

# METRIC NO. 1.4

**Feedback System** 



Shri Sant Gajanan Maharaj College of Engineering, Shegaon Self-Study Report



## SHRI GAJANAN SHIKSHAN SANSTHA'S

## SHRI SANT GAJANAN MAHARAJ COLLEGE OF ENGINEERING, SHEGAON - 444203, DIST. BULDHANA (MAHARASHTRA STATE), INDIA

\* Recognized by A.I.C.T.E., New Delhi, \* Affiliated to Sant Gadge Baba Amravati University, Amravati & \*Approved by the D.T.E., M.S. Mumbai

Ph.Nos : 8669638081 / 8669638082

Website : www.ssgmce.ac.in Email- principal@ssgmce.ac.in registrar@ssgmce.ac.in

Date: 04-03-2024

## **Declaration**

This is to declare that the information, reports, true copies and numerical data etc, furnished in this file as supporting documents is verified by IQAC and found correct.

Hence this certificate.

Dr. A. U. Jawadekar

**IQAC** Coordinator

Dr. S. B. Somani PRINCIPAL Shri Sant Gajanan Maharaj College of Engineering, Shegaon.





#### Shri Gajanan Shikshan Sanstha's

# SHRI SANT GAJANAN MAHARAJ COLLEGE OF ENGINEERING

### SHEGAON – 444203, DIST. BULDHANA (MAHARASHTRA STATE),

#### INDIA

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Ph: +918669638081/82 Website- www.ssgmce.ac.in Email.principal@ssgmce.ac.in, registrar@ssgmce.ac.in

#### 1.4: Feedback analysis report submitted to appropriate bodies

The primary objective of this feedback process is to establish a framework for gathering, summarizing, and documenting stakeholder perceptions regarding the quality and effectiveness of the institute's curriculum. This valuable feedback is subsequently used for program evaluation and curriculum enhancement.

#### Stakeholders Involved:

Feedback is collected from a variety of stakeholders, including employers, alumni, parents, students, and faculty.

Areas of Feedback:

The institution gathers feedback on:

Curriculum suggestions Teaching Learning

#### **Feedback Channels:**

Employers: Feedback from employers highlights areas where the curriculum may be lacking or outdated, providing invaluable insights for curriculum revision and development to align with industry requirements.

Alumni: Alumni input provide perspective on the relevance of the curriculum to real-world scenarios and career opportunities.

Parents: Parental feedback offers insight into the perceived value of the curriculum and its alignment with their expectations for their children's education.

Students: Students are asked to provide feedback on the teaching-learning process and facilities in the institute, ensuring their voices are heard in shaping their educational experiences.

Faculty: Faculty feedback offers insights into the effectiveness of the curriculum delivery methods and areas for improvement.

#### **Communication with Sant Gadge Baba Amravati University:**

As the institution is affiliated with Sant Gadge Baba Amravati University, all valuable curriculum-related suggestions are communicated to the Board of Studies (BoS).

#### **Communication with Departments:**

The Dean Academics facilitates the dissemination of faculty feedback, gathered from student evaluations of the teaching-learning process, to all departments across the institution. Suggestions and observations provided by students are subsequently conveyed to the respective course teachers through heads of the department, enabling them to consider and address areas for enhancement. This structured communication ensures that valuable student input informs on-going efforts to refine teaching methodologies and optimize the learning experience.









## SHRI SANT GAJANAN MAHARAJ COLLEGE OF ENGINEERING, SHEGAON - 444203, DIST. BULDANA (MAHARASHTRA STATE), INDIA

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Ph : 091 - 7265 - 252116, 252216 Fax: 091 - 7265 - 252346

Email- principal@ssgmce.ac.in, registrar@ssgmce.ac.in

Website-www.ssgmce.org

Date: 07/06/2022

To Registers, Board of Studies.

Mechanical Engineering. Sant Gadge Baba Amravati University, Amravati

Subject: Regarding the suggestions in current syllabus of Mechanical Engineering.

R/Sir.

Our institute, i.e. Shri Sant Gajanan Maharaj College of Engineering, Shegaon is affiliated to SGBAU Amravati since from 1983. As a part of regular curriculum gap identification exercise (Related with Accreditation activity), please find the below mentioned suggestions in the current syllabus of Mechanical Engineering.

SN	Subject Name	Subject code	Suggestions
1	Energy Conversion-I	4ME02	Points to be added- Feed water treatment (Unit II), Binary cycle (Unit IV), Safety measures for nuclear power plant (Unit VI), IGCC system (Unit VI).
2	Hydraulic and pneumatic systems	4ME05	Points to be added- Topics related to pneumatic systems, CFD methodology (Unit VI)
3	Kinematics of machines	5ME03	Points to be added- Straight line generators, Universal joints (Unit I), Robotics with application of KOM (Unit III)
4	Refrigeration and air conditioning	8ME04	Points to be added- VARS refrigeration system (Unit I), performance analysis of refrigeration components (Unit III).

It is our humble request to incorporate the above mentioned changes in the upcoming syllabus restructuring process if possible.

Thanking you.

Academic Monitoring Committee,

Mechanical Engg. Dept.

Head of Department, Mechanical Engg. Dept

Principal

Shri Sant Gajanan Maharaj ollege of Engineering, Shegaon.

Head Department of Mechanical Engineering S.S.G.M.College of Engineering Shegaon - 444203 (M.S.) INDIA

SHEGAON

444203



## Shri Gajanan Shikshan Sanstha's

## SHRI SANT GAJANAN MAHARAJ COLLEGE OF ENGINEERING, SHEGAON – 444203, DIST. BULDANA (MAHARASHTRA STATE), INDIA

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Ph : 091 - 7265 - 252116, 252216 Fax : 091 - 7265 - 252346 Email- principal@ssgmce.ac.in, registrar@ssgmce.ac.in Website- www.ssgmce.org

Date: 28.07.2022

To.

Registrar,

Sant Gadge Baba Amravati University

Amravati

Subject: Regarding the suggestions in current syllabus of Mechanical Engineering.

Respected Sir,

Our institute, i.e. Shri Sant Gajanan Maharaj College of Engineering, Shegaon has been affiliated to SGBAU Amravati since from 1983. As part of regular curriculum gap identification exercise, we have conducted the syllabus restructuring meeting in Mechanical Engg. Department on 28th July 2022 with Mr. Kamlesh Pande Sir (Visiting Professor, IIT, Bombay). We are submitting our findings for below mentioned subjects as suggestions in the current syllabus of Mechanical Engg.

S.N.	Subject Name	Subject Code	Suggestion(s)
1	Thermodynamics	3ME04	<ul> <li>Introduced real life examples for Non-flow process.</li> <li>Couple Non-flow process with equipment.</li> <li>Theoretical concept of cannot (Practical limitation of cannot cycle)</li> <li>Industrial examples of entropy variation</li> <li>Disadvantages of throttling process</li> <li>Remove gas laws/Ideal gas equation</li> </ul>
2	Fluid Mechanics	3ME05	<ul> <li>Include pilot tube &amp; orifice meter</li> <li>Include Dimensional Analysis</li> <li>Measurement Instruments</li> <li>Experiment on flow through channels</li> <li>Experiment on pressure drop in different diameter pipes.</li> </ul>
3	Energy Conversion-I	4ME02	<ul> <li>Include Boiler Efficiency &amp; Plant Efficiency</li> <li>Remove MHD, OTEC from syllabus.</li> <li>Add Solar PV, Solar Thermal, Hybrid Renewable Energy.</li> </ul>
4	Hydraulic & Pneumatics System	4ME05	• Include topics like Advancement of Pumps, Rotary Pumps
5	Heat Transfer	5ME01	<ul><li>Include Fourier Number</li><li>Practical examples of Unsteady State H.T.</li></ul>

It is our humble request to incorporate the above mentioned changes in the upcoming syllabus restructuring process if possible. (Subject-wise detailed sheets are attached for reference).

Thanking you

Departm Dr. S. P. Trikal gneering

Head of Department Mech. Engg. Dept.

SHEGAON OF SHEGAON OF SHEGAON

Dr. S. B. Somani

Shri Sas Gigoen Maharaj College of Engineering, Shegaon.



Shri Gajanan Shikshan Sanstha's

## SHRI SANT GAJANAN MAHARAJ COLLEGE OF ENGINEERING, SHEGAON – 444203, DIST. BULDANA (MAHARASHTRA STATE), INDIA

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Website- www.ssgmce.org

Date: 21-05-2022

To The Chairman, BOS, SGBAU, Amravati

Subject: Recommendations on syllabus restructure of Fifth Semester "*Data Science and Statistics*" (5KS04) Subject of Computer Science and Engineering.

Respected Sir,

The Syllabus of Data Science and Statistics (5KS04) of Computer Science and Engineering is guite lengthy and very difficult to complete in given stipulated time period. It is also observed that the same subject syllabus in Information Technology branch is suitable for the third year students.

Due to this bulk syllabus for the third year students, it is observed that there is lack of interest of students to choose this elective subject. So herewith submitting the proposed syllabus for the said subject. You are kindly requested to restructure the syllabus.

Thanking you,

Yours faithfully,

HOD, CSE

#### Enclosed:

- 1. Proposed syllabus copy for data science and statistics (5KS04)
- 2. Data Science and Statistics (5KS04) (CSE) Syllabus Copy.

# Sant Gadge Baba Amravati University, Amravati

## Shri Sant Gajanan Maharaj College of Engineering, Shegaon

Third Year (Fifth Semester) Computer Science and Engineering

Proposed Syllabus for Data science and Statistics (5KS04)

Teaching Scheme: 03 Hours/Week, Credit: 03

Course Prerequisite: Discrete Structures & Graph Theory (3KS02).

**Course Objectives**: Throughout the course, students will be expected to demonstrate their understanding of Data Science and Statistics by being able to do each of the following:

- To understand the need of data science and Statistics
- To understand the computational statistics in data science.
- To understand and apply the different data modeling strategies.
- To learn data analytics using python programming.
- To be conversant with advances in analytics.
- To apply principles of Data Science to the analysis of business problems.

**Course Outcomes:** On completion of the course, the students will be able to:

- 1. Demonstrate proficiency with statistical analysis of data.
- 2. Build skills in transformation and merging of data for use in analytic tools.
- 3. Perform linear and multiple linear regression analysis.
- 4. Develop the ability to build and assess data-based models.
- 5. Evaluate outcomes and make decisions based on data.

#### Unit I: Introduction to Data Science (6 hours)

Basics and need of data science, Applications of data science, Exploratory Data Analysis, the Data Science Process, Stages of a Data Science Project, Data Science life cycle, Data: Data types, Data Collection, Need of data wrangling, Methods: Data Cleaning, Data Integration, Data reduction, Data transformation, data discretization.

#### Unit II: Statistical Inference

Need of Statistics in Data Science, Measures of central tendency: Mean, Median, Mode, Mid-range. Measures of Dispersion: Range, variance, Mean deviation, standard deviation, Bays theorem Basics and need of hypothesis and hypothesis testing, Pearson correlation, sample hypothesis testing, chi-square tests, t-test.

#### Unit III: Regression and its techniques

Basics of regression, simple and multiple regression, Ridge regression, Lasso regression, Selecting the Tuning Parameter, Tradeoff Between Prediction Accuracy and Model Interpretability,

#### Unit IV: Classification

Classification: An Overview of Classification, Why not Linear Regression?, Naïve based decision trees, Regression vs Classification Problems, Logical Regression: The Logistic Model, Regression Coefficients, Making Predictions, Multiple Logistic Regression, Classification Problems, The Bootstrap

#### Unit V: Tree Based Methods

Tree-Based Methods: Decision, Regression and Classification Trees, Trees Versus Linear Models, Advantages and Disadvantages, Bagging, Random Forests, Boosting, Generalized Additive Models: Regression Problems and Classification Problems.

#### Unit VI: Supervised and Unsupervised Learning.

Supervised learning methods overview, challenges ,random forest algorithm, Unsupervised Learning: The Challenge of Unsupervised Learning: Principal Components Analysis, Clustering Methods: K-Means Clustering, Hierarchical Clustering, Practical Issues in Clustering.

#### **Learning Resources:**

#### TEXT BOOK

1) Chirag Shah," A Hands on Introduction to Data Science ", Cambridge University Press,(2020) ISBN:978-1-108-47244-9.

#### REFERENCE BOOK

- 1) Cathy O'Neil and Rachel Schutt: Doing Data Science, First Edition, 2014, O'reilly Publications, ISBN:978-1-449-35865-5.
- Gareth James, Daniela Witten, Trevor Hastie, Robert Tibshirani: An Introduction to Statistical Learning with Applications in R, First Edition, 2013, Springer-Verlag New York, ISBN: 978-1-4614-7137-0.

Dr. P.K.Bharne Subject Teacher CSE, SSGMCE

CSE, SSGMCE

## Student's Signature:

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#### B.E Computer science and engineering Semester V

#### Syllabus for Data Science and Statistics (5KS04)

Course Prerequisite: Basic knowledge of Mathematics

**Course Objectives:** Throughout the course, students will be expected to demonstrate their understanding of Data Science and Statistics by being able to do each of the following:

- Demonstrate knowledge of statistical data analysis techniques utilized in business decision making.
- Apply principles of Data Science to the analysis of business problems.
- Apply the learned concepts for the skillful data management.

**Couse Outcomes**: (Expected Outcome): On completion of the course, the students will be able to

- Demonstrate proficiency with statistical analysis of data.
- Build skills in transformation and merging of data for use in analytic tools.
- Perform linear and multiple linear regression analysis.
- Develop the ability to build and assess data-based models.
- Evaluate outcomes and make decisions based on data.

#### Unit I: Data Science & Statistical Learning

Hour 6

Introduction: What Is Data Science?, Statistical Inference, Exploratory Data Analysis, and the Data Science Process, Exploratory Data Analysis, Stages of a Data Science Project, The Data Science Process, Why Statistical Learning: f Estimation- Why and How, Tradeoff Between Prediction Accuracy and Model Interpretability, Supervised vs Unsupervised Learning, Regression vs Classification Problems, Accessing Model Accuracy: Measuring the Quality of Fit, The Bias Variance Trade-off, The Classification Setting.

#### Unit II: Linear Regression

Hour 7

Simple Linear Regression: Estimating the Coefficients, Assessing the Accuracy of the Coefficient Estimates, Assessing the Accuracy of the Model, Multiple Linear Regression: Estimating the Regression Coefficients, Other Considerations in the Regression Model: Qualitative Predictors, Extensions of the Linear Model, Potential Problems, The Marketing Plan, Comparison of Linear Regression with K-Nearest Neighbors.

#### Unit III: Classification and Cross Validation

Hour 7

Classification: An Overview of Classification, Why not Linear Regression?, Logical Regression: The Logistic Model, Regression Coefficients, Making Predictions, Multiple Logistic Regression, >2 Response Classes, Linear Discriminant Analysis: Using Bayes' Theorem, LDA for p = 1 and p >1, Quadratic Discriminant Analysis, Comparison of Classification Methods, Cross Validation: The Validation Set Approach, Leave-One-Out and k-Fold Cross-Validation, Bias-Variance Trade-Off for k-Fold Cross-Validation, Classification Problems, The Bootstrap

Subset Selection: Best Subset Selection, Stepwise Selection, Choosing the Optimal Model, Shrinkage Methods: Ridge Regression, The Lasso, Selecting the Tuning Parameter, Dimension Reduction Methods: Principal Components Regression, Partial Least Squares, Considerations in High Dimensions: High-Dimensional Data, What Goes Wrong in High Dimensions?, Regression in High Dimensions, Interpreting Results in High Dimensions

#### Unit V: Nonlinearity and Tree Based Methods

Hour 7

Moving Beyond Linearity: Polynomial Regression, Step Functions, Basis Functions, Regression Splines: Piecewise Polynomials, Constraints and Splines, Representation, Number and Locations of the Knots, Comparison to Polynomial Regression, Smoothing Splines: An Overview and Smoothing Parameter  $\lambda$ , Local Regression, Generalized Additive Models: Regression Problems and Classification Problems, Tree-Based Methods: Decision, Regression and Classification Trees, Trees Versus Linear Models, Advantages and Disadvantages, Bagging, Random Forests, Boosting

#### Unit VI: SVM and Unsupervised Learning

Hour 7

Maximal Margin Classifier: Hyperplane and Classification, The Maximal Margin Classifier, Construction, The Non- separable Case, Support Vector Classifiers: Overview and Details, Support Vector Machines: Classification with Non-linear Decision Boundaries, SVM, Application, SVMs with More than Two Classes, Relationship to Logistic Regression, Unsupervised Learning: The Challenge of Unsupervised Learning: Principal Components Analysis, Clustering Methods: K-Means Clustering, Hierarchical Clustering, Practical Issues in Clustering.

#### **Text Book:**

- Cathy O'Neil and Rachel Schutt: Doing Data Science, First Edition, 2014, O'reilly Publications, ISBN: 978-1-449-35865-5
- Gareth James, Daniela Witten, Trevor Hastie, Robert Tibshirani: An Introduction to Statistical Learning with Applications in R, First Edition, 2013, Springer-Verlag New York, ISBN: 978-1-4614-7137-0.

#### Reference Book:

Nina Zumel, John Mount: Practical Data Science with R, First Edition, 2014, Manning Publications Co., ISBN: 9781617291562.



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: 091 - 7265 - 252116, 252216 : 091 - 7265 - 252346 Email- principal@ssgmce.ac.in, registrar@ssgmce.ac.in

Website- www.ssgmce.org

Dt.25/01/2022

To,

Fax

The Chairman BOS (CSE)

SGBAU,

**Amravati** 

Subject: Feedback and suggestion about new syllabus for subject Big Data Analytics (6KS04) for III year CSE spring semester 2021-22.

Respected Sir,

As a subject teacher in the academic year 2021-22 spring semester, I have taught the subject and following are my findings about the course.

According to the student and faculty point of view, the syllabus is too vast to cover up in single semester.

Students need to get the basic concepts in simple way where all the points will be covered.

It will be beneficial for students id is syllabus is in simplified form.

So I kindly request to consider the application and do the needful.

For your ready reference I am attaching the copies of

- 1. Existing Syllabus
- 2. Proposed Syllabus
- 3. Reference Syllabus

Kindly do the needful.

Thanking You.

Yours Sincerely

Dr.Rupali Anantrao Zamare

**Assistant Professor** 

Head, CSE

#### **EXISTING SYLLABUS SUBJECT NAME:**

#### **BIG DATA ANALYTICS CODE:6KS04**

UNIT I:Data Analytics: Big Data Overview, State of the Practice in Analytics, Key Roles for the New Big Data Ecosystem, Examples of Big Data Analytics, Data Analytics Lifecycle: Overview, Phase 1: Discovery, Phase 2: Data Preparation, Phase 3: Model Planning, Phase 4: Model Building, Phase 5: Communicate Results, Phase 6: Operationalize, Case Study: Global Innovation Network and Analysis (GINA).

Unit II: Review of Basic Data Analytics Methods, Clustering and Association Rules Exploratory Data Analysis, Statistical Methods for Evaluation: Hypothesis Testing, Difference of Means, Wilcoxon Rank-Sum Test, Type I and II Errors, ANOVA, Overview of Clustering, K-means: Use Cases, Overview, Number of Clusters, Diagnostics, Additional Algorithms, Overview, Apriori Algorithm, Evaluation of Candidate Rules, Applications of Association Rules, An Example: Transactions in a Grocery Store, The Groceries Dataset, Frequent Itemset Generation, Rule Generation and Visualization, Validation and Testing, Diagnostics.

Unit III: Regression and Classification Linear Regression: Use Cases, Model Description, Diagnostics, Logistic Regression: Use Cases, Model Description, Diagnostics, Reasons to Choose and Cautions, Additional Regression Models, Decision Trees: Overview of a Decision Tree, The General Algorithm, Decision Tree Algorithms, Evaluating a Decision Tree, Decision Trees, Naïve Bayes: Bayes' Theorem, Naïve Bayes Classifier, Smoothing, Diagnostics, Naïve Bayes, Diagnostics of Classifiers, Additional Classification Methods.

Unit IV: Time Series Analysis and Text Analysis Overview of Time Series Analysis: Box-Jenkins Methodology, ARIMA Model: Autocorrelation Function (ACF), Autoregressive Models, Moving Average Models, ARMA and ARIMA Models, Building and Evaluating an ARIMA Model, Reasons to Choose and Cautions, Additional Methods, Text Analysis Steps, A Text Analysis Example, Collecting Raw Text, Representing Text, Term Frequency—Inverse Document Frequency (TFIDF), Categorizing Documents by Topics, Determining Sentiments, Gaining Insights.

Unit V:Tool and Techniques: MapReduce & Hadoop Big Data Tool and Techniques: Big Data Storage, High-Performance Architecture, HDFS, MapReduce and YARN, Big Data Application Ecosystem, Zookeeper, HBase, Hive, Pig, Mahout, Developing Big Data Applications: Parallelism, Myth, Application Development Framework, MapReduce Programming Model, Simple Example, More on MapReduce, Other Frameworks, The Execution Model, Analytics for Unstructured Data: Use Cases, MapReduce, Apache Hadoop, The Hadoop Ecosystem: Pig, Hive, HBase, Mahout, NoSQL.

#### Unit VI: Database Analytics, NoSQL and Graph Analytics

SQL Essentials, In-Database Text Analysis, Advanced SQL, NoSQL Data Management: What is NoSQL, Schema<sub>l</sub> less Models, Key-Value Stores, Document Stores, Tabular Stores, Object Data Stores, Graph Database, Communicating and Operationalizing an Analytics Project, Creating the Final Deliverables, Graph Analytics: Model, Triples, Graphs and Network Organization, Graph Analytics and Use Cases, Graph Analysis Algorithms, Technical Complexity, Features of Graph Analytic Platform, Data Visualization Basics.

# PROPOSED SYLLABUS UNIT I Big Data Analytics

Introduction to Big Data, Big Data characteristics, types of Big Data, Traditional vs. Big Data business approach, Case Study of Big Data Solutions.

#### **UNIT II Review of Basic Data Analytics Methods**

Review of Basic Data Analytics Methods, Clustering and Association Rules Exploratory Data Analysis, Statistical Methods for Evaluation: Hypothesis Testing, Difference of Means, Wilcoxon Rank-Sum Test, Type I and II Errors, ANOVA, Overview of Clustering, K-means: Use Cases, Overview, Number of Clusters, Diagnostics, Additional Algorithms, Overview, Apriori Algorithm, Evaluation of Candidate Rules, Applications of Association Rules, An Example: Transactions in a Grocery Store, The Groceries Dataset.

#### UNIT III Regression and Classification Linear Regression:

Regression and Classification Linear Regression: Use Cases, Model Description, Diagnostics, Logistic Regression: Use Cases, Model Description, Diagnostics, Decision Trees: Overview of a Decision Tree, The General Algorithm, Decision Tree Algorithms, Evaluating a Decision Tree, Decision Trees, Naïve Bayes: Bayes' Theorem, Naïve Bayes Classifier, Smoothing, Diagnostics, Naïve Bayes.

#### **UNIT IV Time Series Analysis and Text Analysis**

Overview of Time Series Analysis: Box-Jenkins Methodology, ARIMA Model: Autocorrelation Function (ACF), Building and Evaluating an ARIMA Model, Reasons to Choose and Cautions, Text Analysis Steps, A Text Analysis Example, Collecting Raw Text, Representing Text, Term Frequency—Inverse Document Frequency (TFIDF), Categorizing Documents by Topics, Determining Sentiments, Gaining Insights.

#### **UNIT V Tool and Techniques**

MapReduce & Hadoop Big Data Tool and Techniques: Big Data Storage, High-Performance Architecture, HDFS, MapReduce and YARN, Big Data Application Ecosystem, Zookeeper, HBase, Hive, Pig, Mahout, Developing Big Data Applications: Parallelism, Myth, Application Development Framework, MapReduce Programming Model, Simple Example, More on MapReduce.

