SAMRAT ASHOK TECHNOLOGICAL INSTITUTE
(Engineering College), VIDISHA M.P.
(An Autonomous Institute Affiliated to RGPV Bhopal)

Applied Science (Physics)

Subject Category	BSC	Subject Code:	PYB101	Subject Name:	**Applied Physics**

Maximum Marks Allotted								Contact Hours			Total Credits
Theory				Practical			Total Marks				
End Sem	Mid-Sem	Quiz	Assignment	End Sem	Lab-Work	Quiz		L	T	P	
60	20	10	10	30	10	10	150	3	-	2	4

Prerequisites:

Intermediate Physics (Theory and Lab)

Course Objective:

This course is designed to impart fundamental knowledge about some areas of physics which are to the core of emerging technologies. It is planned to provide knowledge about Quantum mechanics, Lasers , Fiber Optics, Hologhphy, Superconductor, Nano materials, Dielectric and piezoelectric materials. Laboratory sessions are also designed which are blended with experiments on the fundamental and advanced areas of physics.

Course Outcomes:

After completion of the course, students will be able

CO1	To understand basic quantum physics and apply it to the behaviour of a system at the microscopic level and solve the problems.
CO2	To understand process of lasers and explain the requirements, properties, classification of various lasers. They will also develop an understanding of optical fibers and and holography and can explin the characteristics, various losses, dispersion in optical fibers and procsees of construction and reprocuction of holograms.
CO3	To understand the basic concepts and theory of semiconductor for devices application.
CO4	To understand and know the principle of superconductors and nanomaterils. The sdunednt will be able to explain types of superconductors, their properties and applications, nano technology and its applications.
CO5	To understand the characteristic of Dielectrics and Piezoelectric materials in terms of their applications .
CO6	To perform experiments related to the course contents.

UNIT	Descriptions	Hrs	CO's	Remarks
I	**Quantum mechanics:** Planck's quantum hypothesis, Wave-particle duality of radiation, de-Broglie matter waves, Davisson and Germer's electron diffraction experiment, Compton effect, Phase and group velocity, Heisenberg uncertainty principle and its applications, wave function and its significance, Eigen value and Eigen function, Schrödinger wave equations, particle in one dimensional potential box.	8	1	
II	**Lasers:** Properties of lasers, the basic process of lasers, Population- inversion, classification of lasers, working of He-Ne, Ruby, Nd: YAG and CO_2 lasers, Applications of Lasers in Communication, Medical and Industry. **Optical fibers:** Light guidance through optical fibres, the qualitative idea of critical and acceptance angle, types of fibers, numerical aperture, V- Number, intermodal & material dispersions in fiber. **Holography:** Basic principle of holography, Construction and reconstruction of Image on hologram and applications of holography.	8	2	
III	**Basic of semiconductors:** Density of energy states, Energy-band formations, direct and indirect band gap, Effective mass, Fermi energy evels. Mobility and carrier concentrations (intrinsic). Radiative and non- radiative recombination mechanisms in semiconductors . **Semiconductor Devices**: Properties of PN junction and I-V diode equation, Photovoltaic cell, LED Materials for fabrication, LED Structures and Characteristics; Injection Laser Diode (ILD) - Laser action in semiconductors , structures and efficiency.	8	3	

IV	**Superconductors**: Free electrons theory of metals, Temperature dependence of resistivity in superconducting Metals , Effect of magnetic field (Meissner effect) , Temperature dependence of critical field, Type I and Type II superconductors, BCS theory (Qualitative), High- temperature superconductors and Applications of superconductors. **Nanomaterials**: Basic principle of nanoscience and technology, structure, properties ad uses of Fullerene and Carbon nanotubes, Applications of nanotechnology.	8	4	
V	**Dielectrics Materials**: Polar and Non-Polar Dielectrics, Dipole moment and Polarization, Dielectric constant& Polarization, Gauss law in Dielectric, the relation between electric field vector E, Pand D. **Piezoelectric materials**- Ferroelectric materials , Piezoelectric effect, direct and converse parameter definitions, Piezoceramics, Piezopolymers, Piezoelectric materials as sensor and transducers**.**	8	5	
Guest Lectures (if any)				
Total Hours		40		

Suggestive list of experiments:

