Assignment Ocw Mit

Signals & SystemsPearson Educación
"This is an excellent resource, highly recommended
for new and seasoned educators at every level."
--Nursing Education Perspectives Health information
technology is now the top priority for improving
nursing and health care by informing clinical care,
interconnecting clinicians, personalizing care, and
improving population health at large. This book
presents a broad range of cutting-edge teaching
technologies and a detailed overview of teaching

and learning pedagogical concepts that are relevant across a variety of teaching environments. Helpful to both new and seasoned educators, these "must-know" strategies allow faculty to keep pace with the rapidly changing digital world. The book helps to guide faculty in making thoughtful, informed decisions on how and where to integrate technology into learning environments. A major feature of this book is the Integrated Learning Triangle for Teaching with Technologies, a faculty tool to help determine if and how specific technologies can promote student learning. Other important chapter

pedagogy includes best teaching practices, teaching and learning self-assessment tools, useful tips for faculty such as "making teaching easier," and reflective questions and activities for the reader. Key Topics: Using cutting-edge technologies as tools for "active learning," such as automated response systems, clickers, podcasts, blogs, wikis, web-based modules, and more Expanding faculty and student technology skills and information literacy-a critical competency in all nursing programs Using the Internet and digital videos to help bridge the classroom with the clinical setting Reflecting on how

technology impacts current communication systems Incorporating simulation into students' clinical learning experiences Promoting self-directed, lifelong learning through health information technology

"Provides a unified, insightful, modern, and entertaining treatment of analytics. The book covers the science of using data to build models, improve decisions, and ultimately add value to institutions and individuals"--Back cover.

Linear algebra is something all mathematics undergraduates and many other students, in

subjects ranging from engineering to economics, have to learn. The fifth edition of this hugely successful textbook retains all the qualities of earlier editions while at the same time seeing numerous minor improvements and major additions. The latter include: ▪ A new chapter on singular values and singular vectors, including ways to analyze a matrix of data ▪ A revised chapter on computing in linear algebra, with professional-level algorithms and code that can be downloaded for a variety of languages ▪ A new section on linear algebra and cryptography ▪ A new chapter on linear algebra in probability and

statistics. A dedicated and active website also offers solutions to exercises as well as new exercises from many different sources (e.g. practice problems, exams, development of textbook examples), plus codes in MATLAB, Julia, and Python.
Principles of Computer System Design
With Application to Understanding Data
Introduction to Quantum Mechanics
Statistical Physics of Particles
Ultralearning
Teaching Technologies in Nursing & the Health Professions

Statistical physics has its origins in attempts to describe the thermal properties of matter in terms of its constituent particles, and has played a fundamental role in the development of quantum mechanics. Based on lectures taught by Professor Kardar at MIT, this textbook introduces the central concepts and tools of statistical physics. It contains a chapter on probability and related issues such as the central limit theorem and information theory, and covers interacting particles, with an extensive description of the van der Waals equation and its derivation by mean field approximation. It also contains an integrated set of problems, with solutions to selected problems at the end of the book and a complete set of solutions is available to lecturers on a password

**protected website at www.cambridge.org/9780521873420.
A companion volume, Statistical Physics of Fields,
discusses non-mean field aspects of scaling and critical
phenomena, through the perspective of renormalization
group.**

**Unlike books currently on the market, this book attempts
to satisfy two goals: combine circuits and electronics
into a single, unified treatment, and establish a strong
connection with the contemporary world of digital
systems. It will introduce a new way of looking not only
at the treatment of circuits, but also at the treatment of
introductory coursework in engineering in general. Using
the concept of "abstraction," the book attempts to form a
bridge between the world of physics and the world of**

large computer systems. In particular, it attempts to unify electrical engineering and computer science as the art of creating and exploiting successive abstractions to manage the complexity of building useful electrical systems. Computer systems are simply one type of electrical systems. +Balances circuits theory with practical digital electronics applications. +Illustrates concepts with real devices. +Supports the popular circuits and electronics course on the MIT OpenCourse Ware from which professionals worldwide study this new approach. +Written by two educators well known for their innovative teaching and research and their collaboration with industry. +Focuses on contemporary MOS technology.