#### **UNIT VI Database Analytics**

NoSQL and Graph Analytics SQL Essentials, In-Database Text Analysis, Advanced SQL, NoSQL Data Management: What is NoSQL, Schema<sub>\begin{subarray}{c} \text{ less Models, Key-Value Stores, Document Stores, Tabular Stores, Object Data Stores, Graph Database, Communicating and Operationalizing an Analytics Project, Creating the Final Deliverables, Graph Analytics: Model, Triples, Graphs and Network Organization, Graph Analytics and Use Cases.</sub>

#### **Text Books**

[1] EMC Education Services, "Data Science and Big Data Analytics: Discovering, Analyzing, Visualizing and Presenting Data", 2015, John Wiley & Sons, Inc., ISBN: 978-1-118-87613-8.

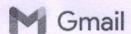
[2] David Loshin, "Big Data Analytics: From Strategic Planning to Enterprise Integration with Tools, Techniques, NoSQL, and Graph", First Edition, 2013, Morgan Kaufmann/Elsevier Publishers, ISBN: 978-0-12-417319-4.

[1] Bart Baesens, "Analytics in a Big Data World: The Essential Guide to Data Science and its Applications", First Edition, 2014, Wiley Publishers, ISBN: 978-1-118-89271-8.

[2] Mohammad Guller, "Big Data Analytics with Spark A Practitioner's Guide to Using Spark for Large-Scale Data Processing, Machine Learning, and Graph Analytics, and High-Velocity Data Stream Processing", First Edition, 2015, Apress Publisher, ISBN-13 (pbk): 978-1-4842-0965-3.

[3] Arshdeep Bahga & Vijay Madisetti, "Big Data Science & Analytics: A Hands-On Approach", First Edition, 2019, ISBN: 978-1-949978-00-1.

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Vishwanath Mahalle <vsmahalle@gmail.com>

## Submission of syllabus proposal (8KS01 OOAD) for CSE new curriculum design of **SGB Amravati University**

4 messages

Vishwanath Mahalle <vsmahalle@gmail.com> To: grbamnote@gmail.com

Thu. Jul 29, 2021 at 8:44 PM

Respected Dr. G. R. Bamnote (Chairman, Board of Studies SGB Amravati University, Amravati)

As per our previous discussion regarding new syllabus structuring, I have taken suggestions from faculties & industry experts and prepared a syllabus of 8KS01 Object Oriented Analysis and Design subject.

I am extremely thankful to you for this opportunity and submitting the final draft of Object Oriented Analysis and Design subject syllabus with this mail.

I hope this proposed syllabus gets approved by the Board of Studies.

Thanks & Regards,

Prof. Vishwanath S. Mahalle, Department of Computer Science & Engineering, Shri Sant Gajanan Maharaj College of Engineering, Shegaon 444203, India

Cell: 98342 72716, 94214 94320



8KS01 OOAD syllabus proposal to SGBAU.docx 25K

#### Gajendra Bamnote <grbamnote@gmail.com>

To: Vishwanath Mahalle <vsmahalle@gmail.com>

Sun, Aug 1, 2021 at 10:22 PM

Dear Prof. Vishwanath S. Mahalle,

On behalf of the Board of Studies in Computer Science & Engineering, I am grateful to you for proposing the syllabus of 8KS01 Object Oriented Analysis and Design subject.

Thanks for your involvement and feedback to find the gaps in the current syllabus and suggesting the changes...\

Regards

#### Dr G.R.Bamnote

Chairman, Board of studies in Computer Science & Engineering SGBA University, Amravati

Professor & Head, Department of Computer Science & Engineering Prof. Ram Meghe Institute of Technology & Research, Badnera-Amravati

Ex Dean Faculty of Engineering & Technology Sant Gadge Baba Amravati University, Amravati

[Quoted text hidden]

6/14/22, 10:06 AM

Vishwanath Mahalle <vsmahalle@gmail.com>
To: Gajendra Bamnote <grbamnote@gmail.com>

Mon, Aug 2, 2021 at 7:43 AM

Thank you very much sir for your reply & given me opportunity to work with you.

Thanks & Regards

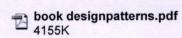
[Quoted text hidden]

Vishwanath Mahalle <vsmahalle@gmail.com>
To: Gajendra Bamnote <grbamnote@gmail.com>

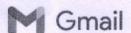
Mon, Aug 2, 2021 at 1:18 PM

Text books recommended for 8KS01 Object Oriented Analysis and Design subject are attached with this mail. [Quoted text hidden]

#### 2 attachments



book Applying UML and Patterns 3rd Edition.pdf



Vishwanath Mahalle <vsmahalle@gmail.com>

## Requesting Suggestions for new syllabus scheme of SGBAU

5 messages

Vishwanath Mahalle <vsmahalle@gmail.com> To: abhishek kumar <exclusive.abhishek@gmail.com> Tue, May 11, 2021 at 12:07 AM

Dear Abhishek,

Warm Greeting !!!

I am V. S. Mahalle, Asst. Prof. at SSGMCE.

We require to frame & propose syllabus of OOAD (Object Oriented Analysis and Design) subject (VIII<sup>th</sup> Semester) to SGBAU for new syllabus scheme.

I am the coordinator of this subject. If you give us your kind suggestions, that will be very helpful to write the final draft of OOAD syllabus. So I am requesting you to send your suggestions/proposal on below email id before

15<sup>th</sup> May. vsmahalle@gmail.com

The previous syllabus of OOAD subject I am attaching with this email for your reference.

Thanking you

Take care

With Regards,

Prof. Vishwanath S. Mahalle, Department of Computer Science & Engineering, Shri Sant Gajanan Maharaj College of Engineering, Shegaon 444203, India

Cell: 98342 72716, 94214 94320



7KS04 OBJECT ORIENTED ANALYSIS AND DESIGN Syllabus.docx 13K

abhishek kumar <exclusive.abhishek@gmail.com> To: Vishwanath Mahalle <vsmahalle@gmail.com>

Tue, May 11, 2021 at 12:16 AM

Dear Sir,

Hope everything is fine at your end.

It would be my privilege to work on the syllabus.

Will definitely send my suggestions by 15th May.

Regards

Abhishek Kumar

[Quoted text hidden]

abhishek kumar <exclusive.abhishek@gmail.com> To: Vishwanath Mahalle <vsmahalle@gmail.com>

Sun, Jun 13, 2021 at 10:34 PM

Dear Sir.

Please find the syllabus attached.

I have included the information from below books:

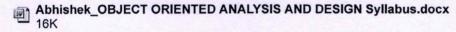
- 1. Larman, Craig: "Applying UML and Patterns, An Introduction to Object Oriented Analysis and Design and Unified Process" PHI.
- 2. Erich Gamma et al., Design Patterns, Elements of Reusable OO Software, Addison-Wesley.
- 3. Arlow, Jim, "UML and the Unified Process", Pearson Education.

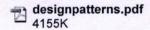
#### Regards

Abhishek Kumar

[Quoted text hidden]

#### 3 attachments





applying-uml-and-patterns.pdf 15597K

Vishwanath Mahalle <vsmahalle@gmail.com> To: abhishek kumar <exclusive.abhishek@gmail.com> Mon, Jun 14, 2021 at 8:40 PM

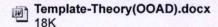
Thank you Dear Abhishek

Within 2-3 days, I will submit the prepared syllabus of the OOAD subject to University. This is possible only because of your help. I received email from other alumni working in Industry. But your proposal is perfect, I hope the University will accept our proposal.

I am sending the syllabus template for verification. Also require your help to write course Objectives & Outcomes.

Thank you

[Quoted text hidden]



abhishek kumar <exclusive.abhishek@gmail.com> To: Vishwanath Mahalle <vsmahalle@gmail.com>

Tue, Jun 15, 2021 at 11:53 PM

Dear Sir,

I have tried to formulate Objectives and Outcomes basis my understanding. Kindly have a look and update if required.

https://mail.google.com/mail/u/0/?ik=16cce84347&view=pt&search=all&permthid=thread-a%3Ar-8868348961793942746&simpl=msg-a%3Ar51427729... 2/3

Regards Abhishek [Quoted text hidden]



Template-Theory(OOAD)\_Updated.docx 20K



#### Shri Gajanan Shikshan Sanstha's

# SHRI SANT GAJANAN MAHARAJ COLLEGE OF ENGINEERING SHEGAON - 444203, DIST. BULDANA (MAHARASHTRA STATE), INDIA

"Recognized by A.I.C.T.E., New Delhi" Affiliated to Sant Gadge Baba Amravati University, Amravati "Approved by the D.T.E., M.S. Mumbai"

Ph : +918669638081/82 Fax : 091-7265-252346

Email.principal@ssgmce.ac.in,registrar@ssgmce.ac.in Website- www.ssgmce.ac.in

# DEPARTMENT OF ELECTRONICS & TELECOMMUNICATION ENGINEERING ACTION TAKEN REPORT (ATR) for the Feedback Year 2020-21

SN	Stakeholders	Observation/Feedback	Action Taken
01	Faculty	Enclose a proposed copy of syllabus	<ol> <li>Discuss the syllabus and asked the faculty to give ar input to add or remove syllabus in department meeting.</li> <li>Concerned subject faculties members are advised to forward the proposed copy of syllabus considering input received from faculty person to syllabus restructuring committee form by SGBA University, Amravati</li> </ol>

V. g. trajak

Mr. V. S. Ingole Prepared by Member, DCC

Dr.JM. N. Tibdewa Head, EXTC



Subject

Proposed Syllabus of Analog and Digital Electronics

From

M.Faizan Khandwani <mkhandwani14@gmail.com>

To Date

<hod\_extc@ssgmce.ac.in>

2020-07-13 10:11



Proposed Syllabus-Analog and Digital Electronics-After Suggestion.docx(~19 KB)

Respected sir, please check the attachment sent along with this email regarding proposed syllabus of Analog and Digital Electronics-3IT05.

It was sent to SGBAU, Amravati for restructuring, but it is not yet finalized.

Please let me know if you need any further information.

## **Analog and Digital Electronics (31T05)**

#### **Objectives of the course:**

To expose the students to the following:

- 1) How semiconductor devices work & the basic principles.
- 2) Rectifiers, Filters and opto-electronic devices.
- 3) How oscillators and operational amplifiers operate.
- 4) The working of logic families and logic gates.
- 5) To design Combinational and Sequential logic circuits.

#### Outcome of the course

At the end of this course, students will demonstrate the ability to

- 1) Understand the characteristics of semiconductors, rectifiers, filters.
- 2) Apply the knowledge of opto-electronic devices in projects.
- 3) Understand the functioning of oscillators and operational amplifiers.
- 4) Understand working of logic families and logic gates.
- 5) Design and implement Combinational and Sequential logic circuits.

#### **Detailed Contents:**

UNIT I: Semiconductor Devices: PN Junction Diode, Zener diode, their VI characteristics, Half Wave, Full Wave and Bridge Rectifiers, Basic types of filters, BJT & FET transistors, Transistor as a switch. (8 hrs)

UNIT II: Opto-Electronic Devices: Fundamental of light, photoconductive sensors, photodiodes, phototransistors, LED, 7 segments display, their principle of operation & application, opto-couplers, introduction to PSPICE. (8 hrs)

UNIT III: RC Oscillator & Operational Amplifier: basic principle, brakhausen criterion, phase shift oscillator, wein-bridge oscillator and crystal oscillator, block diagram of op-amp, parameters of op-amp, inverting and non-inverting op-amp and study of IC-741. (8 hrs)

UNIT IV: Different logic gates: AND, OR, XOR, NAND, NOR, XNOR, and NOT, Standard representation for logic functions SOP and POS, K-map representation, simplification of logic functions using K-map, minimization of logical functions. Don't care conditions, Q-M method of function realization, Determination of prime implicants, selection of Prime implicants. (8 hrs)

UNIT V: Combinational Logic and MSI Components: Design procedure, Multiplexer, De-Multiplexer, Decoders, Adders, Subtractors, binary parallel adder, digital comparator, parity generator, parity checker and code converters. (8 hrs)

UNIT VI: Sequential circuits: The clocked SR flip flop, J-K Flip Flop, T Flip Flop and D Flip Flop, applications of flip flops, ring counter, sequence generator, ripple (Asynchronous) registers, applications of shift registers. (8 hrs)

#### **Suggested Text Books:**

- 1. Basic Electronics & Linear Circuits by N N Bhargava, D C Kulshreshtha, S C Gupta.
- 2. Op-Amps &linear integrated circuits by Gayakwad R.A.
- 3. Analog Electronics by L.K.Maheshwari
- 4. Modern Digital Electronics by R. P. Jain
- 5. Digital logic and Computer design by M. M. Mano

#### **Suggested Reference Books:**

- 1. S. Sedra and K. C. Smith, "Microelectronic Circuits", New York, Oxford University Press,
- 2. J. V. Wait, L. P. Huelsman and G. A. Korn, "Introduction to Operational Amplifier theory and applications", McGraw Hill U. S., 1992.
- 3. J. Millman and A. Grabel, "Microelectronics", McGraw Hill Education, 1988.
- 4. P. Horowitz and W. Hill, "The Art of Electronics", Cambridge University Press, 1989.
- 5. P.R. Gray, R.G. Meyer and S. Lewis, "Analysis and Design of Analog Integrated Circuits", John Wiley & Sons, 2001.
- 6. A. Kumar, "Fundamentals of Digital Circuits", Prentice Hall India, 2016.
- 7. Analog Electronics, A.K. Maini, Khanna Publishing House
- 8. Analog Electronics, I.G.Nagrath, PHI
- 9. Digital Electronics, A. Anand Kumar, PHI
- 10. Digital Electronics, R.Anand Khanna Publishing House

## Analog and Digital Electronics Lab (3IT08):

## **Suggested List of Experiments:**

- 1. To Study and Perform V-I Characteristics of Semiconductor Diode.
- 2. To Study and Perform V-I Characteristics of Zener Diode.
- 3. To Study and Perform The Half Wave Rectifier Circuit with and without Filter.
- 4. To Study and Perform Full wave Bridge Rectifier Circuit without Filter. 5. To Perform Transient Analysis on RC Circuit using P-Spice.
- 6. To Simulate Half Wave Rectifier Circuit with Filter using P-Spice.
- 7. To design and verify truth table of all logic gates.
- 8. To design & verify NAND gate as a universal gate.
- 9. To design & verify NOR gate as a universal gate.
- 10. To design and verify function of Half Adder and Half Subtractor using Logic Gates.
- 11. To design & implement Binary to Gray & Gray to Binary code converter circuits using gates. 12. To design & verify EVEN & ODD parity generator and checker.
- 13. To design and verify digital Comparator.
- 14. To design and verify function of 4:1 Multiplexer and 1:4 Demultiplexer using IC 74153 & 74155.

Subject From

Proposed syllabus of Signal and System

To

Vikas K. Bhangdiya <vikasbb@gmail.com>

gopal sukdeo gawande <gopalgawande@rediffmail.com>, Gopal

Sukdeo Gawande <hod\_extc@ssgmce.ac.in>

Date

2020-07-11 12:49

Proposed Syllabus Signal and system.pdf(~87 KB) Proposed Syllabus Signal and system.doc(~73 KB)

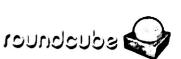
## Respected Sir

With this email I attached an updated copy of the signal and system syllabus. please have a look at it and do the needful.

Thanks & Regards

Vikas K. Bhangdiya Assistant Professor Shri Sant Gajanan Maharaj college of engg. Shegaon

√lob. +91-9823936816



## **4ET1: Signals and Systems**

(Prerequisites: Mathematics-III)

#### **Course Objectives:**

- 1. Understand the fundamental characteristics of signals and systems.
- 2. Understand signals and systems in terms of both the time and transform domains.
- Develop the mathematical skills to solve problems involving convolution and sampling.

#### **Course Outcomes:**

After successfully completing the course, the students will be able to

- 1. Describe Continuous time signals and systems mathematically and understand their classification along with the mathematical operations that can be performed on them.
- 2. Analyze the spectral characteristics of continuous-time periodic signals Fourier series.
- 3. Analyze the spectral characteristics of continuous-time aperiodic signals and systems using Fourier Transform.
- 4. Apply the Laplace transform for analysis of continuous-time systems.
- 5. Understand Discrete Time signals and systems mathematically and understand their classification along with the mathematical operations that can be performed on them.
- 6. Analyze the spectral characteristics of Discrete Time signals and systems using Discrete Time Fourier Transform.

#### Syllabus:

	SECTION-A			
Unit I :	Unit-1 Continuous time signals and systems: Signal Classification, Energy and Power Signal, Signal Operations, Signal models, Even and Odd functions, convolution, System Classification,.			
Unit II :	Continuous-Time Signal Analysis -The Fourier Series: Periodic Signal Representation by Trigonometric Fourier Series, Existence and Convergence of Fourier Series, Gibbs Phenomenon, Exponential Fourier Series, Generalized Fourier Series.			
Unit III :	Continuous-Time Signal Analysis-The Fourier Transform: Aperiodic Signal Representation by Fourier Integral, Properties of Fourier Transform, Signal Transmission Through LTIC Systems, Signal energy, Inverse Fourier Transform			
	SECTION-B			
Unit IV :	Continuous-Time System Analysis Using Laplace Transform: Laplace Transform and it's properties, Region of convergence, Inverse Laplace transform, Solution of differential and Integro-differential equations, System Realization, Frequency response of LTIC system.			
Unit V :	Time-Domain Analysis of Discrete-Time Signals & Systems: Signal Operations, convolution, Classification of Discrete-Time Systems, Discrete-Time System Equations, System response to Internal condition, Unit Impulse Response, System response to External Input, Classical Solution of Linear Difference Equations  Sampling and Reconstruction: Sampling theorem, signal reconstruction spectral, aliasing and its effect.			
Unit VI : j	Fourier Analysis of Discrete-Time Signals: Discrete-Time Fourier Series (DTFS), Aperiodic Signal Representation by Fourier Integral, Properties of DTFT, Relationship between DTFT & CTFT.			

#### **Text Books:**

- 1. Lathi B. P., "Principles of Linear Systems and Signals" Second Edition (International Version) Oxford University Press.
- 2. Alan V. Oppenheim & Alan S. Willsky with S. Hamid Nawab, "Signal & Systems" PHI Publication, Second Edition.
- 3. Michael J. Roberts, "Signals and Systems Analysis Using Transform Methods and MATLAB", Mc Hill Publication

#### References:

- 1. Ambardar A., "Analog And Digital Signal Processing", Thomson Learning-2005.
- 2. Simon Haykin, Barry Van Veen, "Signals & Systems", IInd Edition, Wiley Publication.

## Subject (Practical): Signal and System

#### **Course Objectives:**

- 1. To use software to visualize analysis of Signals and System.
- 2. To manipulate the time signals and identify the type of given system.

#### **Course Outcomes:**

After successful completion of this course the student will be able to

- Generate different plots and explore results to draw valid conclusions and inferences in Signal Processing.
- 2. Enable on how to approach for requirement of signal processing and system design using simulation tools.
- 3. Familiarize with the concepts of sampling.

#### **Experiment List**

Study of Signal Processing Function used in MATLAB/SCILAB.  Program To Generate Standard Common Continuous Time Signals.
Drogram To Generate Standard Common Continuous Time Signals.
Program To Generate Standard Common Discrete Time Signals.
Program To Generate Standard Common Discrete Time Signals.
Program To Perform Basic Operations on Signals.
Program To find Even And Odd parts of a function.
Program To find Periodic or Non-periodic Signals.
Program To find To Find the Energy and Power of a Signal.
Program To find To Find the Convolution of a Signal
Program To identify a given system as linear/ non-linear, time variance/
invariance property of a given system.
Program To demonstrate the time domain sampling of band limited signals
(Nyquist theorem).
Program To find Fourier transform of given signal/ System.

<sup>\*</sup> Minimum 08 experiments based on/relevant to the above list.

1000000000

Subject From

SGBAU Network Theory Syllabus

Swapnil Badar <swapnilbadar@gmail.com>

To Gopal Sukdeo Gawande <hod\_extc@ssgmce.ac.in> Cc

<gopalgawande@rediffmail.com>

Date 2020-07-07 14:14

SGBAU\_Network Theory Syllabus.docx(~18 KB)

Respected sir

Kindly find herewith the attachment of SGBAU Network Theory Syllabus as per AICTE Model Curriculum Scheme.

Thanks & Regard's:

## Swapnil P. Badar

Assistant Professor

Department of Electronics and Telecommunication Engineering,

Shri Sant Gajanan Maharaj College of Engineering, Shegaon-444203 (MS)

#### Subject (Th): EC404 Network Theory

#### Course Requisite:

- 1, (1B4) Electrical Engineering
- 2. (3ET1) Engineering Mathematics-III

#### Course Objectives:

- 1. To understand fundamental concepts of node and mesh analysis for linear circuits.
- 2. To study graph theory for network analysis.
- 3. To understand Laplace Transform technique for analysis of linear circuits.
- 4. To study network theorems and network functions.
- 5. To study two port network parameters and their inter-relationships.

#### **Course Outcomes:**

After successfully completing the course, the students will be able to:

- 1. Analyze electrical circuits using mesh and node analysis.
- 2. Apply suitable network theorems to analyze electrical circuits.
- 3. Apply Laplace Transform for steady state and transient analysis.
- 4. Determine different network functions.
- 5. Appreciate the frequency domain techniques

#### Subject: Network Theory (EC404)

#### Unit-1 Node and Mesh analysis:

Node and Mesh Analysis matrix approach of network containing voltage and current sources; supernode and supermesh analysis and magnetic coupling. Source transformation and duality.

#### Unit-2 Network theorems:

Network theorems: Superposition, reciprocity, Thevenin's, Norton's, Maximum power Transfer, compensation and Tallegen's theorem, Substitution theorem, Compensation theorem to analyse electric circuit

## Unit-3 Network Analysis using Laplace Transform

Laplace transforms and properties: Partial fractions, singularity functions, waveform synthesis, (Gate function, Impulse function, Laplace transform of periodic signals) analysis of RC, RL, and RLC networks with and without initial conditions with Laplace transforms evaluation of initial conditions.

#### Unit-4 Network functions

Necessary conditions for driving point function and transferfunction Driving points and transfer functions. Concept of complex frequency, poles and zeros of immittance function. Time domain behaviour from pole-zero plot, driving point and transfer impedance functions of RLC networks

#### **Unit-5 Resonant Circuits and Filter**

Behaviors of series and parallel resonant circuits, Introduction to band pass, low pass, high pass and band reject filters.

# Unit-6 Two port networks

Two port network parameter, Interrelationship between parameters, Interconnection of two port networks. Input, output and image impedance in terms of two port network parameter.

#### **Network Theory Lab (EC407)**

#### **Experiment List**

- 1. To analyse the electric circuit by using mesh analysis.
- 2. To analyse the electric circuit by using node analysis.
- 3. To study and verify the superposition theorem for a given network.
- 4. To study and verify the thevenins theorem for a given network.
- 5. To study and verify the maximum power transfer theorem for a given network.
- 6. To study and verify the reciprocity theorem for a given network.
- 7. To study and verify the millimans theorem for a given network.
- 8. To find the impedance for T-network and  $\pi$ -network.
- 9. To find the admittance parameter for T-network and  $\pi$ -network.
- 10. To find the transmission parameter for T-network and  $\pi$ -network.
- 11. To find the hybrid parameter for T-network and  $\pi$ -network.
- 12. To study and analyse RLC series and parallel circuit using any simulation tool (MATLAB
- 13. To study and design low pass filter for a particular cut-off frequency using any simulation
- 14. To study and design high pass filter for a particular cut-off frequency using any simulation
- 15. To study and design band pass filter for a particular cut-off frequency using any simulation
- 16. To study and design band reject filter for a particular cut-off frequency using any simulation

Submitted By:

Prof. S. P. Badar Faculty, Department of EXTC SSGMCE, Shegaon (Contact No. - 9503733768)

Subject

**AE SYLLABUS** 

From

kamlesh b. khanchandani <kbkhanchandani@rediffmail.com>

roundoubel

Sender

<kbkhanchandani@rediffmail.com>

To

dthakare1 <dthakare1@gmail.com>, hod\_extc

<hod\_extc@ssgmce.ac.in>

Date

2020-07-06 14:19

ANALOG\_ELECTRONICS\_SYLLABUS.doc(~49 KB)

pl find herewith v the syllabus of AE

Dr.K.B.Khanchandani Professor , Electronics & Telecom. Deptt S.S.G.M.College of Engg. Shegaon-444203 M.S.,INDIA

Tel: +91-07265-253023--303(ext)

FAX No.: 07265-252346 Mobile: 09404009422

#### **EC09 ANALOG CIRCUITS**

## **Course Objectives**

- To understand and design the linear regulated power supplies
- To equip the students with a sound understanding of fundamental concepts of operational amplifiers
- To understand the wide range of applications of operational amplifiers
- To introduce special function integrated circuits

#### **Expected outcomes:**

The students will

- be able to design linear regulated power supply
- have a thorough understanding of operational amplifiers
- be able to design circuits using operational amplifiers for various applications
- be able to design PLL based application circuits.