1. To determine the width of a single slit from the study of Fraunhoffer diffraction pattern using a He-Ne Laser.
2. To determine the frequency of A.C. mains using an electrical - vibrator.
3. Determination of Planck's constant.
4. To determine the frequency of A.C. mains using a sonometer.
5. To study the nature of polarization of light using the half-wave plate.
6. To find the numerical aperture of the given fibre.
7. To determine the refractive indices μ_0 and μ_e of Quartz prism for ordinary and extraordinary rays using the spectrometer.
8. To determine the wavelength of monochromatic source of light by Fresnel's biprism.
9. To study the V-I characteristics of semiconductor diode
10. To study V-I Characteristics of LED
11. To study the V-I characteristics of tunnel diode
12. To determine the radius of curvature of a given plano-convex lens by Newton's rings method.
13. To determine the absorption coefficient of a glass plate by "LUMMER- BRODHUM" photometer.
14. To determine the resolving power of a telescope. To determine the wavelength of light emitted by mercury vapour lamp using a diffraction grating.

TEXT BOOKS:

- Concepts of Modern Physics, Arthur Beiser, Tata McGraw-Hill,6th edition,2009.
- Optics, A.Ghatak, McGraw Hill, 2012.
- Engineering Physics , Hitendra K Malik& A.K. Singh, Mc Graw Hill Education Private Limited
- Elements of Modern Physics, S.H. Patil
- Kiruthiga Sivaprastha, Modern Physics, S. Chand
- A Textbook of Engineering Physics, Gaur and Gupta, Dhanpat Rai Publishers, New Delhi,8th edition,.2011.
- Electrical Engineering Materials by A.J. Dekker, PHI publication

REFERENCE BOOKS:

- Lasers and non-linear optics, B.B.Laud, New Age international,3rd edition,2011
- Solid State Physics, S.O.Pillai , New Age International Ltd, publishers
- Electromagnetic Theory for Telecommunications, C.S.Liu and V.K.Tripathi, Foundation Books, New Delhi,2007
- Quantum Mechanics by L.I. Schiff, Mc Graw Hill Co.
- A Textbook of Quantum Mechanics by Piravonu Mathews, K. Venkatesan (Tata McGraw Hill)
- Cady, W. G., Piezoelectricity, Dover Publication
- Piezoelectric Materials & Devices: Application in Engineering And Medical Sciences By
  - M.S. Vijiya .CRC Press.
- Electrical Engineering Materials Physics Properties by SP A Seth, Dhanpat Rai Publications.

Modes of Evaluation and Rubric

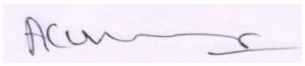
Assignments, Quiz, Tests & exams

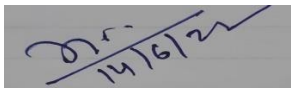
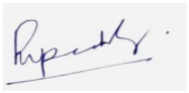
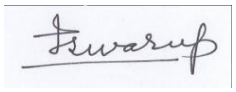
Criteria	Excellent (3 points)	Good (2 points)	Fair(1 point)
Quiz	> 80%	60-80%	40-60%
Test & exam	>75%	60 -75%	< 60%
Assignment	Assignment is coherently organized and the logic / solution to all the problems provided. Writing is clear and concise and persuasive.	Assignment is generally well organized and logic / solution to maximum of the problems provided barring few inaccuracies.	Assignment is poorly organized and difficult to follow. Does not flow logically from one part to another with lots of mistakes

List/Links of e-learning resource

1. https://nptel.ac.in/courses/122107035/#
2. https://nptel.ac.in/course.html
3. http://www.tndte.gov.in/site/wp-content/uploads/2016/08/Engineering-physics.pdf
4. https://physicstoday.scitation.org
5. Barbastathis, G. and Sheppard C., Optics, https://ocw.mit.edu/courses/mechanical-engineering/2-71-optics-spring-2009/

Recommendation by Board of studies on	14.06.2022
Approval by Academic council on	
Compiled and designed by	Jetendra Parashar
Subject handled by department	Applied Science (Physics)

SAMRAT ASHOK TECHNOLOGICAL INSTITUTE
(Engineering College), VIDISHA M.P.
(An Autonomous Institute Affiliated to RGPV Bhopal)

Computer Science and Engineering

Semester/Year			Program		B.Tech.
Subject Category	ESC	Subject Code:	CSA101	Subject Name:	Introduction to Computer Science and Engineering

Maximum Marks Allotted								Contact Hours			Total Credits
Theory				Practical			Total Marks				
End Sem	Mid-Sem	Assignment	Quiz	End Sem	Lab-Work	Quiz		L	T	P	
60	20	10	10	30	10	10	150	3	0	2	4

Course Objective:

The objective of this course is to introduce the Computer Science and Engineering and Basic concepts of computers. To understand the component of computer and generation of computer. To familiarize students with the programming and problem-solving concepts using C Programming language. The course will help student to solve the problem using computer programming.

