



# MUTHAYAMMAL ENGINEERING COLLEGE

(An Autonomous Institution)

(Approved by AICTE, New Delhi, Accredited by NAAC & Affiliated to Anna University)

Rasipuram - 637 408. Namakkal Dt., Tamil Nadu.

## 1.3.2 Number of value-added courses imparting transferable and life skills offered during the last five years

Academic Year (2020-21)

Name of the Value Added Courses	Course Code	Summary Report of Course With Outcome
Building Planning and Vasthu	VASD200125	<p><b>Summary Report of Course:</b></p> <p>Vastu aims to eliminate negative energy present at a place or location so that a person, family or even business inhabiting a building becomes prosperous and progressive. In modern times, the knowledge of house building technology has grown so vast, that it has been branched into special filed such as architecture, engineering and interior decoration.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>• Introduction to vasthu shastra</li> <li>• Application of vasthu shastra</li> <li>• The Birth of Vastu-Purusha</li> <li>• Directions in the plot and building</li> <li>• Explain various parts of a house</li> </ul>
Advanced In Steel Work Design and Inspection Training	VASD200127	<p><b>Summary Report of Course:</b></p> <p>This short course is intended to overview modern procedures for the design and erection of structural steel buildings.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>• Design the connection of steel structure</li> <li>• Design the tension and compression members</li> <li>• Design the beam and roof truss in steel structure</li> <li>• Students able to design the plate and gantry design</li> </ul>
Seismic Rehabilitation of Structures	VASD200163	<p><b>Summary Report of Course:</b></p> <p>This short course is intended to overview modern procedures for the design and erection of structural steel buildings.</p> <p><b>Outcome of the Course:</b></p> <ul style="list-style-type: none"> <li>• Identify the causes for deterioration of structures and remedies through damage assessment.</li> <li>• Learn various methods of diagnosis for the damage by Semi destructive and non-destructive tests</li> <li>• Identify the effect of earthquake on structures and repairs in chemical environment and fire damage assessment through case studies</li> <li>• Identify various retrofitting techniques and repair procedures</li> </ul>
3D CAD Fundamental	VASD200135	<p><b>Summary Report of Course:</b></p> <p>The goal of this course is to construct a three-dimensional model, with the computer as the main teaching material, to enrich the fun paradigm and the complete drawing process. Step-by-step teach you how to use Sketchup's 3D</p>



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		<p>modeling software technology. With the completion of "3D CAD Fundamental", you will be able to realize the 3D objects that exist in the imagination through 3D modeling.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>At the end of this Course students will be able to understand the concepts of 3D computer graphics with the newest technology</li> </ul>
IT Cyber Security and Information Assurance	VASD200101	<p><b>Summary Report of Course:</b></p> <p>Information assurance, which focuses on ensuring the availability, integrity, authentication, confidentiality, and non-repudiation of information and systems. These measures may include providing for restoration of information systems by incorporating protection, detection, and reaction capabilities. Information security, which centers on the protection of information and information systems from unauthorized access, use, disclosure, disruption, modification, or destruction in order to provide confidentiality, integrity, and availability.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>At the end of this Course students will be able to understand the concepts of cyber security and its importance.</li> </ul>
IOT Architecture and Protocols	VASD200103	<p><b>Summary Report of Course :</b></p> <p>Architecture of IoT (A: three layers) (B: five layers). The five layers are perception, transport, processing, application, and business layers. The role of the perception and application layers is the same as the architecture with three layers. IoT protocols are a crucial part of the IoT technology stack without them; hardware would be rendered useless as the IoT protocols enable it to exchange data in a structured and meaningful way.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>At the end of this Course students will be able to understand the concepts of IoT architecture and Protocols.</li> </ul>
Cyber Law and Ethics	VASD200110	<p><b>Summary Report of Course:</b></p> <p>Cyber law is used to describe the legal issues related to use of communications technology, particularly "cyberspace", i.e. the Internet. Cyber ethics is the philosophic study of ethics pertaining to computers, encompassing user behavior and what computers are programmed to do, and how this affects individuals and society.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>At the end of this Course students will be able to understand the concepts of legal issues in communication technology and ethics to access computer.</li> </ul>

