UI-UX Design

- Figma Resource Library
- YouTube Channels

- The Fundamentals of Graphics Design, Gavin Ambrose
- The Non-Designer's Design Book: Design and Typographic Principles for the Visual Novice, Robin Williams
- Designing the User Interface: Strategies for Effective Human-Computer Interaction, Shneiderman, Plaisant
- Interface Design, An Introduction to Visual Communication in UI Design
- Designing Interface: Patterns for Effective Interaction Design, Jenifer Tidwell
- The Elements of User Experience: User-Centered Design for The Web and Beyond, Jesse James Garrett
- Killer UX Design, Jodie Moule
- The Guide to UX Design Process and Documentation, Dominik Pacholczyk
- About Face: The Essentials of Interaction Design, Alan Cooper, Robert Reimann, David Cronin

Ordinary Differential Equations

Ordinary Differential Equations: Reference-1

	An Introduction to Ordinary Differential Equations
	Preliminaries
01	Introduction
02	Complex Numbers
03	Functions
04	Polynomials
05	Complex Series and the Exponential Function
06	Determinants
07	Remarks o Methods of Discovery and Proof
	Introduction – Linear Equations of the First Order
08	Introduction
09	Differential Equations
10	Problems Associated with Differential Equations
11	Linear Equations of the First Order
12	The Equation y`+ ay = 0
13	The Equation y` + ay = b(x)
14	The General Linear Equation of the First Order
	Linear Equations with Constant Coefficients
15	Introduction
16	The Second Order Homogeneous Equation
17	Initial Value Problems for Second Order Equations
18	Linear Dependence and Independence
19	A Formula for the Wronskian
20	The Non-Homogeneous Equation of Order Two
21	The Homogeneous Equation of Order n
22	Initial Value Problems for n-th Order Equations
23	Equations with Real Constants
24	The Non-Homogeneous Equations of Order n
25	A Special Method for Solving the Non-Homogeneous Equation
26	Algebra of Constant Coefficient Operators
	Linear Equations with Variable Coefficients
27	Introduction
28	Initial Value Problems for the Homogeneous Equation
29	Solutions of the Homogeneous Equations
30	The Wronskian and Linear Independence
31	Reduction of the Order of a Homogeneous Equation
32	The Non-Homogeneous Equation
33	Homogeneous Equations with Analytic Coefficients
34	The Legendre Equations
35	Justification of the Power Series Method
	Linear Equations with Regular Singular Points
36	Introduction
37	The Euler Equation
38	Second Order Equations with Regular Singular Points – An Example
39	Second Order Equations with Regular Singular Points – The General Case
40	A Convergence Proof
41	The Exceptional Cases

42	The Bessel Equations
43	The Bessel Equation (Continued)
44	Regular Singular Points at Infinity
	Existence and Uniqueness of Solutions to First Order Equations
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46	Equations with Variables Separated
47	Exact Equations
48	The Method of Successive Approximations
49	The Lipschitz Condition
50	Convergence of the Successive Approximations
51	Non-Local Existence of Solutions
52	Approximations to, and Uniqueness of, Solutions
53	Equations with Complex-Valued Functions
	Existence and Uniqueness of Solutions to Systems and n-th Order Equations
54	Introduction
55	An Example – Central Forces and Planetary Motion
56	Some Special Equations
57	Complex n-dimensional Space
58	Systems as Vector Equations
59	Existence and Uniqueness of Solutions to Systems
60	Existence and Uniqueness for Linear Systems
61	Equations of Order n

