



# G H RAISONI COLLEGE OF ENGINEERING NAGPUR

(An Autonomous Institute affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)

CRPF Gate No.3, Hingna Road, Digdoh Hills, Nagpur. Maharashtra-440016 (India)

## Course wise Teaching Plan for Session : Summer 2017

Course : Theory Of Computation

Faculty : Ms. Nisha Shivcharan Raote

| Unit | Topic Code | Topic Covered  | Date       | Course  | Section |
|------|------------|--|------------|---------|---------|
| 1    | 1          | Sets, relations, functions and graphs examples   | 12/08/2016 | BCSL301 | A       |
| 1    | 1          | Objective of TOC, Applications, Uses, TAE parameter discussion.                        | 05/12/2016 | BCSL301 | A       |
| 1    | 2          | Introduction to TOC and Basic concepts.  | 06/12/2016 | BCSL301 | A       |
| 1    | 3          | Mathematical preliminaries – Sets, operations, relations, strings, transitive closure. | 08/12/2016 | BCSL301 | A       |
| 1    | 4          | Induction and proof methods- pigeon-hole principle.                                    | 09/12/2016 | BCSL301 | A       |
| 1    | 5          | Finite State machine, regular languages.   | 12/12/2016 | BCSL301 | A       |
| 1    | 6          | Deterministic finite automata, conversion to deterministic automata,                   | 13/12/2016 | BCSL301 | A       |
| 1    | 7          | Conversion to deterministic automata and its examples.                                 | 15/12/2016 | BCSL301 | A       |
| 1    | 8          | E-closures – regular expressions.  | 16/12/2016 | BCSL301 | A       |
| 1    | 9          | Finite automata.   | 19/12/2016 | BCSL301 | A       |
| 1    | 10         | Minimization of automata.  | 20/12/2016 | BCSL301 | A       |
| 1    | 11         | Moore and Mealy machine and their equivalence.   | 22/12/2016 | BCSL301 | A       |
| 1    | 12         | Examples & Revision.   | 23/12/2016 | BCSL301 | A       |
| 2    | 13         | Pumping lemma for regular sets.  | 02/01/2017 | BCSL301 | A       |
| 2    | 14         | Closure properties of regular sets- decision properties for regular sets.              | 03/01/2017 | BCSL301 | A       |
| 2    | 15         | Equivalence between regular language and regular grammar.                              | 05/01/2017 | BCSL301 | A       |
| 1    | 17         | Revision   | 06/01/2017 | BCSL301 | A       |
| 2    | 16         | Concept of language – grammars and production rules.                                   | 12/01/2017 | BCSL301 | A       |
| 2    | 18         | Context free languages with example.   | 13/01/2017 | BCSL301 | A       |
| 2    | 19         | Parse trees and ambiguity of grammar.  | 16/01/2017 | BCSL301 | A       |



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|------|------------|--|------------|---------|---------|
| 5    | 32         | Revisions.   | 16/01/2017 | BCSL301 | A       |
| 3    | 20         | Reduction of CFGs.   | 17/01/2017 | BCSL301 | A       |
| 3    | 21         | Chomsky Normal Forms.  | 19/01/2017 | BCSL301 | A       |
| 3    | 22         | Griebach Normal Forms.   | 20/01/2017 | BCSL301 | A       |
| 3    | 23         | Push – down Automata (PDA).  | 23/01/2017 | BCSL301 | A       |
| 4    | 24         | Acceptance by two methods and their equivalence.   | 24/01/2017 | BCSL301 | A       |
| 4    | 25         | Conversion of PDA to CFG CFLs.   | 27/01/2017 | BCSL301 | A       |
| 4    | 26         | .PDAs- closure and decision properties of CFLs.  | 30/01/2017 | BCSL301 | A       |
| 1    | 27         | Turing machines – variants.  | 31/01/2017 | BCSL301 | A       |
| 5    | 28         | Recursively enumerable, recursive sets.  | 02/02/2017 | BCSL301 | A       |
| 4    | 7          | Grammar types, Normal forms of Grammar   | 03/02/2017 | BCSL301 | A       |
| 5    | 29         | TM as computer of function.  | 03/02/2017 | BCSL301 | A       |
| 5    | 30         | Decidability and solvability.  | 13/02/2017 | BCSL301 | A       |
| 5    | 31         | Examples on TM.  | 14/02/2017 | BCSL301 | A       |
| 5    | 33         | Halting Problem, reductions , Post correspondence Problem (PCP).                                 | 17/02/2017 | BCSL301 | A       |
| 6    | 34         | Church's hypothesis, Introduction to recursive function theory – primitive recursive.            | 20/02/2017 | BCSL301 | A       |
| 6    | 35         | Partial recursive functions, Parsing: top down and bottom up approach, derivation and reduction. | 21/02/2017 | BCSL301 | A       |
| 6    | 36         | Partial recursive functions, Parsing: top down and bottom up approach, derivation and reduction. | 23/02/2017 | BCSL301 | A       |
| 6    | 37         | Partial recursive functions, Parsing: top down and bottom up approach, derivation and reduction. | 24/02/2017 | BCSL301 | A       |