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<p><b>IoT in Automobile</b></p>	<p><b>VASD200114</b></p>	<p><b>Summary Report of Course:</b></p> <p>“Automotive IoT” refers to the integration of such components as sensors, gadgets, clouds, and apps into vehicles and their use as a complex system for predictive maintenance, connection of cars, fleet management, etc. Embedded IoT solutions have transformed cars into a “near-artificial intelligence.”</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>At the end of this Course students will be able to understand the concepts of Internet Of Things in Automobile systems to run the industry through automation and sensors.</li> </ul>
<p><b>Industrial IOT</b></p>	<p><b>VASD200134</b></p>	<p><b>Summary Report of Course :</b></p> <p>How to integrate the components as sensors, gadgets, clouds, and apps into vehicles and their use as a complex system for predictive maintenance, connection of cars, fleet management. The term 'automotive IoT' refers to embedding IoT technologies into automotive systems to create new applications and solutions which can make vehicles smarter and more intelligent, facilitating safe, efficient and comfortable driving.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>At the end of this Course students will be able to understand the concepts of embedding IoT technologies into automotive systems to create new applications.</li> </ul>
<p><b>Application of Smart Sensors</b></p>	<p><b>VASD200104</b></p>	<p><b>Summary Report of Course:</b></p> <p>Why measurement and monitoring are important, effects of adverse parameters for the living being. Sensors, Working Principles, Different types and Selection of Sensors for Practical Applications. Architecture of Smart Sensors. Usefulness of Silicon Technology in Smart Sensor and Future scope of research in smart sensor. Relevance of IoT to Developing World and Research Scope for the Internet of things.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>Students can able to understand about the concept of smart sensors related with IOT.</li> </ul>
<p><b>Fundamentals of Low - Power VLSI Design</b></p>	<p><b>VASD200105</b></p>	<p><b>Summary Report of Course:</b></p> <p>Introduction and Need for Low Power Circuit, Short-Channel Effects and Power Dissipation, Leakage Power Minimization, Multilevel Voltage Scaling and Challenges, Algorithm and Architecture</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>Students can able to explain the basic concepts of Low Power VLSI circuits.</li> </ul>

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<p><b>Signal Processing and its Application</b></p>	<p>VASD200106</p>	<p><b>Summary Report of Course:</b></p> <p>Introduction to Signal Processing, Signals and their Usefulness, Applications of Signal Processing, Signal Processing: Practical Implementation, Basic Signal Characteristics.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>• Students can able to understand about the signal Processing.</li> </ul>
<p><b>Basics of Antenna Design</b></p>	<p>VASD200108</p>	<p><b>Summary Report of Course:</b></p> <p>Concepts of Antenna parameters, Antenna feeding techniques, S-parameters and Smith chart, Introduction to CAD tools for desinging Antenna Tuning of designed Components</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>• Students can able to analyze the performance of an Antenna.</li> </ul>
<p><b>Nano Electronics in Agriculture</b></p>	<p>VASD200111</p>	<p><b>Summary Report of Course:</b></p> <p>The concept of advances in Nanotechnology, Synthesis &amp; characterization of nonmaterial's, Understand designing concept of various application of nanomaterials, Biodegradable Nanomaterials, Nanotoxicity, Applications of Novel Materials in Agriculture.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>• Students can able to know about the concept of advances in Nanotechnology in Agriculture.</li> </ul>
<p><b>Sensor and Monitoring Method</b></p>	<p>VASD200115</p>	<p><b>Summary Report of Course:</b></p> <p>The concept of Sensors and transducers, Understand designing concept of Displacement and position sensors, Understand designing concept of Velocity, motion, force and pressure sensors, Temperature and light sensors, Applications of Signal Conditioning Devices.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>• Students can able to know about the concept of sensor and Monitoring.</li> </ul>
<p><b>Low Power VLSI Circuits</b></p>	<p>VASD200116</p>	<p><b>Summary Report of Course:</b></p> <p>Introduction and sources of power dissipation, Switching and Glitching Power Dissipation, Approaches for minimizing leakage power, Dynamic Voltage and Frequency Scaling, CAD Tools for Low Power VLSI Circuits.</p> <p><b>Outcome of the Course:</b></p> <ul style="list-style-type: none"> <li>• Students can able to use VLSI CAD tools.</li> </ul>
<p><b>Design of Microstrip Antenna</b></p>	<p>VASD200119</p>	<p><b>Summary Report of Course:</b></p> <p>Concepts of Antenna parameters, S-parameters and Smith chart, Getting started with HFSS CAD tool, Schematic design of Micro strip Antenna, Simulation and Tuning of designed Components.</p>