Ordinary Differential Equations: Reference-2

	Ordinary Differential Equations: An Elementary Textbook for Students of Mathematics and Engineering
	Basic Concepts
01	How Differential Equations Originate
06	The Meaning of the Terms Set and Functions. Implicit and Elementary Functions – Topics 5
09	The Differential Equations – Topics 3
12	The General Solution of a Differential Equation – Topics 3
14	Direction Field – Topics 2
	Special Types of Differential Equations of the First Order
17	Meaning of the Differential of a Function Separable Differential Equations – Topics 3
19	First Order Differential Equation with Homogeneous Coefficients – Topics 2
23	Differential Equations with Linear Coefficients – Topics 4
25	Exact Differential Equations – Topics 2
28	Recognizable Exact Differential Equations Integrating Factors – Topics 3
32	The Linear Differential Equations of the First Order Bernoulli Equation – Topics 4
34	Miscellaneous Methods of Solving a First Order Differential Equation – Topics 2
	Problems Leading to Differential Equations of the First Order
35	Geometric Problems
38	Trajectories – Topics 3
43	Dilution and Accretion Problems – Topics 5
46	Motion of a Particle Along a Straight Line – Vertical, Horizontal, Inclined – Topics 3
48	Pursuit Curves. Relative Pursuit Curves – Topics 2
56	Miscellaneous Types of Problems Leading to Equations of the First Order – Topics 8
	Linear Differential Equations of Order Greater Than One
59	Complex Numbers and Complex Functions – Topics 3
61	Linear Independence of Functions. The Linear Differential Equations of Order n – Topics 2
65	Solution of the Homogeneous Linear Differential Equation of Order n – Topics 4
67	Solution of the Nonhomogeneous Linear Differential Equations of Order n – Topics 2
69	Solution of the Nonhomogeneous Linear Differential Equations by the Method – Topics 2
71	Solution of the Linear Differential Equation with Non-constant Coefficients – Topics 2
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75	Differential and Polynomial Operators – Topics 4
77	Inverse Operators – Topics 2
80	Solution of a Linear Differential Equation by Means of the Partial Fraction Expansion – Topics 3
85	The Laplace Transform. Gamma Function – Topics 5
	Problems Leading to Linear Differential Equations of Order Tow
89	Undamped Motion – Topics 4
91	Damped Motion – Topics 2
93	Electric Circuits. Analog Computation – Topics 2
97	Miscellaneous Types of Probles Leading to Linear Equations of the Second Order – Topics 4
	Systems of Differential Equations. Linearization of First Order Systems
105	Solution of a System of Differential Equations – Topics 8
106	Linearization of First Order Systems
	Problems Giving Rise to Systems of Equations. Special Types of Second Order Linear
109	Mechanical, Biological, Electrical Problems Giving Rise to Systems of Equations – Topics 3
117	Plane Motions Giving Rise to Systems of Equations – Topics 8
120	Special Types of Second Order Linear and Nonlinear Differential Equations Solvable – Topics 3
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126	Poser Series Solutions of Linear Differential Equations – Topics 2
127	Series Solution of y` = f(x,y)
130	Series Solution of a Nonlinear Differential Equations of Order Greater Than One – Topics 3
132	Ordinary Points and Singularities of a Linear Differential Equations – Topics 2
135	The Legendre Differential Equations. – Topics 3
139	The Bassel Differential Equation. – Topics 4
142	The Laguerre Differential Equations – Topics 3
	Numerical Methods
143	Starting Method. Polygonal Approximation
144	An Improvement of the Polygonal Starting Method
146	Starting Method – Taylor Series – Topics 2
147	Starting Method – Runge-Kutta Formulas
149	Finite Differences. Interpolation – Topics 2
152	Newton's Interpolation Formulas – Topics 3
153	Approximation Formulas Including Simpson's and Weddle's Rule
154	Milne's Method of Finding an Approximate Numerical Solution of y` = f(x, y)
158	General Comments. Selecting h. Reducing h. Summary and an Example – Topics 4
159	Numerical Methods Applied to a System of Two First Order Equations
160	Numerical Solution of a Second Order Differential Equation
161	Perturbation Method. First Order Equation.
162	Perturbation Method. Second Order Equation.
	Existence and Uniqueness Theorem For The First Order Differential Equation y`=f(x,y)
163	Picard's Method of Successive Approximations
166	An Existence and Uniqueness Theorem for the First Order Differential Equation y`=f(x,y) – Topics 3
167	The Ordinary and Singular Points of a First Order Differential Equation y`=f(x,y)
169	Envelopes – Topics 2
170	The Clairaut Equation
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175	Determinants. Wronskians – Topics 2
176	Theorems About Wronskians and the Linear Independence of a Set of Solutions of a Homogeneous
177	Existence and Uniqueness Theorem for the Linear Differential Equation of Order n

