Lecture Notes I

The study of lattice varieties is a field that has experienced rapid growth in the last 30 years, but many of the interesting and deep results discovered in that period have so far only appeared in research papers. The aim of this monograph is to present the main results about modular and nonmodular varieties, equational bases and the amalgamation property in a uniform way. The first chapter covers preliminaries that make the material accessible to anyone who has had an introductory course in universal algebra. Each subsequent chapter begins with a short historical introduction which sites the original references and then presents the results with complete proofs (in nearly all cases). Numerous diagrams illustrate the beauty of lattice theory and aid in the visualization of many proofs. An extensive index and bibliography also make the monograph a useful reference work.

The chapters are not independent, but build on one another. Subjects range from the failures of classical theory to second quantization, including chapters on the Dirac theory and Feynman diagrams."--Pub. desc.

This textbook is a set of lecture notes and practical exercises in College Algebra written for university students. Unlike "College Algebra: Lecture Notes" (ISBN-13: 978-1545126479), this textbook DOES NOT come with a computer code to access online lectures. To get the access code for the MathEdSci online learning system with lectures, tutoring sessions and quizzes, see the book mentioned above.

Lecture Notes on Principles of Plasma Processing

Lecture notes 3/2/92

European Summer School in Quantum Chemistry

USMLE Step 1 Lecture Notes 2021: 7-Book Set

Proceedings of the International Seminar held in Suzdal, Russia, Jan.27-Feb. 2,1991

This comprehensive treatment of network information theory and its applications provides the first unified coverage of both classical and recent results. With an approach that balances the introduction of new models and new coding techniques, readers are guided through Shannon's point-to-point information theory, single-hop networks, multihop networks, and extensions to distributed computing, secrecy, wireless communication, and networking. Elementary mathematical tools and techniques are used throughout, requiring only basic knowledge of probability, whilst unified proofs of coding theorems are based on a few simple lemmas, making the text accessible to newcomers. Key topics covered include successive cancellation and superposition coding, MIMO wireless communication, network coding, and cooperative relaying. Also covered are feedback and interactive communication, capacity approximations and scaling laws, and asynchronous and random access channels. This book is ideal for use in the classroom, for self-study, and as a reference for researchers and engineers in industry and academia.

Lecture Notes: Human Physiology provides concise coverage of general physiology for medical students as well as students of biological sciences, sport science, pharmacology and nursing. This fifth edition of the ever popular Lecture Notes: Human Physiology has been thoroughly revised and updated by a new international team of authors. The simple structure and systems-based approach remain, with a new clean layout for ease of reading and colour now incorporated to aid understanding. Lecture Notes: Human Physiology: Provides more focus on pathophysiology for clinical relevance Is the perfect introduction for medical and allied health care students Now includes physiology of pain and increased coverage of heart and the vascular system Includes a completely revised chapter on the nervous system.

Kaplan Medical's USMLE Step 1 Lecture Notes 2021: 7-Book Set offers in-depth review with a focus on high-yield topics in every discipline—a comprehensive approach that will help you deepen your understanding while focusing your efforts where they'll count the most. Used by thousands of medical students each year to succeed on USMLE Step 1, Kaplan's official lecture notes are packed with full-color diagrams and clear review. The 7 volumes—Pathology, Pharmacology, Physiology, Biochemistry/Medical Genetics, Anatomy, and Behavioral Science/Social Sciences—are updated annually by Kaplan's all-star expert faculty. The Best Review 2,000 pages covering every discipline you'll need on this section of the boards Full-color diagrams and charts for better comprehension and retention Clinical correlations and bridges between disciplines highlighted throughout Chapter summary study guides at the end of every chapter for easier review Up-To-Date Content Clinical updates included in all 7 volumes to align with recent changes Organized in outline format with high-yield summary boxes for efficient study

College Algebra

Lecture Notes on Motivic Cohomology

Stability Problems for Stochastic Models

Lecture Notes for Nutrition 1

Lecture Notes (without Access Code)

The only official Kaplan Lecture Notes for USMLE Step 1 cover the comprehensive information you need to ace the exam and match into the residency of your choice. Up-to-date: Updated annually by Kaplan's all-star faculty Integrated: Packed with clinical correlations and bridges between disciplines Learner-efficient: Organized in outline format with high-yield summary boxes Trusted: Used by thousands of students each year to succeed on USMLE Step 1 Looking for more prep? Our USMLE Step 1 Lecture Notes 2019: 7-book Set has this book, plus the rest of the 7-book series.

