

Complex Analysis Through Examples And Exercises

RIGHT HERE, WE HAVE COUNTLESS BOOK **COMPLEX ANALYSIS THROUGH EXAMPLES AND EXERCISES** AND COLLECTIONS TO CHECK OUT. WE ADDITIONALLY MEET THE EXPENSE OF VARIANT TYPES AND FURTHERMORE TYPE OF THE BOOKS TO BROWSE. THE GRATIFYING BOOK, FICTION, HISTORY, NOVEL, SCIENTIFIC RESEARCH, AS WELL AS VARIOUS EXTRA SORTS OF BOOKS ARE READILY NEARBY HERE.

AS THIS **COMPLEX ANALYSIS THROUGH EXAMPLES AND EXERCISES**, IT ENDS UP BRUTE ONE OF THE FAVORED BOOKS **COMPLEX ANALYSIS THROUGH EXAMPLES AND EXERCISES** COLLECTIONS THAT WE HAVE. THIS IS WHY YOU REMAIN IN THE BEST WEBSITE TO LOOK THE INCREDIBLE EBOOK TO HAVE.

COMPLEX ANALYSIS - IAN STEWART 2018-08-23
A NEW EDITION OF A CLASSIC TEXTBOOK ON COMPLEX ANALYSIS WITH AN EMPHASIS ON TRANSLATING VISUAL INTUITION TO RIGOROUS PROOF.

COMPLEX ANALYSIS - THEODORE W. GAMELIN
2013-11-01
AN INTRODUCTION TO COMPLEX ANALYSIS FOR STUDENTS WITH SOME KNOWLEDGE OF COMPLEX NUMBERS FROM HIGH SCHOOL. IT CONTAINS SIXTEEN CHAPTERS, THE FIRST ELEVEN

OF WHICH ARE AIMED AT AN UPPER DIVISION UNDERGRADUATE AUDIENCE. THE REMAINING FIVE CHAPTERS ARE DESIGNED TO COMPLETE THE COVERAGE OF ALL BACKGROUND NECESSARY FOR PASSING PhD QUALIFYING EXAMS IN COMPLEX ANALYSIS. TOPICS STUDIED INCLUDE JULIA SETS AND THE MANDELBROT SET, DIRICHLET SERIES AND THE PRIME NUMBER THEOREM, AND THE UNIFORMIZATION THEOREM FOR RIEMANN SURFACES, WITH EMPHASIS PLACED ON THE THREE GEOMETRIES: SPHERICAL, EUCLIDEAN, AND HYPERBOLIC. THROUGHOUT, EXERCISES RANGE

FROM THE VERY SIMPLE TO THE CHALLENGING. THE BOOK IS BASED ON LECTURES GIVEN BY THE AUTHOR AT SEVERAL UNIVERSITIES, INCLUDING UCLA, BROWN UNIVERSITY, LA PLATA, BUENOS AIRES, AND THE UNIVERSIDAD AUTONOMA DE VALENCIA, SPAIN.

PROBLEMS AND SOLUTIONS FOR COMPLEX ANALYSIS - RAMI SHAKARCHI 1999-10-14

ALL THE EXERCISES PLUS THEIR SOLUTIONS FOR SERGE LANG'S FOURTH EDITION OF "COMPLEX ANALYSIS," ISBN 0-387-98592-1. THE PROBLEMS IN THE FIRST 8 CHAPTERS ARE SUITABLE FOR AN INTRODUCTORY COURSE AT UNDERGRADUATE LEVEL AND COVER POWER SERIES, CAUCHY'S THEOREM, LAURENT SERIES, SINGULARITIES AND MEROMORPHIC FUNCTIONS, THE CALCULUS OF RESIDUES, CONFORMAL MAPPINGS, AND HARMONIC FUNCTIONS. THE MATERIAL IN THE REMAINING 8 CHAPTERS IS MORE ADVANCED, WITH PROBLEMS ON SCHWARTZ REFLECTION, ANALYTIC CONTINUATION, JENSEN'S FORMULA, THE PHRAGMEN-LINDELOEF THEOREM, ENTIRE FUNCTIONS, WEIERSTRASS PRODUCTS AND MEROMORPHIC FUNCTIONS, THE GAMMA FUNCTION AND ZETA FUNCTION. ALSO BENEFICIAL FOR ANYONE INTERESTED IN LEARNING COMPLEX ANALYSIS.

COMPLEX ANALYSIS THROUGH EXAMPLES AND EXERCISES - E. PAP 2013-03-09

THE BOOK COMPLEX ANALYSIS THROUGH EXAMPLES AND EXERCISES HAS COME OUT FROM THE LECTURES AND

EXERCISES THAT THE AUTHOR HELD MOSTLY FOR MATHEMATICIAN AND PHYSICISTS. THE BOOK IS AN ATTEMPT TO PRESENT THE RATHER INVOLVED SUBJECT OF COMPLEX ANALYSIS THROUGH AN ACTIVE APPROACH BY THE READER. THUS THIS BOOK IS A COMPLEX COMBINATION OF THEORY AND EXAMPLES. COMPLEX ANALYSIS IS INVOLVED IN ALL BRANCHES OF MATHEMATICS. IT OFTEN HAPPENS THAT THE COMPLEX ANALYSIS IS THE SHORTEST PATH FOR SOLVING A PROBLEM IN REAL CIRCUMSTANCES. WE ARE USING THE (CAUCHY) INTEGRAL APPROACH AND THE (WEIERSTRASS) POWER SERIES APPROACH. IN THE THEORY OF COMPLEX ANALYSIS, ON THE HAND ONE HAS AN INTERPLAY OF SEVERAL MATHEMATICAL DISCIPLINES, WHILE ON THE OTHER VARIOUS METHODS, TOOLS, AND APPROACHES. IN VIEW OF THAT, THE EXPOSITION OF NEW NOTIONS AND METHODS IN OUR BOOK IS TAKEN STEP BY STEP. A MINIMAL AMOUNT OF EXPOSITORY THEORY IS INCLUDED AT THE BEGINNING OF EACH SECTION, THE PRELIMINARIES, WITH MAXIMUM EFFORT PLACED ON WELL SELECTED EXAMPLES AND EXERCISES CAPTURING THE ESSENCE OF THE MATERIAL. ACTUALLY, I HAVE DIVIDED THE PROBLEMS INTO TWO CLASSES CALLED EXAMPLES AND EXERCISES (SOME OF THEM OFTEN ALSO CONTAIN PROOFS OF THE STATEMENTS FROM THE PRELIMINARIES). THE EXAMPLES CONTAIN COMPLETE SOLUTIONS AND SERVE AS A MODEL FOR SOLVING SIMILAR PROBLEMS GIVEN IN THE EXERCISES. THE READERS ARE LEFT TO FIND THE SOLUTION IN THE EXERCISES) THE ANSWERS, AND,

OCCASIONALLY, SOME HINTS, ARE STILL GIVEN.

COMPLEX ANALYSIS - JERRY R. MUIR, JR. 2015-05-06

A THOROUGH INTRODUCTION TO THE THEORY OF COMPLEX FUNCTIONS EMPHASIZING THE BEAUTY, POWER, AND COUNTERINTUITIVE NATURE OF THE SUBJECT WRITTEN WITH A READER-FRIENDLY APPROACH, *COMPLEX ANALYSIS: A MODERN FIRST COURSE IN FUNCTION THEORY* FEATURES A SELF-CONTAINED, CONCISE DEVELOPMENT OF THE FUNDAMENTAL PRINCIPLES OF COMPLEX ANALYSIS. AFTER LAYING GROUNDWORK ON COMPLEX NUMBERS AND THE CALCULUS AND GEOMETRIC MAPPING PROPERTIES OF FUNCTIONS OF A COMPLEX VARIABLE, THE AUTHOR USES POWER SERIES AS A UNIFYING THEME TO DEFINE AND STUDY THE MANY RICH AND OCCASIONALLY SURPRISING PROPERTIES OF ANALYTIC FUNCTIONS, INCLUDING THE CAUCHY THEORY AND RESIDUE THEOREM. THE BOOK CONCLUDES WITH A TREATMENT OF HARMONIC FUNCTIONS AND AN EPILOGUE ON THE RIEMANN MAPPING THEOREM. THOROUGHLY CLASSROOM TESTED AT MULTIPLE UNIVERSITIES, *COMPLEX ANALYSIS: A MODERN FIRST COURSE IN FUNCTION THEORY* FEATURES: PLENTIFUL EXERCISES, BOTH COMPUTATIONAL AND THEORETICAL, OF VARYING LEVELS OF DIFFICULTY, INCLUDING SEVERAL THAT COULD BE USED FOR STUDENT PROJECTS NUMEROUS FIGURES TO ILLUSTRATE GEOMETRIC CONCEPTS AND CONSTRUCTIONS USED IN PROOFS REMARKS AT THE CONCLUSION OF EACH SECTION THAT PLACE THE MAIN CONCEPTS IN CONTEXT,