System Analysis and Design

System Analysis and Design: Reference-1

	Modern System Analysis and Design
	Part-01: Foundations for Systems Development
01	**An Overview of Part One**
	The Systems Development Environment
02	Learning Objectives
03	Introduction
04	A Modern Approach to Systems Analysis and Design
05	Developing Information Systems and the Systems Development Life Cycle
06	The Heart of the Systems Development Process – Topics 1
09	Agile Methodologies – Topics 3
10	Object-Oriented Analysis and Design
11	Our Approach to Systems Development
12	Summary
	Key Terms
	Review Questions
	Problems and Exercises
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	References
	The Origins of Software
13	Learning Objectives
14	Introduction
18	Systems Acquisition – Topics 4
19	Reuse
20	Summary
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	Review Questions
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	References
	BEC CASE: The Origins of Software
	Case Questions
	Managing the Information Systems Project
21	Learning Objectives
22	Introduction
23	Pine Valley Furniture Company Background
27	Managing the Information Systems Project – Topics 4
30	Representing and Scheduling Project Plans – Topics 3
33	Using Project Management Software – Topics 3
34	Summary
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	References
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System Analysis and Design: Reference-2

	System Analysis and Design with UML Version 2.0: An Object-Oriented Approach
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01	Introduction
05	The Systems Development Life Cycle – Topics 4
09	Systems Development Methodologies – Topics 4
13	Object-Oriented Systems Analysis and Design (OOSAD) – Topics 4
16	The Unified Process – Topics 3
17	The Unified Modeling Language
22	Project Team Roles and Skills – Topics 5
23	Applying The Concepts at CD Selections
24	Summary
	Part-01: Project Initiation, Project Management, and Requirements Determination
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25	Introduction
26	Project Identification – Topics 1
29	Feasibility Analysis – Topics 3
30	Project Selection
33	Applying The Concepts at CD Selections – Topics 3
34	Summary
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35	Introduction
36	Identifying Project Size – Topics 1
44	Creating and Modeling the Work plane – Topics 8
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53	Applying the Concepts at CD Selections – Topics 2
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59	Requirements Determination – Topics 4
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87	Refining Project Size and Effort Estimation Using Use-Case Points
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	Structural Modeling
94	Introduction
96	Structural Models – Topics 2
98	CRC Cards – Topics 2
101	Class Diagrams – Topics 3

Software Project Management

Software Project Management: Reference-1

	Applied Software Project Management
	Introduction
01	Tell Everyone the Truth All the Time
02	Trust Your Team
03	Review Everything, Test Everything
04	All Software Engineers are Created Equal
05	Doing the Project Right is Most Efficient
06	Part-1: Tools and Techniques
07	Part-2: Using Project Management Effectively
	Tools and Techniques
	Software Project Planning
08	Understand the Project Needs – Top15ics 8
20	Create the Project Plan – 12
24	Diagnosing Project Planning Problems – 04
	Estimation
27	Elements of a Successful Estimate – Topics 3
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43	Other Estimation Techniques – Topics 3
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61	Use the Schedule to Manage Commitments
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79	Walkthroughs
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143	Refactoring – Topics 3
150	Unit testing – Topics 7
152	Use Automation – Topics 2
153	Be Careful with Existing Projects
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Software Project Management: Reference-2

	Essential Scrum: A Practical Guide to the Most Popular Agile Process
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01	What is Scrum?
02	Scrum Origins
03	Why Scrum?
04	Genomica Results
10	Can Scrum Help You? – Topics 6
11	Closing
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	Scrum Framework
12	Overview
15	Scrum Roles – Topics 3
19	Scrum Activities and Artifacts – Topics 4
23	Scrum Activities and Artifacts – Topics 4
24	Closing
	Agile Principles
25	Overview
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34	Prediction and Adaptation – Topics 5
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44	Progress – Topics 3
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	Sprints
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63	Consistent Duration – Topics 2
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	Requirements and User Stories
75	Overview
76	Using Conversations
77	Progressive Refinement
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81	Level of Detail
87	INVEST in Good Stories – Topics 6
88	Nonfunctional Requirements
89	Knowledge-Acquisition Stories
91	Gathering Stories – Topics 2
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	Production Backlog
93	Overview
94	Product Backlog Items
98	Good Product Backlog Characteristics – Topics 4
101	Grooming – Topics 3