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Course : Theory Of Computation

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| Unit | Topic Code | Topic Covered  | Date       | Course  | Section |
|------|------------|--|------------|---------|---------|
| 6    | 38         | Partial recursive functions, Parsing: top down and bottom up approach, derivation and reduction. | 27/02/2017 | BCSL301 | A       |
| 6    | 39         | Revision   | 02/03/2017 | BCSL301 | A       |
| 6    | 40         | Revision   | 06/03/2017 | BCSL301 | A       |
| 6    | 41         | Revision   | 09/03/2017 | BCSL301 | A       |
| 6    | 42         | Revision   | 10/03/2017 | BCSL301 | A       |
| 6    | 43         | Advanced Topic   | 20/03/2017 | BCSL301 | A       |
| 6    | 44         | Advanced Topic   | 27/03/2017 | BCSL301 | A       |
| 2    | 4          | Non- Deterministic Finite Automata   | 01/05/2017 | BCSL301 | A       |
| 4    | 8          | Pumping Lemma, Examples  | 03/09/2017 | BCSL301 | A       |
| 3    | 5          | NFA to DFA conversions   | 01/12/2017 | BCSL301 | A       |



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## Course wise Teaching Plan for Session : Summer 2017

Course : Design & Analysis of Algorithms

Faculty : P S Jain

| Unit | Topic Code | Topic Covered   | Date       | Course  | Section |
|------|------------|---|------------|---------|---------|
| 1    | 1          | Introduction to arithmetic and geometric series               | 05/12/2016 | BCSL404 | A       |
| 1    | 2          | Bounding summation using integration                          | 06/12/2016 | BCSL404 | A       |
| 1    | 1          | Problems on Recurrence Relation                               | 09/12/2016 | BCSL404 | A       |
| 1    | 3          | Recurrence relation   | 09/12/2016 | BCSL404 | A       |
| 1    | 4          | Characteristic equation and generating function               | 12/12/2016 | BCSL404 | A       |
| 1    | 5          | Complexity calculation of various standard functions          | 13/12/2016 | BCSL404 | A       |
| 1    | 2          | Problems on Asymptotic Notations                              | 16/12/2016 | BCSL404 | A       |
| 1    | 6          | Principles of designing algorithms                            | 16/12/2016 | BCSL404 | A       |
| 2    | 7          | Introduction to asymptotic notation of analysis of algorithms | 19/12/2016 | BCSL404 | A       |
| 2    | 8          | Analyzing control structures                                  | 20/12/2016 | BCSL404 | A       |
| 2    | 3          | Divide and conquer basic strategy                             | 23/12/2016 | BCSL404 | A       |
| 2    | 9          | Worst case and average case analysis                          | 23/12/2016 | BCSL404 | A       |
| 2    | 10         | Amortized analysis  | 02/01/2017 | BCSL404 | A       |
| 2    | 11         | Application of amortized analysis                             | 03/01/2017 | BCSL404 | A       |
| 2    | 4          | Matrix operation, Binary search                               | 06/01/2017 | BCSL404 | A       |
| 2    | 12         | Sorting networks, comparison networks                         | 06/01/2017 | BCSL404 | A       |
| 3    | 5          | Quick sort, Merge sort  | 13/01/2017 | BCSL404 | A       |
| 2    | 13         | Biotonic sorting network                                      | 13/01/2017 | BCSL404 | A       |
| 3    | 14         | Introduction to advanced data structure- Fibonacci heap       | 16/01/2017 | BCSL404 | A       |
| 3    | 15         | Disjoint set representation                                   | 17/01/2017 | BCSL404 | A       |
| 3    | 6          | Greedy method- basic strategy                                 | 20/01/2017 | BCSL404 | A       |
| 3    | 16         | Red and black tree and applications                           | 20/01/2017 | BCSL404 | A       |