COMPARE AND CONTRAST RESULTS WITH THE CALCULUS OF REAL FUNCTIONS, AND PROVIDE HISTORICAL NOTES APPENDICES ON THE BASICS OF SETS AND FUNCTIONS AND A HANDFUL OF USEFUL RESULTS FROM ADVANCED CALCULUS APPROPRIATE FOR STUDENTS MAJORING IN PURE OR APPLIED MATHEMATICS AS WELL AS PHYSICS OR ENGINEERING, *COMPLEX ANALYSIS: A MODERN FIRST COURSE IN FUNCTION THEORY* IS AN IDEAL TEXTBOOK FOR A ONE-SEMESTER COURSE IN COMPLEX ANALYSIS FOR THOSE WITH A STRONG FOUNDATION IN MULTIVARIABLE CALCULUS. THE LOGICALLY COMPLETE BOOK ALSO SERVES AS A KEY REFERENCE FOR MATHEMATICIANS, PHYSICISTS, AND ENGINEERS AND IS AN EXCELLENT SOURCE FOR ANYONE INTERESTED IN INDEPENDENTLY LEARNING OR REVIEWING THE BEAUTIFUL SUBJECT OF COMPLEX ANALYSIS.

TWENTY-ONE LECTURES ON COMPLEX ANALYSIS - ALEXANDER ISAEV 2017-11-29

AT ITS CORE, THIS CONCISE TEXTBOOK PRESENTS STANDARD MATERIAL FOR A FIRST COURSE IN COMPLEX ANALYSIS AT THE ADVANCED UNDERGRADUATE LEVEL. THIS DISTINCTIVE TEXT WILL PROVE MOST REWARDING FOR STUDENTS WHO HAVE A GENUINE PASSION FOR MATHEMATICS AS WELL AS CERTAIN MATHEMATICAL MATURITY. PRIMARILY AIMED AT UNDERGRADUATES WITH WORKING KNOWLEDGE OF REAL ANALYSIS AND METRIC SPACES, THIS BOOK CAN ALSO BE USED TO INSTRUCT A GRADUATE COURSE. THE TEXT USES A

CONVERSATIONAL STYLE WITH TOPICS PURPOSEFULLY APPORTIONED INTO 21 LECTURES, PROVIDING A SUITABLE FORMAT FOR EITHER INDEPENDENT STUDY OR LECTURE-BASED TEACHING. INSTRUCTORS ARE INVITED TO REARRANGE THE ORDER OF TOPICS ACCORDING TO THEIR OWN VISION. A CLEAR AND RIGOROUS EXPOSITION IS SUPPORTED BY ENGAGING EXAMPLES AND EXERCISES UNIQUE TO EACH LECTURE; A LARGE NUMBER OF EXERCISES CONTAIN USEFUL CALCULATION PROBLEMS. HINTS ARE GIVEN FOR A SELECTION OF THE MORE DIFFICULT EXERCISES. THIS TEXT FURNISHES THE READER WITH A MEANS OF LEARNING COMPLEX ANALYSIS AS WELL AS A SUBTLE INTRODUCTION TO CAREFUL MATHEMATICAL REASONING. TO GUARANTEE A STUDENT'S PROGRESSION, MORE ADVANCED TOPICS ARE SPREAD OUT OVER SEVERAL LECTURES. THIS TEXT IS BASED ON A ONE-SEMESTER (12 WEEK) UNDERGRADUATE COURSE IN COMPLEX ANALYSIS THAT THE AUTHOR HAS TAUGHT AT THE AUSTRALIAN NATIONAL UNIVERSITY FOR OVER TWENTY YEARS. MOST OF THE PRINCIPAL FACTS ARE DEDUCED FROM CAUCHY'S INDEPENDENCE OF HOMOTOPY THEOREM ALLOWING US TO OBTAIN A CLEAN DERIVATION OF CAUCHY'S INTEGRAL THEOREM AND CAUCHY'S INTEGRAL FORMULA. SETTING THE TONE FOR THE ENTIRE BOOK, THE MATERIAL BEGINS WITH A PROOF OF THE FUNDAMENTAL THEOREM OF ALGEBRA TO DEMONSTRATE THE POWER OF COMPLEX NUMBERS AND CONCLUDES WITH A PROOF OF ANOTHER MAJOR MILESTONE, THE RIEMANN MAPPING

THEOREM, WHICH IS RARELY PART OF A ONE-SEMESTER UNDERGRADUATE COURSE.

INVITATION TO COMPLEX ANALYSIS - RALPH PHILIP BOAS
1987

IDEAL FOR A FIRST COURSE IN COMPLEX ANALYSIS, THIS BOOK CAN BE USED EITHER AS A CLASSROOM TEXT OR FOR INDEPENDENT STUDY. WRITTEN AT A LEVEL ACCESSIBLE TO ADVANCED UNDERGRADUATES AND BEGINNING GRADUATE STUDENTS, THE BOOK IS SUITABLE FOR READERS ACQUAINTED WITH ADVANCED CALCULUS OR INTRODUCTORY REAL ANALYSIS. THE TREATMENT GOES BEYOND THE STANDARD MATERIAL OF POWER SERIES, CAUCHY'S THEOREM, RESIDUES, CONFORMAL MAPPING, AND HARMONIC FUNCTIONS BY INCLUDING ACCESSIBLE DISCUSSIONS OF INTRIGUING TOPICS THAT ARE UNCOMMON IN A BOOK AT THIS LEVEL. THE FLEXIBILITY AFFORDED BY THE SUPPLEMENTARY TOPICS AND APPLICATIONS MAKES THE BOOK ADAPTABLE EITHER TO A SHORT, ONE-TERM COURSE OR TO A COMPREHENSIVE, FULL-YEAR COURSE. DETAILED SOLUTIONS OF THE EXERCISES BOTH SERVE AS MODELS FOR STUDENTS AND FACILITATE INDEPENDENT STUDY. SUPPLEMENTARY EXERCISES, NOT SOLVED IN THE BOOK, PROVIDE AN ADDITIONAL TEACHING TOOL.

A FIRST COURSE IN COMPLEX ANALYSIS - MATTHIAS BECK
2018-09

A FIRST COURSE IN COMPLEX ANALYSIS WAS DEVELOPED

FROM LECTURE NOTES FOR A ONE-SEMESTER UNDERGRADUATE COURSE TAUGHT BY THE AUTHORS. FOR MANY STUDENTS, COMPLEX ANALYSIS IS THE FIRST RIGOROUS ANALYSIS (IF NOT MATHEMATICS) CLASS THEY TAKE, AND THESE NOTES REFLECT THIS. THE AUTHORS TRY TO RELY ON AS FEW CONCEPTS FROM REAL ANALYSIS AS POSSIBLE. IN PARTICULAR, SERIES AND SEQUENCES ARE TREATED FROM SCRATCH.