Course Outcomes:

Upon completion of this course, the student will be able to:

- CO1: Familiarize the importance of computer science and engineering. Understand the concept of generation of computer and learn about component of computer system.
- CO2: Understand the concept of Problem-solving using C and Implement the flowchart and program for solving Mathematical and Engineering problems.
- CO3: Articulate the Modular Programming Concept and Solve the Engineering Problem using Modular Programming.
- CO4: Articulate the Advance C Programming Concept to Solve the Engineering Problem using Structure, Union and File Management.
- CO5: Describe the various Computer Science disciplines and their applications.

UNITs	Descriptions	Hrs.	CO's
I	**Introduction to Computer Science and Engineering**: Computer: Definition, Classification, Generation, Organization i.e. CPU, register, Bus architecture, Instruction set, Memory & Storage Systems, I/O Devices, and System & Application Software.	6	CO1
II	**Problem Solving using C**: Programming solving using computer concept, flowchart.Rules/ conventions of coding, documentation, naming variables, History of C, Structure of a C Program; Data types, Constant & Variable, naming variables, Operators (arithmetic, logical, bitwise, relational, ternary, Pointers - & and * operators) & expressions, Control Constructs – if-else, for, while, do-while, Case switch statement,Special constructs – Break, continue, exit(), goto& labels,Type conversion & type casting, Priority & associatively of operators; Type modifiers.	10	CO2
III	**Modular Programming:** Arrays; storage classes, Functions; Arguments; Return value; Parameter passing – call by value, call by reference; Return statement; Scope, visibility and life-time rules for various types of variables; Calling a function; Recursion – basics, comparison with iteration, types of recursion- direct, indirect, tree and tail recursion, when to avoid recursion.	9	CO3
IV	**Advance C Programming:** Structure – basic, declaration, membership operator, pointer to structure, referential operator, self-referential structures, structure within structure, array in structure, array of structures. Union – basic, declaration; Pre-processor Directives: C pre-processor – basics, #Include, #define, Enumerated data type; Typedef; File Handling in C- concepts, functions.	8	CO4
V	**Introduction to Computer Science disciplines and their applications**: Networking, Security, Operating System, Data Science, Machine Learning, Cloud Computing, Block chain, web development.	7	CO5
Guest Lectures (if any)		May be arranged as required	
Total Hours		**40**	

List of Experiments

1. Make a Poster on Component of Computer Systems/Generation of Computer System with their working. (CO1)
2. Write a program to determine given number is Armstrong number or not.(CO2)

3. Write a program to determine the roots of quadratic equation $ax^2+bx+c=0$(CO2)
4. Write a program to calculate the factorial of an integer quantity. (CO2)
5. Write a program to print diamond shape using star. (CO2)
6. Write a Program to find and print the sum of first N Prime Numbers.(CO2)
7. Write a program to convert binary to decimal and decimal to binary.(CO3)
8. Write a Program in C to read two arrays, add them and to print the resultant array. Use read_mat(),add_mat() and print_mat() functions. Array should not be declared as global variables. (CO3)
9. Write a program to read two matrix and apply addition, subtraction, multiplication, transpose operation and display result. (CO3)
10. Write a C Program to calculate area of triangle, rectangle, circle using function. (CO3)
11. Write a program using recursive function to output in reverse the sequence of characters input from the keyboard. The input is terminated by new line. Your output should be on a new line. Write an iterative solution for the same.
12. Write a Program to store data about 10 books. Which contain book title, price and number of copies of the book. After reading the data about books your program should display the data of all the book which cost more than Rs 200. (CO4)
13. Write a program using structure to accept the current time in (Hr:min:sec) , update it by one second and to print it. (CO4)
14. Write a program to count characters, spaces and new lines in a file. The name of the file should be entered through command line. (CO4)
15. Create a Poster on any one latest computer science and engineering disciplines. (CO5)

Text Book-

- Let us C By YashwantKanetkar, BPBPublication
- Programming in C, SchaumOutline,McGraw-Hill

Reference Books-

- Programming in ANSI-C By E. Balagurusami, TMHPublication
- C Programming language By Kernighan, Brian, W, Retchie, Dennis,PHI Publication
- Information Technology: Theory and Practice y PRADEEP K. SINHA (Author), PRITI SINHA (Author)

Modes of Evaluation and Rubric

The evaluation modes consist of performance in Two mid-semester Tests, Quiz/ Assignments, term work, end-semester examinations, and end-semester practical examinations.