	SECTION-A	L
Unit I	Monolithic Voltage Regulators - Fixed voltage regulators, 78XX and 79XX series, Adjustable voltage regulators, IC 723 - Low voltage and high voltage configurations, LM 317, Current boosting, Current limiting, Short circuit and Fold-back protection	08
Unit II	Differential amplifiers: Differential amplifier configurations using BJT, Large and small signal operations, Input resistance, Voltage gain, CMRR, Non-ideal characteristics of differential amplifier. Frequency response of differential amplifiers, Current sources, Active load, Concept of current mirror circuits, Wilson current mirror circuits.  Operational amplifiers: Introduction, Block diagram, Ideal op-amp parameters, Equivalent circuit, Voltage transfer curve, Open loop op-amp configurations, Effect of finite open loop gain, Bandwidth and slew rate on circuit performance	08
Unit III	Design of scaling, summing, differential amplifier, design of integrator and differentiator, sinusoidal RC oscillators; RC-phase shift, Wein bridge oscillator using IC 741.	06
	SECTION-B	
Unit IV	Design of comparator, zero-crossing detector, window detectors, Schmitt trigger, astable multivibrator as square and triangular wave generator, monostable multivibrator, IC 8038 as waveform generators.	06
Unit V	Design of instrumentation amplifier, bridge amplifier, temperature controller / indicator using thermocouple, RTD, thermo sensors AD590.  Design of Butterworth first and second order low pass, high pass, band pass, band stop filters, all pass filter, design of notch filter,	

Unit VI	Phase Locked Loop - Operation, Closed loop analysis, Lock and capture range, Basic building blocks, PLL IC 565, Applications of PLL for AM & FM detection and Frequency multiplication, Frequency division, Frequency synthesizing	06	
	TOTAL	42	

## **Book Recommended**

#### 1. Text Book

Sr. No.	Title	Author	Publication
l	Design with Linear Integrated Circuits & Op-Amps	Sergio Franco	MH Publications.
2	OP-AMP and Linear Integrated Circuits	R.A. Gayakwad	Pearson Education Publications

## 2. Reference Books

Sr. No.	Title	Author	Publication
R-1	Op-Amps for Everyone, Design Reference	Ron Mancini	Texas Instruments
R-2	Analysis and Design of Analog Integrated Circuits	Gray and Meyer	Wiley Intl. Publication
R-3	Operational Amplifiers & Linear ICs	David A. Bell	Oxford University Press
R-4	Operational Amplifiers	C.G. Clayton	2nd edition , Elsevier
R-5	Operational Amplifiers & Linear Integrated Circuits	R.F. Coughlin & Fredrick Driscoll	РНІ

Subject

Fwd: Proposed syllabus of SS

From

Vikas K. Bhangdiya <vikasbb@gmail.com>

To

Dnyaneshwar Thakare <dthakare1@gmail.com>

Cc

Gopal Sukdeo Gawande <hod\_extc@ssgmce.ac.in>

Date

2020-06-25 13:39

4 ETC 04 Signals and Systems.doc(~64 KB)

with this mail, I attached Proposed syllabus copy of 4ET04: Signals and Systems. Please have a look on it and do the needful

Thanks & Regards

Vikas K. Bhangdiya Assistant Professor Shri Sant Gajanan Maharaj college of engg. Shegaon

Mob. +91-9823936816

Thanks & Regards

Vikas K. Bhangdiya Assistant Professor Shri Sant Gajanan Maharaj college of engg. Shegaon

Mob. +91-9823936816



## 4FTC04: Signals and Systems

#### al Course Objectives:

- 1. Understand the fundamental characteristics of signals and systems.
- 2. Understand signals and systems in terms of both the time and transform domains.
- 3. Develop the mathematical skills to solve problems involving convolution, filtering, modulation and sampling.
  b) Course Outcomes:

After successfully completing the course, the students will be able to

- 1. Describe signals mathematically and understand how to perform mathematical operations on signals and systems.
- 2. Analyze the spectral characteristics of continuous-time periodic and aperiodic signals using Fourier analysis.
- 3. Classify systems based on their properties and determine the response of LTI system.
- 4. Analyze system properties based on impulse response and Fourier analysis.
- 5. Understand the process of sampling and its effects.

#### Syllabus:

	SECTION-A				
Unit I:	Signals and Systems: Energy, Power Signal, Signal Operations, Signal Classification, Signal models,				
	Even and Odd functions, System Classification.				
	Time-Domain Analysis of Continuous-Time Systems: System response to Internal condition, Unit				
	Impulse Response, System response to External Input, Classical Solution of Differential Equation,				
Unit II:	Continuous-Time Signal Analysis -The Fourier Series: Periodic Signal				
	Representation by Trigonometric Fourier Series, Existence and Convergence of Fourier Series,				
	Exponential Fourier Series, LTIC system response to Periodic inputs				
Unit III:	Continuous-Time Signal Analysis-The Fourier Transform: Relation between Fourier & Laplace,				
	Aperiodic Signal Representation by Fourier Integral, Properties of Fourier Transform, Signal				
	Transmission Through LTIC Systems, Signal Energy,				
	SECTION-B				
Unit IV:	Continuous-Time System Analysis Using Laplace Transform: Laplace Transform and properties,				
	Inverse transform, Solution of Differential and Integro-Differential Equations, System Realization.,				
<u></u>	Frequency response of LTIC system, The Bilateral Laplace Transform.				
Unit V:	Time-Domain Analysis of Discrete-Time Signals & Systems: Signal Operations,				
	Classification of Discrete-Time Systems, Discrete-Time System Equations, System				
	response to Internal condition, Unit Impulse Response, System response to External				
	Input, Classical Solution of Linear Difference Equations, System Stability.				
	Sampling & Reconstruction: Sampling Theorem, Signal Reconstruction, Spectral				
	Sampling. State-space analysis and multi-input, multi-output representation. The state-transition matrix				
77 77 77	and its role.				
Unit VI:	Fourier Analysis of Discrete-Time Signals: Discrete-Time Fourier Series (DTFS),				
	Aperiodic Signal Representation by Fourier Integral, Properties of DTFT, LTI-Discrete Time System				
<u> </u>	Analysis by DTFT, Relationship between DTFT & CTFT, DFT & its properties.				

#### **Books Recommended:**

#### Text Books:-

Sr. No.	Title	Author	Publication
1.	Principles of Linear Systems and Signals	Lathi B. P	Second Edition (International Version) Oxford University Press.
2.	Signal & Systems	Alan V. Oppenheim	PHIPublication, Second Edition.)

#### **Reference Books:**

alog and Digital Signal Processing	Ambardar A	Publication Thomson Learning-2005
Signals & Systems	Simon Havkin	IInd Edition, Wiley Publication
-		Cianala & Cristana

Subject AICTE EDC SYLLABUS

From

Amit Dolas <amit.dolas@gmail.com>

To

Dnyaneshwar Thakare <dthakare1@gmail.com>, Gopal Sukdeo

Gawande <hod\_extc@ssgmce.ac.in>

Date

2020-06-23 14:44

AICTE EDC syllabus.doc(~38 KB)

please find EDC syllabus prepared by VMU, AND, SGN

Thanks & Regard's:

## Amit N. Dolas

ME (Digital Electronics)

Assistant Professor

Department of Electronics and Telecommunication Engineering, Shri Sant Gajanan Maharaj College of Engineering, SHEGAON 444203 (MS)



Subject (Th): (3ETC02) - ELECTRONIC DEVICES AND CIRCUITS

### Course Requisite:

1. (IA2) Engineering Physics

### Course Objectives:

- 1. To provide an overview of the principles and operation of electronic devices.
- 2. To explore use of electronic devices for various applications in electronic circuits.
- 3. To analyze various electronic circuits.

### Course Outcomes:

After successfully completing the course, the students will be able to

- 1. Comprehend the knowledge of diode and its applications in rectifier and regulator circuits.
- 2. Understand basics of BJT, JFET, MOSFET, UJT and their operational parameters.
- 3. Understand feedback concept, topologies and their applications.
- 4. Implement and analyze various electronic circuits.

Subject: ELECTRONIC DEVICES AND CIRCUITS	L	
Unit-1	PN diode: Formation and theory of p-n junction, diode biasing, V-I characteristics of diode, application of diode as a Rectifier and its types, Types of filter and its analysis, Theory, Construction, working and characteristics of Avalanche diode, Zener diodes, Light emitting diode, photo diode, Varactor Diode and PIN Diode,	10
Unit-2	Bipolar Junction Transistors: Operation of PNP and NPN transistor, CB, CE and CC configurations, characteristics and parameters, transistor biasing and stability methods, analysis  various dc bias circuits, dc load line and operating point, transistor as an amplifier, small signal analysis of voltage divider biased CE amplifiers using h-parameter model.	09
Unit-3	Feedback amplifiers: Feedback concept, effects of negative feedback, basic feedback  Sinusoidal oscillators: Barkhausen's criteria, Hartley, Colpitts, RC Phase shift, Wien bridge and crystal oscillators.	8
Unit-4	Multistage Amplifiers: Need of multistage, direct coupled amplifier, RC coupled amplifier, transformer coupled amplifier, emitter follower, Darlington emitter follower, bootstrapping principle, Cascode stage.	8
Unit-5	<b>Power Amplifiers:</b> Classification, Class A, Transformer coupled Class A, harmonic distortion, Class B, Class AB, crossover distortion, capacitor coupled and direct coupled output stages, modifications to improve power amplifier performance, Class C amplifier and analysis.	8
Unit-6	Theory, construction, characteristics and parameters: JFET and basing, MOSFET and UJT.  UJT as relaxation oscillator.	7
Total	50	$\dagger$

#### **Text Books:**

- 1. David Bell: Electronic Devices and Circuits, Oxford University Press, 2010.
- 2. Milliman and Halkias: Integrated Electronics, Tata McGraw Hill, New Delhi.
- 3. R. S. Sedha: Electronics Devices and Circuits, S. Chand Technical, New Delhi.

#### References:

- 1. Robert L.Boylestad, <sup>3</sup>Electronic Devices and Circuit theory', Publ. Pearson Education.
- 2. Floyd, <sup>3</sup>Electron Devices' Pearson Asia 5th Edition, 2001.
- 3. Donald A Neamen, <sup>3</sup>Electronic Circuit Analysis and Design' Tata McGraw Hill, 3rd Edition, 2003

14

Subject

Fwd: Syllabus framing

From

Dr. Manish N Tibdewal <mntibdewal@gmail.com>

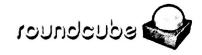
To

Gopal Sukdeo Gawande <hod\_extc@ssgmce.ac.in>

Date

2020-06-20 03:07

Proposed Syllabus-3ETC03-DSD-Revised.docx(~15 KB)



# Manish N.Tibdewal,

Professor

B.E., M.E., Ph.D. (I. I.T., Kharagpur)

Dept.of Electronics & Telecommunication Engg. Shri Sant Gajanan Maharaj College of Engineering, SHEGAON (Buldhana) 444 203 MAHARASHTRA (INDIA)

Cell: 09423144228, 08830174539

France Forwarded message -----

From: Manish Tibdewal < mntibdewal@gmail.com >

Date: Sat, Mar 21, 2020 at 10:21 AM

Subject: Re: Syllabus framing

To: Gopal Sukdeo Gawande < hod extc@ssgmce.ac.in>

Dear Sir,

PFA is the syllabus as per your guidelines.

# Manish N.Tibdewal,

Professor

B.E., M.E., Ph.D. (I. I.T., Kharagpur)

Dept.of Electronics & Telecommunication Engg.
Shri Sant Gajanan Maharaj College of Engineering,
SHEGAON (Buldhana) 444 203 MAHARASHTRA (INDIA)

Cell: 09423144228, 08830174539

On Thu, Mar 19, 2020 at 1:32 AM < <a href="https://doi.org/10.1007/journal.com/">https://doi.org/10.1007/journal.com/</a> Wrote:

You are hereby requested to prepare a syllabus of the subjects according to the AICTE Model curriculum as per the groups mentioned in the attached sheet and submit it to the undersigned on or before 21/03/2020.

Thanks,

Regards,

HOD, EXTC

# Proposed Syllabus for the Subject (Course) of II Year B.E.

# 3ETC03: Digital System Design

Prerequisite for the Course: Positive/Negative Logic system, all types of Logic gates. Introduction to Diode, BJT, MOSFETs, etc.

U-I: Number systems and their arithmetic, Logic Simplification and Combinational Logic Design: Review of Boolean Algebra and De Morgan's Theorem, SOP and POS forms, Canonical forms, Karnaugh maps up to 6 variables, Binary codes, Code Conversion.

U-II: MSI devices like Comparators, Multiplexers, Encoder, Decoder, Driver and Multiplexed Display, Half and Full Adders, Subtractors, Serial and Parallel Adders, BCD Adder, Barrel shifter and ALU.

U-III: Sequential Logic Design: Building blocks like S-R, Edge triggered FF, JK and Master-Slave JK FF, T-FF, D-FF, and their mutual conversions, Ripple and Synchronous counters, and Shift registers Universal Shift Register.

U-IV: Finite state machines, Design of synchronous FSM, Algorithmic State Machines charts. Designing synchronous circuits like Pulse train generator, Pseudo Random Binary Sequence generator, Clock generation.

U-V: Logic Families: TTL NAND gate, Specifications, Noise margin, Propagation delay, fan-in, fan-out, Tristate TTL, ECL, CMOS families and their interfacing.

U-VI: Memory elements and expansion of RAM and ROMs, Concept of Programmable logic devices like FPGA. Logic implementation using Programmable Devices.

### **Text/Reference Books:**

- 1. R.P. Jain, "Modern digital Electronics", Tata McGraw Hill, 4th edition, 2009.
- 2. M. Morris Mano, "Digital Design" 4th Edition.
- 3. W.H. Gothmann, "Digital Electronics- An introduction to theory and practice", PHI, 2nd Edition, 2006.
- 4. D.V. Hall, "Digital Circuits and Systems", Tata McGraw Hill, 1989
- 5. Charles Roth, "Digital System Design using VHDL", Tata McGraw Hill 2nd edition 2012.

### **Course outcomes:**

At the end of this course students will demonstrate the ability to:

- 1. Design and analyze combinational logic circuits.
- 2. Design and analyze modular combinational circuits with MUX/DEMUX, Decoder and Encoder,
- 3. Design and analyze synchronous sequential logic circuits and Logic families.
- 4. Design of Semiconductor Memories and Introduction to FPGA.

Subject

Fwd: syllabus of EDC & ADC

From

sudhir paraskar <srparaskar@gmail.com>

To

gopal sukdeo gawande <gopalgawande@rediffmail.com>,

<hod\_extc@ssgmce.ac.in>

Date

2020-06-22 16:57

roundaubs

EDC\_ADC\_proposed\_syllabus.docx(~14 KB)

Dear Sir,

plz revised and send back to me the CO's of EDC & ADC.

Thank you.

------ Forwarded message ------

From: Purushottam Bharambe < purushottam bharambe@rediffmail.com >

Date: Mon, 22 Jun, 2020, 1:40 PM Subject: syllabus of EDC & ADC

To: srparaskar < srparaskar@gmail.com >

Please see the attachment.

### 3 EP05 ELECTRONIC DEVICES AND CIRCUITS

### **Course Outcomes:**

After successfully completing the course, the students will be able to

- 1. Comprehend the knowledge of basic semiconductor physics, Diode
- 2. Comprehend the knowledge of diode and its applications in rectifier and regulator circuits.
- 3. Understand basics of BJT and their operational parameters.
- 4. Understand the basics of multistage amplifiers
- 5. UnderstandbasicsofJFET, MOSFET, UJTandtheiroperational parameters

### **Syllabus**

### **SECTION-A**

UNIT-I:P-N Junction diode theory, Energy bands in intresnsic and extrensic silicon, carrier transport, diffusion current, drift current, mobility and resistivity, generation and recombination of carriers, PN junction diode, Zener diode, zener diode as voltage regulator, Numericals based on voltage regulator (line and load regulation, Numericals based on resistivity, conductivity, mass action law)

UNIT-II: Half wave, full wave center tapped full wave and bridge rectifier. Filters-C, LC and their analysis, clipping and clamping, Numericals based on clipping and clamping

UNIT-III: Theory and Analysis of Bipolar Junction transistor, 'H' Parameter, methods of biasing, their needs, 'Q' and stability factors, compensation techniques.

#### **SECTION-B**

UNIT-IV Study of typical transistor amplifier circuits i) Emitter follower, ii) Darlington emitter follower. iii) Bootstrap emitter follower, iv) RC coupled amplifier,v) Transformer coupled amplifier, vi) Cascaded amplifier, vii) Direct coupled amplifier, viii) Cascade stage.

### UNIT-V:

FETs (JFET & MOSFET): Types, Characteristics and parameters (u, gm &Rds), Applications of FET amplifiers, UJT: Characteristics, working, UJT as relaxation oscillator.

UNIT-VI :Theory, construction and applications of Schottky diode, Tunnel diode, Varactor diode, Selenium diode, LED, Photo diode, PIN diode, photo-transistor.

### **BOOKS RECOMMENDED:**

- 1) Millman's Electronic Devices & Circuits by J.Millman, C.Halkias, Satyabrata Jit TMH 3rd ed, 2nd reprint 2011
- 2) Electronic Devices and Circuits 5/e David Bell Oxford University Press
- 3) Microelectronic Circuits 5/3 Sedranad Smith Oxford University Press
- 4) Boylestad R. and "Electronics Devices & Circuits", Prentice Hall of India Private Limited, New Delhi (Fifth Edition), 1993.

#### ANALOG AND DIGITAL CIRCUITS **4EP05**

# **Course Outcomes:**

- 1.Comprehend the knowledge of operational amplifiers, parameters of op-amp
- 2. Comprehend the knowledge of linear and nonlinear applications of op-amp
- 3. Comprehend theknowledgeofVoltage regulator, 1 C-555
- 4. ComprehendtheknowledgeofCMOSandit's applications, Logic families
- 5. Comprehendtheknowledgeofcombinational and sequential circuitsand its application

### **Syllabus SECTION-A**

### Unit I:

Introduction to IC's: Operation amplifier; Block schematic internal circuits, Level shifting, overload protection, study of IC 741 op-amo, Measurement of op-amp parameter.

### Unit II:

Linear and Non-linear Application of Op-amp:- Inverting and noninverting amplifiers, voltage follower, integrator, differentiator differential amplifier, op amp as adder subtractor, op amp as a log and antilog amplifier

Sinusoidal RC-phase shift and Wein bridge oscillators, clipping, clamping and comparator circuits using op-amps.

#### Unit III:

Other linear IC's: Block schematic of regulator IC 723, and its applications, study of 78 \*\*, 79 \*\* and its applications, SMPS, Block schematic of timer IC 555 and its applications as a timer, a stable, mono stable, bistable multivibrator and other applications, Operation of phase lock loop system and IC 565 PLL, its application.

### **SECTION-B**

#### Unit IV:

Basic Logic Circuits: Logic gate characteristics, NMOS invertor, propagation delay, NMOS logic gate, CMOS invertor, CMOS logic gates, BJT invertor, TTL, NAND gate, TTL output, state TTL logic families, ECL circuits, composition logic families.

### Unit V:

Combinational Digital Circuits: Standard gate assemblies, Binary adder, Arithmetic functions, Digital comparator, Parity check generator, Decoder / demultiplexer, Data selector / multiplexer, Encoder

#### Unit VI:

Sequential Circuits and Systems: Bistable Latch, Flip-Flop clocked SR,J-K, T, D type shift Registers, counter. Design using filp-flops, Ripple and synchronous types, application of counters

### **BOOKS:-**

- 1. Millman, Microelectronics, 2nd Ed., McGraw Hill.
- 2. Gayakwad, Op-Amp & LLG, 2nd Ed.
- 3. Malvino & Leach, Digital Principles & Applications, 4th Ed., McGraw Hill.
- 4. K.B.Botkar, Integrated Electronics (Khanna Publishers.)

Proposed syllabus copy of subject DSP submitted to BOS

member of SGBAU on Dt. 29/06/2021

From

Pawan Kale <pawankale1989@yahoo.in>

To

hod\_extc@ssgmce.ac.in <hod\_extc@ssgmce.ac.in>, HOD EXTC

Gmail <hod.extc.ssgmce@gmail.com>

Date

2021-10-16 10:04

DSP\_Syllabus\_Proposed to BoS\_new\_AICTE.docx(~14 KB)

Dear Sir

This is regarding submission of proposed syllabus copy submitted to BOS member of SGBAU as per your earlier mail...Please find the attached copy...

Thanks and regards.

Prof. P.D.Kale Dept. of EXTC T&P Co-ordinator S.S.G.M.C.E., Shegaon- 444203



# Subject (Th): 5ETC03- DIGITAL SIGNAL PROCESSING

### **Course Objectives:**

- 1. Learn discrete signal and system fundamentals.
- 2. Learn the discrete-time signals in the frequency domain, using z-transform and DFT.
- 3. Understand the implementation of the DFT using FFT algorithm.
- 4. Learn the basic forms and design of FIR and IIR filters.
- 5. Learn the application filter bank in multi rate DSP.
- 6. Become aware of some applications of digital signal processing.

# **Course Outcomes:**

At the end of this course students will be able to

- 1. Manipulate the discrete time signals and identify the type system.
- 2. Compute the z-transform of a sequence, identify its region of convergence, and compute the inverse z-transform.
- 3. Evaluate the Fourier transform of a signal.
- 4. Design FIR filters.
- 5. Design IIR filters.
- 6. Understand the concepts of Multirate Digital Signal Processing and need of Filter banks.

	Subject: DIGITAL SIGNAL PROCESSING	L
Unit-1	<b>Discrete time Signal &amp; Systems:</b> Classification of Discrete time signals, singularity function, Classification of Discrete time systems, representations of systems.	06
Unit-2	<b>Z-transform</b> : mapping of s-plane to Z-plane, Region of Conversion and its properties, Properties of Z-transform, evaluation of inverse Z-transform using long division method, PFE method and residue method.	06
Unit-3	<b>Discrete and Fast Fourier Transform</b> : Linear and Circular convolution, Auto and Cross Correlation, Discrete Time Fourier Transforms (DTFT), Properties of DTFT, DFT and IDFT, Fast Fourier Transform (FFT).	08
Unit-4	Finite Impulse Response (FIR) filters:  FIR filter design by Fourier series method, Frequency sampling method and Windowing method like Rectangular, Triangular, Blackman window and Kaiser window.	06
Unit-5	Infinite Impulse Response (IIR) filters: Realization of basic structure IIR system: Direct form I, Direct form II, Cascade and parallel. IIR filter design by approximation of derivatives, impulse invariant method, Bilinear transformation method, Butterworth filter and Chebyshev filter.	80
Unit-6	Multirate Digital Signal Processing: Sampling, Sampling rate conversion, signal flow graph, filter structure, digital filter design, Digital filter bank.	06

### Text Books:

1. S. Salivahanan, A. Vallavaraj, "Digital Signal Processing", Tata McGraw-Hill Education, 2001.

### References:

- 1, S.K.Mitra, Digital Signal Processing: A computer based approach.TMH
- 2. A.V. Oppenheim and Schafer, Discrete Time Signal Processing, Prent ice Hall, 1989.
- 3. John G. Proakis and D.G. Manolakis, Digit al Signal Processing: Principles, Algorithms and Applications, Prent ice Hall, 1997.
- 4. L.R. Rabiner and B. Gold, Theory and Application of Digital Signal Processing, Prentice Hall, 1992.
- 5. J.R. Johnson, Introduction to Digital Signal Processing, Prentice Hall, 1992.
- 6. D.J.DeFatta, J. G. Lucas and W.S. Hodgkiss, Digital Signal Processing, John Wile y & Sons, 1988.