COMPLEX ANALYSIS - DENNIS G. ZILL 2013-09-20

DESIGNED FOR THE UNDERGRADUATE STUDENT WITH A CALCULUS BACKGROUND BUT NO PRIOR EXPERIENCE WITH COMPLEX ANALYSIS, THIS TEXT DISCUSSES THE THEORY OF THE MOST RELEVANT MATHEMATICAL TOPICS IN A STUDENT-FRIENDLY MANNER. WITH A CLEAR AND STRAIGHTFORWARD WRITING STYLE, CONCEPTS ARE INTRODUCED THROUGH NUMEROUS EXAMPLES, ILLUSTRATIONS, AND APPLICATIONS. EACH SECTION OF THE TEXT CONTAINS AN EXTENSIVE EXERCISE SET CONTAINING A RANGE OF COMPUTATIONAL, CONCEPTUAL, AND GEOMETRIC PROBLEMS. IN THE TEXT AND EXERCISES, STUDENTS ARE GUIDED AND SUPPORTED THROUGH NUMEROUS PROOFS PROVIDING THEM WITH A HIGHER LEVEL OF MATHEMATICAL INSIGHT AND MATURITY. EACH CHAPTER CONTAINS A SEPARATE SECTION DEVOTED EXCLUSIVELY TO THE APPLICATIONS OF COMPLEX ANALYSIS TO SCIENCE AND ENGINEERING, PROVIDING STUDENTS WITH THE OPPORTUNITY TO DEVELOP A PRACTICAL AND CLEAR UNDERSTANDING OF COMPLEX ANALYSIS. THE MATHEMATICA SYNTAX FROM THE

SECOND EDITION HAS BEEN UPDATED TO COINCIDE WITH VERSION 8 OF THE SOFTWARE. --

ELEMENTARY THEORY OF ANALYTIC FUNCTIONS OF ONE OR SEVERAL COMPLEX VARIABLES - HENRI CARTAN
2013-04-22

BASIC TREATMENT INCLUDES EXISTENCE THEOREM FOR SOLUTIONS OF DIFFERENTIAL SYSTEMS WHERE DATA IS ANALYTIC, HOLOMORPHIC FUNCTIONS, CAUCHY'S INTEGRAL, TAYLOR AND LAURENT EXPANSIONS, MORE. EXERCISES. 1973 EDITION.

INTEGRATION WITH COMPLEX NUMBERS - BRIAN McMASTER
2022-05-02

COMPLEX ANALYSIS, MORE THAN ALMOST ANY OTHER UNDERGRADUATE TOPIC IN MATHEMATICS, RUNS THE FULL PURE/APPLIED GAMUT FROM THE MOST SUBTLE, DIFFICULT, AND INGENIOUS PROOFS TO THE MOST DIRECT, HANDS-ON, ENGINEERING-BASED APPLICATIONS. THIS CREATES CHALLENGES FOR THE INSTRUCTOR AS MUCH AS FOR THE VERY WIDE RANGE OF STUDENTS WHOSE VARIOUS PROGRAMMES REQUIRE A SECURE GRASP OF COMPLEX ANALYSIS. ITS TECHNIQUES ARE INDISPENSABLE TO MANY, BUT SKILL IN THE USE OF A MATHEMATICAL TOOL IS HAZARDOUS AND FALLIBLE WITHOUT A SOUND UNDERSTANDING OF WHY AND WHEN THAT TOOL IS THE RIGHT ONE TO PICK UP. THIS KIND OF UNDERSTANDING DEVELOPS ONLY BY COMBINING CAREFUL EXPLORATION OF IDEAS, ANALYSIS OF PROOFS, AND PRACTICE ACROSS A RANGE

OF EXERCISES. INTEGRATION WITH COMPLEX NUMBERS: A PRIMER ON COMPLEX ANALYSIS OFFERS A READER-FRIENDLY CONTEMPORARY BALANCE BETWEEN IDEA, PROOF, AND PRACTICE, INFORMED BY SEVERAL DECADES OF CLASSROOM EXPERIENCE AND A SEASONED UNDERSTANDING OF THE BACKGROUNDS, MOTIVATION, AND COMPETING TIME PRESSURES OF TODAY'S STUDENT COHORTS. TO ACHIEVE ITS AIM OF SUPPORTING AND SUSTAINING SUCH COHORTS THROUGH THOSE ASPECTS OF COMPLEX ANALYSIS THAT THEY ENCOUNTER IN FIRST AND SECOND-YEAR STUDY, IT ALSO BALANCES COMPETING NEEDS TO BE SELF-CONTAINED, COMPREHENSIVE, ACCESSIBLE, AND ENGAGING - ALL IN SUFFICIENT BUT NOT IN EXCESSIVE MEASURES. IN PARTICULAR, IT BEGINS WHERE MOST STUDENTS ARE LIKELY TO BE, AND INVESTS THE TIME AND EFFORT THAT ARE REQUIRED IN ORDER TO DELIVER ACCESSIBILITY AND INTRODUCTORY GRADUALNESS.

INTRODUCTION TO COMPLEX ANALYSIS IN SEVERAL VARIABLES - VOLKER SCHEIDEMANN 2005-12-27

THIS BOOK PROVIDES A COMPREHENSIVE INTRODUCTION TO COMPLEX ANALYSIS IN SEVERAL VARIABLES. ONE MAJOR FOCUS OF THE BOOK IS EXTENSION PHENOMENA ALIEN TO THE ONE-DIMENSIONAL THEORY (HARTOG'S KUGELSATZ, THEOREM OF CARTAN-THULLEN, BOCHNER'S THEOREM). THE BOOK PRIMARILY AIMS AT STUDENTS STARTING TO WORK IN THE FIELD OF COMPLEX ANALYSIS IN SEVERAL VARIABLES AND

TEACHERS WHO WANT TO PREPARE A UNIVERSITY LECTURE. THEREFORE, THE BOOK CONTAINS MORE THAN 50 EXAMPLES AND MORE THAN 100 SUPPORTING EXERCISES.

COMPLEX ANALYSIS - EBERHARD FREITAG 2006-01-17

ALL NEEDED NOTIONS ARE DEVELOPED WITHIN THE BOOK: WITH THE EXCEPTION OF FUNDAMENTALS WHICH ARE PRESENTED IN INTRODUCTORY LECTURES, NO OTHER KNOWLEDGE IS ASSUMED PROVIDES A MORE IN-DEPTH INTRODUCTION TO THE SUBJECT THAN OTHER EXISTING BOOKS IN THIS AREA OVER 400

EXERCISES INCLUDING HINTS FOR SOLUTIONS ARE INCLUDED

COMPLEX VARIABLES - H. S. KASANA 2005-01-01

THE SECOND EDITION OF THIS COMPREHENSIVE AND ACCESSIBLE TEXT CONTINUES TO OFFER STUDENTS A CHALLENGING AND ENJOYABLE STUDY OF COMPLEX VARIABLES THAT IS INFUSED WITH PERFECT BALANCED COVERAGE OF MATHEMATICAL THEORY AND APPLIED TOPICS. THE AUTHOR EXPLAINS FUNDAMENTAL CONCEPTS AND TECHNIQUES WITH PRECISION AND INTRODUCES THE STUDENTS TO COMPLEX VARIABLE THEORY THROUGH CONCEPTUAL DEVELOPMENT OF ANALYSIS THAT ENABLES THEM TO DEVELOP A THOROUGH UNDERSTANDING OF THE TOPICS DISCUSSED. GEOMETRIC INTERPRETATION OF THE RESULTS, WHEREVER NECESSARY, HAS BEEN INDUCTED FOR MAKING THE ANALYSIS MORE ACCESSIBLE. THE LEVEL OF THE TEXT ASSUMES THAT THE READER IS ACQUAINTED WITH ELEMENTARY REAL ANALYSIS. BEGINNING WITH THE REVISION OF THE ALGEBRA OF COMPLEX VARIABLES,

THE BOOK MOVES ON TO DEAL WITH ANALYTIC FUNCTIONS, ELEMENTARY FUNCTIONS, COMPLEX INTEGRATION, SEQUENCES, SERIES AND INFINITE PRODUCTS, SERIES EXPANSIONS, SINGULARITIES AND RESIDUES. THE APPLICATION-ORIENTED CHAPTERS ON SUMS AND INTEGRALS, CONFORMAL MAPPINGS, LAPLACE TRANSFORM, AND SOME SPECIAL TOPICS, PROVIDE A PRACTICAL-USE PERSPECTIVE. ENRICHED WITH MANY NUMERICAL EXAMPLES AND EXERCISES DESIGNED TO TEST THE STUDENT'S COMPREHENSION OF THE TOPICS COVERED, THIS BOOK IS WRITTEN FOR A ONE-SEMESTER COURSE IN COMPLEX VARIABLES FOR STUDENTS IN THE SCIENCE AND ENGINEERING DISCIPLINES.