Kaplan Medical's USMLE Step 1 Lecture Notes 2022: 7-Book Set offers full-color review that identifies high-yield topics in every discipline—a comprehensive yet concise approach that will help you focus your study to succeed on the exam. These are the same books used in Kaplan Medical's courses and trusted by thousands of medical students each year to succeed on USMLE Step 1. The 7 volumes—Pathology, Pharmacology, Physiology, Biochemistry/Medical Genetics, Immunology/Microbiology, Anatomy, and Behavioral Science/Social Sciences—are updated annually by Kaplan's all-star expert faculty. The Best Review 2,600 pages covering every discipline you'll need on this section of the boards Full-color diagrams and charts for better comprehension and retention Clinical correlations and bridges between disciplines highlighted throughout Chapter summary study guides at the end of every chapter for easier review Up-To-Date Content Clinical updates included in all 7 volumes to align with recent changes Organized in outline format with high-yield summary boxes for efficient study

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Lecture Notes in Quantum Chemistry

Lecture Notes in Computational Intelligence and Decision Making

Network Information Theory

Clinical Medicine

Lecture Notes

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This book is for students who are familiar with an introductory course in mechanics at the freshman level. With an emphasis on perspectives that are more fundamental and techniques more advanced than those given in most introductory mechanics textbooks, the book illuminates on notions where vectors are coordinate free, presents the importance of reference frames (inertial and non-inertial) to mechanics problems, the role of Galilean Relativity on invariance and covariance of physical quantities, a framework to perform calculations — free from the constraint of a fixed axis — in rotational dynamics, and others. Moreover, it provides clear links between concepts in mechanics and other branches of physics, such as thermodynamics and electrodynamics, so that students can possess a more complete view of what they learn within the confines of physics.

The notion of a motive is an elusive one, like its namesake "the motif" of Cezanne's impressionist method of painting. Its existence was first suggested by Grothendieck in 1964 as the underlying structure behind the myriad cohomology theories in Algebraic Geometry. We now know that there is a triangulated theory of motives, discovered by Vladimir Voevodsky, which suffices for the development of a satisfactory Motivic Cohomology theory. However, the existence of motives themselves remains conjectural. This book provides an account of the triangulated theory of motives. Its purpose is to introduce Motivic Cohomology, to develop its main properties, and finally to relate it to other known invariants of algebraic varieties and rings such as Milnor K-theory, etale cohomology, and Chow groups. The book is divided into lectures, grouped in six parts. The first part presents the definition of Motivic Cohomology, based upon the notion of presheaves with transfers. Some elementary comparison theorems are given in this part. The theory of (etale, Nisnevich, and Zariski) sheaves with transfers is developed in parts two, three, and six, respectively. The theoretical core of the book is the fourth part, presenting the triangulated category of motives. Finally, the comparison with higher Chow groups is developed in part five. The lecture notes format is designed for the book to be read by an advanced graduate student or an expert in a related field. The lectures roughly correspond to one-hour lectures given by Voevodsky during the course he gave at the Institute for Advanced Study in Princeton on this subject in 1999-2000. In addition, many of the original proofs have been simplified and improved so that this book will also be a useful tool for research mathematicians. Information for our distributors: Titles in this series are copublished with the Clay Mathematics Institute (Cambridge, MA).

USMLE Step 2 CK Lecture Notes 2020: Internal Medicine

Lecture notes

CSLI Lecture Notes

Lecture Notes on Chern-Simons-Witten Theory

Lecture Notes on Elementary Topology and Geometry

Lecture NotesA Professor's Inside Guide to College SuccessTen Speed Press

Notes on lectures presented by F.F. Randolph at the University of Michigan, Ann Arbor, handwritten by R. Trumbull Gill, Jan. 31-Mar. 18, 1861.