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| Unit | Topic Code | Topic Covered   | Date       | Course  | Section |
|------|------------|---|------------|---------|---------|
| 3    | 17         | Divide and conquer basic strategy                     | 23/01/2017 | BCSL404 | A       |
| 3    | 18         | Matrix operation, Binary search                       | 24/01/2017 | BCSL404 | A       |
| 4    | 7          | Greedy method- basic strategy                         | 27/01/2017 | BCSL404 | A       |
| 3    | 19         | Quick sort, Merge sort                                | 27/01/2017 | BCSL404 | A       |
| 3    | 20         | Fast Fourier Transform                                | 30/01/2017 | BCSL404 | A       |
| 4    | 21         | Greedy method- basic strategy                         | 31/01/2017 | BCSL404 | A       |
| 4    | 8          | Minimum cost spanning trees                           | 03/02/2017 | BCSL404 | A       |
| 4    | 22         | Application to job sequencing with deadlines problem  | 03/02/2017 | BCSL404 | A       |
| 4    | 23         | Minimum cost spanning trees                           | 06/02/2017 | BCSL404 | A       |
| 4    | 24         | Single source shortest path using greedy method       | 07/02/2017 | BCSL404 | A       |
| 4    | 25         | Introduction to dynamic programming                   | 13/02/2017 | BCSL404 | A       |
| 4    | 26         | Basic strategy, Multistage graph                      | 14/02/2017 | BCSL404 | A       |
| 4    | 9          | Minimum cost spanning trees                           | 17/02/2017 | BCSL404 | A       |
| 4    | 27         | All pairs shortest path, single source shortest paths | 20/02/2017 | BCSL404 | A       |
| 4    | 28         | Optimal binary search tree                            | 21/02/2017 | BCSL404 | A       |
| 5    | 29         | Travelling salesman problem, Maximum flow networks    | 27/02/2017 | BCSL404 | A       |
| 5    | 30         | Basic Traversal and Search Techniques,                | 28/02/2017 | BCSL404 | A       |
| 4    | 10         | Introduction to dynamic programming                   | 03/03/2017 | BCSL404 | A       |
| 5    | 31         | Breadth First Search & Depth first search             | 03/03/2017 | BCSL404 | A       |
| 5    | 32         | Connected Component                                   | 06/03/2017 | BCSL404 | A       |
| 5    | 33         | Backtracking strategy                                 | 07/03/2017 | BCSL404 | A       |
| 4    | 11         | Introduction to dynamic programming                   | 10/03/2017 | BCSL404 | A       |



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Course : Design & Analysis of Algorithms

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| Unit | Topic Code | Topic Covered                                      | Date       | Course  | Section |
|------|------------|--|------------|---------|---------|
| 5    | 34         | 8-Queen's problem                                  | 10/03/2017 | BCSL404 | A       |
| 5    | 12         | Travelling salesman problem, Maximum flow networks | 17/03/2017 | BCSL404 | A       |
| 5    | 35         | Graph coloring, Hamiltonian cycles                 | 17/03/2017 | BCSL404 | A       |
| 6    | 36         | NP-hard and NP-complete problems                   | 20/03/2017 | BCSL404 | A       |
| 6    | 37         | Non-deterministic algorithm                        | 21/03/2017 | BCSL404 | A       |
| 5    | 13         | Basic Traversal and Search Techniques,             | 24/03/2017 | BCSL404 | A       |
| 6    | 38         | Decision and optimization problems                 | 24/03/2017 | BCSL404 | A       |
| 6    | 39         | Computational geometry, approximation algorithm    | 27/03/2017 | BCSL404 | A       |
| 6    | 40         | Recent trends in design and analysis of algorithm  | 28/03/2017 | BCSL404 | A       |



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## Course wise Teaching Plan for Session : Summer 2017

Course : Graph Theory & Combinatorics

Faculty : Aarti Patle

| Unit | Topic Code | Topic Covered   | Date       | Course  | Section |
|------|------------|---|------------|---------|---------|
| 1    | 1          | Introduction to GTC   | 05/12/2016 | BAML208 | A       |
| 1    | 2          | Unit:1-Set Theory   | 06/12/2016 | BAML208 | A       |
| 1    | 3          | Representation of sets on computer in terms of 0's & 1's            | 07/12/2016 | BAML208 | A       |
| 1    | 4          | Partition & covering of a set, Product set,                         | 09/12/2016 | BAML208 | A       |
| 1    | 5          | Relations, Graph of relation  | 13/12/2016 | BAML208 | A       |
| 1    | 6          | Matrix of relation, Transitive closure & Compatible relation        | 14/12/2016 | BAML208 | A       |
| 1    | 7          | Partial ordering & poset, ,   | 16/12/2016 | BAML208 | A       |
| 1    | 8          | Hasse diagram of Poset, Totally ordered set                         | 19/12/2016 | BAML208 | A       |
| 1    | 9          | Peano axioms  | 20/12/2016 | BAML208 | A       |
| 1    | 10         | Mathematical Induction  | 21/12/2016 | BAML208 | A       |
| 2    | 11         | Semigroup, monoid, and examples                                     | 23/12/2016 | BAML208 | A       |
| 2    | 12         | Homomorphism, Isomorphism of semigroup.                             | 02/01/2017 | BAML208 | A       |
| 2    | 13         | Groups, properties of groups  | 03/01/2017 | BAML208 | A       |
| 2    | 14         | Permutations groups, Subgroups, Cosets, Lagranges theorem           | 04/01/2017 | BAML208 | A       |
| 2    | 15         | Properties of cyclic groups, generator of group,                    | 06/01/2017 | BAML208 | A       |
| 2    | 16         | Kernel of Homorphism, quotient group                                | 16/01/2017 | BAML208 | A       |
| 2    | 17         | Fundamental theorem, Homomorphism of groups                         | 17/01/2017 | BAML208 | A       |
| 2    | 18         | Residue classes & Fermats theorem                                   | 18/01/2017 | BAML208 | A       |
| 3    | 19         | Rings, types of rings,  | 20/01/2017 | BAML208 | A       |
| 3    | 20         | Fields, subring, Integral domain                                    | 23/01/2017 | BAML208 | A       |
| 3    | 21         | Simple properties of rings. Lattice as Poset & as algebraic system, | 24/01/2017 | BAML208 | A       |