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		<p><b>Outcome of the Course:</b></p> <ul style="list-style-type: none"> <li>The students can able to design a micro strip antenna.</li> </ul>
Wireless Communications and Signal Processing	VASD200117	<p><b>Summary Report of Course:</b></p> <p>Concepts of wireless communication system, Receiver Structure, Models and Performance Metrics, Massive Parallel Processing on heterogeneous MPSoC, Application Specific Processors 5. Application Specific Processors.</p> <p><b>Outcome of the Course:</b></p> <ul style="list-style-type: none"> <li>The students can able to analyze the communication signals.</li> </ul>
Advances Technologies in Smart Grid	VASD200120	<p><b>Summary Report of Course:</b></p> <p>Smart Grid technology has a way for a solution for better generation of electric power and an efficient way for transmission and distribution of this power. Due to its versatility it can be more easily installed and required less space as compared to traditional grids.</p> <p><b>Outcome of the Course:</b></p> <ul style="list-style-type: none"> <li>At the end of this Course students will be able to explain advanced Technologies in Smart Grid.</li> </ul>
Development for Motor Drives	VASD200121	<p><b>Summary Report of Course:</b></p> <p>Common industrial automation applications include food, packaging, logistics systems, tool machines and robots, among others. To achieve higher demands in terms of dynamic behavior and precision, industrial automation heavily relies on industrial AC drives and servo drives. With an Infineon XMC microcontroller at the center of a top-caliber motor control system, it can quickly compute cascaded control tasks, and measure current, position, and speed with ultimate precision. The heavy demand load occurs in real-time, which requires a highly capable system.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>At the end of this Course students will be able to develop the motors and its driver circuits.</li> </ul>
Recent Technology in Automobile	VASD200107	<p><b>Summary Report of Course:</b></p> <p>The course duration of 07 days covering around 40 hours exclusively utilized by the students, which is the prime motto of conducting the value added course. The course coordinator Sri S. Kiruba, Mechanical Component Designer, GE Bangalore had taken an immense effort in imparting the basic to recent trends in the Automobile field.</p> <p><b>Outcome of the Course:</b></p> <ul style="list-style-type: none"> <li>An exposure towards the level climbed in the spectrum of Automobile is made to the student participants.</li> <li>The new or upcoming innovations in automobile industry like machine intelligence and the Internet of Things are bolstering the demand for</li> </ul>