List/Links of e-learning resource

List and Links of e-learning resources:

1. https://nptel.ac.in/courses/108/105/108105132/
2. https://de-iitr.vlabs.ac.in/

Recommendation by Board of studies on	June-2022
Approval by Academic council on	June-2022
Compiled and designed by	CSE
Subject handled by department	CSE

Dr. Kanak Saxena
Chairperson

SAMRAT ASHOK TECHNOLOGICAL INSTITUTE
(Engineering College), VIDISHA M.P.
(An Autonomous Institute Affiliated to RGPV Bhopal)
Department of Humanities and Management

Semester/Year		I/II	Program		B.Tech.
Subject Category	Hum	Subject Code:	HUB101	Subject Name:	**Communication and Report Writing**

Maximum Marks Allotted							Contact Hours			Total Credits
Theory				Practical -		Total Marks				
End Sem	Mid-Sem	Quiz	Assignment	End Sem	Lab-Work		L	T	P	
60	20	10	10	-	-	100	3	-	2	4

Prerequisites:

In this era of Globalization and Information Technology, English has a special and predominant role in the communicative sphere and thus English commands the most prestigious position in the world in the exchange of information across geographical boundaries. The syllabus has been designed to develop linguistic and communicative competence of Engineering Students.

Course Objective:

- To improve the language proficiency of the students in English with emphasis on LSRW Skills.
- To enable the students to study and comprehend the prescribed lessons and subjects more effectively relating to their theoretical and practical components.
- To develop the communication skills of the students in both formal and informal situations.

Course Outcomes:

- Students will develop the ability to listen, speak, read and write effectively in both academic and non-academic environment.
- The students will have an understanding of multidisciplinary contexts.
- They will be able to successfully handle real life situations of business correspondence.
- They will also develop the ability to analyse and interpret any technology related subjects.
- Students will be in a position to make presentations on topics of technical and general interests; current issues related to politics; work and business environment.

UNITs	Descriptions	Hrs.	CO's
I	Significance of Communication: Process of Communication, The importance of Effective Communication in Business, Verbal and Non- Verbal Communication, Oral and Written Communication, Barriers to Communication.	10	1
II	Employability Traits: Job Interview (Body Language), Types of Interviews, Interview Skills, Employability Skills, Group Discussion.	6	2
III	Soft Skills: Goal Setting, Qualities of a good leader, Time Management, Time Wasters, Problem Solving.	8	3
IV	Report Writing: Definition, Importance, Types of Reports, Structure and Layout, Technical Writing, Essay Writing.	8	4
V	Applied Grammar in Communication: Articles, Punctuations, Question Tags, Subject-Verb, Agreement, Prepositions, Narration.	8	5
Guest Lectures (if any)			
Total Hours		40	

Suggestive list of experiments: NA

1. NA

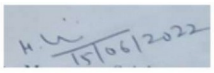
Text Book-

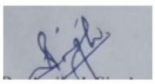
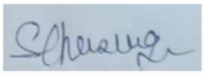
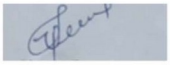
1. A.J. Thomson and A.V. Martinet, A Practical English Grammar, Oxford IBH Pub Sanjay Kumar PushpLata, English for Effective Communication, Oxford.

Reference Books-

- Language and Life: A Skills Approach Board of Editors,Orient Black Swan Publishers,
- India. 2018.
- 3. Business Correspondence and Report Writing - By R C Sharma; TMH.
- 4. Living English Structure – By W.S. Allen; Longmans.
- 5. English Grammar – Ehrlich, Schaum Series; TMH.