# rediffmail

Mailbox of gopalgawande

# Subject: Submission of Proposed syllabus of Renewable Energy sources

From: gopal sukdeo gawande<a href="mailto:gopalgawande@rediffmail.com">gopal sukdeo gawande<a href="mailto:gopalgawande@rediffmail.com">gopal sukdeo gawande<a href="mailto:gopalgawande@rediffmail.com">gopalgawande@rediffmail.com</a> on Thu, 26 Aug 2021 15:50:45

To: "nileshkasat27@gmail.com"<nileshkasat27@gmail.com>,"nnkhalsa@mitra.ac.in" <nnkhalsa@mitra.ac.in>,"ppamt07@yahoo.com"<ppamt07@yahoo.com>

1 attachment(s) - 6ETC04\_\_RES.docx (17.88KB)

Respected Sir,

We hereby submit the Proposed syllabus of Renewable Energy sources as attached herewith. Thanks Warm Regards,

Dr.Gopal S. Gawande HOD,Deptt.Of ENTC Member,International Cell, Shri Sant Gajanan Maharaj College of Engg.,Shegaon(Maharashtra) Mob:-+91-9421494317

From: "gopal sukdeo gawande" < gopalgawande@rediffmail.com>

Sent: Thu, 22 Jul 2021 10:39:18

To: <nileshkasat27@gmail.com>,<nnkhalsa@mitra.ac.in>,<ppamt07@yahoo.com>

Subject: Submission of Proposed syllabus of Control System Engineering

Respected Sir.

please find herewith the proposed syllabus of Control System Engineering for your kind perusal. Thanks. Warm Regards,
Dr.Gopal S. Gawande
HOD.Deptt.Of ENTC
Member,International Cell,
Shri Sant Gajanan Maharaj College of Engg.,Shegaon(Maharashtra)

Mob:-+91-9421494317

# 6ETC04: OE (II): Renewable Energy Sources (Solar & Electric Vehicles)

# **Course Objectives:**

- 1. To learn the fundamentals of solar cell and solar resource
- 2. To understand different solar cell technologies and characteristics of a PV cell
- 2. To understand different solar controllers and its applications3. To understand the basics of solar photovoltaic systems and its applications
- 4. To learn the basics of hybrid electric vehicles
- 5. To analyze the functionalities of electric drives trains
- 6. To learn the concepts of battery based energy storage and its analysis

### **Course Outcomes:**

After successfully completing the course, the students will be able to

- 1. Understand the basics of Solar P V cell and its resources.
- 2. Perform evaluation and switching behavior of PV cell, PV module, and array.
- 3. Explain thephotovoltaic systems and its applications.
- 4. Remember the details of electric vehicle evolution.
- 5. Perform analysis of various electric drives.
- 6.Understand energy storage in electric vehicles.

# Unit I: Solar Cell Fundamentals and Solar Resource

Place of PV in World Energy Scenario, P-N Junction Diode: An Introduction to Solar Cells, solar radiation spectra, solar geometry, Earth Sun angles, and observer Sun angles, solarday length, Estimation of solar energy availability.

# Unit II: Solar Cell Technologies

Production of Si, Si Wafer-based Solar Cell Technology, Advances in c-Si Cell Processes Suitable for Near Future Commercialization, Solar Cell Technologies-Amorphous, monocrystalline, polycrystalline; V-I characteristics of a PV cell, PV module, array.

# Unit III: Solar Photovoltaic Systems and Applications

Power Electronic Converters for Solar Systems, Maximum Power Point Tracking (MPPT) algorithms, Converter Control, Grid-Connected System and Standalone system, Solar Water Pumps, Solar street lights, Battery sizing.

# Unit IV Introduction to Hybrid Electric Vehicle

Review of Conventional Vehicle: Introduction to Hybrid Electric Vehicles: Electric Vehicle Evolution, Types of EVs, Types of battery for EVs.

# Unit V Electric Drives

Energy consumption Concept of Hybrid Electric Drive Trains, Architecture of Hybrid Electric Drive Trains, Series Hybrid Electric Drive Trains, Parallel hybrid electric drive trains, Electric Propulsion unit, Configuration and control of DC Motor drives, Induction Motor drives, Permanent Magnet Motor drives, switched reluctance motor

# Unit VI Energy Storage

Introduction to Energy Storage Requirements in Hybrid and Electric Vehicles: - Battery based energy storage and its analysis, Fuel Cell based energy storage and its analysis.

#### **Text Books:**

- 1. Chetan Singh Solanki, "Solar Photovoltics- Fundamentals, Technologies And Applications" PHI third Edition.
- 2. D. P. Kothari, K. C. Singal and Rakesh Ranjan, "Renewable Energy Sources and Emerging Technologies", PHI Second Edition.
- 3. A. K. Babu, Electric and Hybrid Vehicles, Khanna Publishers, 2019
- 4. S. P. Sukhatme and J.K. Nayak, "Solar Energy: Principles of Thermal Collection and Storage", McGraw Hill, 3 rd ed., 2008.
- 5. G. N. Tiwari and M. K. Ghosal, "Renewable Energy Applications", Narosa Publications, 2004.

### **Reference Books:**

- 1. G. M. Masters, "Renewable and Efficient Electric Power Systems", John Wiley and Sons. 2004.
- 2. J. A. Duffie and W. A. Beckman, "Solar Engineering of Thermal Processes", John Wiley & Sons, 1991
- 3. B.H. Khan, "Non-Conventional Energy Resources", McGraw Hill 2nd Edition 2017.
- 4. Emadi, A. (Ed.), Miller, J., Ehsani, M., "Vehicular Electric Power Systems" Boca Raton, CRC Press, 2003
- 5. Husain, I. "Electric and Hybrid Vehicles" Boca Raton, CRC Press, 2010.
- 6. Larminie, James, and John Lowry, "Electric Vehicle Technology Explained" John Wiley and Sons, 2012

Submitted by, Dr G.S.Gawande Dr P.R. Wankhede SSGMCE, Shegaon

# rediffmail

Mailbox of gopalgawande

# Subject: Submission of Proposed syllabus of Control System Engineering

From: gopal sukdeo gawande<gopalgawande@rediffmail.com> on Thu, 22 Jul 2021 10:39:18

To: <nileshkasat27@gmail.com>,<nnkhalsa@mitra.ac.in>,<ppamt07@yahoo.com>

1 attachment(s) - BOS\_copy\_\_CSE\_\_syllabus.docx (15.35KB)

Respected Sir, please find herewith the proposed syllabus of Control System Engineering for your kind perusal. Thanks. Warm Regards, Dr.Gopal S. Gawande HOD, Deptt. Of ENTC Member, International Cell, Shri Sant Gajanan Maharaj College of Engg., Shegaon (Maharashtra) Mob:-+91-9421494317

# SEMESTER: FIFTH

Subject: Control System Engineering

Subject Code: (5ETC02)

### Course Requisite:

1. (IA1) Engineering Mathematics-I

2. (IB1) Engineering Mathematics-II

3. (4ETC3) Signals and Systems

### **Course Objectives:**

- 1. To understand the fundamental concepts of Control systems and mathematical modeling of the physical systems.
- 2. To analyze time response of the LTI system.
- 3. To analyze LTI system using frequency response.
- 4. To develop and analyze State Variables of the system.

### **Course Outcomes:**

At the end of the course the student will be able to:

- 1. Understand mathematical models of electrical, mechanical and electromechanical systems.
- 2. Determine transfer functions from block diagrams and signal flow graph.
- 3. Evaluate transient response and steady state response parameters.

- 4. Analyze stability of the LTI system using Routh criterion and root locus
- 5. Analyze stability of the LTI system using bode plot and Nyquist criterion
- 6. Create the state model and Evaluate response of the system using state variable method.

	Basics of Control system	
Unit 1	Types of control systems Classification of control system, Mathematical	
	modeling of Physical Systems, Electrical Analogous Systems, Force -voltage	05
	analogy, force- Current analogy.	
Unit 2	Control system Representation Block diagram reduction technique, rules for	
	block diagram reduction. Analysis of multiple input multiple output systems,	06
	properties of signal flow graphs, Mason's gain formula basic control actions.	
Unit 3	Time Response Analysis: Standard test signals, Time response of first order	
	and second order system, impulse response function, Transient domain	06
	specifications, Steady state analysis: steady state error and error constants,	00
	dynamic error coefficients.	
Unit 4	Stability of control System: Concept of stability, necessary conditions for stability, Routh stability criterion. Root locus Techniques: Introduction, Construction of root locus, construction rules, Stability analysis of systems	07
-	using root locus, Effect of addition of open loop zeros & poles.	
Unit 5	Frequency- Domain analysis: Introduction, correlation between time and frequency response, Bode plot: general procedure for construction, Gain margin and phase margin, Stability analysis of systems using Bode plots. Polar plots, Nyquist stability criterion.	07
Unit 6	State Variable Analysis: Space model representation of LTI systems using physical, phase and canonical variables, Relationship between state variable model and transfer function, state transition matrix and its computation, Solution of state equations. Controllability and Observability.	06
	Total Hours	37

# TEXT BOOK:

- 1. Nagrath I. J. and M. Gopal, "Control Systems Engineering", 5th Ed.New Age International.
- 2. K. Ogata: Modern Control Engineering, Fourth Edition (PHI)

# **REFERENCE BOOKS:**

- 1) Richard C. Dorf and Robert H. Bishop, "Modern Control Systems", 11th Ed., Pearson Education.
  - 2) M. Gopal, "Control System Principles and Design", Tata McGraw Hill, 4th Edition, 2012.
  - 3) Norman S. Nise, "Control System Engineering", 5th Edition, Wiley.
  - 4) Bhattarcharya: Control System Engineering, 2nd Edition (Pearson Education).
  - 5) Benjamin C. Kuo, Automatic Control System "JOHN WILEY & SONS, INC.9th Edition

### Submitted by

Dr G.S.Gawande

Dr R.S.Dhekekar

Mr.K.T.Kahar

SSGMCE,Shegaon

roundaubs

**CSE syllabus Preparation Zoom Meeting** 

From To

Kamlesh Kahar <kamleshktkp@gmail.com>

<Pusdekar.wardha@gmail.com>, <nishantlabade@gmail.com>, <jcet.ardudhe@gmail.com>, <sandeeprode30@gmail.com>,

<manishagawande8587@gmail.com>, <ashishbhande1686@gmail.com>,

<vikram.kakade160@gmail.com>, <padmini\_kaushik@jdiet.ac.in>,

ram dhekekar <rsdhekekar@yahoo.co.in>, <npjawarkar@rediffmail.com> 2 more...

Cc

Gopal Gawande <gawandeg25@gmail.com>, Gopal Sukdeo

Gawande <hod\_extc@ssgmce.ac.in>

Date

2021-07-15 11:15

SSGMCE CSE Proposed syllabus.docx(~15 KB)

Dear Sir/Madam

Based on the inputs received from experts from different colleges we have prepared a syllabus for the subject CSE as follows. Kindly go through it and feel free to give suggestions if any in the zoom meeting scheduled tomorrow at 4pm.

iopic: CSE syllabus Preparation Zoom Meeting

Time: Jul 15, 2021 04:00 PM India

Join Zoom Meeting

https://us04web.zoom.us/j/75178954045?pwd=ankvV1U2K3Qvb2dUUzRLZlp0WUdnZz09

Meeting ID: 751 7895 4045

Passcode: 6i0HCD

Prof. Kamlesh T. Kahar EXTC Dept, SSGMCE Shegaon

# Semester -Fifth

# Subject: Control System Engineering

Reference:	Basic control system components; Feedback principle; Transfer
Control Systems	function; Block diagram representation; Signal flow graph;
Gate- 22 EXAM	Transient and steady-state analysis of LTI systems; Frequency
Syllabus	response; Routh-Hurwitz and Nyquist stability criteria; Bode and
	root-locus plots; Lag, lead and lag-lead compensation; State
	variable model and solution of state equation of LTI systems.

# **Teaching scheme**

Subject	Lecture	Tutorial	P/D	Credits	Paper duration	Max marks	Int marks	Total	Min passing
Control System Engineering	3	0	0	3	3h	80	20	100	40

# Proposed Syllabus by SSGMCE Shegaon (subjected to any correction)

Unit 1	Basics of Control system  Types of control systems Classification of control system, Mathematical	
	modeling of Physical Systems, Electrical Analogous Systems, Force -voltage analogy, force- Current analogy.	1
Unit 2	Basic control system components: Block diagram representation, block diagram reduction technique, rules for block diagram reduction. Analysis of multiple input multiple output systems, properties of signal flow graphs,	06

	Mason's gain formula basic control actions.	_
Unit 3	Time Response Analysis: Standard test signals, Time response of first order and second order system, impulse response function, Transient domain specifications, Steady state analysis: steady state error and error constants, dynamic error coefficients.	06
Jnit 4	Stability Analysis: Concept of stability, necessary conditions for stability, Routh stability criterion, Introduction, Root locus concepts, Construction of root locus, construction rules, Stability analysis of systems using root locus, Effect of addition of open loop zeros & poles.	06
Jnit 5	Frequency response analysis: Introduction, correlation between time and frequency response, Bode plots, Polar plots, general procedure for construction, Gain margin and phase margin, Stability analysis of systems using Bode plots, Nyquist stability criterion.	06
Init 6	State Variable Analysis: Space model representation of LTI systems using physical, phase and canonical variables, Relationship between state variable model and transfer function, state transition matrix and its computation, Solution of state equations. Controllability and observability	06
	Total lecture	36



Devesh Nawgaje <dnawgaje@gmail.com>

### About Syllabus of 6ETC02: Comp. Architecture

1 message

Dr. Nilesh Kasat <nileshkasat27@gmail.com>

Wed, Jul 14, 2021 at 6:07 PM

To: jcet.ardudhe@gmail.com, nilesh731@rediffmail.com, kashmira.kasat@prmceam.ac.in, Devesh Nawgaje <dnawgaje@gmail.com>, ahmedvasif@gmail.com,

Cc: Pramod Patil <ppamt07@yahoo.com>, NIKKOO KHALSA <nnkhalsa@mitra.ac.in>

As per the subject cited above, We have received the draft from Five institutes till date as,

- 1. SIPNA
- 2. SSGMCOE Shegaon
- 3. PRMITR Badnera
- 4. BNCOE Pusad 5. PRMCEAM Badnera

Further, As per the directions given by Chairman BoS, We will shortly be having online meetings before 18th July 2021 to finalize the single draft syllabus. I request you to please go through the attachments of draft syllabus provided by various institutes and spare your time for the meeting. The Date , Time and link will be provided on the whatsapp group as well as through mail. Thanks & Regards.

Dr. Nilesh N. Kasat

B.E., M.E., Ph.D.

Professor, Department of Electronics & Telecommunications Engineering,

Sipna COET, Amravati - 444701. Maharashtra State. INDIA.

Member - Governing Body, SIPNA College of Engineering & Technology, Amravati.

Member- Board of Studies (Electronics Engineering), SGB Amravati University, Amravati

Council Member, IETE HQ, New Delhi.

West Zone Mentor & Co\_Chairman, TPPC (Technical Programs & Publicity Committee)

Ex.Co Chairman, Academic Committee & Centre Chairperson's Committee, IETE HQ., New Delhi

Member, Alumni Association, GOVT. CoE, Amravati.

#### 5 attachments

COMPUTER\_Architecture\_BNCOE\_Pusad.pdf

Syllabus\_CA\_KNK\_PRMCEAM.doc 33K

Subject From

Proposed syllabus copy of Signal and System

To

Vikas K. Bhangdiya <vikasbb@gmail.com>

Date

Gopal Sukdeo Gawande <hod\_extc@ssgmce.ac.in> 2021-10-13 11:46

ronuqenps

Proposed Syllabus Signal and system.doc(~73 KB)

SS\_Lab\_propsed.docx(~17 KB)

# Respected Sir

With this mail I attached a proposed syllabus copy of Signal and system which was submitted to the syllabus meeting at Sipana COE.

Thanks & Regards

Vikas K. Bhangdiya Assistant Professor Shri Sant Gajanan Maharaj college of engg. Shegaon

Mob. +91-9823936816

# **4ET1: Signals and Systems**

(Prerequisites: Mathematics-III)

### **Course Objectives:**

- 1. Understand the fundamental characteristics of signals and systems.
- 2. Understand signals and systems in terms of both the time and transform domains.
- 3. Develop the mathematical skills to solve problems involving convolution and sampling.

### **Course Outcomes:**

After successfully completing the course, the students will be able to

- 1. Describe Continuous time signals and systems mathematically and understand their classification along with the mathematical operations that can be performed on them.
- 2. Analyze the spectral characteristics of continuous-time periodic signals Fourier series.
- 3. Analyze the spectral characteristics of continuous-time aperiodic signals and systems using Fourier Transform.
- 4. Apply the Laplace transform for analysis of continuous-time systems.
- 5. Understand Discrete Time signals and systems mathematically and understand their classification along with the mathematical operations that can be performed on them.
- 6. Analyze the spectral characteristics of Discrete Time signals and systems using Discrete Time Fourier Transform.

### Syllabus:

	SECTION-A
Unit I:	Unit-1 Continuous time signals and systems: Signal Classification, Energy and Power Signal, Signal Operations, Signal models, Even and Odd functions, convolution, System Classification,.
Unit II:	Continuous-Time Signal Analysis -The Fourier Series: Periodic Signal Representation by Trigonometric Fourier Series, Existence and Convergence of Fourier Series, Gibbs Phenomenon, Exponential Fourier Series, Generalized Fourier Series.
Unit III:	Continuous-Time Signal Analysis-The Fourier Transform: Aperiodic Signal Representation by Fourier Integral, Properties of Fourier Transform, Signal Transmission Through LTIC Systems, Signal energy, Inverse Fourier Transform
	SECTION-B
Unit IV:	Continuous-Time System Analysis Using Laplace Transform: Laplace Transform and it's properties, Region of convergence, Inverse Laplace transform, Solution of differential and Integro-differential equations, System Realization, Frequency response of LTIC system.
Unit V :	Time-Domain Analysis of Discrete-Time Signals & Systems: Signal Operations, convolution, Classification of Discrete-Time Systems, Discrete-Time System Equations, System response to Internal condition, Unit Impulse Response, System response to External Input, Classical Solution of Linear Difference Equations  Sampling and Reconstruction: Sampling theorem, signal reconstruction spectral, aliasing and its effect.
Unit VI :	Fourier Analysis of Discrete-Time Signals: Discrete-Time Fourier Series (DTFS), Aperiodic Signal Representation by Fourier Integral, Properties of DTFT, Relationship between DTFT & CTFT.

# Text Books:

- 1. Lathi B. P., "Principles of Linear Systems and Signals" Second Edition (International Version) Oxford University Press.
- 2. Alan V. Oppenheim & Alan S. Willsky with S. Hamid Nawab, "Signal & Systems" PHI Publication, Second Edition.
- 3. Michael J. Roberts, "Signals and Systems Analysis Using Transform Methods and MATLAB", Mc Hill Publication

- References: 1. Ambardar A., "Analog And Digital Signal Processing", Thomson Learning-2005.
- 2. Simon Haykin, Barry Van Veen, "Signals & Systems", IInd Edition, Wiley Publication.

# Subject (Practical): Signal and System

# Course Objectives:

- 1. To use software to visualize analysis of Signals and System.
- 2. To manipulate the time signals and identify the type of given system.

After successful completion of this course the student will be able to Course Outcomes:

- 1. Generate different plots and explore results to draw valid conclusions and inferences
- 2. Enable on how to approach for requirement of signal processing and system design using simulation tools.
- 3. Familiarize with the concepts of sampling.

# **Experiment List**

	Study of Signal Processing Function used in MATLAB/SCILAB.  Study of Signal Processing Function used in MATLAB/SCILAB.  Time Signals.
	Girmal Processing Function used in Figure Time Signals.
Expt-01	Study of Signal Troots Standard Common Continuous Time Signals
Expt-02	Program 10 Generate 1111 Common Discrete Time Signats.
Expt-03	Drogram 10 Generations on Signals.
	Program To Perform 2014 parts of a function.
Expt-04	D - gram 10 IIIu Lveii 1: 1: Signals
Expt-05	To find Periodic or Non-periodic Signal
Expt-06	Program To find Even And Odd parts of a Signals.  Program To find Periodic or Non-periodic Signals.  Program To find To Find the Energy and Power of a Signal.  Program To find To Find the Convolution of a Signal
Expt-07	Program To find To Find the Energy and Towns  Program To find To Find the Convolution of a Signal  Program To find To Find the Convolution of a Signal  Program To find To Find the Convolution of a Signal  Program To find To Find the Energy and Towns  Program To find To Find the Energy and Towns  Program To find To Find the Energy and Towns  Program To find To Find the Energy and Towns  Program To find To Find the Energy and Towns  Program To find To Find the Convolution of a Signal  Program To find To Find the Convolution of a Signal
Expt-08	
Express	Program To identify a given system
Expt-09	roger property of a given system.
	Program To identify a given system. invariance property of a given system. invariance property the time domain sampling of band limited signals
E 10	The gram 10 delitoristrate are
Expt-10	(Nyquist theorem).  Program To find Fourier transform of given signal/ System.
	To find Fourier transform of given significant
Expt-11	Program 10 Into 2
	- have list

<sup>\*</sup> Minimum 08 experiments based on/relevant to the above list.



Swapnii Badar <swapniibadar@gmail.com>

# **CMOS Design Syllabus**

1 message

Swapnil Badar <swapnilbadar@gmail.com>

2 July 2021 at 18:15

To: rahulghongade@rediffmail.com

Cc: gopal sukdeo gawande <gopalgawande@rediffmail.com>, Gopal Sukdeo Gawande <hod\_extc@ssgmce.ac.in>, Swapnil Badar <swapnilbadar@gmail.com>

Respected sir

Kindly find herewith the attachment of a draft of CMOS Design Syllabus

Thanks & Regard's:

### Swapnil P. Badar

Assistant Professor

Department of Electronics and Telecommunication Engineering, Shri Sant Gajanan Maharaj College of Engineering, Shegaon-444203 (MS)

#### 2 attachments

SGBAU CMOS Design Syllabus.docx 24K

SGBAU CMOS Design Syllabus.pdf 197K

# Subject (Th): ECEL13- CMOS Design

### Course Pre-requisites:

- 1. 3ETC02 Electronic Devices & Circuits.
- 2. 3ETC03 Digital System Design

### Course Objectives:

- 1. To study CMOS transistor theory and performance parameters.
- 2. To study layout design rules for size & power optimization.
- 3. To understand the concept of combinational CMOS circuit design.
- 4. To implement the concept of sequential circuit in CMOS design.
- 5. To learn the dynamic CMOS logic circuit

# Course Outcomes: After successfully completing the course, the students will be able to:

- 1. To understand the concept of CMOS circuit.
- 2. To draw Layout, Stick diagrams of CMOS Circuits.
- 3. To analyses the CMOS circuit performance parameter
- 4. To implement combinational CMOS circuit design using CMOS logic families.
- 5. To design sequential CMOS circuit.
- 6. To design the CMOS circuit using dynamic CMOS logic

Unit-1: CMOS Device Fundamentals: Review of MOS transistor models, Non-ideal behavior of the MOS Transistor, Transistor as a switch, CMOS Inverter and its Characteristics.