The most comprehensive and authoritative text on the subject, DISTANCE EDUCATION, Third Edition, retains its emphasis on a systems approach to the organization and selection of material. The text is researched-based and grounded in solid principles of teaching and learning. The authors apply their broad experience and expertise as they explain how to design and teach courses online--including the latest technologies employed, characteristics of learners, organizational structures, and current policy and global perspectives. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.
Very roughly speaking, representation theory studies

symmetry in linear spaces. It is a beautiful mathematical subject which has many applications, ranging from number theory and combinatorics to geometry, probability theory, quantum mechanics, and quantum field theory. The goal of this book is to give a ``holistic'' introduction to representation theory, presenting it as a unified subject which studies representations of associative algebras and treating the representation theories of groups, Lie algebras, and quivers as special cases. Using this approach, the book covers a number of standard topics in the representation theories of these structures. Theoretical material in the book is supplemented by many problems and exercises which touch upon a lot of additional topics; the more difficult

exercises are provided with hints. The book is designed as a textbook for advanced undergraduate and beginning graduate students. It should be accessible to students with a strong background in linear algebra and a basic knowledge of abstract algebra.
Introduction to the Theory of Computation
Fatigue of Materials
Signals & Systems
Systems Thinking Applied to Safety
Global Marketing Management System
The Art of Performing Sound for Film, Games, and Animation
Master classic and cutting-edge Foley

techniques that will allow you to create rich, convincing sound for any medium, be it film, television, radio, podcasts, animation, or games. In The Foley Grail, Second Edition award-winning Foley artist Vanessa Theme Ament teaches you how Foley is designed, crafted, and edited for any project, right down to the nuts and bolts of spotting, cueing, and performing sounds. Various renowned sound artists provide a treasure trove

of shortcuts, hot tips, and other
tricks of the trade. This new edition
features: Entirely new chapters
dedicated to Foley in games,
television, broadcasting, and
animation, as well as what is new in
sound for media education All new sound
"recipes" that include proven Foley
methods you can immediately use on your
own projects New case studies from well-
known films, shows, games, and
animations Interviews with current

sound artists from across the globe An
extensive companion website
(www.focalpress.com/cw/ament) featuring
video demonstrations of Foley artists
at work, video tutorials of specific
Foley techniques, lectures from the
author, and much more
Statistical Physics I discusses the
fundamentals of equilibrium statistical
mechanics, focussing on basic physical
aspects. No previous knowledge of
thermodynamics or the molecular theory

of gases is assumed. Illustrative examples based on simple materials and photon systems elucidate the central ideas and methods.

This book covers elementary discrete mathematics for computer science and engineering. It emphasizes mathematical definitions and proofs as well as applicable methods. Topics include formal logic notation, proof methods; induction, well-ordering; sets, relations; elementary graph theory;

integer congruences; asymptotic
notation and growth of functions;
permutations and combinations, counting
principles; discrete probability.
Further selected topics may also be
covered, such as recursive definition
and structural induction; state
machines and invariants; recurrences;
generating functions.
This book provides readers with an
introductory resource for learning how
to create compelling games using the

open source Python programming language
and Pygame games development library.
Authored by industry veteran and Python
expert Will McGugan, readers are
treated to a comprehensive, practical
introduction to games development using
these popular technologies. They can
also capitalize upon numerous tips and
tricks the author has accumulated over
his career creating games for some of
the world's largest gaming developers.
Automate the Boring Stuff with Python,

2nd Edition
How Technology is Transforming Academic
Practice
Languages for Specific Purposes in
History
Training Cognition
From Novice to Professional
Introduction to Probability
1. Introduction 2. Syntax 3.
Operational semantics 4. Denotational
semantics 5. Fixed points 6. FL: a
functional language 7. Naming 8. State

9. Control 1O. Data 11. Simple types
12. Polymorphism and higher-order types
13. Type reconstruction 14. Abstract
types 15. Modules 16. Effects describe
progran behavior 17. Compilation 18.
Garbage collection.
Learn a new talent, stay relevant,
reinvent yourself, and adapt to
whatever the workplace throws your way.
Ultralearning offers nine principles to
master hard skills quickly. This is the
essential guide to future-proof your

career and maximize your competitive advantage through self-education. In these tumultuous times of economic and technological change, staying ahead depends on continual self-education—a lifelong mastery of fresh ideas, subjects, and skills. If you want to accomplish more and stand apart from everyone else, you need to become an ultralearner. The challenge of learning new skills is that you think you already know how best to learn, as you

did as a student, so you rerun old
routines and old ways of solving
problems. To counter that,
Ultralearning offers powerful
strategies to break you out of those
mental ruts and introduces new training
methods to help you push through to
higher levels of retention. Scott H.
Young incorporates the latest research
about the most effective learning
methods and the stories of other
ultralearners like himself—among them