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Faculty : Aarti Patle

| Unit | Topic Code | Topic Covered  | Date       | Course  | Section |
|------|------------|--|------------|---------|---------|
| 3    | 22         | Types of lattices, Hasse diagrams, Sublattice  | 25/01/2017 | BAML208 | A       |
| 3    | 23         | Direct product of Lattices, Lattice Homomorphism,                                    | 27/01/2017 | BAML208 | A       |
| 3    | 24         | Complement of elements of lattices, Various lattices, composition tables, Lattice    | 30/01/2017 | BAML208 | A       |
| 3    | 25         | Boolean algebra, Expressions, Equivalence of Boolean                                 | 31/01/2017 | BAML208 | A       |
| 3    | 26         | Expression by tables, Simplification of circuit & equivalent circuit by truth tables | 01/02/2017 | BAML208 | A       |
| 4    | 27         | Graphs and its types, Subgraph,  | 03/02/2017 | BAML208 | A       |
| 4    | 28         | Quotient graph, Euler path, Complete path, reach-ability                             | 06/02/2017 | BAML208 | A       |
| 4    | 29         | Cycle, matrix representation of graph. Transitive closure of graph                   | 07/02/2017 | BAML208 | A       |
| 4    | 30         | Adjacency matrix, Trees, Venn diagram, Representation of trees                       | 08/02/2017 | BAML208 | A       |
| 4    | 31         | Binary trees, Spanning trees,  | 13/02/2017 | BAML208 | A       |
| 4    | 32         | Prims algorithm  | 14/02/2017 | BAML208 | A       |
| 5    | 33         | Definition of generating functions and examples.                                     | 15/02/2017 | BAML208 | A       |
| 5    | 34         | Proof of simple combinatorial identities, Probab. G.F.                               | 20/02/2017 | BAML208 | A       |
| 5    | 35         | Recursive relations  | 21/02/2017 | BAML208 | A       |
| 5    | 36         | Definitions & examples, explicitly formula for sequence                              | 22/02/2017 | BAML208 | A       |
| 5    | 37         | Back tracking to find explicit formula of sequence,                                  | 27/02/2017 | BAML208 | A       |
| 5    | 38         | solving recurrence relations, Counting Theorem and appl.                             | 28/02/2017 | BAML208 | A       |
| 5    | 39         | Cardinal numbers, denumerable sets. Multiplication principle of counting.            | 01/03/2017 | BAML208 | A       |
| 5    | 40         | Equivalent sets Permutation & Combination with examples                              | 03/03/2017 | BAML208 | A       |
|      |            |  |            |         |         |





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|------|------------|--|------------|---------|---------|
| 5    | 41         | The pigeon hole principle & extended pigeon hole principle               | 06/03/2017 | BAML208 | A       |
| 5    | 42         | Application of pigeon hole principle in solving simple problems          | 07/03/2017 | BAML208 | A       |
| 6    | 43         | Examples of continued fractions ,<br>Study of continued fractions,       | 08/03/2017 | BAML208 | A       |
| 6    | 44         | Alpha has Infinite continued fraction if alpha is irrational             | 10/03/2017 | BAML208 | A       |
| 6    | 45         | Alpha has periodic continued fractions if alpha is quadratic irrational. | 17/03/2017 | BAML208 | A       |
| 6    | 46         | Appl. to approximation of irrationals by rationals, Hurwitz's theorem    | 20/03/2017 | BAML208 | A       |
| 6    | 47         | Revision   | 21/03/2017 | BAML208 | A       |
| 6    | 48         | Revision   | 22/03/2017 | BAML208 | A       |
| 6    | 49         | Revision   | 24/03/2017 | BAML208 | A       |
| 6    | 50         | Revision   | 27/03/2017 | BAML208 | A       |