Unit-2 CMOS Layout & Design Rules: CMOS fabrication processing steps, p-well CMOS Process, n-well CMOS Process, Twin well process, Silicon-on-Insulator Process, CMOS Process enhancements -Interconnect, Circuit Elements, CMOS Lambda-based Design Rules, Stick Diagrams, Physical layout of simple CMOS Logic Gates.

Unit-3 CMOS Performance Parameter: RC Delay model, linear delay model, logical path efforts. Power, interconnect and Robustness in CMOS circuit layout.

Unit-4 Combinational Circuit Design: CMOS logic families, CMOS logic circuit, Complex CMOS circuit, Transmission gate, Pass transistor logic.

Unit-5 Sequential Circuit Design: Sequential Circuit Design: Design of latches and Flip-flops, Monostable and astable circuit.

Unit-6 Dynamic Logic Circuit: Dynamic Pass transistor logic, Dynamic CMOS logic, Domino logic, NORA logic.

#### **Text Books:**

- 1. S. M. Kang and Y. Leblebici, "CMOS Digital Integrated Circuits: Analysis and Design", 3rd Edition, MH, 2002.
- 2. Neil H. Weste, D. Harris, "Principles of CMOS VLSI design A Circuit & System Perspective" 4th Edition, Pearson (Addison-Wesley), 2011.
- 3. Wayne Wolfe, "Modern VLSI Design: IP based Approach", 4th Edition, PHI.
- 4. Jan M. Rabaey, A. Chandrakasan, B. Nikolic, "Digital Integrated Circuits: A Design Perspective", 2nd Edition, Pearson

#### Reference Books:

- 1. S.K. Ghandhi, "VLSI Fabrication Principles", John Wiley Inc., New York, 1994 (2nd Edition).
- 2. Plummer, Deal, Griffin, "Silicon VLSI Technology: Fundamentals, Practice & Modeling" PH, 2001.
- 3. S.M. Sze (Ed), "VLSI Technology", McGraw Hill.
- 4. C. Mead and L. Conway, Introduction to VLSI Systems, Addison Wesley, 1979.

Submitted By:

Prof. S. P. Badar Faculty, Department of EXTC SSGMCE, Shegaon (Contact No. - 9503733768)

# Rediffmail

Mailbox of kbkhanchandani@rediffmail.com

**Print** 

Cancel

From: kamlesh b. khanchandani<a href="mailto:kbkhanchandani@rediffmail.com">kbkhanchandani@rediffmail.com</a>

To: <apthakare40@rediffmail.com>

Subject: Adaptive Signal Proc. Syllabus

Date: Thu, 01 Jul 2021 16:58:21 IST

<ag\_vijay@rediffmail.com>,<vinitkharkar27@gmail.com>,<anup\_pachghare@jdiet.ac.in>,

Cc: <kbkhanchandani@rediffmail.com>,<k.m.pimple1999@yahoo.co.in>,<cndeshmukh@mitra.ac.in>,

<asmahore@mitra.ac.in>

Dear Dr. A. P. Thakare,

Please find attached herewith the softcopy of the syllabus contents for 6ETC04: Adaptive Signal Processing Open Elective - II (OE-II)

With Regards,

Dr.K.B.Khanchandani Professor ,Electronics & Telecom.Deptt S.S.G.M.College of Engg. Shegaon-444203 M.S.,INDIA

Mobile: 09284221205

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### 6ETC04: Open Elective - II (OE-II)

### ADAPTIVE SIGNAL PROCESSING

Prerequisite: 1. Signals and Systems

2. Digital Signal Processing

### **Course Objectives:**

- 1.Introduce to the concept and need of adaptive filters and popular adaptive signal processing algorithms
- 2.Understand the concepts of training and convergence and the trade-off between performance and complexity.
- 3.Introduce to common linear estimation techniques
- 4.Demonstrate applications of adaptive systems

### **Course Outcomes:**

At the end of the course, students will be able to:

- 1.Devise filtering solutions for optimising the cost function indicating error in estimation of parameters and appreciate the need for adaptation in design.
- 2. Evaluate the performance of various methods for designing adaptive filters through estimation of different parameters
- 3. Analyse convergence and stability issues associated with adaptive filter design and come up with optimum solutions
- 4. Design and implement filtering solutions for applications such as channel equalisation, interference cancelling and prediction considering present day challenges.

UNIT –I :Definitions, Characteristics, Applications, Example of an Adaptive System. The Adaptive Linear Combiner – Description, Weight Vectors, Desired Response Performance function – Gradient & Mean Square Error.(6)

UNIT –II: Development of Adaptive Filter Theory: Introduction to Filtering – Smoothing and Prediction – Linear Optimum Filtering, Problem statement, Principle of Orthogonally – Minimum Mean Square Error, Wiener- Hopf equations, Error Performance – Minimum Mean Square Error, Estimation of phase shift between two narrow band signals using Orthogonal Decomposer. .(7)

UNIT –III: Steepest Descent Algorithms: Searching the performance surface – Methods & Ideas of Gradient Search methods – Gradient Searching Algorithm & its Solution – Stability & Rate of convergence – Learning Curves Gradient Search by Newton's Method, Method of Steepest Descent, Comparison of Learning Curves. .(6)

UNIT –IV: LMS Algorithm & Applications: Overview – LMS Adaptation algorithms, Stability & Performance analysis of LMS Algorithms – LMS Gradient & Stochastic algorithms – Convergence of LMS algorithm. Applications: Adaptive BFSK, BPSK, ASK demodulators and delay estimation. Adaptive Beam forming, concept of IQ channels, Adaptive filter implementation of Hilbert Transform. Introduction to MUSIC.(7)

### UNIT -V: State Estimators:

Introduction to RLS Algorithm, Statement of Kalman filtering problem, The Innovation Process, Estimation of State using the Innovation Process- Expression of Kalman Gain, Filtering Example estimation of state from observations of noisy observed narrow band signals. Target tracking using only DOA. .(6)

UNIT-VI: Applications: System Identification, Linear Predictor, Adaptive Noise Cancellation, Adaptive ,Line Enhancement, ,jammer suppression, Inverse modeling, and Adaptive notch filter. .(6)

### **TEXT BOOKS:**

- 1.Bernard Widrow, Samuel D.Strearns, "Adaptive Signal Processing", 2005, PE.
- 2. Simon Haykin, "Adaptive Filter Theory", 4th Edition. 2002, PE Asia.

### **REFERENCE BOOKS:**

1.Kaluri V. Rangarao, Ranjan K. Mallik, "Digital Signal Processing: A Practitioner's Approach", ISBN: 978-0-470-01769-2, 210 pages, November 2006, John Wiley (UK)

# Rediffmail

Mailbox of kbkhanchandani@rediffmail.com

**Print** 

Cancel

From: kamlesh b. khanchandani<kbkhanchandani@rediffmail.com>

To: <apthakare40@rediffmail.com>

Subject: AUDIO & SPEECH SIGNAL PROC SYLLABUS

Date: Thu, 01 Jul 2021 16:50:18 IST

<nileshkasat27@gmail.com>,<prof\_gurjar1928@rediffmail.com>,<sopanbadak@gmail.com>,

**Cc:** <ag\_vijay@rediffmail.com>,<vinitkharkar27@gmail.com>,<pragati\_pawar@jdiet.ac.in>,

<a href="mailcom"><a href="mai

Dear Dr. A. P. Thakare,

Please find attached herewith the softcopy of the syllabus for 5ETC04-SPEECH & AUDIO PROCESSING.

With Regards,

Dr.K.B.Khanchandani Professor ,Electronics & Telecom.Deptt S.S.G.M.College of Engg. Shegaon-444203 M.S.,INDIA

Mobile: 09284221205

**Print** 

Cancel

# 5 ETC04: Professional Elective - I (PE-I)

# SPEECH AND AUDIO PROCESSING

Prerequisite: 1. Audio Systems and Analog Filters

2. Digital Signal Processing

### Course objectives:

1. To understand the different representations of digitized human speech

2. Analysis of the dominant features of speech

- 3. Modeling and processing using digital filters and Pattern Recognition techniques
- 4. Models for speech encoding
- 5. Speech Synthesis and coding.

### **Course Outcomes:**

At the end of the course, students will the able to:

- 1. Describe the key aspects of typical speech signals
- 2. Express the speech signal in terms of its time domain and frequency domain representations and the different ways in which it can be modelled
- 3. Derive expressions for simple features used in speech classification applications
- 4. Explain the operation of example algorithms and discuss the effects of varying parameter values within these
- 5. Synthesize block diagrams for speech applications, and describe the algorithms that could be used to implement them
- **Unit1: Introduction:** Production and transmission of acoustic signals: articulation of human speech. Acoustic-phonetic structure of Speech and Music: music synthesis and speech synthesis. A history of Voders & Vocoders and early speech recognition methods. [6]

**Unit2:** Acoustic-Phonetic classification: Phonemes, Auto-spectra. Short-term Spectral Analysis and STFT, the ARPA and DARPA projects, Pattern matching, introduction to Hidden Markov (HMM) Models. Adaptive segmentation of speech. [6]

**Unit3:** The stochastic parameters of human speech, Gaussian densities and statistical model training, voiced and unvoiced speech, voice-box modeling, resonance. Acoustic travelling waves. Psycho-acoustics, Physiological exploration of periodicity, audio-spectrograms and sonograms, pitch-perception models. [7]

Unit4: Physiology of the ear and hearing mechanism, the Auditory System modeled as a Filter-bank, Gamma-tone and Roex filters, Spectrum and Complex Cepstrum analysis prediction analysis [6]

Unit5: Phonetic and phonemic alphabets, phonological models of ASR, Linear and Dynamic Time-warping, connected word recognition, Statistical sequence recognition and model training in speech pattern recognition, HMM training, Viterbi training, MLP architecture and training, [6]

Unit 6: Speech Synthesis and coding, Formant synthesizers, Vocoders, Speech transformation, Speaker verification, Music synthesizers, speech-assisted applications in industry, defence and medicine. [7]

### Text Books:

1B.Gold & N.Morgan :- Speech & Audio Signal Processing -Processing and Perception of Speech & Music (Wiley Student edition)

2.. L.R. Rabiner & B.H.Juang :- Fundamentals of Speech Recognition (Prentice-Hall Signal Processing series)

### Reference Books:

- 1. G. Young :- The Application of Hidden Markov Models in Speech Recognition
- 2. M.Grimm & K.Kroschel:-Robust Speech Recognition & Understanding
- 3. L. R.Rabiner & R.W.Schafer: Theory and Applications of Digital Speech Processing (Hewlett-Packard Labs/Pearson Pub)
- 4. C. Schmandt :- Voice Communication with Computers-Conversational Systems (Van Norstrand Reinhold Computers Series)
- 5. B.Plannerer: An Introduction to Speech Recognition
- 6. .Mihelic & J.Zibert: Speech Recognition
- 7. I. Mcloughlin :Applied Speech and Audio Processing with MATLAB examples (Cambridge University Press)





### Feedback Analysis of Teachers by Students Autumn 2018-19

- Overall Faculty Feedback shows satisfactory.
- Following faculty shows that average performance rating below 75%

Dept	Class	Subject	Faculty	Average Performance Rating (%)
ASH	B2	EE	Prof. R. Z. Fulare	71.9722222
ASH	A2	EM-I	Prof. S.V.Yenkar /NS Thakare	71.7836257
ASH	A2	EP	Dr. J. S. Bakare	70.4678363
ASH	В3	СР	Prof.P.K. Shelke	67.8571429
COMPUTER	2R	MIII	Prof. S. V. Yenkar	70.3278689
COMPUTER	4R	WE	Prof. S. D. Jain	67.1768707
COMPUTER	2R	EDC	Dr. S. B. Patil	67.0765027
ELECTRONICS	2U2	EDC	Prof. A.N.Dolas	71.6369048
ELECTRONICS	2U2	1&5	Prof. Lopamudra S.	69.5535714
ELECTRONICS	2U2	ENVS	Prof. A. S. Alane	68.4242424
ELECTRONICS	2U2	SDL-I	Prof. D. L. Bhombe	65.6547619
IT	3N	DIC	Prof.A.G.Sharma	73.7202381
IT	3N	EAM	Prof. R. K. Mankar	72.9166667
IT	2N	MIII	Prof.S.V.Yenkar	71.5931373
MECHANICAL	2M	МоМ	Prof. A. S. Bharule	74.375

Action suggested in the Principal, Dean and HOD Meeting:

- 1. Concerned department should send faculty for Faculty Development Program.
- 2. ASH Department will arrange English Speaking classes.
- 3. Faculty orientation program should arrange with S & K associates and Dean Academics
- 4. HOD should arrange personal counselling
- 5. Lesson Plan of respective faculty must be revised under Academic monitoring Committee

Dean Academics



Dean Academics
S.S.G.M.College of Engineering
Shegaon-451 222 (1997)

### Feedback Analysis of Teachers by Students Spring 2018-19

- Overall Faculty Feedback shows satisfactory.
- Following faculty shows that average performance rating below 75%

Dept	Class	Subject	Faculty	Average Performance Rating (%)
ASH	A2	EP	Dr. J. S. Bakare	73.10
ASH	B2	EE	Prof. R. Z. Fulare	72.71
ASH	В3	EM-II	Prof. N.S. Thakare	70.63
ASH	B2	EC	Prof. A. V. Patil	66.76
ASH	B1	A, EE =	Prof. B. S. Rakhonde	66.57
ASH	B1	EM-II	Prof. S. V. Yenkar	56.67
COMPUTER	2R	ООР	Prof. V. S. Mahalle	74.04
COMPUTER	4R	Al	Dr. D. R. Dhotre	68.06
COMPUTER	2R	тос	Prof. C. M. Mankar	66.85
ELECTRONICS	2U2	DE	Prof. B. P. Harne	74.84
ELECTRONICS	2U2	AE-I	Prof. A. N. Dolas	73.14
ELECTRONICS	2U1	ENVS	Dr. R.M.Kharate	69.96 、
ELECTRONICS	2U1	SDLAB-II	Prof. V. S. Ingole	69.15
ELECTRONICS	2U2	ENVS	Prof.A.S.Alane	63.51
IT	3N	CLAB-IV	Prof. A. G. Sharma	71.69
IT	4N	DWC	Prof. A. G. Sharma	69.86
IT	4N	SE	Prof. Ms. P. K. Shelake	59.73
ÎΤ	2N	CLAB-II	Prof. P. P. Bute	34.23
MECHANICAL	2M	ENVS	Dr. R.M. Kharate	69.26

### Action suggested in the Principal, Dean and HOD Meeting:

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- 4. HOD should arrange personal counselling
- 5. Lesson Plan of respective faculty must be revised under Academic monitoring Committee

Dean Academics

Dean Academics S.S.G.M.College of Engineering Shegaon-444 202 (24 5 World)

### Feedback Analysis of Teachers by Students Spring 2018-19

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ASH	B2	EC	Prof. A. V. Patil	66.76
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COMPUTER	4R	Al	Dr. D. R. Dhotre	68.06
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ELECTRONICS	2U2	AE-I	Prof. A. N. Dolas	73.14
ELECTRONICS	2U1	ENVS	Dr. R.M.Kharate	69.96
ELECTRONICS	2U1	SDLAB-II	Prof. V. S. Ingole	69.15
ELECTRONICS	2U2	ENVS	Prof.A.S.Alane	63.51
IT	3N	CLAB-IV	Prof. A. G. Sharma	71.69
IT	4N	DWC	Prof. A. G. Sharma	69.86
ΙΤ	4N	SE	Prof. Ms. P. K. Shelake	59.73
IT.	2N	CLAB-II	LAB-II Prof. P. P. Bute	
MECHANICAL	2M	ENVS	Dr. R.M. Kharate	69.26

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**Dean Academics** 

Dean Academics S.S.G.M.College of Engineering Shegaon-444 203 (M.S.) India.

SHEGAON 444 203

# Shri Sant Gajanan Maharaj College Of Engineering Shegaon Summary of Feedback of Teachers by Students Autumn 2018-19

Department of MBA

	Department of MBA					
Dept	Class	Subject	Teacher	Percentage		
MBA	SEM I	PPM	Prof.P.M.Kuchar	87.21		
MBA	SEM I	ME	Prof.S.M.Mishra	85.28		
МВА	SEM I	MSD	Dr.H.M.Jha "Bidyarthi"	84.29		
MBA	SEM I	AFM	Prof.V.V.Patil	84.21		
МВА	SEM I	OBE	Prof.W.Z.suliya	83.28		
MBA	SEM I	BE	Prof.M.A.Dande	82.55		
MBA	SEM IA	MIS	Dr.P.V.Bokad	80.68		
MBA	SEM IA	QM	Dr.L.B.Deshmukh	79.26		
MBA	SEM III	BL	Prof.V.V.Patil	78.33		
MBA	SEM III HR	MIR	Prof. W. Z. Suliya	77.08		
MBA	SEM III HR	HRLF	Prof. W. Z. Suliya	73.61		
MBA	SEM III HR	CM	Prof.S.M.Mishra	72.64		
MBA	SEM III HR	HRD	Prof.V.V.Patil	71.67		
MBA	SEM III HR	MTD	Dr.P.V.Bokad	70.97		
MBA	SEM III HR	PM	Prof. P M Kuchar	70.63		
MBA	SEM III MR	IMS	Prof.P.M.Kuchar	70.42		
МВА	SEM III MR	SDMN	Dr.L.B.Deshmukh	68.13		
МВА	SEM III MR	СВ	Dr. L B Deshmukh	67.08		
МВА	SEM III MR	AM	Prof.M.A.Dande	66.42		
МВА	SEM III MR	вм	Prof. M A Dande	63.33		
MBA	SEM III MR	ABM	Dr.H.M.Jha "Bidyarthi"	60.36		

PRINCIPAL

Dean Academics SS.GM.College of Engineering Slegaon 444 203 (M S ) India.

### Feedback Analysis of Teachers by Students Autumn 2018-19

- Overall Faculty Feedback shows satisfactory.
- Following faculty shows that average performance rating below 75%

Dept	Class	Subject	Teacher	Percentage
MBA	SEM III HR	HRLF	Prof. W. Z. Suliya	73.61
MBA	SEM III HR	СМ	Prof.S.M.Mishra	72.64
МВА	SEM III HR	HRD	Prof.V.V.Patil	71.67
MBA	SEM III HR	MTD	Dr.P.V.Bokad	70.97
MBA	SEM III HR	PM	Prof. P M Kuchar	70.63
MBA	SEM III MR	IMS	Prof.P.M.Kuchar	70.42
МВА	SEM III MR	SDMN	Dr.L.B.Deshmukh	68.13
MBA	SEM III MR	СВ	Dr. L B Deshmukh	67.08
MBA	SEM III MR	AM	Prof.M.A.Dande	66.42
МВА	SEM III MR	BM	Prof. M A Dande	63.33
MBA	SEM III MR	ABM	Dr.H.M.Jha "Bidyarthi"	60.36

SHEGAON 444 203

S.S.G.M.College of Engine Shegaon-444-292 (2012)

### Action suggested in the Principal, Dean and HOD Meeting:

- 1. Individual feedback analysis reports were compiled and communicated to teachers
- 2. Knowledge of the subject should enhance by attending STTP
- 3. The teachers were advised to strengthen the areas of concern highlighted in the student feedback report.
- 4. Concerned department should send faculty for Faculty Development Program.
- 5. ASH Department will arrange English Speaking classes.
- 6. Faculty orientation program should arrange with S & K associates and Dean Academics
- 7. HOD should arrange personal counselling
- 8. Lesson Plan of respective faculty must be revised under Academic monitoring Committee

Dean Academic

SHEGAON SHEGAON 444 203

Dean Academics
S.S.GM.College of Frigingering
Slegaon-444 20204 (2014)

#### Feedback Analysis of Teachers by Students Autumn 2019-20

- Overall Faculty Feedback shows satisfactory.
- Following faculty shows that average performance rating below 75%

Dept	Class	Subject	Faculty	Average Performance Rating (%)
ASH	B2	EE	Prof. R. Z. Fulare	71.9722222
ASH	A2	EM-I	Prof. S.V.Yenkar /NS Thakare	71.7836257
ASH	A2	EP	Dr. J. S. Bakare	70.4678363
ASH	В3	СР	Prof.P.K. Shelke	67.8571429
COMPUTER	2R	MIII	Prof. S. V. Yenkar	70.3278689
COMPUTER	4R	WE	Prof. S. D. Jain	67.1768707
COMPUTER	2R	EDC	Dr. S. B. Patil	67.0765027
ELECTRONICS	2U2	EDC	Prof. A.N.Dolas	71.6369048
ELECTRONICS	2U2	1&5	Prof. Lopamudra S.	69.5535714
ELECTRONICS	2U2	ENVS	Prof. A. S. Alane	68.4242424
ELECTRONICS	2U2	SDL-I	Prof. D. L. Bhombe	65.6547619
IT	3N	DIC	Prof.A.G.Sharma	73.7202381
IT	3N	EAM	Prof. R. K. Mankar	72.9166667
1T	2N	MIII	Prof.S.V.Yenkar	71.5931373
MECHANICAL	2M	MoM	Prof. A. S. Bharule	74.375

#### Action suggested in the Principal, Dean and HOD Meeting:

- 1. Concerned department should send faculty for Faculty Development Program.
- 2. ASH Department will arrange English Speaking classes.
- 3. Faculty orientation program should arrange with \$ & K associates and Dean Academics
- 4. HOD should arrange personal counselling

5. Lesson Plan of respective faculty must be revised under Academic monitoring Committee

Dean Academics

Dean Academics S.S.G.M.College of Engineering Slegaon 444 203 (M 2 ) India.

PRINCIPAL
Shri Sant Gajanan Maharaj
College of Engineering, Shegaon.

#### Feedback Analysis of Teachers by Students Autumn 2019-20

- Overall Faculty Feedback shows satisfactory.
- Following faculty shows that average performance rating below 75%

Dept	Class	Subject	Faculty	Average Performance Rating (%)
ASH	B2	EE	Prof. R. Z. Fulare	71.9722222
ASH	A2	EM-I	Prof. S.V.Yenkar /NS Thakare	71.7836257
ASH	A2	EP	Dr. J. S. Bakare	70.4678363
ASH	В3	СР	Prof.P.K. Shelke	67.8571429
COMPUTER	2R	MIII	Prof. S. V. Yenkar	70.3278689
COMPUTER	4R	WE	Prof. S. D. Jain	67.1768707
COMPUTER	2R	EDC	Dr. S. B. Patil	67.0765027
ELECTRONICS	2U2	EDC	Prof. A.N.Dolas	71.6369048
ELECTRONICS	2U2	1&S	Prof. Lopamudra S.	69.5535714
ELECTRONICS	2U2	ENVS	Prof. A. S. Alane	68.4242424
ELECTRONICS	2U2	SDL-I	Prof. D. L. Bhombe	65.6547619
IT	3N	DIC	Prof.A.G.Sharma	73.7202381
IT	3N	EAM	Prof. R. K. Mankar	72.9166667
IT	2N	MIII	Prof.S.V.Yenkar	71.5931373
MECHANICAL	2M	MoM	Prof. A. S. Bharule	74.375

#### Action suggested in the Principal, Dean and HOD Meeting:

- 1. Concerned department should send faculty for Faculty Development Program.
- 2. ASH Department will arrange English Speaking classes.
- 3. Faculty orientation program should arrange with S & K associates and Dean Academics
- 4. HOD should arrange personal counselling

SHEGAON

5. Lesson Plan of respective faculty must be revised under Academic monitoring Committee

Dean Academics

Dean Academics

S.S.GM.College of Engineering Shegaon 444 202 (34 2 Madi

PRINCIPAL

Shri Sant Gajanan Maharaj College of Engineering, Shegaon.