COMPLEX ANALYSIS - ANDREI BOURCHTEIN 2021-02-09
THIS BOOK DISCUSSES ALL THE MAJOR TOPICS OF COMPLEX ANALYSIS, BEGINNING WITH THE PROPERTIES OF COMPLEX NUMBERS AND ENDING WITH THE PROOFS OF THE FUNDAMENTAL PRINCIPLES OF CONFORMAL MAPPINGS. TOPICS COVERED IN THE BOOK INCLUDE THE STUDY OF HOLOMORPHIC AND ANALYTIC FUNCTIONS, CLASSIFICATION OF SINGULAR POINTS AND THE LAURENT SERIES EXPANSION, THEORY OF RESIDUES AND THEIR APPLICATION TO EVALUATION OF INTEGRALS, SYSTEMATIC STUDY OF ELEMENTARY FUNCTIONS, ANALYSIS OF CONFORMAL MAPPINGS AND THEIR APPLICATIONS—MAKING THIS BOOK SELF-SUFFICIENT AND THE READER INDEPENDENT OF ANY OTHER TEXTS ON COMPLEX VARIABLES. THE BOOK IS AIMED AT THE ADVANCED UNDERGRADUATE STUDENTS OF MATHEMATICS AND

ENGINEERING, AS WELL AS THOSE INTERESTED IN STUDYING COMPLEX ANALYSIS WITH A GOOD WORKING KNOWLEDGE OF ADVANCED CALCULUS. THE MATHEMATICAL LEVEL OF THE EXPOSITION CORRESPONDS TO ADVANCED UNDERGRADUATE COURSES OF MATHEMATICAL ANALYSIS AND FIRST GRADUATE INTRODUCTION TO THE DISCIPLINE. THE BOOK CONTAINS A LARGE NUMBER OF PROBLEMS AND EXERCISES, MAKING IT SUITABLE FOR BOTH CLASSROOM USE AND SELF-STUDY. MANY STANDARD EXERCISES ARE INCLUDED IN EACH SECTION TO DEVELOP BASIC SKILLS AND TEST THE UNDERSTANDING OF CONCEPTS. OTHER PROBLEMS ARE MORE THEORETICALLY ORIENTED AND ILLUSTRATE INTRICATE POINTS OF THE THEORY. MANY ADDITIONAL PROBLEMS ARE PROPOSED AS HOMEWORK TASKS WHOSE LEVEL RANGES FROM STRAIGHTFORWARD, BUT NOT OVERLY SIMPLE, EXERCISES TO PROBLEMS OF CONSIDERABLE DIFFICULTY BUT OF COMPARABLE INTEREST.

COMPLEX ANALYSIS WITH APPLICATIONS - NAKHL H. ASMAR 2018-10-12

THIS TEXTBOOK IS INTENDED FOR A ONE SEMESTER COURSE IN COMPLEX ANALYSIS FOR UPPER LEVEL UNDERGRADUATES IN MATHEMATICS. APPLICATIONS, PRIMARY MOTIVATIONS FOR THIS TEXT, ARE PRESENTED HAND-IN-HAND WITH THEORY ENABLING THIS TEXT TO SERVE WELL IN COURSES FOR STUDENTS IN ENGINEERING OR APPLIED SCIENCES. THE OVERALL AIM IN DESIGNING THIS TEXT IS TO ACCOMMODATE STUDENTS OF DIFFERENT MATHEMATICAL BACKGROUNDS AND TO ACHIEVE

A BALANCE BETWEEN PRESENTATIONS OF RIGOROUS MATHEMATICAL PROOFS AND APPLICATIONS. THE TEXT IS ADAPTED TO ENABLE MAXIMUM FLEXIBILITY TO INSTRUCTORS AND TO STUDENTS WHO MAY ALSO CHOOSE TO PROGRESS THROUGH THE MATERIAL OUTSIDE OF COURSEWORK. DETAILED EXAMPLES MAY BE COVERED IN ONE COURSE, GIVING THE INSTRUCTOR THE OPTION TO CHOOSE THOSE THAT ARE BEST SUITED FOR DISCUSSION. EXAMPLES SHOWCASE A VARIETY OF PROBLEMS WITH COMPLETELY WORKED OUT SOLUTIONS, ASSISTING STUDENTS IN WORKING THROUGH THE EXERCISES. THE NUMEROUS EXERCISES VARY IN DIFFICULTY FROM SIMPLE APPLICATIONS OF FORMULAS TO MORE ADVANCED PROJECT-TYPE PROBLEMS. DETAILED HINTS ACCOMPANY THE MORE CHALLENGING PROBLEMS. MULTI-PART EXERCISES MAY BE ASSIGNED TO INDIVIDUAL STUDENTS, TO GROUPS AS PROJECTS, OR SERVE AS FURTHER ILLUSTRATIONS FOR THE INSTRUCTOR. WIDELY USED GRAPHICS CLARIFY BOTH CONCRETE AND ABSTRACT CONCEPTS, HELPING STUDENTS VISUALIZE THE PROOFS OF MANY RESULTS. FREELY ACCESSIBLE SOLUTIONS TO EVERY-OTHER-ODD EXERCISE ARE POSTED TO THE BOOK'S SPRINGER WEBSITE. ADDITIONAL SOLUTIONS FOR INSTRUCTORS' USE MAY BE OBTAINED BY CONTACTING THE AUTHORS DIRECTLY.

PARTIAL DIFFERENTIAL EQUATIONS THROUGH EXAMPLES AND EXERCISES - E. PAP 2012-12-06

THE BOOK PARTIAL DIFFERENTIAL EQUATIONS THROUGH

EXAMPLES AND EXERCISES HAS EVOLVED FROM THE LECTURES AND EXERCISES THAT THE AUTHORS HAVE GIVEN FOR MORE THAN FIFTEEN YEARS, MOSTLY FOR MATHEMATICS, COMPUTER SCIENCE, PHYSICS AND CHEMISTRY STUDENTS. BY OUR BEST KNOWLEDGE, THE BOOK IS A FIRST ATTEMPT TO PRESENT THE RATHER COMPLEX SUBJECT OF PARTIAL DIFFERENTIAL EQUATIONS (PDEs FOR SHORT) THROUGH ACTIVE READER-PARTICIPATION. THUS THIS BOOK IS A COMBINATION OF THEORY AND EXAMPLES. IN THE THEORY OF PDEs, ON ONE HAND, ONE HAS AN INTERPLAY OF SEVERAL MATHEMATICAL DISCIPLINES, INCLUDING THE THEORIES OF ANALYTICAL FUNCTIONS, HARMONIC ANALYSIS, ODEs, TOPOLOGY AND LAST, BUT NOT LEAST, FUNCTIONAL ANALYSIS, WHILE ON THE OTHER HAND THERE ARE VARIOUS METHODS, TOOLS AND APPROACHES. IN VIEW OF THAT, THE EXPOSITION OF NEW NOTIONS AND METHODS IN OUR BOOK IS "STEP BY STEP". A MINIMAL AMOUNT OF EXPOSITORY THEORY IS INCLUDED AT THE BEGINNING OF EACH SECTION PRELIMINARIES WITH MAXIMUM EMPHASIS PLACED ON WELL SELECTED EXAMPLES AND EXERCISES CAPTURING THE ESSENCE OF THE MATERIAL. ACTUALLY, WE HAVE DIVIDED THE PROBLEMS INTO TWO CLASSES TERMED EXAMPLES AND EXERCISES (OFTEN CONTAINING PROOFS OF THE STATEMENTS FROM PRELIMINARIES). THE EXAMPLES CONTAIN COMPLETE SOLUTIONS, AND ALSO SERVE AS A MODEL FOR SOLVING SIMILAR PROBLEMS, GIVEN IN THE EXERCISES. THE READERS ARE

LEFT TO FIND THE SOLUTION IN THE EXERCISES; THE ANSWERS, AND OCCASIONALLY, SOME HINTS, ARE STILL GIVEN. THE BOOK IS IMPLICITLY DIVIDED IN TWO PARTS, CLASSICAL AND ABSTRACT.