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## Course wise Teaching Plan for Session : Summer 2017

Course : Microprocessor Based Systems

Faculty : Ganesh S Khekare

| Unit | Topic Code | Topic Covered   | Date       | Course  | Section |
|------|------------|---|------------|---------|---------|
| 1    | 1          | Revision  | 06/12/2016 | BECL303 | A       |
| 1    | 1          | Objectives of Microprocessor based systems, Revision of 8085 and other Processors | 06/12/2016 | BECL303 | A       |
| 1    | 1          | Objectives of Microprocessor based systems, Revision of 8085 and other Processors | 06/12/2016 | BECL303 | A       |
| 1    | 2          | Building Concepts of Microprocessor   | 07/12/2016 | BECL303 | A       |
| 1    | 2          | Building Concepts of Microprocessor   | 07/12/2016 | BECL303 | A       |
| 1    | 3          | Introduction to 16, 32, 64 bit Microprocessor                                     | 08/12/2016 | BECL303 | A       |
| 1    | 3          | Introduction to 16, 32, 64 bit Microprocessor                                     | 08/12/2016 | BECL303 | A       |
| 1    | 4          | Introduction to 16, 32, 64 bit Microprocessor                                     | 09/12/2016 | BECL303 | A       |
| 1    | 4          | Introduction to 16, 32, 64 bit Microprocessor                                     | 09/12/2016 | BECL303 | A       |
| 1    | 5          | Comparison of 8086 / 8088 CPU Architecture  | 13/12/2016 | BECL303 | A       |
| 1    | 5          | Comparison of 8086 / 8088 CPU Architecture  | 13/12/2016 | BECL303 | A       |
| 1    | 6          | Microprocessor Evolution - INTEL 8086 to Pentium with focus on                    | 14/12/2016 | BECL303 | A       |
| 1    | 6          | Microprocessor Evolution - INTEL 8086 to Pentium with focus on                    | 14/12/2016 | BECL303 | A       |
| 1    | 7          | Clock Speed, Concurrent operation of EU and BIU                                   | 15/12/2016 | BECL303 | A       |
| 1    | 7          | Clock Speed, Concurrent operation of EU and BIU                                   | 15/12/2016 | BECL303 | A       |
| 1    | 8          | Memory Organization & Interfacing   | 16/12/2016 | BECL303 | A       |
| 1    | 8          | Memory Organization & Interfacing   | 16/12/2016 | BECL303 | A       |
| 1    | 9          | Memory Organization & Interfacing   | 20/12/2016 | BECL303 | A       |
| 1    | 9          | Memory Organization & Interfacing   | 20/12/2016 | BECL303 | A       |
| 1    | 10         | Revision  | 21/12/2016 | BECL303 | A       |



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| Unit | Topic Code | Topic Covered  | Date       | Course  | Section |
|------|------------|--|------------|---------|---------|
| 1    | 10         | Revision   | 21/12/2016 | BECL303 | A       |
| 2    | 11         | 8086 Programming-Concepts of programming                   | 22/12/2016 | BECL303 | A       |
| 2    | 11         | 8086 Programming-Concepts of programming                   | 22/12/2016 | BECL303 | A       |
| 2    | 12         | Addressing modes   | 23/12/2016 | BECL303 | A       |
| 2    | 12         | Addressing modes   | 23/12/2016 | BECL303 | A       |
| 2    | 13         | Instruction set  | 03/01/2017 | BECL303 | A       |
| 2    | 13         | Instruction set  | 03/01/2017 | BECL303 | A       |
| 2    | 14         | Instruction set  | 04/01/2017 | BECL303 | A       |
| 2    | 14         | Instruction set  | 04/01/2017 | BECL303 | A       |
| 2    | 15         | Programming examples                                       | 05/01/2017 | BECL303 | A       |
| 2    | 15         | Programming examples                                       | 05/01/2017 | BECL303 | A       |
| 2    | 16         | Pseudo Opcodes   | 06/01/2017 | BECL303 | A       |
| 2    | 16         | Pseudo Opcodes   | 06/01/2017 | BECL303 | A       |
| 2    | 17         | Assembler Directives                                       | 12/01/2017 | BECL303 | A       |
| 2    | 17         | Assembler Directives                                       | 12/01/2017 | BECL303 | A       |
| 2    | 18         | Introduction to Software and Hardware tools                | 13/01/2017 | BECL303 | A       |
| 2    | 18         | Introduction to Software and Hardware tools                | 13/01/2017 | BECL303 | A       |
| 2    | 19         | [Cross assemblers, Logic analysers, Emulators, Simulators] | 17/01/2017 | BECL303 | A       |
| 2    | 19         | [Cross assemblers, Logic analysers, Emulators, Simulators] | 17/01/2017 | BECL303 | A       |
| 2    | 20         | Revision   | 18/01/2017 | BECL303 | A       |
| 2    | 20         | Revision   | 18/01/2017 | BECL303 | A       |
| 3    | 21         | Co-processor interfacing                                   | 19/01/2017 | BECL303 | A       |