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		<p>electric and self-driving vehicles.</p> <ul style="list-style-type: none"> <li>New business models in shared vehicle ownership, analytics-driven maintenance, safety improvements, and insurance are also possible.</li> </ul>
Design Thinking in Industries	VASD200112	<p><b>Summary Report of Course:</b></p> <p>The course duration of 10 days covering around 30 hours had showered traces under the lime light made by the trainer Sri. S. Anuj Kumar Issar, Senior SAP Test Specialist, UST Global, Bangalore and also it is rightly utilized by the students.</p> <p><b>Outcome of the Course:</b></p> <ul style="list-style-type: none"> <li>Design thinking has been used to solve business problems at companies like Toyota, Intuit, SAP, and IBM.</li> <li>One reason for the proliferation of design thinking in industries is that it's useful to break down problems in any complex system, be it business, government, or social organization.</li> </ul>
Composite Materials for Biomedical Applications	VASD200113	<p><b>Summary Report of Course:</b></p> <p>The course duration of 6 days covering around 30 hours had been conducted for the benefit of students by the trainer Sri. S. Kiruba, Mechanical Component Designer, GE, Bangalore and also it is rightly utilized by the students.</p> <p><b>Outcome of the Course:</b></p> <ul style="list-style-type: none"> <li>Metals, ceramics, plastic, glass, and even living cells and tissue all can be used in creating a biomaterial.</li> <li>They can be reengineered into molded or machined parts, coatings, fibers, films, foams, and fabrics for use in biomedical products and devices.</li> </ul>
Auto Gear Mechanism in Automobile	VASD200118	<p><b>Summary Report of Course:</b></p> <p>The course duration of 6 days covering around 40 hours have been conducted by the Department of Mechanical Engineering in association with Design Thinking Technology Learning Group. Trainer Sri. J Krishnan, Partner, S. Natesa Iyer &amp; Co, MCCI, Chennai, made the program in right manner.</p> <p><b>Outcome of the Course:</b></p> <ul style="list-style-type: none"> <li>The Value Added Course on Auto Gear mechanism in Automobile - An automatic transmission is also known as self-shifting transmission or AT or dual pedal technology, as this system operates without a clutch pedal.</li> <li>It is a type of motor vehicle transmission that can automatically change gear ratios as the vehicle moves, erasing the need to shift gears manually. The course enriches the students with newer insight into the growing technology.</li> </ul>
Technology fo Smart Manufacturing	VASD200142	<p><b>Summary Report of Course:</b></p> <p>The course duration of 7 days covering around 35 hours had been</p>

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		<p>utilized by the student community in a better manner. Mr. R. Sandeep Kumar, Business Manager, IID, Salem, by his eminent manner of teaching had made the value added course a successful one.</p> <p><b>Outcome of the Course:</b></p> <ul style="list-style-type: none"> <li>The target of the Value Added Course on Smart Manufacturing shows lime light over the newer manufacturing technologies being used in present industrial scenario.</li> <li>The students are exposed to topics which include recent advancement in the field of Manufacturing like AI/Machine Learning, Augmented Reality/Virtual Reality, Automation/Robotics, Additive Manufacturing / Hybrid Manufacturing, Big Data Analysis, Cloud Computing, CNC Machining, Design for Manufacturing.</li> </ul>
Poly Products and its Applications	VASD200129	<p><b>Summary Report of Course:</b></p> <p>The course duration of 6 days covering around 30 hours have been conducted by the Department of Mechanical Engineering in association with Polymer Science and Technology Learning Group. Mr. Martin. M, IEDP, EDII made the program to the greatest height.</p> <p><b>Outcome of the Course:</b></p> <ul style="list-style-type: none"> <li>The course aims to reach the student participants for exposing them to the level of usage of poly products in the society and its commercial usage and its limitation.</li> <li>The primary uses of polyethylene are in packaging film, garbage bags, grocery bags, insulation for wires and cables, agricultural mulch, bottles, toys, and house ware. Polythene is also used in trays, fruit juice containers, milk containers, crates, and food packaging products.</li> </ul>
Cyber Security	VASD200153	<p><b>Summary Report of Course:</b></p> <p>Cyber security is the body of technologies, processes, and practices designed to protect networks, computers, and data from attack, damage, and unauthorized access. Programs in cyber security teach professionals to spot vulnerabilities, fend off attacks, and immediately respond to emergencies.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>Protection against external threats</li> <li>Protection against internal threats</li> <li>Regulation compliance</li> <li>Improved productivity</li> </ul>
Voice Technology	VASD200132	<p><b>Summary Report of Course:</b></p> <p>Voice recognition technology can be divided into two main parts: the phonetic recognition of different words, and the interpretation of the actual language as spoken, a field also known as natural language processing (NLP).</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>You can dictate a document three times faster than you can type it.</li> </ul>