• 6. Spoken English for India – By R.K. Bansal and IB Harrison Orient Longman. • 7. New International Business English – by Joans and Alexander; OUP. • 8. Effective Technical Communication – Rizvi; TMH • 9. Body Language – Vinay Mohan Sharma	
Modes of Evaluation and Rubric	
Two mid semester tests, Quiz, Sessional an end semester examination.	
List/Links of e-learning resource	
• https://onlinecourses.nptel.ac.in • https://www.classcentral.com (swayam)	
Recommendation by Board of studies on	26/02/2022
Approval by Academic council on	
Compiled and designed by	Dr. Amitish Singh, Dr. Manorama Saini and Dr. Veena Datar
Subject handled by department	Department of Humanities



SAMRAT ASHOK TECHNOLOGICAL INSTITUTE
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Computer Science and Engineering

Semester/Year			Program		B.Tech.
Subject Category	ESC	Subject Code:	CSA102	Subject Name:	Digital Electronics

Maximum Marks Allotted								Contact Hours			Total Credits
Theory				Practical			Total Marks				
End Sem	Mid-Sem	Assignment	Quiz	End Sem	Lab-Work	Quiz		L	T	P	
60	20	10	10	--	--	--	100	3	0	0	3

Prerequisites:

Basics of Physics

Course Objective:

The objective of this course is to provide the fundamental concepts associated with the digital logic and circuit design. To familiarize students with the different number systems, logic gates, minimization of logic circuits and combinational and sequential circuits utilized in the different digital circuits and systems. The course will help student to design and analyze the digital circuits and systems.

Course Outcomes:

Upon completion of this course, the student will be able to:

- CO1: Convert different number systems and codes used in digital circuits and systems.
- CO2: Simplify and analyze the digital logic circuits using Boolean algebra and other mapping techniques.
- CO3: Analyse and design different combinational logic circuits using different mapping techniques and mathematical tools.
- CO4: Compare different types of sequential circuits viz. counters in the domain of analysis.

UNITs	Descriptions	Hrs.	CO's
I	**Introduction to Digital Electronics**: Review of number system and conversions; Binary Arithmetic, Signed and Unsigned representation, Binary codes, Gray Code, Code Conversions, Error detection and correction codes - parity check codes and Hamming code.	8	CO1
II	**Boolean Algebra and Switching Functions -** Study of basic logic gates, Basic postulates and fundamental theorems of Boolean algebra; Standard representation of logic functions - SOP and POS forms; Simplification of switching functions - K-map and Quine-McCluskey tabular methods.	8	CO2
III	**Combinational Logic Modules and their applications**: Adders, Subtractors, Code Converters, parity generators and comparators, Encoders & Decoders, BCD to seven-segment decoder, Multiplexers & Demultiplexers and their applications.	9	CO3
IV	**Sequential Circuits and Systems:** Set-Reset latches and flip flops, D-flipflop, R-S flip-flop, J-K Flip-flop, Master slave Flip flop, edge	7	CO4

	triggered flip-flop, T flip-flops, Shift registers, classification of shift registers.		
V	**Counters classification**: asynchronous counters, synchronous counters, counters design, BCD counter, MOD counters, ripple counter, Introduction to finite state machines.	8	CO4
Guest Lectures (if any)		--	
Total Hours		40	

List of Experiments

Text Books-

- M. Mano, "Digital Logic and Computer Design", Pearson Education.
- T. L. Floyd, “Digital Fundamentals”, Pearson Education.
- A. Anand Kumar, “Fundamentals of Digital Circuits”, PHI.

Modes of Evaluation and Rubric

The evaluation modes consist of performance in Two mid-semester Tests, Quiz/ Assignments, term work, end-semester examinations, and end-semester practical examinations.

List/Links of e-learning resource

List and Links of e-learning resources:

3. https://nptel.ac.in/courses/108/105/108105132/

https://de-iitr.vlabs.ac.in/

Recommendation by Board of studies on	June-2022
Approval by Academic council on	June-2022
Compiled and designed by	CSE
Subject handled by department	CSE

Dr. Kanak Saxena
Chairperson

SAMRAT ASHOK TECHNOLOGICAL INSTITUTE
(Engineering College), VIDISHA M.P.
(An Autonomous Institute Affiliated to RGPV Bhopal)
Department of Applied Science

Semester/Year		First Sem	Program		B.Tech.
Subject Category	Departmental Core	Subject Code:	MAB101	Subject Name:	Linear Algebra and Calculus

Maximum Marks Allotted							Contact Hours			Total Credits
Theory				Practical		Total Marks				
End Sem	Mid-Sem	Quiz	Assignment	End Sem	Lab-Work		L	T	P	
60	20	10	10	-	-	100	3	1	-	4

Prerequisites:

Basic of Differentiations, Integrations and Matrices.