#### Feedback Analysis of Teachers by Students Spring 2019-20

- Overall Faculty Feedback shows satisfactory.
- Following faculty shows that average performance rating below 75%

Dept	Class	Subject	Faculty	Average Performance Rating (%)
ASH	A2	EP	Dr. J. S. Bakare	73.10
ASH	B2	EE	Prof. R. Z. Fulare	72.71
ASH	В3	EM-II	Prof. N.S. Thakare	70.63
ASH	B2	EC	Prof. A. V. Patil	66.76
ASH	B1	EE	Prof. B. S. Rakhonde	66.57
ASH	B1	EM-II	Prof. S. V. Yenkar	56.67
COMPUTER	2R	ООР	Prof. V. S. Mahalle	74.04
COMPUTER	4R	Al	Dr. D. R. Dhotre	68.06
COMPUTER	2R	TOC	Prof. C. M. Mankar	66.85
ELECTRONICS	2U2	DE	Prof. B. P. Harne	74.84
ELECTRONICS	2U2	AE-I	Prof. A. N. Dolas	73.14
ELECTRONICS	2U1	ENVS	Dr. R.M.Kharate	69.96
ELECTRONICS	2U1	SDLAB-II	Prof. V. S. Ingole	69.15
ELECTRONICS	2U2	ENVS	Prof.A.S.Alane	63.51
ΙΤ	3N	CLAB-IV	Prof. A. G. Sharma	71.69
ΙΤ	4N	DWC	Prof. A. G. Sharma	69.86
IT	4N	SE	Prof. Ms. P. K. Shelake	59.73
IT	2N	CLAB-II	Prof. P. P. Bute	34.23
MECHANICAL	2M	ENVS	Dr. R.M. Kharate	69.26

#### Action suggested in the Principal, Dean and HOD Meeting:

- 1. Concerned department should send faculty for Faculty Development Program.
- 2. ASH Department will arrange English Speaking classes.
- 3. Faculty orientation program should arrange with S & K associates and Dean Academics
- 4. HOD should arrange personal counselling

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5. Lesson Plan of respective faculty must be revised under Academic monitoring Committee

Dean Academics

S.S.G.M. College of Engineering

Shri Sant Gajanan Maharaj College of Engineering, Shegaon.

Theory Subject Summery Report of Feedback Analysis(Branchwise)

Academic Session 2022-23(Autumn)

Department	Applied Science	s & Humanities			
Class	Subject	Name of Faculty	FeedBack	Records	Date
1M	EM-II	Prof. K. P. Deshmukh	85.14	59	01 / 02 / 202
1M	EC	Prof. A. V. Patil	85.02	59	01 / 02 / 202
1M	BEE	Prof. U. A. Jawadekar	86.15	59	01 / 02 / 202
1M	EG	Prof. K. R. Dudhe	86.35	59	01 / 02 / 202
Department	Applied Sciences	s & Humanities			
Class	Subject	Name of Faculty	FeedBack	Records	Date
1N	EM-I	Prof. K. P. Deshmukh	84.31	63	01 / 02 / 202
1N	EP	Prof. R. G. Raut	85.79	63	01 / 02 / 202
1N	EM	Dr. S. B. Somani	84.10	63	01 / 02 / 202
1N	СР	Prof. S. S. Muddalkar	92.01	63	01 / 02 / 202
Department	Applied Sciences	& Humanities	75	•	-
Class	Subject	Name of Faculty	FeedBack	Records	Date
1R	EM-I	Dr. N. A. Patil	89.81	64	01 / 02 / 202
1R	EP	Dr. A. S. Tale	89.58	64	01 / 02 / 202
1R	EM	Prof. C. V. Patil	87.68	64	01 / 02 / 202
1R	СР	Prof. J. M. Patil	88.88	64	01 / 02 / 2023
Department	Applied Sciences	& Humanities			
Class	Subject	Name of Faculty	FeedBack	Records	Date
1S	EM-I	Prof. P. S. Dhokane	84.35	59	01 / 02 / 2023
1S	EP	Prof. R. G. Raut	86.10	59	01 / 02 / 2023
1S	EM	Prof. N. G. More	76.83	59	01 / 02 / 2023
1S	СР	Prof. S. B. Pagrut	84.83	59	01 / 02 / 2023
Department	Applied Sciences	& Humanities			
Class	Subject	Name of Faculty	FeedBack	Records	Date
1U1	EM-II	Dr. N. A. Patil	91.01	61	01 / 02 / 2023
1U1	EC	Prof. A. S Alane	91.91	61	01 / 02 / 2023
1U1	BEE	Prof. R. Z. Fulare	85.16	61	01 / 02 / 2023
1U1	EG	Prof. N. B. Borkar	91.53	61	01 / 02 / 2023
Department	Applied Sciences	& Humanities			
Class	Subject	Name of Faculty	FeedBack	Records	Date
1U2	EM-II	Prof. N. S.Thakare	74.14	64	01 / 02 / 2023
1U2	EC	Dr. R. M. Kharate	91.69	65	01 / 02 / 2023
1U2	BEE	Prof. R. S. Kankale	84.17	65	01 / 02 / 2023









Practical Subject Summery Report of Feedback Analysis(Branchwise)

Academic Session 2022-23(Autumn)

Dep	artment Applied S	ciences & Humanities			
Class	Subject	Name of Faculty	FeedBack	Records	Date
1M	EC (XY)	Prof. A. S Alane	93.68	38	01 / 02 / 2023
1M	EC (Z)	Dr. R. M. Kharate	93.28	16	01 / 02 / 2023
1M	BEE (XZ)	Prof. U. A. Jawadekar	90.5	35	01 / 02 / 2023
1M	BEE (Y)	Prof. M. R. Chavan	67.63	19	01 / 02 / 2023
1M	EG (XYZ)	Prof. K. R. Dudhe	89.29	53	01 / 02 / 2023
1M	CMS Lab (XZ)	Prof. H. S. Patil	83.38	34	01 / 02 / 2023
1M	CMS Lab (Y)	Prof. S. V. Bhagat	85.78	19	01 / 02 / 2023
Dep	artment Applied Sc	ciences & Humanities			
Class	Subject	Name of Faculty	FeedBack	Records	Date
1N	EP (XYZ)	Prof. R. G. Raut	86.66	60	01 / 02 / 2023
1N	EM (XY)	Prof. C. V. Patil	88.71	39	01 / 02 / 2023
1N	EM (Z)	Prof. N. G. More	80.59	21	01 / 02 / 2023
1N	CP (XYZ)	Prof. S. S. Muddalkar	92.37	60	01 / 02 / 2023
1N	Workshop (XYZ)	Prof. P. T. Patokar	86.08	60	01 / 02 / 2023
Depa	artment Applied Sc	iences & Humanities			
Class	Subject	Name of Faculty	FeedBack	Records	Date
1R	EP (XYZ)	Dr. A. S. Tale	90.12	60	01 / 02 / 2023
1R	EM (XZ)	Prof. K. V. Chandan	84.82	44	01 / 02 / 2023
1R	EM (Y)	Prof. C.V.Patil	89.84	16	01 / 02 / 2023
1R	CP (XYZ)	Prof. J. M. Patil	88.55	59	01 / 02 / 2023
1R	Workshop (XYZ)	Prof. P.T. Patokar	87.29	60	01 / 02 / 2023
Depa	ertment Applied Sci	iences & Humanities			01 / 02 / 2023  Date
Class	Subject	Name of Faculty	FeedBack	Records	Date
ıs	EP (XYZ)	Dr. A. S. Tale	88,46	49	01 / 02 / 2023
ıs	EM (XYZ)	Prof. N. G. More	83.36	49	01 / 02 / 2023
s	CP (XYZ)	Prof. S. B. Pagrut	85.86	49	01 / 02 / 2023
lS	Workshop (XYZ)	Prof. P.T. Patokar	86.27	49	01 / 02 / 2023
Depa	rtment Applied Sci	ences & Humanities			
Class	Subject	Name of Faculty	FeedBack	Records	Date
				A STATE OF THE STA	

1U1

EC (XYZ)

Prof. A. S. Alane

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01 / 02 / 2023

## Practical Subject Summery Report of Feedback Analysis(Branchwise)

Academic Session 2022-23(Autumn)

<b>1</b> U1	BEE (XYZ)	Prof. R. Z. Fulare	91.29	56	01 / 02 / 2023
1U1	EG (XYZ)	Prof. N. B. Borkar	93.92	56	01 / 02 / 2023
1U1	CMS Lab (X)	Prof. H. S. Patil	84.87	20	01 / 02 / 2023
1U1	CMS Lab (YZ)	Prof. S. V. Bhagat	89.51	36	01 / 02 / 2023
Dep	artment Applied S	ciences & Humanities			
Class	Subject	Name of Faculty	FeedBack	Records	Date
1U2	BEE (XYZ)	Prof. R. S. Kankale	83.88	56	01 / 02 / 2023
1U2	EG (X)	Prof. S. P. Joshi	88.97	17	01 / 02 / 2023
1U2	EG (Y)	Prof. K. R. Dudhe	89.86	19	01 / 02 / 2023
1U2	EG (Z)	Prof. N. B. Borkar	81.84	19	01 / 02 / 2023
1U2	CMS Lab (X)	Prof. S. V. Bhagat	87.08	18	01 / 02 / 2023
1U2	CMS Lab (YZ)	Prof. H. S. Patil	87.29	37	01 / 02 / 2023

Mr. A. B. Wagh Analyst

Prof. D. L. Bhombe Dean (Academics)

Dr. S. B. Somani Principal

01 / 02 / 2023



Theory Subject Summery Report of Feedback Analysis(Branchwise)

Academic Session 2022-23(Autumn)

Department	COMPUTER				
Class	Subject	Name of Faculty	FeedBack	Records	Date
2R	M-III	Prof. Ms. K. P. Deshmukh	89.76	64	28 - 12 - 202
2R	DSGT	Dr. P. K. Bharne	87.05	64	28 - 12 - 202
2R	ООР	Prof. V. S. Mahalle	78.69	64	28 - 12 - 202
2R	DS	Prof. Ms. K. P. Sable	75.96	64	28 - 12 - 202
2R	ADE	Prof. S. G. Nemane	90.13	64	28 - 12 - 202
2R	ENVS	Dr. R. M. Kharate	85.44	63	28 - 12 - 202
Department	COMPUTER				
Class	Subject	Name of Faculty	FeedBack	Records	Date
3R	IRA	Prof. C. V. Patil	86.15	49	17 - 10 - 202
3R	DBMS	Prof. J. M. Patil	91.46	58	17 - 10 - 202
3R	CD	Prof. C. M. Mankar	70.20	57	17 - 10 - 202
3R	CAO	Prof. P. V. Deshmukh	86.46	58	17 - 10 - 202
3R	DS	Dr. P. K. Bharne	83.07	39	17 - 10 - 202
3R	ICS	Prof. V. S. Mahalle	72.75	43	17 - 10 - 202
Department	COMPUTER				
Class	Subject	Name of Faculty	FeedBack	Records	Date
4R	SSEE	Dr. Satyamohan Mishra	75.5	50	28 - 11 - 202
4R	CG	Prof. H. M. Deshmukh	76.93	50	28 - 11 - 202
4R	СС	Prof. C. M. Mankar	75.86	50	28 - 11 - 202
4R	DF	Prof. S. B. Pagrut	75.57	46	28 - 11 - 202
4R	DWM	Dr. Ms. R. A. Zamare	65.85	45	28 - 11 - 202
4R	BF	Dr. N. M. Kandoi	73.36	50	28 - 11 - 202

Mr. A. B. Wagl Analyst Prof. D. L. Bhombe Dean (Academics)

Practical Subject Summery Report of Feedback Analysis(Branchwise)

Academic Session 2022-23(Autumn)

Dep	artment COMPUTER				
Class	Subject	Name of Faculty	FeedBack	Records	Date
2R	OOP (AB)	Dr. N. M. Kandoi	82.94	39	28 - 12 - 2022
2R	OOP ( C )	Prof. V. S. Mahalle	79.41	17	28 - 12 - 2022
2R	OOP (D)	Dr. R. A. Zamare	81.25	8	28 - 12 - 2022
2R	DS (ABCD)	Prof. Ms. K. P. Sable	73.32	64	28 - 12 - 2022
2R	ADE (ABCD)	Prof. S. G. Nemane	87.03	64	28 - 12 - 2022
2R	CS_LAB-I (ABCD)	Prof. Ms. P. V. Deshmukh	90.42	64	28 - 12 - 2022
Depa	artment COMPUTER				i
Class	Subject	Name of Faculty	FeedBack	Records	Date
3R	DBMS (AB)	Prof. Ms. P. V. Deshmukh	90.62	28	17 - 10 - 2022
3R	DBMS (CD)	Prof. H. M. Deshmukh	87.12	27	17 - 10 - 2022
3R	CD (ABCD)	Prof. C. M. Mankar	75.86	55	17 - 10 - 2022
3R	CS_LAB-III (ABCD)	Dr. R. A. Zamare	79.36	55	17 - 10 - 2022
Depa	ortment COMPUTER			-	
Class	Subject	Name of Faculty	FeedBack	Records	Date
4R	CG (ABCD)	Prof. H. M. Deshmukh	77.12	47	28 - 11 - 2022
4R	DF (ABCD)	Dr. P. K. Bharne	76.03	41	28 - 11 - 2022
4R	DWM (ABCD)	Dr. Ms. R. A. Zamare	78.52	39	28 - 11 - 2022
4R	BF (ABCD)	Dr. N. M. Kandoi	75.05	47	28 - 11 - 2022

Mr. A. B. Wagh Analyst Prof. D. L. Bhombe Dean (Academics)



Theory Subject Summery Report of Feedback Analysis(Branchwise)

Academic Session 2022-23(Autumn)

Department	ELECTRICAL				
Class	Subject	Name of Faculty	FeedBack	Records	Date
25	M-III	Mr. P. S. Dhokane	89.53	61	27 - 12 - 202
2S	ECA	Mr. V. S. Karale	89.50	61	27 - 12 - 202
2S	EM - I	Mr. B. S. Rakhonde	92.13	60	27 - 12 - 202
2S	ERG	Mr. M. R. Chavan	74.18	61	27 - 12 - 202
25	EDC	Prof. G. N. Bonde	79.69	61	27 - 12 - 202
2S	ENVS	Prof. A. S. Alane	80.57	58	27 - 12 - 202
Department	ELECTRICAL				
Class	Subject	Name of Faculty	FeedBack	Records	Date
35	DSA	Prof. Mrs. S. N. Khandare	63.77	19	19/10/2022
3S	IRA	Prof. P. A. Dalke	60.57	23	19/10/2022
3S	PS-I	Prof. P. R. Dhabe	83.25	42	19/10/2022
3S	MPMC	Dr. S. S. Jadhao	82.89	42	19/10/2022
35	EM-II	Prof. P. R. Bharambe	74.84	42	19/10/2022
3\$	SS	Dr. Mrs.A.U. Jawadekar	76.34	42	19/10/2022
Department	ELECTRICAL			-	
Class	Subject	Name of Faculty	FeedBack	Records	Date
45	PS-II	Dr. S.R. Paraskar	63.98	59	28 - 11 - 202
4S	DSP	Prof. R. Z. Fulare/ Dhabe	74.40	59	28 - 11 - 202
4S	EPM	Prof. W.Z.Suliya/Deshmukh	68.38	59	28 - 11 - 202
4S	WSES	Prof. U. A. Jawadekar	68.36	52	28 - 11 - 202
4S	EDC	Prof. R. K. Mankar	75.13	24	28 / 11 / 202
45	AI	Dr. S. S. Jadhao	73.04	35	28 / 11 / 202
45	PSOC	Prof. RS. Kankale	78.75	12	28 / 11 / 2022

Mr. A. B. Wagh Analyst



Prof. D. L. Bhombe Dean (Academics)

Practical Subject Summery Report of Feedback Analysis(Branchwise)

Academic Session 2022-23(Autumn)

Dep	artment ELECTRICAL	-						
Class	Subject	Name of Faculty	FeedBack	Records	Date			
25	ECA (ABCD)	Prof. V. S. Karale	90.21	58	27 - 12 - 2022			
2S	EM - I (ABCD)	Prof. B. S. Rakhonde	91.57	57	27 - 12 - 2022			
25	EDC (ABCD)	Prof. G. N. Bonde	83.87	58	27 - 12 - 2022			
2S	ET Lab (ABC)	Prof. R. Z. Fulare	89.11	48	27 - 12 - 2022			
25	ET Lab (D)	Dr. R. S. Pote	90.25	10	27 - 12 - 2022			
Depa	Department ELECTRICAL							
Class	Subject	Name of Faculty	FeedBack	Records	Date			
35	PS-I (AB)	Prof. P. R. Dhabe	79.19	28	19 - 10 - 2022			
3S	PS-I (CD)	Prof. R .K. Mankar	90.41	12	19 - 10 - 2022			
3\$	MPMC (AB)	Dr. S. S. Jadhao	82.41	28	19 - 10 - 2022			
3S	MPMC (CD)	Prof. V. S. Karale	86.66	12	19 - 10 - 2022			
35	EM-II (ABCD)	Prof. P. R. Bharambe	85.87	40	19 - 10 - 2022			
35	ICT Lab (ABCD )	Prof. A. U. Jawadekar	83.43	40	19 - 10 - 2022			
Depa	artment ELECTRICAL				11			
Class	Subject	Name of Faculty	FeedBack	Records	Date			
45	PS-II (AB)	Dr. S. R. Paraskar	73.5	35	28 - 11 - 2022			
45	PS-II (CD)	Prof. R.K.Mankar	76.08	23	28 - 11 - 2022			
45	DSP (AD)	Prof. P.R.Dhabe	71.07	28	28 - 11 - 2022			
45	EP&M (AB)	MrM.R.Chavan	64.21	35	28 - 11 - 2022			
45	DSP (BC)	Prof. B.S. Rakhonde	79.66	30	28 - 11 - 2022			
45	EP&M (CD)	Prof. A. K. Dambral	72.28	23	28 - 11 - 2022			

Mr. A. B. Wagh Analyst



Prof. D. L. Bhombe Dean (Academics)

Theory Subject Summery Report of Feedback Analysis(Branchwise)

Academic Session 2022-23(Autumn)

Department	ELECTRONIC	CS			
Class	Subject	Name of Faculty	FeedBack	Records	Date
2U1	M-III	Prof. N. S.THAKARE	77.83	63	30 - 12 - 202
2U1	EDC	Prof. V. M.UMALE	54.86	63	30 - 12 - 202
2U1	DSD	Prof. S. P. BADAR	84.10	63	30 - 12 - 202
2U1	EMW	DR. B. P. HARNE	67.40	63	30 - 12 - 202
2U1	ООР	DR. S. B. PATIL	51.96	62	30 - 12 - 202
2U1	ENVS	Dr. R. M. Kharate	68.84	42	30 - 12 - 202
Department	ELECTRONIC	es			
Class	Subject	Name of Faculty	FeedBack	Records	Date
2U2	M-III	Prof. N. S. THAKARE	81.48	63	30 - 12 - 2022
2U2	EDC	DR. P. R. WANKHADE	80.42	63	30 - 12 - 202
2U2	DSD	Prof. S. P. BADAR	86.34	63	30 - 12 - 2022
2U2	EMW	Prof. P. D. KALE	85.82	63	30 - 12 - 2022
2U2	ООР	Prof. V. S. INGOLE	88.67	63	30 - 12 - 2022
2U2	ENVS	Prof. A. S. ALANE	87.40	59	30 - 12 - 202:
Department	ELECTRONIC	S			
Class	Subject	Name of Faculty	FeedBack	Records	Date
3U1	MIC	DR. D. D. NAWGAJE	92.30	52	17 - 10 - 2022
3U1	CSE	Prof. A. N. DOLAS	80.73	52	17 - 10 - 2022
3U1	DSP	DR. K. B. KHANCHANDANI	83.91	52	17 - 10 - 2022
3U1	PE	DR. R. S. DHEKEKAR	72.68	18	17 - 10 - 2022
3U1	FOC	DR. V. V. RATNPARKHI	79.12	42	17 - 10 - 2022
3U1	DSA	Prof. A. G. Sharma	80.23	43	17 - 10 - 2022
3U1	IRA	Prof. C.V. Patil	85.83	8	17 - 10 - 2022
Department	ELECTRONIC	S			17 - 10 - 202
Class	Subject	Name of Faculty	FeedBack	Records	Date Supplied
BU2	MIC	DR. D. D. NAWGAJE	83.70	59	25 - 11 - 2022
3U2	CSE	Prof. A. N. DOLAS	68.13	59	25 - 11 - 2022
BU2	DSP	DR. K.B.KHANCHANDAŅI	76.44	59	25 - 11 - 2022
BU2	PE	DR. R. S. DHEKEKAR	64.76	14	25 - 11 - 2022
BU2	FOC	DR. V. V. RATNPARKHI	77.42	57	25 - 11 - 2022
BU2	DSA	Mrs. Dipawali P. Tathe	66.62	42	25 - 11 - 2022
8U2	IRA	Prof. P. A. Dalke	66.78	14	25 - 11 - 2022

Theory Subject Summery Report of Feedback Analysis(Branchwise)

Academic Session 2022-23(Autumn)

Department	ELECTRONICS				
Class	Subject	Name of Faculty	FeedBack	Records	Date
4U1	CNS	Prof. Mrs. K. S. VYAS	86.63	54	17 - 10 - 202
4U1	DIVP	Prof. V. K. BHANGDIYA	84.29	54	17 - 10 - 202
4U1	PME	Prof. D. L. BHOMBE	79.62	54	17 - 10 - 202
4U1	MCN	Prof. V. N. BHONGE	81.04	54	17 - 10 - 202
4U1	ITM	Prof. K. T. KAHAR	82.74	54	17 - 10 - 202
Department	ELECTRONICS				
Class	Subject	Name of Faculty	FeedBack	Records	Date
4U2	CNS	Prof. T. P. MARODE	84.48	39	24 - 11 - 2022
4U2	DIVP	DR. M. N. TIBDEWAL	73.37	38	24 - 11 - 2022
4U2	PME	Prof. BILAL HUSAIN	78.29	39	24 - 11 - 2022
4U2	MCN	Prof. A. A. DESHMUKH	70.94	39	24 - 11 - 2022
4U2	ITM	Prof. K. T. KAHAR	76.52	35	24 - 11 - 2022

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Practical Subject Summery Report of Feedback Analysis (Branchwise)

Academic Session 2022-23(Autumn)

Dep	artment ELECTRO	NICS			
Class	Subject	Name of Faculty	FeedBack	Records	Date
2U1	EDC (ABCD)	Dr. V. V. Ratnaparkhi	74.53	64	30 - 12 - 2022
2U1	DSD (AB)	Prof. A.N.Dolas	73.71	35	30 - 12 - 2022
2U1	DSD (CD)	Prof. S. P. Badar	80.86	29	30 - 12 - 2022
2U1	OOP (AB)	Dr. B.P.Harne	64.72	36	30 - 12 - 2022
2U1	OOP (CD)	Dr. S. B. Patil	65.27	27	30 - 12 - 2022
2U1	EW (ABCD)	Dr. D. P. Tulaskar	80.46	64	30 - 12 - 2022
Dep	artment ELECTRO	NICS			
Class	Subject	Name of Faculty	FeedBack	Records	Date
2U2	EDC (AC)	Prof. V. M. Umale	73.62	29	30 - 12 - 2022
2U2	EDC (BD)	Dr. P. R. Wankhede	82.12	33	30 - 12 - 2022
2U2	DSD (AB)	Prof. S.P.Badar	93.21	28	30 - 12 - 2022
2U2	DSD ( CD )	Dr. D. P. Tulaskar	84	35	30 - 12 - 2022
2U2	OOP (ABCD )	Prof. V. S. Ingole	90.03	63	30 - 12 - 2022
2U2	EW (ABCD)	Dr. B. P. Harne	78.84	63	30 - 12 - 2022
Depa	artment ELECTRO	NICS			
Class	Subject	Name of Faculty	FeedBack	Records	Date
3U1	DSP (AB)	Dr. K. B. Khanchandani	80.64	35	17 / 10 / 2022
3U1	MIC (ABD)	Dr. D. D. Nawgaje	95.88	45	17 - 10 - 2022
3U1	MIC ( C )	Prof. V. S. Ingole	85	8	17 - 10 - 2022
3U1	DSP (CD )	Prof. P. D. Kale	85.13	18	17 - 10 - 2022
3U1	PE LAB (AD)	Prof. S. P. Satal	90.58	30	17 - 10 - 2022
3U1	PE LAB (BC)	Dr. R. S. Dhekekar	80.76	23	17 - 10 - 2022
3U1	E LAB (ABC)	Prof. K. T. Khar	85.98	43	17 - 10 - 2022
3U1	E LAB (D)	Prof. M .B. Dhamande	92	10	17 - 10 - 2022
Depa	rtment ELECTRON	IICS			18
Class	Subject	Name of Faculty	FeedBack	Records	Date
					1.