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		Dictation paired with transcription software means reduced transcription costs and a much easier workflow.
Edge Computing	VASD200141	<p><b>Summary Report of Course:</b></p> <p>Edge Computing is to push computation to the edge of the network away from data centers, exploiting the capabilities of smart objects, mobile phones and network gateways to provide services and processing on behalf of the cloud.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>The technique utilises various smart devices around the edge of a network in order to store data.</li> <li>The benefits of adopting edge computing are that it provides improved security, scalability, shorter latencies, cost-effectiveness and much more.</li> </ul>
Virtual Reality	VASD200149	<p><b>Summary Report of Course:</b></p> <p>Virtual Reality (VR), the use of computer modeling and simulation that enables a person to interact with an artificial three-dimensional (3-D) visual or other sensory environment.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>Increased memory retention and decreased cost.</li> <li>Compliance with travel and security regulation</li> <li>High video resolutions and ultra-realistic graphic</li> <li>Collecting users' personal data for marketing purposes.</li> </ul>
Quantum Computing	VASD200143	<p><b>Summary Report of Course:</b></p> <p>Quantum algorithms can process exponentially more data more efficiently through this quantum hardware. It has applications in cyber security, internet search, and artificial intelligence. Almost every industry from finance to agriculture could also reap the benefit of quantum processors.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>Quantum computers will allow for the storage and processing of data in ways that we cannot even comprehend today.</li> <li>They also offer more complex calculations than traditional computers and therefore can easily solve problems that would take years to solve on a traditional computer.</li> </ul>
Public Speaking	VASD200148	<p><b>Summary Report of Course :</b></p> <p>This course focuses on enhancing the public speaking skills of students by improving the content writing, stage speaking skills and body language.</p> <p><b>course outcome:</b></p> <ul style="list-style-type: none"> <li>Learn Public Speaking techniques to reduce nervousness and fear</li> </ul>



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		<ul style="list-style-type: none"> <li>Understand your Public Speaking strengths as a presenter and how to appeal to different types of people</li> <li>Recognize how visual aids can create impact and attention in Public Speaking.</li> </ul>
<b>Group Discussions And Personal Interview Sessions</b>	<b>VASD200152</b>	<p><b>Summary Report of Course :</b></p> <p>This course focuses on enhancing the group discussion skills of students by improving the content writing, stage speaking skills and body language and interview skills.</p> <p><b>Course outcome:</b></p> <ul style="list-style-type: none"> <li>Learn Group Discussion techniques to reduce nervousness and fear</li> <li>Understand your Personal Strengths as a presenter and how to appeal to different types of people</li> <li>Recognize how interview techniques can help you to crack all kinds of interviews.</li> </ul>
<b>Business Sustainability Management</b>	<b>VASD200131</b>	<p><b>Summary Report of Course:</b></p> <p>This course focuses on enhancing the business analytics skills of students to improve the stability of the business with the help of various analytical tools.</p> <p><b>Course outcome:</b></p> <ul style="list-style-type: none"> <li>Learn the business analysis techniques.</li> <li>To understand the Strengths and Weakness of the business.</li> <li>Make SWOT analysis for a business</li> </ul>
<b>Strong Work Ethics</b>	<b>VASD200162</b>	<p><b>Summary Report of Course :</b></p> <p>This course focuses on teaching the professional ethics, ethical crises in decision making.</p> <p><b>Course outcome:</b></p> <ul style="list-style-type: none"> <li>Learn the professional ethics for managers.</li> <li>Understand the need for ethics in emerging business environment.</li> <li>Create a ethical platform for a successful business.</li> </ul>
<b>Sales Force Management</b>	<b>VASD200144</b>	<p><b>Summary Report of Course:</b></p> <p>This course focuses on teaching the importance of human resource management for a small and medium size business.</p> <p><b>Course outcome:</b></p> <ul style="list-style-type: none"> <li>To learn workforce management for HR Managers.</li> <li>Understand workforce management, reward and retention policies for an organization.</li> <li>Create a working model of workforce management.</li> </ul>