MATHEMATICAL MODELLING - J. CALDWELL 2004-03-31

OVER THE PAST DECADE THERE HAS BEEN AN INCREASING DEMAND FOR SUITABLE MATERIAL IN THE AREA OF MATHEMATICAL MODELLING AS APPLIED TO SCIENCE, ENGINEERING, BUSINESS AND MANAGEMENT. RECENT DEVELOPMENTS IN COMPUTER TECHNOLOGY AND RELATED SOFTWARE HAVE PROVIDED THE NECESSARY TOOLS OF INCREASING POWER AND SOPHISTICATION WHICH HAVE SIGNIFICANT IMPLICATIONS FOR THE USE AND ROLE OF MATHEMATICAL MODELLING IN THE ABOVE DISCIPLINES. IN THE PAST, TRADITIONAL METHODS HAVE RELIED HEAVILY ON EXPENSIVE EXPERIMENTATION AND THE BUILDING OF SCALED MODELS, BUT NOW A MORE FLEXIBLE AND COST EFFECTIVE APPROACH IS AVAILABLE THROUGH GREATER USE OF MATHEMATICAL MODELLING AND COMPUTER SIMULATION. IN PARTICULAR, DEVELOPMENTS IN COMPUTER ALGEBRA, SYMBOLIC MANIPULATION PACKAGES AND USER FRIENDLY SOFTWARE PACKAGES FOR LARGE SCALE PROBLEMS, ALL HAVE IMPORTANT IMPLICATIONS IN BOTH THE TEACHING OF MATHEMATICAL MODELLING AND, MORE IMPORTANTLY, ITS USE IN THE SOLUTION OF REAL WORLD PROBLEMS. MANY TEXTBOOKS HAVE BEEN PUBLISHED WHICH COVER THE ART AND

TECHNIQUES OF MODELLING AS WELL AS SPECIFIC MATHEMATICAL MODELLING TECHNIQUES IN SPECIALIST AREAS WITHIN SCIENCE AND BUSINESS. IN MOST OF THESE BOOKS THE MATHEMATICAL MATERIAL TENDS TO BE RATHER TAILOR MADE TO FIT IN WITH A ONE OR TWO SEMESTER COURSE FOR TEACHING STUDENTS AT THE UNDERGRADUATE OR POSTGRADUATE LEVEL, USUALLY THE FORMER. THIS TEXTBOOK IS QUITE DIFFERENT IN THAT IT IS INTENDED TO BUILD ON AND ENHANCE STUDENTS' MODELLING SKILLS USING A COMBINATION OF CASE STUDIES AND PROJECTS.

GEOMETRIC FUNCTION THEORY - STEVEN G. KRANTZ
2007-09-19

* PRESENTED FROM A GEOMETRIC ANALYTICAL VIEWPOINT, THIS WORK ADDRESSES ADVANCED TOPICS IN COMPLEX ANALYSIS THAT VERGE ON MODERN AREAS OF RESEARCH * METHODICALLY DESIGNED WITH INDIVIDUAL CHAPTERS CONTAINING A RICH COLLECTION OF EXERCISES, EXAMPLES, AND ILLUSTRATIONS

THE LINEAR ALGEBRA A BEGINNING GRADUATE STUDENT OUGHT TO KNOW - JONATHAN S. GOLAN 2004-01-31

LINEAR ALGEBRA IS A LIVING, ACTIVE BRANCH OF MATHEMATICS WHICH IS CENTRAL TO ALMOST ALL OTHER AREAS OF MATHEMATICS, BOTH PURE AND APPLIED, AS WELL AS COMPUTER SCIENCE, THE PHYSICAL AND SOCIAL SCIENCES, AND ENGINEERING. IT ENTAILS AN EXTENSIVE CORPUS OF THEORETICAL RESULTS AS WELL AS A LARGE BODY OF

COMPUTATIONAL TECHNIQUES. THE BOOK IS INTENDED TO BE USED IN ONE OF SEVERAL POSSIBLE WAYS: (1) AS A SELF-STUDY GUIDE; (2) AS A TEXTBOOK FOR A COURSE IN ADVANCED LINEAR ALGEBRA, EITHER AT THE UPPER-CLASS UNDERGRADUATE LEVEL OR AT THE FIRST-YEAR GRADUATE LEVEL; OR (3) AS A REFERENCE BOOK. IT IS ALSO DESIGNED TO PREPARE A STUDENT FOR THE LINEAR ALGEBRA PORTION OF PRELIM EXAMS OR PHD QUALIFYING EXAMS. THE VOLUME IS SELF-CONTAINED TO THE EXTENT THAT IT DOES NOT ASSUME ANY PREVIOUS FORMAL KNOWLEDGE OF LINEAR ALGEBRA, THOUGH THE READER IS ASSUMED TO HAVE BEEN EXPOSED, AT LEAST INFORMALLY, TO SOME BASIC IDEAS AND TECHNIQUES, SUCH AS THE SOLUTION OF A SMALL SYSTEM OF LINEAR EQUATIONS OVER THE REAL NUMBERS. MORE IMPORTANTLY, IT DOES ASSUME A SERIOUSNESS OF PURPOSE AND A MODICUM OF MATHEMATICAL SOPHISTICATION. THE BOOK ALSO CONTAINS OVER 1000 EXERCISES, MANY OF WHICH ARE VERY CHALLENGING.

AN INTRODUCTION TO COMPLEX ANALYSIS AND GEOMETRY -

JOHN P. D'ANGELO 2010

PROVIDES THE READER WITH A DEEP APPRECIATION OF COMPLEX ANALYSIS AND HOW THIS SUBJECT FITS INTO MATHEMATICS. THE FIRST FOUR CHAPTERS PROVIDE AN INTRODUCTION TO COMPLEX ANALYSIS WITH MANY ELEMENTARY AND UNUSUAL APPLICATIONS. CHAPTERS 5 TO 7 DEVELOP THE CAUCHY THEORY AND INCLUDE SOME STRIKING

APPLICATIONS TO CALCULUS. CHAPTER 8 GLIMPSES SEVERAL APPEALING TOPICS, SIMULTANEOUSLY UNIFYING THE BOOK AND OPENING THE DOOR TO FURTHER STUDY.

COMPLEX ANALYSIS IN ONE VARIABLE -

RAGHAVAN NARASIMHAN 2012-12-06

THE ORIGINAL EDITION OF THIS BOOK HAS BEEN OUT OF PRINT FOR SOME YEARS. THE APPEARANCE OF THE PRESENT SECOND EDITION OWES MUCH TO THE INITIATIVE OF YVES NIEVERGELT AT EASTERN WASHINGTON UNIVERSITY, AND THE SUPPORT OF ANN KOSTANT, MATHEMATICS EDITOR AT BIRKHAUSER. SINCE THE BOOK WAS FIRST PUBLISHED, SEVERAL PEOPLE HAVE REMARKED ON THE ABSENCE OF EXERCISES AND EXPRESSED THE OPINION THAT THE BOOK WOULD HAVE BEEN MORE USEFUL HAD EXERCISES BEEN INCLUDED. IN 1997, YVES NIEVERGELT INFORMED ME THAT, FOR A DECADE, HE HAD REGULARLY TAUGHT A COURSE AT EASTERN WASHINGTON BASED ON THE BOOK, AND THAT HE HAD SYSTEMATICALLY COMPILED EXERCISES FOR HIS COURSE. HE KINDLY PUT HIS WORK AT MY DISPOSAL. THUS, THE PRESENT EDITION APPEARS IN TWO PARTS. THE FIRST IS ESSENTIALLY JUST A REPRINT OF THE ORIGINAL EDITION. I HAVE CORRECTED THE MISPRINTS OF WHICH I HAVE BECOME AWARE (INCLUDING THOSE POINTED OUT TO ME BY OTHERS), AND HAVE MADE A SMALL NUMBER OF OTHER MINOR CHANGES.