Prof. Mrs. K. S. Vyas

Dr. P. R. Wankhede

Prof. V. S. Ingole

Dr. K. B. Khanchandani

75.80

84.5

79.65

79.46

31

10

44

14

25 / 11 / 2022

25 / 11 / 2022

25 - 11 - 2022

25 - 11 - 2022

3U2

3U2

3U2

3U2

DSP (AB)

DSP(C)

MIC (ACD)

MIC (B)

Practical Subject Summery Report of Feedback Analysis (Branchwise)

Academic Session 2022-23(Autumn)

3U2	DSP ( D )	Prof. P .D. Kale	77.35	17	25 - 11 - 2022
3U2	PE LAB (ABCD)	Prof. V. N. Bhonge	80.83	57	25 - 11 - 2022
3U2	E LAB (A)	Prof. M. B. Dhamande	85.44	17	25 - 11 - 2022
3U2	E LAB (BC)	Prof. K. T. Kahar	80.72	24	25 - 11 - 2022
3U2	E LAB (D)	Prof. S. P. Satal	81.61	17	25 - 11 - 2022

#### **Department ELECTRONICS**

Class	Subject	Name of Faculty	FeedBack	Records	Date
4U1	CNS (ABCD)	Prof. K. S. Vyas	85.68	51	17 - 10 - 2022
4U1	DIVP (ABCD )	Prof. V. K. Bhangadiya	85.78	51	17 - 10 - 2022
4U1	PME (AD)	Prof. D.L.Bhombe	77.94	28	17 - 10 - 2022
4U1	PME (BC)	Prof. A. A. Deshmukh	85.76	23	17 - 10 - 2022

#### **Department ELECTRONICS**

Class	Subject	Name of Faculty	FeedBack	Records	Date
4U2	CNS (ABCD)	Prof. T. P. Marode	85.54	37	24 - 11 - 2022
4U2	DIVP (AD)	Dr. M. N. Tibdewal	78.87	20	24 - 11 - 2022
4U2	DIVP (BC)	Prof. A. N. Dolas	75.73	17	24 - 11 - 2022
4U2	PME (AC)	Dr. R. S. Dhekekar	83.05	18	24 - 11 - 2022
4U2	PME (BD)	Prof. A. A. Deshmukh	80.39	19	24 - 11 - 2022

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Theory Subject Summery Report of Feedback Analysis(Branchwise)

Academic Session 2022-23(Autumn)

Departm	ent IT				
Class	Subject	Name of Faculty	FeedBack	Records	Date
2N	ENVS	Dr. R. M. Kharate	67.31	44	27 - 12 - 2022
2N	M-III	Prof.Ms. K. P. Deshmukh	87.61	60	27 - 12 - 2022
2N	DS GT	Prof. S. D. Padiya	85.58	60	27 - 12 - 2022
2N	ООР	Prof. Ms. P. V. Kale	87	60	27 - 12 - 2022
2N	ALP	Prof. Ms. P. P. Bute	73.08	60	27 - 12 - 2022
2N	ADE	Prof. F. I. Khandwani	89.77	60	27 - 12 - 2022
2N	CSLab-I	Dr. A. S. Manekar	89.13	60	27 - 12 - 2022
Departme	ent IT				
Class	Subject	Name of Faculty	FeedBack	Records	Date
3N	DBMS	Prof. F. I. Khandwani	94.55	60	19 - 10 - 2022
3N	тос	Prof. S. S. Muddalkar	92.05	60	19 - 10 - 2022
3N	SE	Prof. B. R Chincholkar	54.68	58	19 - 10 - 2022
3N	DSS	Prof. A. G. Sharma	72.41	60	19 - 10 - 2022
3N	CSLab-III	Prof. Mrs. S. N. Khandare	61.92	59	19 - 10 - 2022
3N	DSA	Prof. Mrs. S. N. Khandare	85.51	13	19 - 10 - 2022
3N	IRA	Prof. P. A. Dalke	66.28	44	19 - 10 - 2022
3N	PSS	Prof. M. R. Chavan	86.54	14	19 - 10 - 2022
Departme	ent IT	- 4			
Class	Subject	Name of Faculty	FeedBack	Records	Date
4N	МС	Prof. Mrs. S. N. Khandare	80.54	49	18 - 10 - 2022
4N	ES	Prof. S. D. Padiya	87.41	49	18 - 10 - 2022
4N	СС	Dr. A. S. Manekar	81.73	49	18 - 10 - 2022
4N	ML	Prof. A. K. Shahade	84.89	49	18 - 10 - 2022
1N	BCF	Prof. Ms. P. P. Bute	82.99	49	18 - 10 - 2022

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Practical Subject Summery Report of Feedback Analysis (Branchwise)

Academic Session 2022-23(Autumn)

Dep	artment IT				
Class	Subject	Name of Faculty	FeedBack	Records	Date
2N	OOP (ABCD)	Prof.Ms.P.V.Kale	90.26	57	27 - 12 - 2022
2N	ALP (ABCD)	Prof. Ms. P. P. Bute	88.64	57	27 - 12 - 2022
2N	ADE (ABCD)	Prof.F.I.Khandwani	91.16	56	27 - 12 - 2022
2N	CSLAB-I (ABCD)	Dr. A S. Manekar	89.64	57	27 - 12 - 2022
Depa	artment IT				
Class	Subject	Name of Faculty	FeedBack	Records	Date
3N	DBMS (AC)	Prof.Ms.P.V.Kale	85	28	19 - 10 - 2022
3N	DBMS (BD)	Prof.A.K.Shahade	86.85	31	19 - 10 - 2022
3N	SE (ABCD)	Prof.B. R Chincholkar	62.14	57	19 - 10 - 2022
3N	DSS (ABCD)	Prof. A. G. Sharma	78.89	59	19 - 10 - 2022
3N	CSLAB-III ( ABCD )	Prof. Mrs. S. N. Khandare	64.40	59	19 - 10 - 2022
Depa	artment IT				
Class	Subject	Name of Faculty	FeedBack	Records	Date
4N	ES (ABCD)	Prof. S. D. Padiya	88.63	44	18 - 10 - 2022
4N	ML (ABCD)	Prof. A. K. Shahade	86.42	44	18 - 10 - 2022
4N	BCF (AB)	Prof.B. R Chincholkar	75.23	21	18 - 10 - 2022
4N	BCF ( C )	Prof. Mrs. S. N. Khandare	87.72	11	18 - 10 - 2022
4N	BCF (D)	Prof. Ms. P. P. Bute	92.04	11	18 - 10 - 2022

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Theory Subject Summery Report of Feedback Analysis (Branchwise)

Academic Session 2022-23(Autumn)

Departme	ent MECHANICA	L			
Class	Subject	Name of Faculty	FeedBack	Records	Date
2M	M-III	Prof. P. S. Dhokne	83.80	64	29 - 12 - 202
2M	MP	Dr. S. P. Trikal	86.27	64	29 - 12 - 202
2M	МОМ	Prof. A. S. Bharule	75.65	64	29 - 12 - 202
2M	ET	Prof. S. Q. Syed	82.39	64	29 - 12 - 202
2M	FM	Prof. K. V. Chandan	77.21	64	29 - 12 - 202
2M	ENVS	Prof. A. S. Alane	62.63	60	29 - 12 - 202
Departme	ent MECHANICA	L			
Class	Subject	Name of Faculty	FeedBack	Records	Date
3M	нт	Prof. M. B. Bhambere	87.92	45	18 - 10 - 202
3M	MQC	Dr. N. H. Khandare	83.70	45	18 - 10 - 2022
3M	КОМ	Prof. K. D. Gadgil	81.03	45	18 - 10 - 202
3M	MS	Prof. S. P. Joshi	80.92	45	18 - 10 - 2022
ЗМ	DSA	Prof. Mrs. S. N. Khandare	64.89	32	18 - 10 - 202
3M	PSS	Prof. M. R. Chavan	85.51	13	18 - 10 - 2022
Departme	nt MECHANICAL				
Class	Subject	Name of Faculty	FeedBack	Records	Date
4M	MECHX	Dr. V. K. Thute	72.05	43	24 - 11 - 2022
4M	PT	<sup>*</sup> Dr. N. H. Khandare	73.56	43	24 - 11 - 2022
4M	IMC	Prof. N. B. Borkar	75.73	43	24 - 11 - 2022
4M	EC-II	Prof. S. Q. Syed	82.17	43	24 - 11 - 2022
4M	AE	Dr. J. G. Khan	83.87	43	24 - 11 - 2022

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Practical Subject Summery Report of Feedback Analysis(Branchwise)

Academic Session 2022-23(Autumn)

Dep	artment MECHANI	CAL			
Class	Subject	Name of Faculty	FeedBack	Records	Date
2M	MP ( AD )	Dr. S P Trikal	85.77	29	29 - 12 - 2022
2M	MP (BC)	Prof. C V Patil	85.64	35	29 - 12 - 2022
2M	MOM (ABCD)	Prof. A. S. Bharule	82.46	64	29 - 12 - 2022
2M	FM (AD)	Prof. K. V. Chandan	85.34	29	29 - 12 - 2022
2M	FM (B )	Prof. M. B. Bhambere	81.18	19	29 - 12 - 202
2M	FM (C)	Prof. K D Gadgil	82.34	16	29 - 12 - 2022
2M	MDL (AB)	Dr. J G Khan	75.90	33	29 - 12 - 2022
2M	MDL (CD)	Prof. K. V. Chandan	78.22	31	29 - 12 - 2022
Depa	artment MECHANIC	CAL			•
Class	Subject	Name of Faculty	FeedBack	Records	Date
3M	HT (ABCD)	Prof. M B Bhambere	89.60	44	18 - 10 - 2022
3M	MQC (AB)	Prof. K. R. Dudhe	74.27	24	18 - 10 - 2022
3M	MQC (CD)	Dr. N H Khandare	83.25	20	18 - 10 - 2022
3M	KOM (ABCD)	Prof. K. D. Gadgil	80.68	44	18 - 10 - 2022
3M	MS (ABCD)	Prof. S P Joshi	86.98	44	18 - 10 - 2022
Depa	ortment MECHANIC	CAL			
Class	Subject	Name of Faculty	FeedBack	Records	Date
4M	MECHX (ABCD)	Dr. V K Thute	75.34	43	24 - 11 - 2022
4M	EC-II (ABCD)	Prof. S. Q. Syed	82.55	43	24 - 11 - 2022
4M	AE (A)	Prof. N. G. More	83.33	12	24 - 11 - 2022
4M	AE_(BCD)	Dr. J G Khan	83.38	31	24 - 11 - 2022

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Theory Subject Summery Report of Feedback Analysis(Branchwise)

Academic Session 2022-23(Autumn)

Department	МВА				
Class	Subject	Name of Faculty	FeedBack	Records	Date
SEM I	PPM	Prof.P.M.Kuchar	87.20	51	29 / 09 / 2018
SEM I	ME	Dr. S.M. Mishra	76.48	64	10 - 02 - 2023
SEM I	LBE	Dr. P. M. Kuchar	82.28	64	10 - 02 - 2023
SEM I	FRSA	Prof. V. V. Patil	82.71	64	10 - 02 - 2023
SEM I	IEBE	Dr. M. A. Dande	82.87	64	10 - 02 - 2023
SEM I	ОВ	Prof. W. Z. Suliya	86.58	64	10 - 02 - 2023
SEM I	САВ	Prof. B. H. Husain	81.93	64	10 - 02 - 2023
Department	МВА				
Class	Subject	Name of Faculty	FeedBack	Records	Date
SEM IA	BSADM	Dr. L.B. Deshmukh	80.83	64	10 / 02 / 2023
Department	мва				
Class	Subject	Name of Faculty	FeedBack	Records	Date
SEM III	BL	Prof. V. V. Patil	83.59	48	24 - 12 - 2022
Department	МВА				
Class	Subject	Name of Faculty	FeedBack	Records	Date
SEM III HR	MIR	Prof. W. Z. Suliya	88.08	30	24 - 12 - 2022
SEM III HR	HRLF	Prof. W. Z. Suliya	88.83	30	24 - 12 - 2022
SEM III HR	СМ	Prof. S. M. Mishra	83.41	30	24 - 12 - 2022
SEM III HR	HRD	Prof. V. V. Patil	86.70	30	24 - 12 - 2022
SEM III HR	MTD	Prof. B. T. Husain	82.87	30	24 - 12 - 2022
SEM III HR	PM	Dr. P M Kuchar	79.79	30	24 - 12 - 2022
Department	МВА				
Class	Subject	Name of Faculty	FeedBack	Records	Date
SEM III MR	IMS	Dr. P. M. Kuchar	81.25	21	24 - 12 - 2022
SEM III MR	SDMN	Dr. L. B. Deshmukh	76.76	22	24 - 12 - 2022
SEM III MR	СВ	Dr. M. A. Dande	76.70	22	24 - 12 - 2022
SEM III MR	AM	Dr. L. B. Deshmukh	78.18	22	24 - 12 - 2022
SEM III MR	ВМ	Dr. M. A. Dande	77.38	22	24 - 12 - 2022
SEM III MR	ABM	Dr.H.M.Jha "Bidyarthi"	80.17	22	24 - 12 - 2022

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Theory Subject Summery Report of Feedback Analysis(Branchwise)

Academic Session 2022-23(Spring)

Departm	ent Applied Scie	ences & Humanities			
Class	Subject	Name of Faculty	FeedBack	Records	Date
1M	EM-I	Prof. P. S. Dhokane	71.75	39	21 - 06 - 2023
1M	EP	Dr. A. S. Tale	73.76	39	21 - 06 - 2023
1M	EM	Prof. C. V. Patil	79.70	39	21 - 06 - 2023
1M	СР	Prof. S. S. Muddalkar	78.71	39	21 - 06 - 2023
Departm	ent Applied Scie	nces & Humanities	*		
Class	Subject	Name of Faculty	FeedBack	Records	Date
1N	EM-II	Dr. N. A. Patil	88.51	46	22 - 06 - 2023
1N	EC	Prof. A. V. Patil	61.07	45	22 - 06 - 2023
1N	BEE	Prof. R. Z. Fulare	75	46	22 - 06 - 2023
1N	EG	Prof. K. R. Dudhe	79.34	46	22 - 06 - 2023
Departme	ent Applied Scie	nces & Humanities			
Class	Subject	Name of Faculty	FeedBack	Records	Date
1R	EM-II	Prof. N. S. Thakare	68,66	65	22 - 06 - 2023
1R	EC	Prof. A. S Alane	70.66	65	22 - 06 - 2023
1R	BEE	Prof. U. A. Jawadekar	69.48	65	22 - 06 - 2023
1R	EG	Prof. N. B. Borkar	77.25	65	22 - 06 - 2023
Departme	ent Applied Scien	nces & Humanities			
Class	Subject	Name of Faculty	FeedBack	Records	Date
15	EM-II	Prof. N. S.Thakare	67.38	49	22 - 06 - 2023
15	EC	Dr. R. M. Kharate	76.36	50	22 - 06 - 2023
15	BEE	Prof. R. S. Kankale	81.56	50	22 - 06 - 2023
15	EG	Prof. S. P. Joshi	78.13	50	22 - 06 - 2023
Departme	nt Applied Scier	ices & Humanities			00 2020
Class	Subject	Name of Faculty	FeedBack	Records	Date
1U1	EM-I	Prof. P. S. Dhokane	76.25	64	21 - 06 - 2023
1U1	EP	Dr. A. S. Tale	81.14	64	21 - 06 - 2023
lU1	EM	Dr. S. B. Somani	69.50	64	21 - 06 - 2023
lU1	СР	Prof. J. M. Patil	78.20	64	21 - 06 - 2023
Departme	nt Applied Scien	ces & Humanities	1	<u> </u>	(6)
Class	Subject	Name of Faculty	FeedBack	Records	Date Date
.U2	EM-I	Prof. K. P. Deshmukh	70.21	62	21 - 06 - 2023
.U2	EP	Prof. R. G. Raut	70.29	62	21 - 06 - 2023

### Theory Subject Summery Report of Feedback Analysis(Branchwise)

Academic Session 2022-23(Spring)

1U2	EM	Prof. N. G. More	59.39	61	21 - 06 - 2023
1U2	СР	Prof. S. B. Pagrut	63.87	62	21 - 06 - 2023

Mr. A. B. Wagh

Analyst

Prof. D. L. Bhombe Dean (Academics)

Dr. S. B. Somani

Principal



Practical Subject Summery Report of Feedback Analysis (Branchwise)

Academic Session 2022-23(Spring)

Class	Subject	Name of Faculty	FeedBack	Records	Date
1M	EP (XYZ)	Prof. R. G. Raut	65.34	36	21 - 06 - 2023
1M	EM (XYZ)	Prof.C.V. Patil	80.07	35	21 - 06 - 2023
1M	CP (XYZ)	Prof.S.S. Muddalkar	77.21	35	21 - 06 - 2023
1M	Workshop (XYZ)	Prof. P.T. Patokar	82.01	36	21 - 06 - 2023
Dep	artment Applied Sc	iences & Humanities			
Class	Subject	Name of Faculty	FeedBack	Records	Date
1N	EC (X)	Dr. R.M. Kharate	82.95	11	22 - 06 - 2023
1N	EC (YZ)	Prof. A. S Alane	79.46	33	22 - 06 - 2023
1N	BEE (XYZ)	Prof. R. Z. Fulare	78.63	44	22 - 06 - 2023
1N	EG (XYZ)	Prof.K.R. Dudhe	79.60	44	22 - 06 - 2023
1N	CMS Lab ( X )	Prof. S. V. Bhagat	77.04	11	22 / 06 / 2023
1N	CMS Lab (YZ)	Prof. H.S. Patil	80.07	33	22 / 06 / 2023
Dep	artment Applied Sc	iences & Humanities			
Class	Subject	Name of Faculty	FeedBack	Records	Date
1R	EC (XYZ)	Prof. A. S Alane	72.94	62	22 - 06 - 2023
1R	BEE (XYZ)	Prof. U. A. Jawadekar	72.94	62	22 - 06 - 2023
1R	EG (XYZ)	Prof. N. B. Borkar	74.67	62	22 - 06 - 2023
1R	CMS Lab (X)	Prof. H.S. Patil	61.62	20	22 / 06 / 2023
1R	CMS Lab (YZ)	Prof. S. V. Bhagat	72.20	42	22 / 06 / 2023
Depa	artment Applied Sci	ences & Humanities			19)
Class	Subject	Name of Faculty	FeedBack	Records	Date
1S	EC (XYZ)	Dr.R.M. Kharate	80.45	50	22 - 06 - 2023
1S	BEE (XYZ)	Prof.R.S. Kankale	85.2	50	22 - 06 - 2023
15	EG (XYZ)	Prof. S. P. Joshi	82.5	50	22 - 06 - 2023
1S	CMS Lab (X)	Prof. H.S. Patil	81.02	22	22 / 06 / 2023
15	CMS Lab (YZ)	Prof. S. V. Bhagat	77.67	28	22 / 06 / 2023
Depa	rtment Applied Sci	ences & Humanities			227 007 2020
Class	Subject	Name of Faculty	FeedBack	Records	Date
4114	ED (1972)				

**1**U1

1U1

EP (XYZ)

EM (XyZ)

Dr. A. S. Tale

Prof. K.V. Chandan

81.27

77.82

59

38

21 - 06 - 2023

21 - 06 - 2023

## Practical Subject Summery Report of Feedback Analysis(Branchwise)

Academic Session 2022-23(Spring)

1U1	CP (XYZ)	Prof.J. M. Patil	79.70	59	21 - 06 - 2023
1U1	Workshop (XYZ)	Prof. P.T. Patokar	81.77	59	21 - 06 - 2023
Depa	artment Applied Sc	iences & Humanities			
Class	Subject	Name of Faculty	FeedBack	Records	Date
1U2	EP (XYZ)	Prof. R. G. Raut	69.41	56	21 - 06 - 2023
1U2	EM (XYZ)	Prof. N. G. More	71.22	55	21 - 06 - 2023
1U2	CP (XYZ)	Prof.S.B. Pagrut	67.72	56	21 - 06 - 2023
1U2	Workshop (XYZ)	Prof. P.T. Patokar	72.85	56	21 - 06 - 2023

Analyst

Prof. D. L. Bhombe Dean (Academics)

Principal



Theory Subject Summery Report of Feedback Analysis(Branchwise)

Academic Session 2022-23(Spring)

Department	COMPUTER				
Class	Subject	Name of Faculty	FeedBack	Records	Date
2R	AI	Prof. C. M. Mankar	73.53	59	25 - 05 - 202
2R	DCN	Prof. Ms. K. P. Sable	70.80	58	25 - 05 - 202
2R	os	Dr. P. K. Bharne	77.88	59	25 - 05 - 202
2R	MALP	Prof. Ms. P. V. Deshmukh	89.71	59	25 - 05 - 202
2R	тос	Dr. N. M. Kandoi	85.70	59	25 - 05 - 202
2R	ENVS	Dr. R. M. Kharate	78.84	59	25 - 05 - 202
Department	COMPUTER			,	
Class	Subject	Name of Faculty	FeedBack	Records	Date
3R	SPG	Prof. S. B. Pagrut	69.06	43	28 - 04 - 2023
3R	DAA	Prof. Ms. D. P. Patil	69.72	43	28 - 04 - 2023
3R	SE	Prof. C. M. Mankar	59.68	42	28 - 04 - 2023
3R	DBA	Dr. R. A. Zamare	59.68	42	28 - 04 - 2023
3R	BDA	Dr. R. A. Zamare	67.17	23	28 - 04 - 2023
3R	Crypto	Prof. V. S. Mahalle	80.78	17	28 - 04 - 2023
3R	WC	Dr. V. V. Ratnaparkhi	82.32	43	28 - 04 - 2023
Department	COMPUTER				-
Class	Subject	Name of Faculty	FeedBack	Records	Date
4R	OOAD	Prof. J. M. Patil	70.87	55	27 - 04 - 2023
4R	PEM	Dr. P. K. Bharne	68.33	55	27 - 04 - 2023
4R	ML AI	Prof. Ms. P. V. Deshmukh	62.45	17	27 - 04 - 2023
4R	SSS	Prof. V. S. Mahalle	73.07	39	27 - 04 - 2023
4R	DLT	Dr. N. M. Kandoi	56.11	54	27 - 04 - 2023
4R	BF	Dr. N. M. Kandoi	52.33	5	27 - 04 - 2023

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Practical Subject Summery Report of Feedback Analysis(Branchwise)

Academic Session 2022-23(Spring)

