://www.maths.lth.se/matematiklu/personal/olofsson/CompHT06.pdf">http://www.maths.lth.se/matematiklu/personal/olofsson/CompHT06.pdf</a>
18	B.Sc	Dynamics	<a href="https://www.merriam-webster.com/dictionary/dynamics">https://www.merriam-webster.com/dictionary/dynamics</a> <a href="https://www.dictionary.com/browse/dynamics">https://www.dictionary.com/browse/dynamics</a> <a href="https://www.britannica.com/science/dynamics-physics">https://www.britannica.com/science/dynamics-physics</a>
19	B.Sc	Fuzzy Mathematics	<a href="https://www.mdpi.com/books/pdfdownload/book/1028">https://www.mdpi.com/books/pdfdownload/book/1028</a> <a href="https://pdfs.semanticscholar.org/a31d/fa5eb97fced9494dfa1d88578da6827bf78d.pdf">https://pdfs.semanticscholar.org/a31d/fa5eb97fced9494dfa1d88578da6827bf78d.pdf</a>
20	B.Sc	Numerical Methods	<a href="https://www.google.com/url?sa=t&amp;source=web&amp;rct=j&amp;url=https://www.math.ust.hk/~machas/numerical-methods.pdf&amp;ved=2ahUKEwiA4YrD2YTmAhUyheYKHRafCF8QFjABegQIBhAB&amp;usg=AOvVaw2XYqzDmJzupEa79S98dhiS">https://www.google.com/url?sa=t&amp;source=web&amp;rct=j&amp;url=https://www.math.ust.hk/~machas/numerical-methods.pdf&amp;ved=2ahUKEwiA4YrD2YTmAhUyheYKHRafCF8QFjABegQIBhAB&amp;usg=AOvVaw2XYqzDmJzupEa79S98dhiS</a>
21	B.Sc	Transforms and its applications	<a href="https://see.stanford.edu/materials/lsoftae261/book-fall-07.pdf">https://see.stanford.edu/materials/lsoftae261/book-fall-07.pdf</a>
22	M.Sc	Algebra	<a href="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">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</a> <a href="http://abstract.ups.edu/download/aata-20110810.pdf">http://abstract.ups.edu/download/aata-20110810.pdf</a>
23	M.Sc	Analysis	<a href="https://notendur.hi.is/vae11/%C3%9Eekking/principles_of_mathematical_analysis_walter_rudin.pdf">https://notendur.hi.is/vae11/%C3%9Eekking/principles_of_mathematical_analysis_walter_rudin.pdf</a>
24	M.Sc	Analytic Number Theory	<a href="https://www.google.com/url?sa=t&amp;source=web&amp;rct=j&amp;url=https://faculty.math.illinois.edu/~ford/Math531_Notes_Hildebrand.pdf&amp;ved=2ahUKEwix27X7ioXmAhVPU30KHVXZAd8QFjAJegQIAxAB&amp;usg=AOvVaw2PSSHNd84Zp2QLQ-7pydSo&amp;cshid=1574675465067">https://www.google.com/url?sa=t&amp;source=web&amp;rct=j&amp;url=https://faculty.math.illinois.edu/~ford/Math531_Notes_Hildebrand.pdf&amp;ved=2ahUKEwix27X7ioXmAhVPU30KHVXZAd8QFjAJegQIAxAB&amp;usg=AOvVaw2PSSHNd84Zp2QLQ-7pydSo&amp;cshid=1574675465067</a>

25	M.Sc	Ordinary Differential Equations	<a href="https://www.cs.bgu.ac.il/~leonid/ode_bio_files/Ionascu_LectNotes.pdf">https://www.cs.bgu.ac.il/~leonid/ode_bio_files/Ionascu_LectNotes.pdf</a>
26	M.Sc	Numerical Analysis	<a href="http://www.ikiu.ac.ir/public-files/profiles/items/090ad_1410599906.pdf">http://www.ikiu.ac.ir/public-files/profiles/items/090ad_1410599906.pdf</a>
27	M.Sc	Graph Theory	<a href="http://www.zib.de/groetschel/teaching/WS1314/BondyMurtyGTWA.pdf">http://www.zib.de/groetschel/teaching/WS1314/BondyMurtyGTWA.pdf</a> <a href="https://www.google.com/url?sa=t&amp;source=web&amp;rct=j&amp;url=http://www.zib.de/groetschel/teaching/WS1314/BondyMurtyGTWA.pdf&amp;ved=2ahUKEwj02sr1i4XmAhXaeisKHTtxDYAQFjAJegQIAxAB&amp;usq=AOvVaw15e3Z0Jx0pzFHMjk9KOaRy">https://www.google.com/url?sa=t&amp;source=web&amp;rct=j&amp;url=http://www.zib.de/groetschel/teaching/WS1314/BondyMurtyGTWA.pdf&amp;ved=2ahUKEwj02sr1i4XmAhXaeisKHTtxDYAQFjAJegQIAxAB&amp;usq=AOvVaw15e3Z0Jx0pzFHMjk9KOaRy</a>