Benjamin Franklin, chess grandmaster
Judit Polgár, and Nobel laureate
physicist Richard Feynman, as well as a
host of others, such as little-known
modern polymath Nigel Richards, who won
the French World Scrabble
Championship—without knowing French.
Young documents the methods he and
others have used to acquire knowledge
and shows that, far from being an
obscure skill limited to aggressive
autodidacts, ultralearning is a

powerful tool anyone can use to improve their career, studies, and life. Ultralearning explores this fascinating subculture, shares a proven framework for a successful ultralearning project, and offers insights into how you can organize and exe - cute a plan to learn anything deeply and quickly, without teachers or budget-busting tuition costs. Whether the goal is to be fluent in a language (or ten languages), earn the equivalent of a college degree in a

fraction of the time, or master
multiple tools to build a product or
business from the ground up, the
principles in Ultralearning will guide
you to success.
This book delves into the changes in
technology regarding higher education
and seeks to define what it means to be
a scholar in the digital age.
Now you can clearly present even the
most complex computational theory
topics to your students with Sipser's

distinct, market-leading INTRODUCTION
TO THE THEORY OF COMPUTATION, 3E. The
number one choice for today's
computational theory course, this
highly anticipated revision retains the
unmatched clarity and thorough coverage
that make it a leading text for upper-
level undergraduate and introductory
graduate students. This edition
continues author Michael Sipser's well-
known, approachable style with timely
revisions, additional exercises, and

more memorable examples in key areas. A new first-of-its-kind theoretical treatment of deterministic context-free languages is ideal for a better understanding of parsing and LR(k) grammars. This edition's refined presentation ensures a trusted accuracy and clarity that make the challenging study of computational theory accessible and intuitive to students while maintaining the subject's rigor and formalism. Readers gain a solid

understanding of the fundamental
mathematical properties of computer
hardware, software, and applications
with a blend of practical and
philosophical coverage and mathematical
treatments, including advanced theorems
and proofs. INTRODUCTION TO THE THEORY
OF COMPUTATION, 3E's comprehensive
coverage makes this an ideal ongoing
reference tool for those studying
theoretical computing. Important
Notice: Media content referenced within

the product description or the product
text may not be available in the ebook
version.
Master Hard Skills, Outsmart the
Competition, and Accelerate Your Career
Introduction to Computation and
Programming Using Python, second
edition
Statistical Physics I
Foundations of Analog and Digital
Electronic Circuits
Introduction to Representation Theory

A Common Sense Guide

The essays in this edited collection reflect on the nature of open education resources, where the question on openness for education emerges. Training is both a teaching and a learning experience, and just about everyone has had that experience. Training involves acquiring knowledge and skills. This newly acquired training information is meant to be applicable to specific activities, tasks, and jobs. In modern times, where jobs are increasingly more complex, training workers to perform successfully is of more importance than ever. The range of contexts in which training is required includes industrial, corporate,

military, artistic, and sporting, at all levels from assembly line to executive function. The required training can take place in a variety of ways and settings, including the classroom, the laboratory, the studio, the playing field, and the work environment itself. The general goal of this book is to describe the current state of research on training using cognitive psychology to build a complete empirical and theoretical picture of the training process. The book focuses on training cognition, as opposed to physical or fitness training. It attempts to show how to optimize training efficiency, durability, and generalizability. The book includes a review of relevant cognitive

psychological literature, a summary of recent laboratory experiments, a presentation of original theoretical ideas, and a discussion of possible applications to real-world training settings. The second edition of this best-selling Python book (over 500,000 copies sold!) uses Python 3 to teach even the technically uninclined how to write programs that do in minutes what would take hours to do by hand. There is no prior programming experience required and the book is loved by liberal arts majors and geeks alike. If you've ever spent hours renaming files or updating hundreds of spreadsheet cells, you know how tedious tasks like these can be. But what if