A COMPLEX ANALYSIS PROBLEM BOOK -

DANIEL ALPAY 2016-10-26

THIS SECOND EDITION PRESENTS A COLLECTION OF EXERCISES ON THE THEORY OF ANALYTIC FUNCTIONS, INCLUDING COMPLETED AND DETAILED SOLUTIONS. IT INTRODUCES STUDENTS TO VARIOUS APPLICATIONS AND ASPECTS OF THE THEORY OF ANALYTIC FUNCTIONS NOT ALWAYS TOUCHED ON IN A FIRST COURSE, WHILE ALSO ADDRESSING TOPICS OF INTEREST TO ELECTRICAL ENGINEERING STUDENTS (E.G., THE REALIZATION OF RATIONAL FUNCTIONS AND ITS CONNECTIONS TO THE THEORY OF LINEAR SYSTEMS AND STATE SPACE REPRESENTATIONS OF SUCH SYSTEMS). IT PROVIDES EXAMPLES OF IMPORTANT HILBERT SPACES OF ANALYTIC FUNCTIONS (IN PARTICULAR THE HARDY SPACE AND THE FOCK SPACE), AND ALSO INCLUDES A SECTION REVIEWING ESSENTIAL ASPECTS OF TOPOLOGY, FUNCTIONAL ANALYSIS AND LEBESGUE INTEGRATION. BENEFITS OF THE 2ND EDITION RATIONAL FUNCTIONS ARE NOW COVERED IN A SEPARATE CHAPTER. FURTHER, THE SECTION ON CONFORMAL MAPPINGS HAS BEEN EXPANDED.

COMPLEX ANALYSIS WITH APPLICATIONS IN SCIENCE AND ENGINEERING - HAROLD COHEN 2010-04-23

THE SECOND EDITION OF THIS ACCLAIMED TEXT HELPS YOU APPLY THEORY TO REAL-WORLD APPLICATIONS IN MATHEMATICS, PHYSICS, AND ENGINEERING. IT EASILY GUIDES YOU THROUGH COMPLEX ANALYSIS WITH ITS EXCELLENT COVERAGE OF TOPICS SUCH AS SERIES, RESIDUES, AND THE EVALUATION OF INTEGRALS; MULTI-VALUED FUNCTIONS;

CONFORMAL MAPPING; DISPERSION RELATIONS; AND ANALYTIC CONTINUATION. WORKED EXAMPLES PLUS A LARGE NUMBER OF ASSIGNED PROBLEMS HELP YOU UNDERSTAND HOW TO APPLY COMPLEX CONCEPTS AND BUILD YOUR OWN SKILLS BY PUTTING THEM INTO PRACTICE. THIS EDITION FEATURES MANY NEW PROBLEMS, REVISED SECTIONS, AND AN ENTIRELY NEW CHAPTER ON ANALYTIC CONTINUATION.

COMPLEX ANALYSIS: AN INVITATION (2ND EDITION) - MURALI RAO 2015-01-28

THIS VOLUME IS AN ENLARGED EDITION OF A CLASSIC TEXTBOOK ON COMPLEX ANALYSIS. IN ADDITION TO THE CLASSICAL MATERIAL OF THE FIRST EDITION IT PROVIDES A CONCISE AND ACCESSIBLE TREATMENT OF LOEWNER THEORY, BOTH IN THE DISC AND IN THE HALF-PLANE. SOME OF THE NEW MATERIAL HAS BEEN DESCRIBED IN RESEARCH PAPERS ONLY OR APPEARS HERE FOR THE FIRST TIME. EACH CHAPTER ENDS WITH EXERCISES.

EXPLORATIONS IN COMPLEX ANALYSIS - MICHAEL A. BRILLESLYPER 2012-12-31

RESEARCH TOPICS IN THE BOOK INCLUDE COMPLEX DYNAMICS, MINIMAL SURFACES, FLUID FLOWS, HARMONIC, CONFORMAL, AND POLYGONAL MAPPINGS, AND DISCRETE COMPLEX ANALYSIS VIA CIRCLE PACKING. THE NATURE OF THIS BOOK IS DIFFERENT FROM MANY MATHEMATICS TEXTS: THE FOCUS IS ON STUDENT-DRIVEN AND TECHNOLOGY-ENHANCED INVESTIGATION. INTERLACED IN THE READING FOR EACH

CHAPTER ARE EXAMPLES, EXERCISES, EXPLORATIONS, AND PROJECTS, NEARLY ALL LINKED EXPLICITLY WITH COMPUTER APPLETS FOR VISUALIZATION AND HANDS-ON MANIPULATION.
COMPLEX ANALYSIS - SERGE LANG 2013-06-29

THE PRESENT BOOK IS MEANT AS A TEXT FOR A COURSE ON COMPLEX ANALYSIS AT THE ADVANCED UNDERGRADUATE LEVEL, OR FIRST-YEAR GRADUATE LEVEL. SOMEWHAT MORE MATERIAL HAS BEEN INCLUDED THAN CAN BE COVERED AT LEISURE IN ONE TERM, TO GIVE OPPORTUNITIES FOR THE INSTRUCTOR TO EXERCISE HIS TASTE, AND LEAD THE COURSE IN WHATEVER DIRECTION STRIKES HIS FANCY AT THE TIME. A LARGE NUMBER OF ROUTINE EXERCISES ARE INCLUDED FOR THE MORE STANDARD PORTIONS, AND A FEW HARDER EXERCISES OF STRIKING THEORETICAL INTEREST ARE ALSO INCLUDED, BUT MAY BE OMITTED IN COURSES ADDRESSED TO LESS ADVANCED STUDENTS. IN SOME SENSE, I THINK THE CLASSICAL GERMAN PREWAR TEXTS WERE THE BEST (HURWITZ-COURANT, KNOPP, BIBERBACH, ETC.) AND I WOULD RECOMMEND TO ANYONE TO LOOK THROUGH THEM. MORE RECENT TEXTS HAVE EMPHASIZED CONNECTIONS WITH REAL ANALYSIS, WHICH IS IMPORTANT, BUT AT THE COST OF EXHIBITING SUCCINCTLY AND CLEARLY WHAT IS PECULIAR ABOUT COMPLEX ANALYSIS: THE POWER SERIES EXPANSION, THE UNIQUENESS OF ANALYTIC CONTINUATION, AND THE CALCULUS OF RESIDUES. THE SYSTEMATIC ELEMENTARY DEVELOPMENT OF FORMAL AND CONVERGENT POWER SERIES WAS STANDARD FARE IN THE

GERMAN TEXTS, BUT ONLY CARTAN, IN THE MORE RECENT BOOKS, INCLUDES THIS MATERIAL, WHICH I THINK IS QUITE ESSENTIAL, E. G. , FOR DIFFERENTIAL EQUATIONS. I HAVE WRITTEN A SHORT TEXT, EXHIBITING THESE FEATURES, MAKING IT APPLICABLE TO A WIDE VARIETY OF TASTES. THE BOOK ESSENTIALLY DECOMPOSES INTO TWO PARTS.

A QUICK INTRODUCTION TO COMPLEX ANALYSIS - KALYAN CHAKRABORTY 2016-08-08

THE AIM OF THE BOOK IS TO GIVE A SMOOTH ANALYTIC CONTINUATION FROM CALCULUS TO COMPLEX ANALYSIS BY WAY OF PLENTY OF PRACTICAL EXAMPLES AND WORKED-OUT EXERCISES. THE SCOPE RANGES FROM APPLICATIONS IN CALCULUS TO COMPLEX ANALYSIS IN TWO DIFFERENT LEVELS. IF THE READER IS IN A HURRY, HE CAN BROWSE THE QUICKEST INTRODUCTION TO COMPLEX ANALYSIS AT THE BEGINNING OF CHAPTER 1, WHICH EXPLAINS THE VERY BASICS OF THE THEORY IN AN EXTREMELY USER-FRIENDLY WAY. THOSE WHO WANT TO DO SELF-STUDY ON COMPLEX ANALYSIS CAN CONCENTRATE ON CHAPTER 1 IN WHICH THE TWO MAINSTREAMS OF THE THEORY — THE POWER SERIES METHOD DUE TO WEIERSTRASS AND THE INTEGRATION METHOD DUE TO CAUCHY — ARE PRESENTED IN A VERY CONCRETE WAY WITH RICH EXAMPLES. READERS WHO WANT TO LEARN MORE ABOUT APPLIED CALCULUS CAN REFER TO CHAPTER 2, WHERE NUMEROUS PRACTICAL APPLICATIONS ARE PROVIDED. THEY WILL MASTER THE ART OF PROBLEM SOLVING BY FOLLOWING

THE STEP BY STEP GUIDANCE GIVEN IN THE WORKED-OUT EXAMPLES. THIS BOOK HELPS THE READER TO ACQUIRE FUNDAMENTAL SKILLS OF UNDERSTANDING COMPLEX ANALYSIS AND ITS APPLICATIONS. IT ALSO GIVES A SMOOTH INTRODUCTION TO FOURIER ANALYSIS AS WELL AS A QUICK PRELUDE TO THERMODYNAMICS AND FLUID MECHANICS, INFORMATION THEORY, AND CONTROL THEORY. ONE OF THE MAIN FEATURES OF THE BOOK IS THAT IT PRESENTS DIFFERENT APPROACHES TO THE SAME TOPIC THAT AIDS THE READER TO GAIN A DEEPER UNDERSTANDING OF THE SUBJECT.