28	M.Sc	Programming in C++	<a href="https://www.cs.colorado.edu/~kena/classes/5448/f12/presentation-materials/torpe.pdf">https://www.cs.colorado.edu/~kena/classes/5448/f12/presentation-materials/torpe.pdf</a> <a href="http://www.mldcollege.com/panel/programs/Object%20Oriented%20Programming%20with%20C++-Bal%20-%20E.Balagurusamy.pdf">http://www.mldcollege.com/panel/programs/Object%20Oriented%20Programming%20with%20C++-Bal%20-%20E.Balagurusamy.pdf</a> <a href="https://mcdtu.files.wordpress.com/2016/09/e_balagurusamy-object_oriented_programming_with_c.pdf">https://mcdtu.files.wordpress.com/2016/09/e_balagurusamy-object_oriented_programming_with_c.pdf</a>
29	M.Sc	Mechanics	<a href="http://www.freebookcentre.net/physics-books-download/Lecture-notes-for-Mechanics-[PDF-76p].html">http://www.freebookcentre.net/physics-books-download/Lecture-notes-for-Mechanics-[PDF-76p].html</a>
30	M.Sc	Measure and Integration	<a href="http://www.math.utoronto.ca/almut/MAT1000/LL-1.pdf">http://www.math.utoronto.ca/almut/MAT1000/LL-1.pdf</a>
31	M.Sc	Topology	<a href="https://www.academia.edu/23504055/Topology_Second_Edition">https://www.academia.edu/23504055/Topology_Second_Edition</a>
32	M.Sc	Complex Analysis	<a href="https://www.coursera.org/learn/complex-analysis">https://www.coursera.org/learn/complex-analysis</a> <a href="http://www.maths.lth.se/matematiklu/personal/olofsson/CompHT06.pdf">http://www.maths.lth.se/matematiklu/personal/olofsson/CompHT06.pdf</a> <a href="https://www.britannica.com/science/analysis-mathematics/Complex-analysis">https://www.britannica.com/science/analysis-mathematics/Complex-analysis</a>
33	M.Sc	Calculus of Variations and integral equations	<a href="https://www.google.com/url?sa=t&amp;source=web&amp;rct=j&amp;url=https://nptel.ac.in/courses/111104025/&amp;ved=2ahUKEwj04NfAjlXmAhWFV30KH Y8mDJqQFjAEeqQIBhAC&amp;usq=AOvVaw1-JQ5rarlotsIIAxCcLWSD&amp;cshid=1574675973936">https://www.google.com/url?sa=t&amp;source=web&amp;rct=j&amp;url=https://nptel.ac.in/courses/111104025/&amp;ved=2ahUKEwj04NfAjlXmAhWFV30KH Y8mDJqQFjAEeqQIBhAC&amp;usq=AOvVaw1-JQ5rarlotsIIAxCcLWSD&amp;cshid=1574675973936</a> <a href="https://www.google.com/url?sa=t&amp;source=web&amp;rct=j&amp;url=https://freevideolectures.com/course/3077/calculus-of-variations-and-integral-equations&amp;ved=2ahUKEwj04NfAjlXmAhWFV30KH Y8mDJqQFjAKeq QICBAB&amp;usq=AOvVaw0plqKkVtqXaqSAND4bxzaw&amp;cshid=1574675973936">https://www.google.com/url?sa=t&amp;source=web&amp;rct=j&amp;url=https://freevideolectures.com/course/3077/calculus-of-variations-and-integral-equations&amp;ved=2ahUKEwj04NfAjlXmAhWFV30KH Y8mDJqQFjAKeq QICBAB&amp;usq=AOvVaw0plqKkVtqXaqSAND4bxzaw&amp;cshid=1574675973936</a>