you could have your computer do them for you? In this fully revised second edition of the best-selling classic Automate the Boring Stuff with Python, you'll learn how to use Python to write programs that do in minutes what would take you hours to do by hand--no prior programming experience required. You'll learn the basics of Python and explore Python's rich library of modules for performing specific tasks, like scraping data off websites, reading PDF and Word documents, and automating clicking and typing tasks. The second edition of this international fan favorite includes a brand-new chapter on input validation, as well as tutorials on automating Gmail and Google Sheets, plus

tips on automatically updating CSV files. You'll learn how to create programs that effortlessly perform useful feats of automation to: • Search for text in a file or across multiple files • Create, update, move, and rename files and folders • Search the Web and download online content • Update and format data in Excel spreadsheets of any size • Split, merge, watermark, and encrypt PDFs • Send email responses and text notifications • Fill out online forms Step-by-step instructions walk you through each program, and updated practice projects at the end of each chapter challenge you to improve those programs and use your newfound skills to automate similar tasks. Don't spend

*your time doing work a well-trained monkey could do.
Even if you've never written a line of code, you can
make your computer do the grunt work. Learn how in
Automate the Boring Stuff with Python, 2nd Edition.
An assessment of human thought and behavior
explores conundrums from the mind's ability to
perceive three dimensions to the nature of
consciousness, in an account that draws on beliefs in
cognitive science and evolutionary biology.
Open Education and Education for Openness
Introduction to Probability and Statistics
Mathematics for Computer Science
The Foley Grail*

The Digital Scholar
Data Structures And Algorithms

When science's "black boxes" are pried open, its workings become accessible. Like time-travellers into history but grounded in today's cultures, learners interact directly with authentic instruments and replicas. Chapters describe educational experiences sparked through collaborations interrelating museum, school and university.

New edition of a text intended primarily for the undergraduate courses on the subject which are frequently found in electrical engineering curricula--but the concepts and techniques it covers are also of fundamental

importance in other engineering disciplines. The book is structured to develop in parallel the methods of analysis for continuous-time and discrete-time signals and systems, thus allowing exploration of their similarities and differences. Discussion of applications is emphasized, and numerous worked examples are included. Annotation copyrighted by Book News, Inc., Portland, OR

This bestselling textbook teaches students how to do quantum mechanics and provides an insightful discussion of what it actually means.

Linear algebra and the foundations of deep learning, together at last! From Professor Gilbert Strang, acclaimed

author of Introduction to Linear Algebra, comes Linear Algebra and Learning from Data, the first textbook that teaches linear algebra together with deep learning and neural nets. This readable yet rigorous textbook contains a complete course in the linear algebra and related mathematics that students need to know to get to grips with learning from data. Included are: the four fundamental subspaces, singular value decompositions, special matrices, large matrix computation techniques, compressed sensing, probability and statistics, optimization, the architecture of neural nets, stochastic gradient descent and backpropagation.

Selected Papers from the International Workshop on
Computational Sciences and Its Education, Beijing,
China, 29-31 August 2005
Recent Advances in Computational Sciences
A Subject Guide to Quality Web Sites
Optimizing Efficiency, Durability, and Generalizability
Introduction to Linear Algebra
Principles of Digital Communication
**This is the second edition of the Global
Marketing Management System (GMMS). The
GMMS approach (GMMS book + GMMSO4
software) provides a rigorous theoretical base**

and a comprehensive, systematic and integrative planning process designed to guide students and managers alike through the decision-making process of a company seeking global market opportunities. The book aims to provide a structure, platform, tools and a systematic step-by-step process designed to support the creation of a strategic and applied oriented methodology to global business planning and strategy formulation. It introduces the GMMS process as a demonstration of a successful application

of using web-based tools in teaching international business. The book also facilitates the ability of students to enhance their understanding of decision making in international management and bridge the gap between theory and practice. More about GMMSO GMMSO4 Student User Guide (2 MB) What is GMMS? For Professors (2 MB) What is GMMS? For Consultants and SMEs (2 MB) Contents:The Global Marketing Management System:Introduction:Globalization and the Need for a Global Business EducationProject-

based Learning and GMMSOUnderstanding the Firm's Strategic Position:Information ScanningPerforming a Firm Level Strategic AnalysisSummaryThe Search for Global Markets:The Decision Making ProcessPreliminary Screening of MarketsThe Process of Screening Countries Using Three Separate Screening Matrices Performing an in-Depth Market Analysis of the Two Best MarketsMarket and Company Sales PotentialAnalyzing Market/Country Specific Competitive AnalysisIdentification of Country-

entry Conditions for the FirmAnalysis of Financial and Market Entry ConditionsCreating an Entry Strategy into a Selected Market:Selecting an Entry Mode into the Target MarketThe Business Environment of the Selected MarketCreating a Marketing Plan with Its Firm Specific Goals and ObjectivesDeveloping a Product StrategyDeveloping a Pricing StrategyCreation of a Promotional StrategyDeveloping of a Distribution StrategyCreation of a Financial