"Quantum Chemistry" is the course material of a European Summer School in Quantum Chemistry, organized by Bj|rn O. Roos. It consists of lectures by outstanding scientists who participate in the education of students and young scientists. The book has a wider appeal as additional reading for University courses. Contents: P.-A. Malmquist: Mathematical Tools in Quantum Chemistry J. Olsen: The Method of Second Quantization P.R. Taylor: Molecular Symmetry and Quantum Chemistry B.O. Roos: The Multiconfigurational (MC) Self-Consistent Field (SCF) Theory P.E.M. Siegbahn: The Configuration Interaction Method T. Helgaker: Optimization of Minima and Saddle Points P.R. Taylor: Accurate Calculations and Calibration U. Wahlgren: Effective Core Potential Method

Guided Lecture Notes for Algebra and Trigonometry

Human Physiology

Lecture Notes on Tropical Medicine

REPORTS OF THE MIDWEST CATEGORY SEMINAR 4- LECTURE NOTES IN MATHEMATICS

Lecture Notes Based on the Institute

This textbook provides a guide to the fundamental principles of acoustics in a straightforward manner using a solid foundation in mathematics and physics. It is designed for those who are new to acoustics and noise control, and includes all the necessary material for a comprehensive understanding of the topic. It is written in lecture-note style and can be easily adapted to an acoustics-related one semester course at the senior undergraduate or graduate level. The book also serves as a ready reference for the practicing engineer new to the application of acoustic principles arising in product design and fabrication.

If you're an incoming freshman facing the culture shock of campus life, reeling under the weight of scholastic expectations, and feeling the pressure of overwhelming financial commitments—don't panic! Lectures Notes counters the confusion with an insider's perspective on navigating these challenges and many more. Professor Philip Freeman reveals the three sure-fire rules for a great college experience, offers solid strategies for fostering crucial relationships with faculty advisors, and sets you up for four years of success—and beyond. Packed with practical advice, Lectures Notes is a must read for every college-bound high school senior, whether you're attending a small-town junior college, a sprawling mega-campus, or an ivy-league university. Don't leave home without it!

This book is an introduction to the subject of mean curvature flow of hypersurfaces with special emphasis on the analysis of singularities. This flow occurs in the description of the evolution of numerous physical models where the energy is given by the area of the interfaces. These notes provide a detailed discussion of the classical parametric approach (mainly developed by R. Hamilton and G. Huisken). They are well suited for a course at PhD/PostDoc level and can be useful for any researcher interested in a solid introduction to the technical issues of the field. All the proofs are carefully written, often simplified, and contain several comments. Moreover, the author revisited and organized a large amount of material scattered around in literature in the last 25 years.

USMLE Step 1 Lecture Notes 2022: 7-Book Set

Varieties of Lattices

USMLE Step 1 Lecture Notes 2021: Pathology

USMLE Step 1 Lecture Notes 2020: Pharmacology

Lecture Notes On Mechanics: Intermediate Level

The subject of this book is a new direction in the field of probability theory and mathematical statistics which can be called "stability theory": it deals with evaluating the effects of perturbing initial probabilistic models and embraces quite varied subtopics: limit theorems, queueing models, statistical inference, probability metrics, etc. The contributions are original research articles developing new ideas and methods of stability analysis.

Plasma processing of semiconductors is an interdisciplinary field requiring knowledge of both plasma physics and chemical engineering. The two authors are experts in each of these fields, and their collaboration results in the merging of these fields with a common terminology. Basic plasma concepts are introduced painlessly to those who have studied undergraduate electromagnetics but have had no previous exposure to plasmas. Unnecessarily detailed derivations are omitted; the reader is led to understand in some depth those concepts, such as the structure of sheaths, that are important in the design and operation of plasma processing reactors. Physicists not accustomed to low-temperature plasmas are introduced to chemical kinetics, surface science, and molecular spectroscopy. The material has been condensed to suit a nine-week graduate course, but it is sufficient to bring the reader up to date on current problems such as copper interconnects, low-k and high-k dielectrics, and oxide damage. Students will appreciate the web-style layout with ample color illustrations opposite the text, with ample room for notes. This short book is ideal for new workers in the semiconductor industry who want to be brought up to speed with minimum effort. It is also suitable for Chemical Engineering students studying plasma processing of materials; Engineers, physicists, and technicians entering the semiconductor industry who want a quick overview of the use of plasmas in the industry.