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| Unit | Topic Code | Topic Covered                                  | Date       | Course  | Section |
|------|------------|--|------------|---------|---------|
| 3    | 21         | Co-processor interfacing                       | 19/01/2017 | BECL303 | A       |
| 3    | 22         | 8086 / 88 Maximum Mode                         | 20/01/2017 | BECL303 | A       |
| 3    | 22         | 8086 / 88 Maximum Mode                         | 20/01/2017 | BECL303 | A       |
| 3    | 23         | Architecture of 8087                           | 24/01/2017 | BECL303 | A       |
| 3    | 23         | Architecture of 8087                           | 24/01/2017 | BECL303 | A       |
| 3    | 24         | Programming of 8087                            | 25/01/2017 | BECL303 | A       |
| 3    | 24         | Programming of 8087                            | 25/01/2017 | BECL303 | A       |
| 3    | 25         | Programming of 8087                            | 27/01/2017 | BECL303 | A       |
| 3    | 25         | Programming of 8087                            | 27/01/2017 | BECL303 | A       |
| 3    | 26         | 8087 Interfacing with 8086/8088                | 31/01/2017 | BECL303 | A       |
| 3    | 26         | 8087 Interfacing with 8086/8088                | 31/01/2017 | BECL303 | A       |
| 3    | 27         | 8087 Interfacing with 8086/8088                | 01/02/2017 | BECL303 | A       |
| 3    | 27         | 8087 Interfacing with 8086/8088                | 01/02/2017 | BECL303 | A       |
| 3    | 28         | Revision                                       | 02/02/2017 | BECL303 | A       |
| 3    | 28         | Revision                                       | 02/02/2017 | BECL303 | A       |
| 4    | 29         | 8255 Interfacing                               | 03/02/2017 | BECL303 | A       |
| 4    | 29         | 8255 Interfacing                               | 03/02/2017 | BECL303 | A       |
| 4    | 30         | Interfacing and programming of Peripheral 8255 | 07/02/2017 | BECL303 | A       |
| 4    | 30         | Interfacing and programming of Peripheral 8255 | 07/02/2017 | BECL303 | A       |
| 4    | 31         | Interfacing and programming of Peripheral 8255 | 08/02/2017 | BECL303 | A       |
| 4    | 31         | Interfacing and programming of Peripheral 8255 | 08/02/2017 | BECL303 | A       |
| 4    | 32         | Interfacing of ADC, DAC & applications         | 14/02/2017 | BECL303 | A       |



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## Course wise Teaching Plan for Session : Summer 2017

Course : Microprocessor Based Systems

Faculty : Ganesh S Khekare

| Unit | Topic Code | Topic Covered  | Date       | Course  | Section |
|------|------------|--|------------|---------|---------|
| 4    | 32         | Interfacing of ADC, DAC & applications   | 14/02/2017 | BECL303 | A       |
| 4    | 33         | Interfacing of ADC, DAC & applications   | 15/02/2017 | BECL303 | A       |
| 4    | 33         | Interfacing of ADC, DAC & applications   | 15/02/2017 | BECL303 | A       |
| 4    | 34         | Interfacing of ADC, DAC & applications   | 21/02/2017 | BECL303 | A       |
| 4    | 34         | Interfacing of ADC, DAC & applications   | 21/02/2017 | BECL303 | A       |
| 4    | 35         | Interfacing and programming of Peripheral 8253                                 | 22/02/2017 | BECL303 | A       |
| 4    | 35         | Interfacing and programming of Peripheral 8253                                 | 22/02/2017 | BECL303 | A       |
| 4    | 36         | Interfacing and programming of Peripheral 8253                                 | 23/02/2017 | BECL303 | A       |
| 4    | 36         | Interfacing and programming of Peripheral 8253                                 | 23/02/2017 | BECL303 | A       |
| 5    | 37         | Special Peripheral Interfacing   | 24/02/2017 | BECL303 | A       |
| 5    | 37         | Special Peripheral Interfacing   | 24/02/2017 | BECL303 | A       |
| 5    | 38         | Architecture, Interfacing and programming of Peripherals, 8251                 | 28/02/2017 | BECL303 | A       |
| 5    | 38         | Architecture, Interfacing and programming of Peripherals, 8251                 | 28/02/2017 | BECL303 | A       |
| 5    | 39         | Architecture, Interfacing and programming of Peripherals, 8251                 | 01/03/2017 | BECL303 | A       |
| 5    | 39         | Architecture, Interfacing and programming of Peripherals, 8251                 | 01/03/2017 | BECL303 | A       |
| 5    | 40         | Architecture, Interfacing and programming of Peripherals, 8251                 | 02/03/2017 | BECL303 | A       |
| 5    | 40         | Architecture, Interfacing and programming of Peripherals, 8251                 | 02/03/2017 | BECL303 | A       |
| 5    | 41         | Architecture, Interfacing and programming of Peripherals, DMA Controllers 8237 | 03/03/2017 | BECL303 | A       |
| 5    | 41         | Architecture, Interfacing and programming of Peripherals, DMA Controllers 8237 | 03/03/2017 | BECL303 | A       |
|      |            |  |            |         |         |