StrategyCreating the Organizational Structure for the New MarketUnderstanding Exit Strategy and ScenariosSummaryThe GMMSO4 Software System:GMMSO4:What Is GMMSO?Bridge the GapBenefitsBackground to the Development of the Online Version of the GMMS MethodLearning OutcomesCase Study:Lafkiotis Winery Entry into United States: A Report Created by Using the GMMSO4 SystemLafkiotis Winery's Strategic AnalysisThe Search for Global MarketEntry Strategy into the US Market Readership:

Students, instructors, researchers and professionals working in the fields of marketing management, global strategy and international business.
The renowned communications theorist Robert Gallager brings his lucid writing style to the study of the fundamental system aspects of digital communication for a one-semester course for graduate students. With the clarity and insight that have characterized his teaching and earlier textbooks, he develops a simple framework and then

combines this with careful proofs to help the reader understand modern systems and simplified models in an intuitive yet precise way. A strong narrative and links between theory and practice reinforce this concise, practical presentation. The book begins with data compression for arbitrary sources. Gallager then describes how to modulate the resulting binary data for transmission over wires, cables, optical fibers, and wireless channels. Analysis and intuitive interpretations are developed for channel

noise models, followed by coverage of the principles of detection, coding, and decoding. The various concepts covered are brought together in a description of wireless communication, using CDMA as a case study. A new approach to safety, based on systems thinking, that is more effective, less costly, and easier to use than current techniques. Engineering has experienced a technological revolution, but the basic engineering techniques applied in safety and reliability engineering, created in a simpler, analog

world, have changed very little over the years. In this groundbreaking book, Nancy Leveson proposes a new approach to safety—more suited to today's complex, sociotechnical, software-intensive world—based on modern systems thinking and systems theory. Revisiting and updating ideas pioneered by 1950s aerospace engineers in their System Safety concept, and testing her new model extensively on real-world examples, Leveson has created a new approach to safety that is more effective, less expensive, and easier to

use than current techniques. Arguing that traditional models of causality are inadequate, Leveson presents a new, extended model of causation (Systems-Theoretic Accident Model and Processes, or STAMP), then shows how the new model can be used to create techniques for system safety engineering, including accident analysis, hazard analysis, system design, safety in operations, and management of safety-critical systems. She applies the new techniques to real-world events including the friendly-fire

loss of a U.S. Blackhawk helicopter in the first Gulf War; the Vioxx recall; the U.S. Navy SUBSAFE program; and the bacterial contamination of a public water supply in a Canadian town. Leveson's approach is relevant even beyond safety engineering, offering techniques for "reengineering" any large sociotechnical system to improve safety and manage risk.

This book presents state-of-the-art lectures delivered by international academic and industrial experts in the field of

computational science and its education, covering a wide spectrum from theory to practice. Topics include new developments in finite element method (FEM), finite volume method and Spline theory, such as Moving Mesh Methods, Galerkin and Discontinuous Galerkin Schemes, Shape Gradient Methods, Mixed FEMs, Superconvergence techniques and Fourier spectral approximations with applications in multidimensional fluid dynamics; Maxwell equations in discrepancy media; and phase-field equations. It also

discusses some interesting topics related to Stokes equations, Schrodinger equations, wavelet analysis and approximation theory. Contemporary teaching issues in curriculum reform also form an integral part of the book. This book will therefore be of significant interest and value to all graduates, research scientists and practitioners facing complex computational problems. Administrators and policymakers will find it is an addition to their mathematics curriculum reform libraries.