This invaluable monograph has arisen in part from E Witten's lectures on topological quantum field theory in the spring of 1989 at Princeton University. At that time Witten unified several important mathematical works in terms of quantum field theory, most notably the Donaldson polynomial, the Gromov-Floer homology and the Jones polynomials.In his lectures, among other things, Witten explained his intrinsic three-dimensional construction of Jones polynomials via Chern-Simons gauge theory. He provided both a rigorous proof of the geometric quantization of the Chern-Simons action and a very illuminating view as to how the quantization arises from quantization of the space of connections. He constructed a projective flat connection for the Hilbert space bundle over the space of complex structures, which becomes the Knizhik-Zamolodchikov equations in a special case. His construction leads to many beautiful applications, such as the derivation of the skein relation and the surgery formula for knot invariant, a proof of Verlinde's formula, and the establishment of a connection with conformal field theory.In this book, Sen Hu has added material to provide some of the details left out of Witten's lectures and to update some new developments. In Chapter 4 he presents a construction of knot invariant via representation of mapping class groups based on the work of Moore-Seiberg and Kohno. In Chapter 6 he offers an approach to constructing knot invariant from string theory and topological sigma models proposed by Witten and Vafa. The localization principle is a powerful tool to build mathematical foundations for such cohomological quantum field theories.In addition, some highly relevant material by S S Chern and E Witten has been included as appendices for the convenience of readers: (1) Complex Manifold without Potential Theory by S S Chern, pp148-154. (2) "Geometric quantization of Chern-Simons gauge theory" by S Axelrod, S D Pietra and E Witten. (3) "On holomorphic factorization of WZW and Coset models" by E Witten.

A Professor's Inside Guide to College Success

Pointwise Convergence of Fourier Series

Lecture Notes on the Use of the Microscope

Lecture Notes on Quantum Mechanics

Lecture Notes ... New Stuff

This compact textbook is a collection of the author's lecture notes for a two-semester graduate-level real analysis course. While the material covered is standard, the author's approach is unique in that it combines elements from both Royden's and Folland's classic texts to present a more concise and intuitive presentation. Illustrations, examples, and exercises are included that present Lebesgue integrals, measure theory, and topological spaces in an original and more accessible way, making difficult concepts easier for students to understand. This text can be used as a supplementary resource or for individual study.

Lecture Notes on Tropical Medicine is a core text with an emphasis on the clinical aspects of problem-solving in the tropics. This new, revised edition includes a more global and syndromic approach to tropical medicine. Section A covers clinical presentations according to body systems and syndromic approaches, so that the reader can go straight to the relevant section for clues to the likely diagnosis. Section B gives core knowledge & clinical advice on the major tropical infections such as malaria and leprosy. The final section covers other serious tropical diseases, grouped by main body system of presentation, which includes cholera, hepatitis and scabies amongst others. Additionally, this edition includes new chapters that broaden the traditional scope of 'tropical medicine'. These include a chapter on HIV & Aids which reflects the impact that these have had on the tropics, a chapter on non-communicable diseases and their management, as well as a new chapter on refugee health that covers humanitarian emergencies, control of epidemics as well as health assessment of asylum seekers. As always, carefully selected colour plates and an increased number of illustrations, effectively portray clinical conditions. This fifth edition of Lecture Notes on Tropical Medicine is a very practical companion for the increasing number of medical students and junior doctors who have the opportunity to practice medicine in the tropics. It is also a key resource for clinicians who see patients with `tropical' disorders.