34	M.Sc	Research Methodology	<a href="https://www.msuniv.ac.in/images/academic/academic_affairs/M.Phil-Research&amp;TeachingMethodology.pdf">https://www.msuniv.ac.in/images/academic/academic_affairs/M.Phil-Research&amp;TeachingMethodology.pdf</a> <a href="https://www.semanticscholar.org/paper/Research-methods-in-(mathematics)-education-Schoenfeld/67ed862c1883fa6b2f5dbd9011d95335aa45c3f0">https://www.semanticscholar.org/paper/Research-methods-in-(mathematics)-education-Schoenfeld/67ed862c1883fa6b2f5dbd9011d95335aa45c3f0</a> <a href="https://www.researchgate.net/publication/282370187_e-textbooks_infor_Teaching_and_Learning_Mathematics_A_Disruptive_and_Potentially_Transformative_Educational_Technology">https://www.researchgate.net/publication/282370187_e-textbooks_infor_Teaching_and_Learning_Mathematics_A_Disruptive_and_Potentially_Transformative_Educational_Technology</a>
35	M.Sc	Operations Research	<a href="https://thalis.math.upatras.gr/~tsantas/DownloadFiles/Taha%20-%20Operation%20Research%208Ed.pdf">https://thalis.math.upatras.gr/~tsantas/DownloadFiles/Taha%20-%20Operation%20Research%208Ed.pdf</a>
36	M.Sc	Advanced Algebra	<a href="https://www.chilimath.com/lessons/advanced-algebra/">https://www.chilimath.com/lessons/advanced-algebra/</a> <a href="https://accuplacer.collegeboard.org/accuplacer/pdf/next-generation-sample-questions-advanced-algebra-and-functions.pdf">https://accuplacer.collegeboard.org/accuplacer/pdf/next-generation-sample-questions-advanced-algebra-and-functions.pdf</a> <a href="http://www.mathematik.uni-muenchen.de/~pareigis/Vorlesungen/01WS/advalg.pdf">http://www.mathematik.uni-muenchen.de/~pareigis/Vorlesungen/01WS/advalg.pdf</a>

			<a href="https://machinelearningmastery.com/resources-for-linear-algebra-in-machine-learning/">https://machinelearningmastery.com/resources-for-linear-algebra-in-machine-learning/</a> <a href="https://analyticsindiamag.com/7-top-linear-algebra-resources-for-machine-learning-beginners/">https://analyticsindiamag.com/7-top-linear-algebra-resources-for-machine-learning-beginners/</a> <a href="https://www.khanacademy.org/math/linear-algebra">https://www.khanacademy.org/math/linear-algebra</a>
37	M.Sc	Functional Analysis	<a href="http://susanka.org/HSforQM/%5BSimmons%5D%20Introduction%20to%20Topology%20and%20Modern%20Analysis.pdf">http://susanka.org/HSforQM/%5BSimmons%5D Introduction to Topology and Modern Analysis.pdf</a>
38	M.Sc	Differential Geometry	<a href="https://www.google.com/url?sa=t&amp;source=web&amp;rct=j&amp;url=http://strangebeautiful.com/other-texts/spivak-intro-diff-geom-v1-3ed.pdf&amp;ved=2ahUKEwjUquiCkIXmAhWSdn0KHQHGAcQQFjAJegQICBAB&amp;usg=AOvVaw0I9chHUATReR4ewH9GqHTg">https://www.google.com/url?sa=t&amp;source=web&amp;rct=j&amp;url=http://strangebeautiful.com/other-texts/spivak-intro-diff-geom-v1-3ed.pdf&amp;ved=2ahUKEwjUquiCkIXmAhWSdn0KHQHGAcQQFjAJegQICBAB&amp;usg=AOvVaw0I9chHUATReR4ewH9GqHTg</a>
39	M.Phil	Advanced Analysis	<a href="https://59clc.files.wordpress.com/2011/01/real-and-complex-analysis.pdf">https://59clc.files.wordpress.com/2011/01/real-and-complex-analysis.pdf</a>
40	M.Phil	Teaching and Research Methodology	<a href="http://www.math.toronto.edu/jcarlson/A--M.pdf">http://www.math.toronto.edu/jcarlson/A--M.pdf</a> <a href="http://gtu.ge/Agro-Lib/RESEARCH%20METHOD%20COHEN%20ok.pdf">http://gtu.ge/Agro-Lib/RESEARCH%20METHOD%20COHEN%20ok.pdf</a>
41	M.Phil	Banach Algebra & Spectral Theory	<a href="https://59clc.files.wordpress.com/2012/08/functional-analysis-_-rudin-2th.pdf">https://59clc.files.wordpress.com/2012/08/functional-analysis-_-rudin-2th.pdf</a>