Equilibrium Statistical Mechanics
Linear Algebra and Learning from Data
Beginning Game Development with Python and Pygame
How the Mind Works
Engineering a Safer World

The first edition of Assessing Student Learning has become the standard reference for college faculty and administrators who are charged with the task of assessing student learning within their institutions. The second edition of this landmark book offers the same practical guidance and is designed to meet ever-increasing demands for improvement and accountability. This edition includes expanded coverage of

vital assessment topics such as promoting an assessment culture, characteristics of good assessment, audiences for assessment, organizing and coordinating assessment, assessing attitudes and values, setting benchmarks and standards, and using results to inform and improve teaching, learning, planning, and decision making.

The Web is always moving, always changing. As some Web sites come, others go, but the most effective sites have been well established. A Subject Guide to Quality Web Sites provides a list of key web sites in various disciplines that will assist researchers with a solid starting point for their queries. The sites included in this collection are stable and have librarian tested high-quality information: the most important attribute information can have.

This book presents twelve papers on the use of Languages for Specific Purposes (LSPs) throughout history. From Antiquity to the present time, contributors analyse how LSPs emerged both in Europe and in other parts of the world, such as Judea, North America, and China. The historical aspect of LSPs has generally not been studied in depth, despite being part of the global understanding of the phenomenon. All aspects of professional life are tackled in this book, including administration, commerce, diplomacy, medicine, legal studies, geography, sociology, mathematics and history. This volume will naturally appeal to historians but also to linguists, sociologists, and anyone interested in languages used in a professional context. It offers a better understanding of where LSPs come from, how they emerged and how they tend to

become real specialties in the teaching of modern languages. Principles of Computer System Design is the first textbook to take a principles-based approach to the computer system design. It identifies, examines, and illustrates fundamental concepts in computer system design that are common across operating systems, networks, database systems, distributed systems, programming languages, software engineering, security, fault tolerance, and architecture. Through carefully analyzed case studies from each of these disciplines, it demonstrates how to apply these concepts to tackle practical system design problems. To support the focus on design, the text identifies and explains abstractions that have proven successful in practice such as remote procedure call, client/service organization, file systems, data integrity,

consistency, and authenticated messages. Most computer systems are built using a handful of such abstractions. The text describes how these abstractions are implemented, demonstrates how they are used in different systems, and prepares the reader to apply them in future designs. The book is recommended for junior and senior undergraduate students in Operating Systems, Distributed Systems, Distributed Operating Systems and/or Computer Systems Design courses; and professional computer systems designers. Features: Concepts of computer system design guided by fundamental principles. Cross-cutting approach that identifies abstractions common to networking, operating systems, transaction systems, distributed systems, architecture, and software engineering. Case studies that

make the abstractions real: naming (DNS and the URL); file systems (the UNIX file system); clients and services (NFS); virtualization (virtual machines); scheduling (disk arms); security (TLS). Numerous pseudocode fragments that provide concrete examples of abstract concepts. Extensive support. The authors and MIT OpenCourseWare provide on-line, free of charge, open educational resources, including additional chapters, course syllabi, board layouts and slides, lecture videos, and an archive of lecture schedules, class assignments, and design projects.

Knowledge and the Governance of Higher Education
Design Concepts in Programming Languages
Patterns for Parallel Programming
Vibrations and Waves

Historical Scientific Instruments in Contemporary Education
Beyond Simulation and Online Courses
*The M.I.T. Introductory Physics Series is the
result of a program of careful study,
planning, and development that began in 1960.
The Education Research Center at the
Massachusetts Institute of Technology
(formerly the Science Teaching Center) was
established to study the process of
instruction, aids thereto, and the learning
process itself, with special reference to
science teaching at the university level.
Generous support from a number of foundations
provided the means for assembling and*

*maintaining an experienced staff to co-
operate with members of the Institute's
Physics Department in the examination,
improvement, and development of physics
curriculum materials for students planning
careers in the sciences. After careful
analysis of objectives and the problems
involved, preliminary versions of textbooks
were prepared, tested through classroom use
at M.I.T. and other institutions, re-
evaluated, rewritten, and tried again. Only
then were the final manuscripts undertaken.
Did you know that any straight-line drawing
on paper can be folded so that the complete*

drawing can be cut out with one straight scissors cut? That there is a planar linkage that can trace out any algebraic curve, or even 'sign your name'? Or that a 'Latin cross' unfolding of a cube can be refolded to 23 different convex polyhedra? Over the past decade, there has been a surge of interest in such problems, with applications ranging from robotics to protein folding. With an emphasis on algorithmic or computational aspects, this treatment gives hundreds of results and over 60 unsolved 'open problems' to inspire further research. The authors cover one-dimensional (1D) objects (linkages), 2D