This book includes 46 scientific papers presented at the conference and reflecting the latest research in the fields of data mining, machine learning and decision-making. The international scientific conference "Intellectual Systems of Decision-Making and Problems of Computational Intelligence" was held in the Kherson region, Ukraine, from May 25 to 29, 2020. The papers are divided into three sections: "Analysis and Modeling of Complex Systems and Processes," "Theoretical and Applied Aspects of Decision-Making Systems" and "Computational Intelligence and Inductive Modeling." The book will be

of interest to scientists and developers specialized in the fields of data mining, machine learning and decision-making systems.

Lecture Notes in Real Analysis

Lecture Notes on Acoustics and Noise Control

Lecture Notes on Mean Curvature Flow

2020 International Scientific Conference "Intellectual Systems of Decision-making and Problems of Computational Intelligence"

This book contains a detailed exposition of Carleson-Hunt theorem following the proof of Carleson: to this day this is the only one giving better bounds. It points out the motivation of every step in the proof. Thus the Carleson-Hunt theorem becomes accessible to any analyst.The book also contains the first detailed exposition of the fine results of Hunt, Sjölin, Soria, etc on the convergence of Fourier Series. Its final chapters present original material. With both Fefferman's proof and the recent one of Lacey and Thiele in print, it becomes more important than ever to understand and compare these two related proofs with that of Carleson and Hunt. These alternative proofs do not yield all the results of the Carleson-Hunt proof. The intention of this monograph is to make Carleson's proof accessible to a wider audience, and to explain its consequences for the pointwise convergence of Fourier series for functions in spaces near $ãcal Lü^1\$, filling a well-known gap in the literature.

At the present time, the average undergraduate mathematics major finds mathematics heavily compartmentalized. After the calculus, he takes a course in analysis and a course in algebra. Depending upon his interests (or those of his department), he takes courses in special topics. Ifhe is exposed to topology, it is usually straightforward point set topology; if he is exposed to geom etry, it is usually classical differential geometry. The exciting revelations that there is some unity in mathematics, that fields overlap, that techniques of one field have applications in another, are denied the undergraduate. He must wait until he is well into graduate work to see interconnections, presumably because earlier he doesn't know enough. These notes are an attempt to break up this compartmentalization, at least in topology-geometry. What the student has learned in algebra and advanced calculus are used to prove some fairly deep results relating geometry, topol ogy, and group theory. (De Rham's theorem, the Gauss-Bonnet theorem for surfaces, the functorial relation of fundamental group to covering space, and surfaces of constant curvature as homogeneous spaces are the most note worthy examples.) In the first two chapters the bare essentials of elementary point set topology are set forth with some hint ofthe subject's application to functional analysis.

These lecture notes help students take thorough, organized, and understandable notes as they watch the Author in Action videos.

USMLE Step 1 Lecture Notes 2020: Anatomy

Synthesis

Lecture notes for mathematics

Chemical lecture notes

Featuring updated content throughout, this new edition of Clinical Medicine Lecture Notes is a concise guide to both history taking and examination, and to the essentials of clinical medicine on a system-by-system basis. The text is divided into two sections, with part one exploring communication and physical examination techniques, supported by the core knowledge required for assessing and diagnosing diseases in the main systems of the body. The second part of the text covers a range of common diseases, although accounts of rare conditions are also given. The level of information provided will equip junior clinicians with the necessary knowledge required to succeed in any clinical situation. A concise approach that contains all that medical students and junior doctors need to know, covering both the clinical approach and the essential background knowledge Summary and evidence-based medicine boxes to assist revision and learning Includes OSCE exam summaries Fully updated content throughout, with full colour illustrations and photographs Whether you need to develop your knowledge for clinical practice, or refresh that knowledge in the run up to examinations, Clinical Medicine Lecture Notes will help foster a systematic approach to the clinical situation for all medical students and junior doctors.

The official Kaplan Lecture Notes for USMLE Step 2 CK cover the comprehensive information you need to ace the USMLE Step 2 and match into the residency of your choice. Up-to-date. Updated annually by Kaplan's all-star faculty. Highly illustrated. Includes color images and tables. Integrated. Packed with bridges between specialities and basic science. Learner-efficient. Organized in outline format with high-yield summary boxes. Trusted. Used by thousands of students each year to succeed on the USMLE Step 2.