Course Objective:

The objective of this course is to familiarize the prospective engineers with techniques in calculus, and linear algebra. It aims to equip the students with standard concepts and tools at an intermediate to advanced level that will serve them well towards tackling more advanced level of mathematics and applications that they would find useful in their disciplines.

Course Outcomes:

This course is to develop students abilities to:

1. Apply Differential Calculus to Notions of Curvature. Apart from some other Applications they will have a Basic Understanding of Taylor's Theorem, Maxima and Minima.
2. The Fallouts of Partial Differentiation that is Fundamental to Application of Analysis to Engineering Problems.
3. Finding area and Volume using Double and Triple Integrals.
4. The Essential Tool of Matrices and Linear Algebra in a Comprehensive Manner. Student will understand Matrices and their Application to Solve System of Linear Simultaneous Equations.
5. Students will Gain Experience with Problem Solving in Boolean Algebra and Graph Theory.

UNITs	Descriptions	Hrs.	CO's
I	**Differential Calculus:** Lebnitz Theorem, Expansion of functions by Maclaurins and Taylors theorem (one variable), Maxima & Minima of two variables, Curvature: Radius and Centre of Curvature for Cartesian Coordinates.	8	1
II	**Partial Differentiation:** Partial Derivatives of Higher Order, Homogeneous Functions, Euler's Theorem, Total differentiation, Errors and Approximations.	8	2
III	**Integral Calculus :** Definite Integral as a Limit of the Sum, Application in Summation of Series, Multiple Integrals, Change of order of Integration, Application of Double and Triple Integrals (Area & Volume).	8	3
IV	**Matrix :** Definition, Types & Properties of Matrices, Elementary Transformation, Rank of Matrix, Consistency of Linear System of Equations and their solutions, Eigen Values and Eigen Vectors, Cayley Hamilton Theorem and its Application to find the Inverse.	8	4

V	**Boolean Algebra & Graph Theory:** Algebra of logic, Principal of Duality and basic theorem, Boolean expression and Boolean functions, Definition of Graph, Types of Graphs, Sub Graphs, Walk, Path and Circuits,.	8	5
TOTAL HOURS		40	

Reference Books:

1. Engg. Mathematics: By B.S. Grewal
2. Boolean Algebra: R.S. Agrawal
3. Engg. Mathematics: by H.K. Dass
4. Engg. Mathematics : By B. V. Rammanna

Recommendation by Board of studies on	14-06-2022
Approval by Academic council on	16-06-2022
Compiled and designed by	Applied Maths Board of Studies, Chairman Dr. Shailesh Jaloree

SAMRAT ASHOK TECHNOLOGICAL INSTITUTE
(Engineering College), VIDISHA M.P.
(An Autonomous Institute Affiliated to RGPV Bhopal)
Department of Humanities and Management

Semester/Year		I/II	Program		B.Tech.
Subject Category	Hum	Subject Code:	HUL101	Subject Name:	**Interactive Presentation Skills**

Maximum Marks Allotted								Contact Hours			Total Credits
Theory				Practical -			Total Marks				
End Sem	Mid-Sem	Quiz	Assignment	End Sem	Lab-Work	Quiz		L	T	P	
-	-	-	-	30	10	10	50	3	-	2	4

Prerequisites:

Improve your personality with self-awareness, confidence, and continuous development. Manage time well and enhance social skills through networking. For interactive presentations, tailor content to the audience, practice thoroughly, use multimedia, and seek feedback for ongoing improvement

Course Objective:

1. Students will develop self-awareness and confidence through practical .exercises and self-reflection activities.
2. Students will enhance their verbal and non-verbal communication skills to effectively express their ideas.
3. Students will build social and networking skills to form and maintain professional relationships.
4. Students will master the art of tailoring presentation content to specific audiences for maximum engagement.
5. Students will practice and refine their presentation delivery, including the use of multimedia tools and strong bodv language.

Course Outcomes:

After completion of the course student will be able to

CO1 Communicate effectively with enhanced verbal and non-verbal skills.

CO2 Express themselves confidently and clearly in various professional contexts.