COMPLEX ANALYSIS - JOHN M. HOWIE 2012-12-06

COMPLEX ANALYSIS CAN BE A DIFFICULT SUBJECT AND MANY INTRODUCTORY TEXTS ARE JUST TOO AMBITIOUS FOR TODAY'S STUDENTS. THIS BOOK TAKES A LOWER STARTING POINT THAN IS TRADITIONAL AND CONCENTRATES ON EXPLAINING THE KEY IDEAS THROUGH WORKED EXAMPLES AND INFORMAL EXPLANATIONS, RATHER THAN THROUGH "DRY" THEORY.

COMPLEX ANALYSIS - THERAL ORVIS MOORE 1991

THIS IS A TEXTBOOK FOR A FIRST COURSE IN FUNCTIONS OF COMPLEX VARIABLE, ASSUMING A KNOWLEDGE OF FRESHMAN CALCULUS. IT IS DESIGNED FOR STUDENTS IN ENGINEERING, PHYSICS, AND MATHEMATICS. WITHOUT SACRIFICING EASE AND CLARITY OF PROOFS, MATHEMATICAL PRECISENESS AND RIGOR ARE STRESSED. CROSS REFERENCES ARE USED TO JUSTIFY ALMOST EVERY STEP IN EACH PROOF. SOLUTIONS

AND HINTS ARE GIVEN TO MANY EXERCISES.

AN INTRODUCTION TO COMPLEX ANALYSIS - WOLFGANG TUTSCHKE 2004-06-25

LIKE REAL ANALYSIS, COMPLEX ANALYSIS HAS GENERATED METHODS INDISPENSABLE TO MATHEMATICS AND ITS APPLICATIONS. EXPLORING THE INTERACTIONS BETWEEN THESE TWO BRANCHES, THIS BOOK USES THE RESULTS OF REAL ANALYSIS TO LAY THE FOUNDATIONS OF COMPLEX ANALYSIS AND PRESENTS A UNIFIED STRUCTURE OF MATHEMATICAL ANALYSIS AS A WHOLE. TO SET THE GROUNDWORK AND MITIGATE THE DIFFICULTIES NEWCOMERS OFTEN EXPERIENCE, AN INTRODUCTION TO COMPLEX ANALYSIS BEGINS WITH A COMPLETE REVIEW OF CONCEPTS AND METHODS FROM REAL ANALYSIS, SUCH AS METRIC SPACES AND THE GREEN-GAUSS INTEGRAL FORMULA. THE APPROACH LEADS TO BRIEF, CLEAR PROOFS OF BASIC STATEMENTS - A DISTINCT ADVANTAGE FOR THOSE MAINLY INTERESTED IN APPLICATIONS. ALTERNATE APPROACHES, SUCH AS FICHERA'S PROOF OF THE GOURSAT THEOREM AND ESTERMANN'S PROOF OF THE CAUCHY'S INTEGRAL THEOREM, ARE ALSO PRESENTED FOR COMPARISON. DISCUSSIONS INCLUDE HOLOMORPHIC FUNCTIONS, THE WEIERSTRASS CONVERGENCE THEOREM, ANALYTIC CONTINUATION, ISOLATED SINGULARITIES, HOMOTOPY, RESIDUE THEORY, CONFORMAL MAPPINGS, SPECIAL FUNCTIONS AND BOUNDARY VALUE PROBLEMS. MORE THAN 200 EXAMPLES AND 150 EXERCISES ILLUSTRATE THE SUBJECT

MATTER AND MAKE THIS BOOK AN IDEAL TEXT FOR UNIVERSITY COURSES ON COMPLEX ANALYSIS, WHILE THE COMPREHENSIVE COMPILATION OF THEORIES AND SUCCINCT PROOFS MAKE THIS AN EXCELLENT VOLUME FOR REFERENCE.

VISUAL COMPLEX ANALYSIS - TRISTAN NEEDHAM 1997

NOW AVAILABLE IN PAPERBACK, THIS SUCCESSFUL RADICAL APPROACH TO COMPLEX ANALYSIS REPLACES THE STANDARD CALCULATIONAL ARGUMENTS WITH NEW GEOMETRIC ONES. WITH SEVERAL HUNDRED DIAGRAMS, AND FAR FEWER PREREQUISITES THAN USUAL, THIS IS THE FIRST VISUAL INTUITIVE INTRODUCTION TO COMPLEX ANALYSIS. ALTHOUGH DESIGNED FOR USE BY UNDERGRADUATES IN MATHEMATICS AND SCIENCE, THE NOVELTY OF THE APPROACH WILL ALSO INTEREST PROFESSIONAL MATHEMATICIANS.

COMPLEX ANALYSIS THROUGH EXAMPLES AND EXERCISES -
ENDRE PAP 2014-01-15

COMPLEX ANALYSIS - ELIAS M. STEIN 2010-04-22

WITH THIS SECOND VOLUME, WE ENTER THE INTRIGUING WORLD OF COMPLEX ANALYSIS. FROM THE FIRST THEOREMS ON, THE ELEGANCE AND SWEEP OF THE RESULTS IS EVIDENT. THE STARTING POINT IS THE SIMPLE IDEA OF EXTENDING A FUNCTION INITIALLY GIVEN FOR REAL VALUES OF THE ARGUMENT TO ONE THAT IS DEFINED WHEN THE ARGUMENT IS COMPLEX. FROM THERE, ONE PROCEEDS TO THE MAIN PROPERTIES OF HOLOMORPHIC FUNCTIONS, WHOSE PROOFS

ARE GENERALLY SHORT AND QUITE ILLUMINATING: THE CAUCHY THEOREMS, RESIDUES, ANALYTIC CONTINUATION, THE ARGUMENT PRINCIPLE. WITH THIS BACKGROUND, THE READER IS READY TO LEARN A WEALTH OF ADDITIONAL MATERIAL CONNECTING THE SUBJECT WITH OTHER AREAS OF MATHEMATICS: THE FOURIER TRANSFORM TREATED BY CONTOUR INTEGRATION, THE ZETA FUNCTION AND THE PRIME NUMBER THEOREM, AND AN INTRODUCTION TO ELLIPTIC FUNCTIONS CULMINATING IN THEIR APPLICATION TO COMBINATORICS AND NUMBER THEORY. THOROUGHLY DEVELOPING A SUBJECT WITH MANY RAMIFICATIONS, WHILE STRIKING A CAREFUL BALANCE BETWEEN CONCEPTUAL INSIGHTS AND THE TECHNICAL UNDERPINNINGS OF RIGOROUS ANALYSIS, COMPLEX ANALYSIS WILL BE WELCOMED BY STUDENTS OF MATHEMATICS, PHYSICS, ENGINEERING AND OTHER SCIENCES. THE PRINCETON LECTURES IN ANALYSIS REPRESENTS A SUSTAINED EFFORT TO INTRODUCE THE CORE AREAS OF MATHEMATICAL ANALYSIS WHILE ALSO ILLUSTRATING THE ORGANIC UNITY BETWEEN THEM. NUMEROUS EXAMPLES AND APPLICATIONS THROUGHOUT ITS FOUR PLANNED VOLUMES, OF WHICH COMPLEX ANALYSIS IS THE SECOND, HIGHLIGHT THE FAR-REACHING CONSEQUENCES OF CERTAIN IDEAS IN ANALYSIS TO OTHER FIELDS OF MATHEMATICS AND A VARIETY OF SCIENCES. STEIN AND SHAKARCHI MOVE FROM AN INTRODUCTION ADDRESSING FOURIER SERIES AND INTEGRALS TO IN-DEPTH CONSIDERATIONS

OF COMPLEX ANALYSIS; MEASURE AND INTEGRATION THEORY, AND HILBERT SPACES; AND, FINALLY, FURTHER TOPICS SUCH AS FUNCTIONAL ANALYSIS, DISTRIBUTIONS AND ELEMENTS OF PROBABILITY THEORY.