Dep	artment COMPUTER				
Class	Subject	Name of Faculty	FeedBack	Records	Date
2R	DCN (ABCD)	Prof. Ms. K. P. Sable	70.22	55	25 - 05 - 2023
2R	OS (ABCD)	Dr. P. K. Bharne	77.58	56	25 - 05 - 2023
2R	MALP (ABCD)	Prof. Ms. P. V. Deshmukh	85.98	56	25 - 05 - 2023
2R	CS_LAB-II (ABCD)	Dr. R. A. Zamare	76.11	56	25 - 05 - 2023
Depa	artment COMPUTER				
Class	Subject	Name of Faculty	FeedBack	Records	Date
3R	DAA (ABCD)	Prof. Ms. D. P. Patil	70.23	42	28 - 04 - 2023
3R	SE (ABCD)	Prof. C. M. Mankar	58.15	42	28 - 04 - 2023
3R	BDA (ABCD)	Dr. R. A. Zamare	62.5	24	28 - 04 - 2023
3R	Crypto (ABCD)	Prof. V. S. Mahalle	73.15	19	28 - 04 - 2023
3R	CS_LAB-IV (A)	Dr. P. K. Bharne	58.63	11	28 - 04 - 2023
3R	CS_LAB-IV (B)	Prof. J. M. Patil	78.61	9	28 - 04 - 2023
3R	CS_LAB-IV ( C )	Prof. S. B. Pagrut	72.14	14	28 - 04 - 2023
3R	CS_LAB-IV (D)	Prof. Mrs. S. N. Khandare	66.25	8	28 - 04 - 2023
Depa	artment COMPUTER	e e			
Class	Subject	Name of Faculty	FeedBack	Records	Date
4R	MLAI (ABCD)	Prof. Ms. P. V. Deshmukh	76.76	17	27 - 04 - 2023
4R	SSS (ABCD)	Prof. V. S. Mahalle	76.31	36	27 - 04 - 2023
4R	DLT (ABCD)	Dr. N. M. Kandoi	61.97	48	27 - 04 - 2023

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Academic Session 2022-23(Spring)

Department	ELECTRICAL				
Class	Subject	Name of Faculty	FeedBack	Records	Date
25	EMF	Dr. Mrs. A. U. Jawadekar	78.99	68	19 - 06 - 2023
2S	EMI	Prof. U. A. Jawadekar	71.26	67	19 - 06 - 2023
25	CS	Prof. R. Z. Fulare	63.72	68	19 - 06 - 2023
2S	NMOT	Prof. B. S. Rakhonde	83.18	68	19 - 06 - 2023
2S	ADC	Dr. S. S. Jadhao	73.79	68	19 - 06 - 2023
2S	ENVS	Prof. A. S. Alane	73.83	63	19 - 06 - 2023
Department	ELECTRICAL		937		-42
Class	Subject	Name of Faculty	FeedBack	Records	Date
3S	PE	Prof. V. S. Karale	79.39	74	26 - 04 - 2023
35	EEDU	Dr. S.R. Paraskar	76.84	74	26 - 04 - 2023
3S	CAEMD	Prof. P. R. Bharambe	71.59	74	26 - 04 - 2023
3\$	ACS	Dr. Mrs.A.U. Jawadekar	79.27	74	26 - 04 - 2023
3S	WC	Dr. D. P. Tulaskar	74.60	72	26 - 04 - 2023
3S	CLE	Dr. Ms. R. A. Zamare	74.60	72	26 - 04 - 2023
Department	ELECTRICAL				
Class	Subject	Name of Faculty	FeedBack	Records	Date
4S	PSP	Prof. P. R. Bharambe	75.35	66	28 - 04 - 2023
4S	CMPSA	Prof. R. K. Mankar	79.08	64	28 - 04 - 2023
45	HVE	Prof. R.S. Kankale	74.06	66	28 - 04 - 2023
4S	PQ	Prof. P. R. Dhabe	77.82	33	28 - 04 - 2023
4S	EĘCA	Prof. M. R. Chavan	68.33	37	28 - 04 - 2023

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Practical Subject Summery Report of Feedback Analysis(Branchwise)

Academic Session 2022-23(Spring)

Dep	artment ELECTRIC	AL			
Class	Subject	Name of Faculty	FeedBack	Records	Date
25	EMI (ABCD)	Prof. M. R. Chavan	66.04	62	19 - 06 <b>-</b> 2023
2S	CS (ABCD)	Prof. G. N. Bonde	80.15	64	19 - 06 - 2023
2S	ADC (ABCD)	Dr. S. S. Jadhao	78.16	64	19 - 06 - 2023
2S	ET Lab (ABCD)	Prof. P. R. Dhabe	83.32	64	19 - 06 - 2023
Depa	artment ELECTRICA	AL			
Class	Subject	Name of Faculty	FeedBack	Records	Date
3S	PE (ABCD)	Prof. V. S. Karale	81.32	70	26 - 04 - 2023
35	EEDU (AB)	Dr. S.R. Paraskar	87.62	40	26 - 04 - 2023
3S	EEDU (CD)	Dr. A. K. Damral	75.5	30	26 - 04 - 2023
35	CAEMD (ABCD)	Prof. P. R. Bharambe	67.92	70	26 <b>-</b> 04 - 2023
3S	ICT Lab (AB)	Prof. P. R. Dhabe	82.31	40	26 - 04 <b>-</b> 2023
35	ICT Lab (CD )	Prof. G. N. Bonde	68.33	30	26 - 04 - 2023
Depa	artment ELECTRICA	AL			
Class	Subject	Name of Faculty	FeedBack	Records	Date
45	PSP (ABCD)	Dr. R. S. Pote	86.57	62	28 - 04 - 2023
45	CMPSA (ABCD)	Prof. R. K. Mankar	77.33	60	28 - 04 - 2023

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Academic Session 2022-23(Spring)

Department	ELECTRONICS				
Class	Subject	Name of Faculty	FeedBack	Records	Date
2U1	AC	Prof. V. M. Umale	56.39	43	24 - 05 - 202
2U1	NT	Prof. S. P. Badar	80.22	44	24 - 05 - 202
2U1	SS	Dr. M. N. Tibdewal	60.34	43	24 - 05 - 202
2U1	VE	Dr. R. S. Dhekekar	60.34	43	24 - 05 - 202
2U1	ENVS	Dr. R. M. Kharate	60.49	37	24 - 05 - 202
2U1	ADC	Prof. P. D. Kale	75.79	44	24 - 05 - 202
Department	ELECTRONICS				
Class	Subject	Name of Faculty	FeedBack	Records	Date
2U2	ADC	Prof. P. D. Kale	88.39	57	24 - 05 - 202
2U2	AC	Dr. S. B. Patil	63.83	56	24 - 05 - 202
2U2	NT	Prof. K. T. Kahar	85.76	57	24 - 05 - 202
2U2	SS	Prof. V. K. Bhangdiya	88.47	57	24 - 05 - 202
2U2	VE	Dr. R. S. Dhekekar	80.70	57	24 - 05 - 202
2U2	ENVS	Prof. A. S. Alane	78.08	54	24 - 05 - 202
Department	ELECTRONICS			1	
Class	Subject	Name of Faculty	FeedBack	Records	Date
3U1	CN	Prof. A. N. Dolas	81.19	49	26 - 04 - 202
3U1	CA	Dr. D. D. Nawgaje	83.60	49	26 - 04 - 202
3U1	SC	Prof. K. S. Vyas	81.82	43	26 - 04 - 202
3U1	EE	Dr. S. M. Mishra	71.46	49	26 - 04 - 202
3U1	EAM	Prof. V. S. Karale	74.39	47	26 - 04 - 202
3U1	AE EV	Prof. P. A. Dalke	100	1	26 - 04 - 202
3U1	CMOS	Prof. S. P. Badar	79.58	8	26 - 04 - 202
Department	ELECTRONICS		7		
Class	Subject	Name of Faculty	FeedBack	Records	Date
3U2	CN	Prof. T. P. Marode	76.02	52	28 - 04 - 202
3U2	CA	Prof. V. S. Ingole	75.67	52	28 - 04 - 202
3U2	SC	Prof. S. G. Nemane	77.24	46	28 - 04 - 202
3U2	EE	Prof. A. A. Deshmukh	62.78	52	28 - 04 - 202
3U2	EAM	Prof. M. R. Chavan	63.97	47	28 - 04 - 202
3U2	CMOS	Prof. S. P. Badar	90.55	6	28 - 04 - 202
3U2	AE EV	Prof. P. A. Dalke	63	5	28 - 04 - 202

Theory Subject Summery Report of Feedback Analysis(Branchwise)

Academic Session 2022-23(Spring)

Department	ELECTRONICS				
Class	Subject	Name of Faculty	FeedBack	Records	Date
4U1	ES	Dr. K. B. Khanchandani	88.83	50	25 - 04 - 2023
4U1	МТТ	Dr. B. P. Harne	67.94	47	25 - 04 - 2023
4U1	WSN	Prof. D. L. Bhombe	81.33	50	25 - 04 - 2023
4U1	5G6G	Prof. V. N. Bhonge	79.26	50	25 - 04 - 2023
Department	ELECTRONICS				
Class	Subject	Name of Faculty	FeedBack	Records	Date
4U2	ES	Dr. P. R. Wankhede	80.74	47	26 - 04 - 2023
4U2	МТТ	Dr. B. P. Harne	72.73	47	26 - 04 - 2023
4U2	WSN	Prof. D. L. Bhombe	79.78	47	26 - 04 - 2023
4U2	5G6G	Prof. V. N. Bhonge	78,82	47	26 - 04 - 2023

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Practical Subject Summery Report of Feedback Analysis (Branchwise)

Academic Session 2022-23(Spring)

Don	enterest ELECTRONIA				
Бер	artment ELECTRONI	cs 			-
Class	Subject	Name of Faculty	FeedBack	Records	Date
2U1	ADC (ABD)	Prof. K. S. Vyas	74.62	33	24 - 05 - 2023
2U1	ADC (C)	Prof. P. D. Kale	82.75	10	24 - 05 - 2023
2U1	AC (AB)	Prof. S. G. Nemane	64.79	24	24 - 05 - 2023
2U1	AC (CD)	Prof. V. M. Umale	55	18	24 - 05 - 2023
2U1	NT (ACD)	Prof. S. P. Badar	80.24	31	24 - 05 - 2023
2U1	NT (B)	Prof. K. T. Kahar	77.5	12	24 - 05 - 2023
2U1	SS (AC)	Dr. M. N. Tibdewal	69.43	22	24 - 05 - 2023
2U1	SS (B)	Prof. V. K. Bhangdiya	86.25	12	24 - 05 - 2023
2U1	SS (D)	Prof. A. N. Dolas	75.55	9	24 - 05 - 2023
Dep	artment ELECTRONIC	cs			
Class	Subject	Name of Faculty	FeedBack	Records	Date
2U2	ADC (ABD)	Prof. V. N. Bhonge	89.31	40	24 - 05 - 2023
2U2	ADC ( C )	Prof. K. S. Vyas	84.80	13	24 - 05 - 2023
2U2	AC (AD )	Prof. S. G. Nemane	83.65	26	24 - 05 - 2023
2U2	AC (BC)	Dr. S. B. Patil	64.16	27	24 - 05 - 2023
2U2	NT (ABCD )	Prof. K. T. Kahar	89.29	53	24 - 05 - 2023
2U2	SS (ABCD)	Prof. V. K. Bhangadiya	89.62	53	24 - 05 - 2023
Depa	artment ELECTRONIC	CS ·			
Class	Subject	Name of Faculty	FeedBack	Records	Date
3U1	CN (ABCD)	Prof. A. N. Dolas	86.07	49	26 - 04 - 2023
3U1	ECD LAB (ABCD)	Dr. D. P. Tulaskar	75.71	49	26 - 04 - 2023
3U1	PYTHON LAB (ABCD)	Prof. V. S. Ingole	83.85	48	26 - 04 - 2023
3U1	MINI PRO (AD )	Dr. D. Nawgaje	92.71	23	26 - 04 - 2023
3U1	MINI PRO (BC )	Dr. R. S. Dhekekar	72.59	26	26 - 04 - 2023
Depa	rtment ELECTRONIC	S			
Class	Subject	Name of Faculty	FeedBack	Records	Date
3U2	CN (ABCD)	Prof. A. A. Deshmukh	70.98	51	28 - 04 - 2023

Dr. P. R. Wankhede

Dr. D. P. Tulaskar

Dr. K. B. Khanchandani

55.68

77.5

72.5

11

27

13

3U2

3U2

3U2

ECD LAB (A)

ECD LAB (BC)

ECD LAB (D)

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28 - 04 - 2023

28 - 04 - 2023

28 - 04 - 2023

Practical Subject Summery Report of Feedback Analysis(Branchwise)

Academic Session 2022-23(Spring)

3U2	PYTHON LAB (ABCD )	Prof. T. P. Marode	79.41	51	28 - 04 - 2023	
3U2	MINI PRO (AD)	Dr. R. S. Dhekekar	66.25	24	28 - 04 - 2023	
3U2	MINI PRO (BC)	Dr. D. D. Nawgaje	79.35	27	28 - 04 - 2023	
Dep	Department ELECTRONICS					
Class	Subject	Name of Faculty	FeedBack	Records	Date	
4U1	ES (ABCD)	Dr. K. B. Khanchandani	94.08	49	25 - 04 - 2023	
4U1	MTT (ABCD )	Dr. V. V. Ratnparkhi	94.69	49	25 - 04 - 2023	
Dep	artment ELECTRONIC	s				
Class	Subject	Name of Faculty	FeedBack	Records	Date	
4U2	MTT (BCD)	Dr. B. P. Harne	76.48	32	26 - 04 - 2023	
4U2	ES (ABCD)	Dr. P. R. Wankhede	82.38	45	26 - 04 - 2023	
4U2	MTT (A),	Dr. V. V. Ratnparkhi	86.34	13	26 - 04 - 2023	

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Theory Subject Summery Report of Feedback Analysis(Branchwise)

Academic Session 2022-23(Spring)

Department	IT				
Class	Subject	Name of Faculty	FeedBack	Records	Date
2N	COA	Prof. F. I. Khandwani	85.87	42	25 - 05 - 202
2N	DCN	Prof. S. D. Padiya	73.80	42	25 - 05 - 202
2N	os	Prof. Ms. P. V. Kale	63.88	42	25 - 05 - 202
2N	DS	Prof. A. K. Shahade	81.90	42	25 - 05 - 202
2N	SSEE	Prof. SMMishra/Prof. VVPatil	79.28	42	25 - 05 - 202
2N	ENVS	Dr. R. M. Kharate	66.34	36	25 - 05 - 202
Department	IT				A
Class	Subject	Name of Faculty	FeedBack	Records	Date
3N	CD	Prof. S. D. Padiya	81.69	60	27 - 04 - 202
3N	DAA	Prof. A. G. Sharma	68.58	60	27 - 04 - 202
3N	AI	Prof. S. N. Khandare	49.77	60	27 - 04 - 202
3N	BDA	Prof. F. I. Khandwani	82.86	60	27 - 04 - 202
3N	WC	Dr. D. P. Tulaskar	68.21	28	27 - 04 - 202
3N	EAM	Prof. N. G. More	65.47	21	27 - 04 - 202
3N	CLE	Dr. Ms. R. A. Zamare	69.76	14	27 / 04 / 202
Department	IT				
Class	Subject	Name of Faculty	FeedBack	Records	Date
4N	OOAD	Dr. A. S. Manekar	85.62	53	26 - 04 - 202
4N	PEM	Dr. M. A. Dande	79.87	53	26 - 04 - 202
4N	EPM	Prof. S. S. Muddalkar	81.16	53	26 - 04 - 202
4N	,VAR	Prof. Ms. P. P. Bute	85.84	53	26 - 04 - 202

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Practical Subject Summery Report of Feedback Analysis(Branchwise)

Academic Session 2022-23(Spring)

Dep	artment IT				
Class	Subject	Name of Faculty	FeedBack	Records	Date
2N	DCN (AB)	Prof. A. G. Sharma	74.43	22	25 - 05 - 2023
2N	DCN (CD)	Prof. S. N. Khandare	67.5	16	25 - 05 - 2023
2N	OS (ABCD)	Prof. Ms. P. V. Kale	65.70	39	25 - 05 - 2023
2N	DS (ABCD)	Prof. A. K. Shahade	77.17	38	25 - 05 - 2023
2N	CSLAB-II (ABCD)	Prof. S. N. Khandare	69.67	38	25 - 05 - 2023
Dep	artment IT				
Class	Subject	Name of Faculty	FeedBack	Records	Date
3N	CD (ABCD)	Prof. S. D. Padiya	81.79	60	27 - 04 - 2023
3N	DAA (ABCD)	Prof. A. G. Sharma	78.06	58	27 - 04 - 2023
3N	BDA (ABCD)	Prof. F. I. Khandwani	81	60	27 - 04 - 2023
3N	CSLAB-IV (AD)	Prof. Ms. P. V. Kale	79.63	34	27 - 04 - 2023
3N	CSLAB-IV ( BC )	Prof. Ms. P. P. Bute	71.53	26	27 - 04 - 2023
Depa	artment IT				
Class	Subject	Name of Faculty	FeedBack	Records	Date
4N	OOAD (ACD)	Dr. A. S. Manekar	86.77	38	26 - 04 - 2023
4N	OOAD (B)	Prof. A. K. Shahade	89.42	13	26 - 04 - 2023
4N	VAR (ABCD)	Prof. Ms. P. P. Bute	88.18	51	26 - 04 - 2023

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Theory Subject Summery Report of Feedback Analysis(Branchwise)

Academic Session 2022-23(Spring)

Department	MECHANICAL	-			
Class	Subject	Name of Faculty	FeedBack	Records	Date
2M	MS	Dr. N. H. Khandare	72.61	70	24 - 05 - 2023
2M	EC-I	Prof. S. Q. Syed	72.71	70	24 - 05 - 2023
2M	MT	Dr. S. P. Trikal	75.21	70	24 - 05 - 2023
2M	BEDC	Prof. B.S. Rakhonde	73.40	70	24 - 05 - 2023
2M	НМ	Prof. M. B. Bhambere	71.45	70	24 - 05 - 2023
2M	ENVS	Prof. A. S. Alane	58.25	63	24 - 05 - 2023
Department	MECHANICAL				
Class	Subject	Name of Faculty	FeedBack	Records	Date
3M	DME	Prof. A. S. Bharule	63.04	35	25 - 04 - 2023
3M	DOM	Dr. V. K. Thute	67.91	36	25 - 04 - 2023
3M	CSE	Prof. G. N. Bonde	69.21	36	25 - 04 - 2023
3M	NES	Prof. S. Q. Syed	65.55	12	25 - 04 - 2023
3M	LM	Dr. J. G. Khan	74.93	26	25 - 04 - 2023
3M	EAM	Prof. N.G. More	64.65	24	25 - 04 - 2023
3M	WC	Dr. D. P. Tulaskar	52.83	10	25 - 04 - 2023
3M	CLE	Dr. R. A. Zambare	83.33	1	25 - 04 - 2023
Department	MECHANICAL	•	*		
Class	Subject	Name of Faculty	FeedBack	Records	Date
4M	ORT	Prof. K. R. Dudhe	73.75	59	27 - 04 - 2023
4M	ICE	Prof. K. V. Chandan	56.22	57	27 - 04 - 2023
4M	AI	Prof. C. V. Patil	67.73	36	27 - 04 - 2023
4M	PPC	Dr. J. G. Khan	74.01	32	27 - 04 - 2023
4M	RIA	Dr. N. H. Khandare	71.23	46	27 - 04 - 2023
4M	RAC	Prof. K. D. Gadgil	69.71	23	27 - 04 - 2023

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Practical Subject Summery Report of Feedback Analysis(Branchwise)

Academic Session 2022-23(Spring)

Department MECHANICAL									
Class	Subject	Name of Faculty	FeedBack	Records	Date				
2M	MS ( AB )	Prof. S. P. Joshi	74.43	31	24 - 05 - 2023				
2M	MS ( CD )	Prof. K D Gadgil	71.89	37	24 - 05 - 2023				
2M	MT (AD)	Dr. S. P. Trikal	74.11	34	24 - 05 - 2023				
2M	MT (BC)	Prof. N. B. Borkar	77.13	34	24 - 05 - 2023				
2M	BEDC (ABCD )	Prof. B.S. Rakhonde	73.86	68	24 - 05 - 2023				
2M	HM (AB )	Prof. M. B. Bhambere	76.12	31	24 - 05 - 2023				
2M	HM (CD)	Prof. K D Gadgil	75.20	37	24 - 05 - 2023				
Department MECHANICAL									
Class	Subject	Name of Faculty	FeedBack	Records	Date				
3M	DME (ABCD)	Prof. A. S. Bharule	61.59	36	25 - 04 - 2023				
зм	DOM (ABCD)	Dr. V. K. Thute	67.63	36	25 - 04 - 2023				
зм	CADS LAB (ABCD)	Dr. J. G. Khan	71.73	36	25 - 04 - 2023				
ЗМ	RS LAB (ABC)	Prof. M. B. Bhambere	67.58	31	25 - 04 - 2023				
зм	RS LAB (D)	Prof. S. Q. Syed	86.87	4	25 - 04 - 2023				
Department MECHANICAL									
Class	Subject	Name of Faculty	FeedBack	Records	Date				
4M	ICE (AC)	Prof. K. V. Chandan	66.98	29	27 - 04 - 2023				
4M	ICE (BD)	Prof. S. Q. Syed	81.25	30	27 - 04 - 2023				
4M	RIA (ABCD)	Dr. N H Khandare	79.73	47	27 - 04 - 2023				
4M	RAC (ABCD)	Prof. K. D. Gadgil	89.16	12	27 - 04 - 2023				

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Theory Subject Summery Report of Feedback Analysis(Branchwise)

Academic Session 2022-23(Spring)

Department	МВА				
Class	Subject	Name of Faculty	FeedBack	Records	Date
SEM II	ВС	Dr. H. M. Jha "Bidyarthi"	81.80	36	25 - 05 - 2023
SEM II	RM	Prof. B.T. Husain	81.45	36	25 - 05 - 2023
SEM II	HRM	Prof. W.Z.Suliya	81.35	36	25 - 05 - 2023
SEM II	CF	Prof. S.M. Mishra	77.18	36	25 - 05 - 2023
SEM II	ММ	Prof. M.A. Dande	84.23	36	25 - 05 - 2023
SEM II	РОМ	Dr. L.B. Deshmukh	81.31	36	25 - 05 - 2023
SEM II	ENTR	Dr. P. M. Kuchar	81.97	36	25 - 05 - 2023
Department	МВА				
Class	Subject	Name of Faculty	FeedBack	Records	Date
SEM IV FI	FDA	Prof. Vishal Patil	73.65	27	27 - 04 - 202
SEM IV FI	SAPM	Dr. S.M. Mishra	69.25	27	27 - 04 - 202
SEM IV FI	FD	Dr. S.M. Mishra	70.64	27	27 - 04 - 202
SEM IV FI	MOFS	Prof. V. V. Patil	70.27	27	27 - 04 - 202
SEM IV FI	FEM	Dr. H.M. Jha "Bidyarthi"	69.95	27	27 - 04 - 202
SEM IV FI	IM	Dr. H. M. Jha "Bidyarthi"	69.53	27	27 - 04 - 202
SEM IV FI	SM	Dr. B.T. Husain	70.13	27	27 - 04 - 202
Department	мва				
Class	Subject	Name of Faculty	FeedBack	Records	Date
SEM IV MR	SM	Dr. B.T. Husain	84.88	11	27 - 04 - 202
SEM IV MR	SPM	Dr. P.M.Kuchar	87.84	11	27 - 04 - 202
SEM IV MR	MOS	Dr. M.A. Dande	86.93	11	27 - 04 - 202
SEM IV MR	MNPOSS	Dr. M.A. Dande	86.13	11	27 - 04 - 202
SEM IV MR	RTM	Dr. L.B. Deshmukh	88.18	11	27 - 04 - 202
SEM IV MR	RM	Prof. W.Z. Suliya	88.06	11	27 - 04 - 202
SEM IV MR	IME	Prof. W.Z. Suliya	87.5	11	27 - 04 - 202

Mr. A. B. Wagh Analyst

Prof. D. L. Bhombe Dean (Academics)