CO3 Approach real-life situations and interviews with confidence and competence.

CO4 Understand and apply the basic principles of effective presentation and interpersonal skills.

CO5 Deliver engaging and well-structured presentations, incorporating multimedia and strong body language techniques

UNITs	Descriptions	Hrs.	CO's
I	**Etiquette Training:** Professional Etiquettes, Basic Social Manners, Grooming, Dining Etiauettes.	E6	1
II	**Bodv Language:** Eve Contact, Posture, Gesture, Proxemics.	5	2
III	**Public Speaking:** Speech Preparation, Preparing Notes, Understanding our Audience, Role of Humor in Persuasive speaking	4	3
IV	**MS WORD:** Creating, editing, saving and printing text documents. Font and paragraph formatting ,Simple character formatting ,Inserting tables, smart art, page breaks, Using lists and styles, Working with images, Using spe11ing and grammar check. **MS Excel :** Spreadsheet basics Creating, Editing , saving and printing spreadsheets, Working with functions- and formulas. Modifying work sheets with color and auto formats, **Graphically representing data:** Charts & Graphs, Speeding data entry: Using Data Forms, Analyzing Data: Data menu, subtotal, filtering data, Formatting Worksheets.	5	4
V	**MS POWER POINT:**Creating basic presentations, Applying Slide Layouts, Insert and format text, shapes and images, Insert tables,charts,	4	5

	SmartArt and medias, Apply transitions and Animations, Converting ppt files, USING THEMES: Applying Themes, Customizing Themes, Formatting the Slide Background, Inserting Actions.		
Guest Lectures (if any)			
Total Hours		24	

Suggestive list of experiments: NA

1. NA

Text Book-

1. The Art of Public Speaking by Dale Carnegie and Joseph B. Esenwein
2. Crucial Conversations: Tools for Talking When Stakes Are High by Kerry Patterson, Joseph / Grenny, Ron McMillan, and Al Switzler.
3. Slide:ology: The Art and Science of Creating Great Presentations by Nancy Duarte
4. Presentation Zen: Sim le Ideas on Presentation Desi and Delive b Garr Re nolds

Reference Books-

- The Cambridge Handbook of Communication Studies edited by David K. H. W. R. and John P. Murphy
- English for Everyone: English Grammar Guide by DK
- English Vocabulary in Use: Advanced by Michael McCarthy and Felicity O'Dell
- The Elements of Style by William Strunk Jr. and E.B. White
- The Public Speaking Playbook by Teri Kwal Gamble and Michael W. Gamble

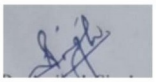
Modes of Evaluation and Rubric

Two mid semester tests, Quiz, Sessional an end semester examination.

List/Links of e-learning resource

- https://onlinecourses.nptel.ac.in
- https://www.classcentral.com (swayam)

Recommendation by Board of studies on	30/07/2024
Approval by Academic council on	
Compiled and designed by	Dr. Amitosh Singh/Dr. Kanak Saxena/ Aditi Dwivedi
Subject handled by department	Department of Humanities



SAMRAT ASHOK TECHNOLOGICAL INSTITUTE
(Engineering College), VIDISHA M.P.
(An Autonomous Institute Affiliated to RGPV Bhopal)
Department of Humanities and Management

Semester/Year		II Year	Program		B. Tech All Branches
Subject Category	MAC	Subject Code:	MAC101	Subject Name:	**Universal Human Values**

Maximum Marks Allotted								Contact Hours			Total Credits
Theory				Practical			Total Marks				
End Sem	Mid-Sem	Quiz	Assign ment	End Sem	Lab-Work	Quiz		L	T	P	
00	00	00	00	60	20	20	100	-	-	2	Grade

Prerequisites:

During the Induction Program, students would get an initial exposure to human values through Universal Human Values – I. This exposure is to be augmented by this compulsory full semester foundation course.

Course Objective:

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

1. Develop a holistic perspective based on exploration about others and themselves.
2. Develop clarity, importance of harmony and humanity towards family, society and nature/existence.
3. Strengthen self-reflection.
4. Develop commitment and courage to act.

Course Outcomes:

1. By the end of the course, students will become aware of themselves, and their surroundings (family, society, nature)
2. They would have better critical ability.
3. They would become more responsible in life; and keeping human relationships and human nature in mind will be able to handle problems with sustainable solutions.
4. They would also become sensitive to their commitment towards nature and existence.
5. They would be able to apply what they have learnt to their own selves in different day-to-day real- life scenarios, at least a beginning would be made in this direction.