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<p><b>Carrier Opportunity for Chemical Engineers</b></p>	<p>VASD200140</p>	<p><b>Summary Report of Course:</b></p> <p>Work experience is available in the pharmaceutical, petrochemical, and food and drink industries. Check out the careers section of company websites for more information on the opportunities available.</p> <p><b>Outcome of the Course:</b></p> <ul style="list-style-type: none"> <li>At the end of course student will able to know about various Carrier Opportunity for Chemical Engineers.</li> </ul>
<p><b>Importance of Chemical and Biochemical Process used in Process Industry</b></p>	<p>VASD200156</p>	<p><b>Summary Report of Course:</b></p> <p>Biochemical reactions, DNA damage and repair processes, Enzymes membrane ion pumps, Physiological systems, Ecosystems and bio-geocenosis</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>At the end of course student will able to know about Importance of Chemical and Biochemical Process used in Process Industry.</li> </ul>
<p><b>Introduction to Mathematical Modeling to Chemical Engineers</b></p>	<p>VASD200155</p>	<p><b>Summary Report of Course:</b></p> <p>Identify the terms involved in inventory rate equation of mass, energy and momentum, Recall the basic concepts involved in modeling and simulation, Develop model equations for chemical engineering systems.</p> <p><b>Outcome of the Course:</b></p> <ul style="list-style-type: none"> <li>At the end of course student will able to know about Mathematical Modeling to Chemical Engineers.</li> </ul>
<p><b>Challenges and Solutions in Petroleum Industry</b></p>	<p>VASD200160</p>	<p><b>Summary Report of Course:</b></p> <p>With rising global demand, highly volatile prices and increasingly stringent environmental regulations, the oil and gas industry faces three major challenges: reduce costs, optimize the performance of its industrial base assets and improve its environmental footprint.</p> <p><b>Outcome of the Course:</b></p> <ul style="list-style-type: none"> <li>At the end of course student will able to know about various Challenges and Solutions in Petroleum Industry.</li> </ul>
<p><b>Electrical Safety- Testing of Medical Equipments</b></p>	<p>VASD200124</p>	<p><b>Summary of the Report :</b></p> <p>Electrical safety is very essential in handling Medical Equipments. Students will be able to understand the handling of Medical equipments. They will be trained to test the equipments. Calibration and Maintenance of Electrical Equipments is very important in Medical field.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>At the end of this course, Students will gain knowledge in Testing, Calibrating and Maintenance of Medical Equipments.</li> </ul>

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<p><b>Biosignal and Image Processing using Neural Network</b></p>	<p>VASD200145</p>	<p><b>Summary Report of Course :</b></p> <p>Image Processing plays a major role. Analysis of signals is done using various processing techniques. Neural network is commonly used technique in analyzing the signals. Usage of Processing techniques and signal analysis has been applied in Image processing.</p> <p><b>Outcome of the Course:</b></p> <ul style="list-style-type: none"> <li>At the end of this Course students will be able to understand the concepts of Signal analysis and Image processing using neural network.</li> </ul>
<p><b>Artificial Intelligence and Deep Learning in Medical Applications</b></p>	<p>VASD200161</p>	<p><b>Summary Report of Course:</b></p> <p>Machine learning is to train a model on historical, labeled data (i.e., data for which the outcome is known) in order to predict the value of some quantity on the basis of a new data item for which the target value or classification is unknown. Deep learning is a technique which is used to train the data sets and it is applied in Medical field.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>At the end of this Course students will be able to understand the concepts of Artificial Intelligence and deep learning in biomedical field.</li> </ul>
<p><b>Application of Labview in Biomedical Engineering</b></p>	<p>VASD200159</p>	<p><b>Summary Report of Course:</b></p> <p>LabVIEW is a graphical programming environment engineers use to develop automated research, validation, and production test systems. It is a open source tool software which is used to learn the applications very easily.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>At the end of this Course students will be able to understand the concepts of open source tool Lab view in biomedical field.</li> </ul>
<p><b>Preponderance of Instrumentation in Biomedical Field</b></p>	<p>VASD200137</p>	<p><b>Summary Report of Course :</b></p> <p>Biomedical instrumentation focuses on the development of methods and devices for the treatment of diseases. It is an emerging field of biomedical engineering that bridges the gap between medicine and engineering. To measure biological signals and to design a medical instrument, concepts of electronics and measurement techniques are needed.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>At the end of this Course students will be able to understand the concepts of Basics of Instrumentation and applications of Instrumentation in Biomedical Field.</li> </ul>
<p><b>Basics of Human Anatomy and Physiology</b></p>	<p>VASD200123</p>	<p><b>Summary Report of Course :</b></p> <p>Anatomy is the science of understanding the structure and the parts of living organisms. Physiology, on the other hand, deals with the internal mechanisms and the processes that work towards sustaining life. These can</p>