*objects (paper), and 3D objects (polyhedra).
Aimed at advanced undergraduate and graduate
students in mathematics or computer science,
this lavishly illustrated book will fascinate
a broad audience, from school students to
researchers.
Second edition of successful materials
science text for final year undergraduate and
graduate students.
Social processes and policies that foster
openness as an overriding value as evidenced
in the growth of open source, open access and
open education and their convergences that
characterize global knowledge communities*

*that transcend borders of the nation-state.
Openness seems also to suggest political
transparency and the norms of open inquiry,
indeed, even democracy itself as both the
basis of the logic of inquiry and the
dissemination of its results. Openness is a
value and philosophy that also offers us a
means for transforming our institutions and
our practices. This book examines the
interface between learning, pedagogy and
economy in terms of the potential of open
institutions to transform and revitalize
education in the name of the public good.
Distance Education: A Systems View of Online*

Learning
Geometric Folding Algorithms
The Pedagogy of the Open Society
Linkages, Origami, Polyhedra
An Introduction
Assessing Student Learning

The new edition of an introductory text
that teaches students the art of
computational problem solving, covering
topics ranging from simple algorithms to
information visualization. This book
introduces students with little or no
prior programming experience to the art of

computational problem solving using Python and various Python libraries, including PyLab. It provides students with skills that will enable them to make productive use of computational techniques, including some of the tools and techniques of data science for using computation to model and interpret data. The book is based on an MIT course (which became the most popular course offered through MIT's OpenCourseWare) and was developed for use not only in a conventional classroom but in in a massive open online course (MOOC).

This new edition has been updated for Python 3, reorganized to make it easier to use for courses that cover only a subset of the material, and offers additional material including five new chapters. Students are introduced to Python and the basics of programming in the context of such computational concepts and techniques as exhaustive enumeration, bisection search, and efficient approximation algorithms. Although it covers such traditional topics as computational complexity and simple algorithms, the book

focuses on a wide range of topics not found in most introductory texts, including information visualization, simulations to model randomness, computational techniques to understand data, and statistical techniques that inform (and misinform) as well as two related but relatively advanced topics: optimization problems and dynamic programming. This edition offers expanded material on statistics and machine learning and new chapters on Frequentist and Bayesian statistics.

This is an excellent, up-to-date and easy-to-use text on data structures and algorithms that is intended for undergraduates in computer science and information science. The thirteen chapters, written by an international group of experienced teachers, cover the fundamental concepts of algorithms and most of the important data structures as well as the concept of interface design. The book contains many examples and diagrams. Whenever appropriate, program codes are included to facilitate

*learning.This book is supported by an
international group of authors who are
experts on data structures and algorithms,
through its website at
www.cs.pitt.edu/~jung/GrowingBook/, so
that both teachers and students can
benefit from their expertise.
The Parallel Programming Guide for Every
Software Developer From grids and clusters
to next-generation game consoles, parallel
computing is going mainstream. Innovations
such as Hyper-Threading Technology,
HyperTransport Technology, and multicore*

*microprocessors from IBM, Intel, and Sun
are accelerating the movement's growth.
Only one thing is missing: programmers
with the skills to meet the soaring demand
for parallel software. That's where
Patterns for Parallel Programming comes
in. It's the first parallel programming
guide written specifically to serve
working software developers, not just
computer scientists. The authors introduce
a complete, highly accessible pattern
language that will help any experienced
developer "think parallel"-and start*

writing effective parallel code almost immediately. Instead of formal theory, they deliver proven solutions to the challenges faced by parallel programmers, and pragmatic guidance for using today's parallel APIs in the real world. Coverage includes: Understanding the parallel computing landscape and the challenges faced by parallel developers Finding the concurrency in a software design problem and decomposing it into concurrent tasks Managing the use of data across tasks Creating an algorithm structure that

effectively exploits the concurrency you've identified Connecting your algorithmic structures to the APIs needed to implement them Specific software constructs for implementing parallel programs Working with today's leading parallel programming environments: OpenMP, MPI, and Java Patterns have helped thousands of programmers master object-oriented development and other complex programming technologies. With this book, you will learn that they're the best way to master parallel programming too.

*Practical Programming for Total Beginners
The Analytics Edge*