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## Course wise Teaching Plan for Session : Summer 2017

Course : Microprocessor Based Systems

Faculty : Ganesh S Khekare

| Unit | Topic Code | Topic Covered  | Date       | Course  | Section |
|------|------------|--|------------|---------|---------|
| 5    | 42         | Architecture, Interfacing and programming of Peripherals, DMA Controllers 8237 | 07/03/2017 | BECL303 | A       |
| 5    | 42         | Architecture, Interfacing and programming of Peripherals, DMA Controllers 8237 | 07/03/2017 | BECL303 | A       |
| 6    | 43         | Advanced Microprocessor study  | 08/03/2017 | BECL303 | A       |
| 6    | 43         | Advanced Microprocessor study  | 08/03/2017 | BECL303 | A       |
| 6    | 44         | 80386 Architecture, Real and Protected Mode,                                   | 09/03/2017 | BECL303 | A       |
| 6    | 45         | Register Model, Memory Management Unit   | 10/03/2017 | BECL303 | A       |
| 6    | 46         | Register Model, Memory Management Unit   | 17/03/2017 | BECL303 | A       |
| 6    | 47         | Latest trends in microprocessors systems.                                      | 21/03/2017 | BECL303 | A       |
| 6    | 48         | Revision   | 22/03/2017 | BECL303 | A       |
| 6    | 49         | Revision   | 23/03/2017 | BECL303 | A       |
| 6    | 50         | Revision   | 24/03/2017 | BECL303 | A       |



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## Course wise Teaching Plan for Session : Summer 2017

Course : Analog & Digital Communication

Faculty : Ms. Trupti H. Nagrare

| Unit | Topic Code | Topic Covered  | Date       | Course  | Section |
|------|------------|--|------------|---------|---------|
| 1    | 1          | Objectives and importance of communication   | 05/12/2016 | BECL210 | A       |
| 1    | 2          | Objectives of Analog And Digital Communication , explanation about TAE parameter, Introduction to syllabus | 06/12/2016 | BECL210 | A       |
| 1    | 3          | Block Schematic of Communication System  | 07/12/2016 | BECL210 | A       |
| 1    | 4          | Base Band Signals and their bandwidth requirements   | 08/12/2016 | BECL210 | A       |
| 1    | 5          | RF Bands, Types of Communication Channels  | 12/12/2016 | BECL210 | A       |
| 1    | 6          | transmission line, coaxial cable, fiber optic, Waveguides and Optical Fiber                                | 13/12/2016 | BECL210 | A       |
| 1    | 7          | Concept of Radiation and Electromagnetic waves   | 14/12/2016 | BECL210 | A       |
| 1    | 8          | Ground Wave Sky Wave, Space Wave   | 15/12/2016 | BECL210 | A       |
| 1    | 9          | Duct, Tropospheric Scatter and   | 19/12/2016 | BECL210 | A       |
| 1    | 10         | Concept of Fading and diversity reception, Noise Figure Calculations.                                      | 20/12/2016 | BECL210 | A       |
| 2    | 11         | AM Modulators series plate modulated class C amplifiers,   | 21/12/2016 | BECL210 | A       |
| 2    | 12         | efficiency & power calculations  | 22/12/2016 | BECL210 | A       |
| 2    | 13         | AM using transistors   | 02/01/2017 | BECL210 | A       |
| 2    | 14         | Block Diagram of AM Receiver   | 03/01/2017 | BECL210 | A       |
| 2    | 15         | AM Detection : Envelope detection  | 04/01/2017 | BECL210 | A       |
| 2    | 16         | Synchronous detection, Practical diode detection   | 05/01/2017 | BECL210 | A       |
| 2    | 17         | AGC, SSB and DSB detection methods   | 12/01/2017 | BECL210 | A       |
| 2    | 18         | AM receiver  | 16/01/2017 | BECL210 | A       |
| 2    | 19         | Am demodulator, SSB receiver, AGC  | 17/01/2017 | BECL210 | A       |
| 3    | 20         | Frequency modulation, introduction, modulation index   | 18/01/2017 | BECL210 | A       |