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		<p>include biochemical and physical interactions between various factors and components in our body.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>At the end of this Course students will be able to understand the concepts of Basics of Anatomy of Human organs and its Physiology.</li> </ul>
<p><b>Applications of 3D Printing Technology in Health Care</b></p>	VASD200164	<p><b>Summary Report of Course :</b></p> <p>3D printing, also known as additive manufacturing, is a method of creating a three dimensional object layer-by-layer using a computer created design. Melting methods of 3D printing include powder bed fusion, electron beam melting and direct energy deposition, these use lasers, electric arcs or electron beams to print objects by melting the materials together at high temperatures.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>At the end of this Course students will be able to understand the concepts of 3D printing of human organs.</li> </ul>
<p><b>Applications of MEMS in Medical field</b></p>	VASD200146	<p><b>Summary Report of Course :</b></p> <p>A MEMS (Micro-Electromechanical System) is a miniature machine that has both mechanical and electronic components. The physical dimension of MEMS can range from several millimeters to less than one micrometer, a dimension many times smaller than the width of a human hair. MEMS Technology is used to manufacture different sensors like Pressure, Temperature, Vibration and Chemical Sensors.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>At the end of this Course students will be able to understand the applications of MEMS in Biomedical field.</li> </ul>
<p><b>Image Processing and its Applications Towards Health care Technology</b></p>	VASD200158	<p><b>Summary Report of Course :</b></p> <p>Image Processing plays a major role. Analysis of signals is done using various processing techniques. Neural network is commonly used technique in analyzing the signals. Usage of Processing techniques and signal analysis has been applied in Image processing.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>At the end of this Course students will be able to understand the concepts of Signal analysis and Image processing in healthcare sector.</li> </ul>
<p><b>Basics of Transducers and their usage in Instrumentation</b></p>	VASD200136	<p><b>Summary Report of Course :</b></p> <p>A transducer is an electronic device that converts energy from one form to another. The process of converting energy from one form to another is known as transduction. Transducers are used in an ultrasound machine. The transducers in a speaker convert electrical signals into acoustic sound. A transducer is used in the antenna to convert electromagnetic waves into electrical signal.</p> <p style="text-align: right;"><b>Attested</b></p>