UNITs	Descriptions	Hrs.	CO's
I	Introduction - Need, Basic Guidelines, Content and Process for Value Education 6. Self-Exploration–what is it? - Its content and process; 'Natural Acceptance' and Experiential Validation- as the process for self-exploration 7. Continuous Happiness and Prosperity- A look at basic Human Aspirations 8. Right understanding, Relationship and Physical Facility- the basic requirements for fulfilment of aspirations of every human being with their correct priority 9. Understanding Happiness and Prosperity correctly- A critical appraisal of the current scenario	8	1

	5. Method to fulfil the above human aspirations: understanding and living in harmony at various levels. Include practice sessions to discuss natural acceptance in human being as the innate acceptance for living with responsibility.		
II	Understanding Harmony in the Human Being - Harmony in Myself! 1. Understanding human being as a co-existence of the sentient 'I' and the material 'Body' 2. Understanding the needs of Self ('I') and 'Body' - happiness and physical facility 3. Understanding the characteristics and activities of 'I' and harmony in 'I' 4. Understanding the harmony of I with the Body: Sanyam and Health; correct appraisal of Physical needs, meaning of Prosperity in detail 5. To ensure Sanyam and Health. Include practice sessions to discuss the role others have played in making material goods. Identifying from one's own life. Differentiate between prosperity and accumulation.	6	2
III	Understanding Harmony in the Family and Society- Harmony in Human- Human Relationship 1. Understanding values in human-human relationship; meaning of Justice (nine universal values in relationships) and program for its fulfillment to ensure mutual happiness. 2. Understanding the meaning of Trust; Difference between intention and competence. 3.Understanding the meaning of Respect, Difference between Respect and differentiation; the other salient values in relationship. 4.Understanding the harmony in the society (society being an extension of family): Resolution, Prosperity, fearlessness (trust) and co-existence as comprehensive Human Goals. 5. Visualizing a universal harmonious order in society- Undivided Society, Universal Order- from family to world family. Gratitude as a universal value in relationships. Elicit examples from students' lives.	4	3
IV	Understanding Harmony in the Nature and Existence - Whole existence as Coexistence 1. Understanding the harmony in the Nature. 2. Interconnectedness and mutual fulfilment among the four orders of nature recyclability and self-regulation in nature. 3. Understanding Existence as Co-existence of mutually interacting units in all-pervasive space. 4. Holistic perception of harmony at all levels of existence. 5. Include practice sessions to discuss human being as cause of imbalance in nature (film "Home" can be used), pollution, depletion of resources and role of technology etc.	8	4

V	Implications of the above Holistic Understanding of Harmony on Professional Ethics 1. Natural acceptance of human values. 2. Definitiveness of Ethical Human Conduct. 3. Basis for Humanistic Education, Humanistic Constitution and Humanistic Universal Order 4. Competence in professional ethics: a. Ability to utilize the professional competence for augmenting universal human order b. Ability to identify the scope and characteristics of people friendly and eco-friendly production systems, c. Ability to identify and develop	9	5
	appropriate technologies and management patterns for above production systems. 5. Strategy for transition from the present state to Universal Human Order: a. as socially and ecologically responsible engineers, technologists b. At the level of society: as mutually enriching institutions and organizations.		
Guest Lectures (if any)		5	
Total Hours		40	

Suggestive list of experiments:
Text Book-Human Values and Professional Ethics by R R Gaur, R Sangal, G P Bagaria, Excel Books, New Delhi, 2010
Reference Books- 15. JeevanVidya: EkParichaya, A Nagaraj, JeevanVidyaPrakashan, Amarkantak, 1999. 16. Human Values, A.N. Tripathi, New Age Intl. Publishers, New Delhi, 2004.
Modes of Evaluation and Rubric
Questionnaire,Quiz,Presentation and standard procedure will be followed .
List/Links of e-learning resource
https://fdp-aicte-india.org https://vvce.ac.in

Recommendation by Board of studies on	26/02/2022
Approval by Academic council on	
Compiled and designed by	Dr. Amitosh Singh , Dr. Manorama Saini and Dr. VeenaDatar
Subject handled by department	Humanities and Management