Human Computer Interaction

Data Visualization

	Fundamentals of Data Visualization: A Primer on Making Informative and Compelling Figures
	Introduction
01	Ugly, Bad, and Wrong Figures
	Part-01: From Data to Visualization
	Visualizing Data: Mapping Data onto Aesthetics
02	Aesthetics and Types of Data
03	Scales Map Data Values onto Aesthetics
	Coordinate Systems and Axes
04	Cartesian Coordinates
05	Nonlinear Axes
06	Coordinate Systems with Curved Axes
	Color Scales
07	Color as a Tool to Distinguish
08	Color to Represent Data Values
09	Color as a Tool to Highlight
	Directory of Visualization
10	Amounts
11	Distributions
12	Proportions
13	x-y Relationships
14	Geospatial Data
15	Uncertainty
	Visualizing Amounts
16	Bar Plots
17	Grouped and Stacked Bars
18	Dot Plots and Heat-maps
	Visualizing Distributions: Histograms and Density Plots
19	Visualizing a Single Distribution
20	Visualizing Multiple Distributions at the Same Time
	Visualizing Distributions: Empirical Cumulative Distribution Functions and Q-Q Plots
21	Empirical Cumulative Distribution Functions
22	Highly Skewed Distributions
23	Quantile-Quantile Plots
	Visualizing Many Distributions at Once
24	Visualizing Distributions Along the Vertical Axis
25	Visualizing Distributions Along the Horizontal Axis
	Visualizing Proportions
26	A Case for Pie Charts
27	A Case for Side-by-Side Bars
28	A Case for Stacked Bars and Stacked Densities
29	Visualizing Proportions Separately as Parts of the Total
	Visualizing Nested Proportions
30	Nested Proportions Gone Wrong
31	Mosaic Plots and Treemaps
32	Nested Pies
33	Parallel Sets
	Visualizing Associations Among Two or More Quantitative Variables
34	Scatterplots

Software Quality Assurance

	Software Quality Assurance: From Theory to Implementation
	Part-01: Introduction
	The Software Quality Challenge
01	The Uniqueness of Software Quality Assurance
02	The Environments for Which SQA Methods and Developed
03	Summary
	Review Questions
	Topics for Discussion
	What is Software Quality?
04	What is Software?
05	Software Errors Faults and Failures
06	Classification of the Causes of Software Errors
07	Software Quality – Definition
08	Software Quality Assurance – Definition and Objectives
09	Software Quality Assurance and Software Engineering
10	Summary
	Selected Bibliography
	Review Questions
	Topics for Discussion
	Software Quality Factors
11	The Need for Comprehensive Software Quality Requirements
12	Classifications of Software Requirements into Software Quality Factors
13	Product Operation Software Quality Factors
14	Product Revision Software Quality Factors
15	Product Transition Software Quality Factors
16	Alternative Models of Software Quality Factors
17	Who is Interested in the Definition of Quality Requirements?
18	Software Compliance with Quality Factors
19	Summary
	Selected Bibliography
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	The Components of the Software Quality Assurance System – Overview
20	The SQA System – An SQA Architecture
21	Pre-project Components
22	Software Project Life Cycle Components
23	Infrastructure Components for Error Prevention and Improvement
24	Management SQA Components
25	SQA Standards, System Certification, and Assessment Components
26	Organizing for SQA – The Human Components
27	Considerations Guiding Construction of an Organization's SQA System
	Part-02: Pre-project Software Quality Components
	Contract Review
28	Introduction: The CFV Project Completion Celebration
29	The Contract Reviw Process and Its Stages
30	Contract Reviw Objectives
31	Implementation of a Contract Review
32	Contract Review Subjects