INTRODUCTORY COMPLEX ANALYSIS - RICHARD A. SILVERMAN 2013-04-15

SHORTER VERSION OF MARKUSHEVICH'S THEORY OF FUNCTIONS OF A COMPLEX VARIABLE, APPROPRIATE FOR ADVANCED UNDERGRADUATE AND GRADUATE COURSES IN COMPLEX ANALYSIS. MORE THAN 300 PROBLEMS, SOME WITH HINTS AND ANSWERS. 1967 EDITION.

COMPLEX ANALYSIS - MAN-WAH WONG 2008-03-14

THIS BOOK IS IDEAL FOR A ONE-SEMESTER COURSE FOR ADVANCED UNDERGRADUATE STUDENTS AND FIRST-YEAR GRADUATE STUDENTS IN MATHEMATICS. IT IS A STRAIGHTFORWARD AND COHERENT ACCOUNT OF A BODY OF KNOWLEDGE IN COMPLEX ANALYSIS, FROM COMPLEX NUMBERS TO CAUCHY'S INTEGRAL THEOREMS AND FORMULAS TO MORE ADVANCED TOPICS SUCH AS AUTOMORPHISM GROUPS, THE SCHWARZ PROBLEM IN PARTIAL DIFFERENTIAL EQUATIONS, AND BOUNDARY BEHAVIOR OF HARMONIC FUNCTIONS. THE BOOK COVERS A WIDE RANGE OF TOPICS, FROM THE MOST BASIC COMPLEX NUMBERS TO THOSE THAT UNDERPIN CURRENT RESEARCH ON SOME ASPECTS OF ANALYSIS AND PARTIAL DIFFERENTIAL EQUATIONS. THE NOVELTY OF THIS BOOK LIES IN ITS CHOICE OF TOPICS, GENESIS OF PRESENTATION, AND

LUCIDITY OF EXPOSITION.

COMPLEX ANALYSIS - JOSEPH BAK 2010-08-02

THIS UNUSUAL AND LIVELY TEXTBOOK OFFERS A CLEAR AND INTUITIVE APPROACH TO THE CLASSICAL AND BEAUTIFUL THEORY OF COMPLEX VARIABLES. WITH VERY LITTLE DEPENDENCE ON ADVANCED CONCEPTS FROM SEVERAL-VARIABLE CALCULUS AND TOPOLOGY, THE TEXT FOCUSES ON THE AUTHENTIC COMPLEX-VARIABLE IDEAS AND TECHNIQUES. ACCESSIBLE TO STUDENTS AT THEIR EARLY STAGES OF MATHEMATICAL STUDY, THIS FULL FIRST YEAR COURSE IN COMPLEX ANALYSIS OFFERS NEW AND INTERESTING MOTIVATIONS FOR CLASSICAL RESULTS AND INTRODUCES RELATED TOPICS STRESSING MOTIVATION AND TECHNIQUE. NUMEROUS ILLUSTRATIONS, EXAMPLES, AND NOW 300 EXERCISES, ENRICH THE TEXT. STUDENTS WHO MASTER THIS TEXTBOOK WILL EMERGE WITH AN EXCELLENT GROUNDING IN COMPLEX ANALYSIS, AND A SOLID UNDERSTANDING OF ITS WIDE APPLICABILITY.

COMPLEX ANALYSIS - KEVIN HOUSTON 2017-07-21

DR KEVIN HOUSTON FOLLOWS UP HIS BEST-SELLING BOOK HOW TO THINK LIKE A MATHEMATICIAN WITH COMPLEX ANALYSIS: AN INTRODUCTION. COMPLEX ANALYSIS IS A CENTRAL SUBJECT IN MATHEMATICS WITH APPLICATIONS IN ENGINEERING, PHYSICS, AND EVEN THE STUDY OF PRIME NUMBERS. IT HAS BEEN SAID THAT OFTEN THE SHORTEST ROUTE IN THE SOLUTION OF A REAL PROBLEM IS TO TAKE A

SHORTCUT THROUGH THE COMPLEX NUMBERS. UNLIKE OTHER TEXTS THIS BOOK GETS QUICKLY TO THE HEART OF COMPLEX ANALYSIS: THE CONCEPT OF COMPLEX CONTOUR INTEGRATION. THIS MEANS THAT STUDENTS GET MUCH MORE PRACTICE IN THE FUNDAMENTAL CONCEPT THAN THEY NORMALLY WOULD. THE CENTRAL METHOD OF PROOF - USE OF THE ESTIMATION LEMMA - IS EMPHASISED THROUGHOUT BECAUSE STUDENTS THEN HAVE A UNIFYING PRINCIPLE TO HELP UNDERSTAND AND REMEMBER THOSE PROOFS. THE BOOK CONTAINS ALL YOU WILL NEED FOR AN INTRODUCTORY COURSE IN COMPLEX ANALYSIS AND INCLUDES A SHORT AND SWEET PROOF OF CAUCHY'S THEOREM - ONE WHICH THE MAJORITY OF STUDENTS CAN GRASP NOT ONLY THE OUTLINE BUT THE DETAILS AS WELL. THE BOOK CONTAINS COPIOUS EXAMPLES AND EXERCISES TESTED ON STUDENTS ARISING FROM DR. HOUSTON'S 20 YEARS PLUS EXPERIENCE OF TEACHING THE SUBJECT

COMPLEX VARIABLES WITH APPLICATIONS - SAMINATHAN PONNUSAMY 2007-05-26

EXPLORES THE INTERRELATIONS BETWEEN REAL AND COMPLEX NUMBERS BY ADOPTING BOTH GENERALIZATION AND SPECIALIZATION METHODS TO MOVE BETWEEN THEM, WHILE SIMULTANEOUSLY EXAMINING THEIR ANALYTIC AND GEOMETRIC CHARACTERISTICS ENGAGING EXPOSITION WITH DISCUSSIONS,

REMARKS, QUESTIONS, AND EXERCISES TO MOTIVATE UNDERSTANDING AND CRITICAL THINKING SKILLS ENCLUDES NUMEROUS EXAMPLES AND APPLICATIONS RELEVANT TO SCIENCE AND ENGINEERING STUDENTS

A FIRST COURSE IN COMPLEX ANALYSIS WITH APPLICATIONS - DENNIS ZILL 2009

THE NEW SECOND EDITION OF A FIRST COURSE IN COMPLEX ANALYSIS WITH APPLICATIONS IS A TRULY ACCESSIBLE INTRODUCTION TO THE FUNDAMENTAL PRINCIPLES AND APPLICATIONS OF COMPLEX ANALYSIS. DESIGNED FOR THE UNDERGRADUATE STUDENT WITH A CALCULUS BACKGROUND BUT NO PRIOR EXPERIENCE WITH COMPLEX VARIABLES, THIS TEXT DISCUSSES THEORY OF THE MOST RELEVANT MATHEMATICAL TOPICS IN A STUDENT-FRIENDLY MANOR. WITH ZILL'S CLEAR AND STRAIGHTFORWARD WRITING STYLE, CONCEPTS ARE INTRODUCED THROUGH NUMEROUS EXAMPLES AND CLEAR ILLUSTRATIONS. STUDENTS ARE GUIDED AND SUPPORTED THROUGH NUMEROUS PROOFS PROVIDING THEM WITH A HIGHER LEVEL OF MATHEMATICAL INSIGHT AND MATURITY. EACH CHAPTER CONTAINS A SEPARATE SECTION ON THE APPLICATIONS OF COMPLEX VARIABLES, PROVIDING STUDENTS WITH THE OPPORTUNITY TO DEVELOP A PRACTICAL AND CLEAR UNDERSTANDING OF COMPLEX ANALYSIS.