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## Course wise Teaching Plan for Session : Summer 2017

Course : Analog & Digital Communication

Faculty : Ms. Trupti H. Nagrare

| Unit | Topic Code | Topic Covered  | Date       | Course  | Section |
|------|------------|--|------------|---------|---------|
| 3    | 21         | FM modulator using FET   | 19/01/2017 | BECL210 | A       |
| 3    | 22         | Angle modulation,  | 23/01/2017 | BECL210 | A       |
| 3    | 23         | frequency modulation spectrum<br>reactance tube and FET modulators                                     | 24/01/2017 | BECL210 | A       |
| 3    | 24         | Angle modulation,  | 25/01/2017 | BECL210 | A       |
| 3    | 25         | Armstrong method,  | 30/01/2017 | BECL210 | A       |
| 3    | 26         | FM transmitters  | 31/01/2017 | BECL210 | A       |
| 3    | 27         | Armstrong method,  | 01/02/2017 | BECL210 | A       |
| 3    | 28         | frequency stabilization methods  | 02/02/2017 | BECL210 | A       |
| 3    | 29         | FM discriminator, foster Seeley ,PLL<br>detectors  | 06/02/2017 | BECL210 | A       |
| 3    | 30         | stereo phonic FM, Super heterodyne<br>Receiver   | 07/02/2017 | BECL210 | A       |
| 3    | 31         | FM discriminator   | 08/02/2017 | BECL210 | A       |
| 3    | 32         | Performance characteristics<br>:Sensitivity, Selectivity,Fidelity,<br>Image Frequency Rejection, IFRR, | 13/02/2017 | BECL210 | A       |
| 3    | 33         | Tracking, De-emphasis, Mixers  | 14/02/2017 | BECL210 | A       |
| 4    | 34         | Pulse modulation: Pulse amplitude<br>modulation [PAM] , pulse width<br>modulation[PWM]                 | 15/02/2017 | BECL210 | A       |
| 4    | 35         | Pulse position modulation [PPM]Pulse<br>code modulation [PCM   | 20/02/2017 | BECL210 | A       |
| 4    | 36         | PCM systems, Delta<br>modulation,ADPCM, matched filter<br>receiver                                     | 21/02/2017 | BECL210 | A       |
| 4    | 37         | Coherent Binary: PSK, FSK  | 22/02/2017 | BECL210 | A       |
| 4    | 38         | Pulse code modulation, quantization  | 23/02/2017 | BECL210 | A       |
| 4    | 39         | ADPCM,DM,Digital modulation  | 27/02/2017 | BECL210 | A       |
| 5    | 40         | Source coding and transmission<br>methods  | 28/02/2017 | BECL210 | A       |





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## Course wise Teaching Plan for Session : Summer 2017

Course : Analog & Digital Communication

Faculty : Ms. Trupti H. Nagrare

| Unit | Topic Code | Topic Covered   | Date       | Course  | Section |
|------|------------|---|------------|---------|---------|
| 5    | 41         | Data formats-unipolar and polar NRZ,RZ                          | 01/03/2017 | BECL210 | A       |
| 5    | 42         | bipolar [AMI], manchester, synchronization-bit and frame        | 02/03/2017 | BECL210 | A       |
| 5    | 43         | Synchronization, scrambling and unscramling, Information theory | 06/03/2017 | BECL210 | A       |
| 5    | 44         | Information theory, Huffman coding and                          | 07/03/2017 | BECL210 | A       |
| 5    | 45         | L-Z encoding  | 08/03/2017 | BECL210 | A       |
| 5    | 46         | channel coding algorithm  | 09/03/2017 | BECL210 | A       |
| 5    | 47         | convolution, distance properties                                | 20/03/2017 | BECL210 | A       |
| 6    | 48         | Linear block coding, generator matrix and parity check matrix,  | 21/03/2017 | BECL210 | A       |
| 6    | 49         | Transfer function of convolution code,                          | 22/03/2017 | BECL210 | A       |
| 6    | 50         | viterbi algorithm   | 23/03/2017 | BECL210 | A       |
| 6    | 51         | optimum decoding,   | 27/03/2017 | BECL210 | A       |
| 6    | 52         | distance properties of binary convolution coding                | 28/03/2017 | BECL210 | A       |
| 6    | 53         | fano algorithm,   | 29/03/2017 | BECL210 | A       |
| 6    | 54         | Trellis code modulation   | 30/03/2017 | BECL210 | A       |