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		<p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>At the end of this Course students will be able to understand the basics of Transducers and their usage in Instrumentation.</li> </ul>
<p><b>Latest Trends in Medical Monitoring Devices</b></p>	<p>VASD200202</p>	<p><b>Summary Report of Course :</b></p> <p>Wearable technology allows doctors to detect major health events and detect diseases in their early stages. This means they can provide their patients the necessary treatment on time which could end up increasing their lifespan and ultimately saving their patient's life. AI programs are applied to practices such as diagnostics, treatment protocol development, drug development, personalized medicine, and patient monitoring and care.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>At the end of this Course students will be able to understand the concepts of Wearable Technology and its applications.</li> </ul>
<p><b>Organics Intelligence and Deep Learning in Medical Application</b></p>	<p>VASD200201</p>	<p><b>Summary Report of Course :</b></p> <p>Organic Intelligence brings a necessary shift in perspective from pathology and trauma to the proven methods drawn from the wisdom of mindfulness and the science of self-organization. OI teaches how healing happens from the nervous system up and makes it possible to imagine freedom from suffering.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>At the end of this Course students will be able to understand the concepts of Organic Intelligence and Deep Learning.</li> </ul>
<p><b>Academic Year (2019-20)</b></p>		
<p><b>Name of the Value Added Courses</b></p>	<p><b>Course Code</b></p>	<p><b>Summary Report of Course With Outcome</b></p>
<p><b>Concrete and Steel Design using STAAD.Pro</b></p>	<p>VASD190101</p>	<p><b>Summary Report of Course :</b></p> <p>Analysis considerations for concrete structures, Beam, column, and wall design, and seismic detailing, Generation of reports and drawings.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>At the end of the course the students will be able to understand the use of STAAD.Pro for designing, modeling, and analyzing buildings.</li> <li>This is a cornerstone course in the civil design domain.</li> </ul>
<p><b>Mastering Bitumen for Better Roads and Innovative Applications</b></p>	<p>VASD190133</p>	<p><b>Summary Report of Course :</b></p> <p>The course covers basic concepts about bitumen as well as complex topics related to the use of bitumen.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>At the end of the course the students will be able to understand the use of bitumen and its applications.</li> </ul>

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<p><b>Basic Interior Design using Software</b></p>	<p>VASD190135</p>	<p><b>Summary Report of Course :</b></p> <p>To introduce students to the basic principles and elements of interior design, To equip students with knowledge about dimensions and zoning and to teach them how to create liner dimensions how to create zones and use furniture in Sketch Up. To able students to create a simple project of a room using Sketch up.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>At the end of the course the students will able to Explore and generate creative solutions via a systematic and coordinated design process that integrates functional and aesthetic concerns.</li> </ul>
<p><b>Core Java</b></p>	<p>VASD190104</p>	<p><b>Summary Report of Course :</b></p> <p>Java consists of J2ME, J2EE, and J2SE. Core Java consists only of J2SE. We generally use the Java language to develop various applications as well as applets. We can only use Core Java for developing various server-based applications and website applications.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>At the end of the course the students will able to understand the concepts of developing computing or desktop applications using J2SE</li> </ul>
<p><b>Android App Development</b></p>	<p>VASD190115</p>	<p><b>Summary Report of Course :</b></p> <p>Android app development is making mobile apps for devices that run on the Android operating system. Initially, Android was written in Java language, but now they are written with the help of modern languages such as Kotlin, C++ languages, and Java, with Android Software Development Kit (SDK) on Android Studio.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>At the end of the course the students will able to understand how to develop an android app.</li> </ul>
<p><b>Hardware and Network Essentials</b></p>	<p>VASD190117</p>	<p><b>Summary Report of Course :</b></p> <p>Basics of computer network. OSI Model. Transmission Media. Networking devices &amp; Topology. LAN Basics. IP Addressing. TCP/IP &amp; Ethernet Advanced. Structured Cabling.</p> <p><b>Outcome of the course :</b></p> <ul style="list-style-type: none"> <li>The students can Gain the essential knowledge and skills required to configure, troubleshoot, manage and protect a data network.</li> </ul>
<p><b>Applications of EDA Tools for Communication</b></p>	<p>VASD190107</p>	<p><b>Summary Report of Course:</b></p> <p>Importance of EDA Tools, design flow of HDL language, language elements and various levels modeling. Basic concepts, complete design flow and execution of the tool. By using Active HDL Tool students actively simulated different digital circuits with various level of modeling and verify the results</p>

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		<p>with the tool. Concepts, complete design flow and execution of the tool.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>By using Xilinx ISE 10.1i Tool students actively simulated different digital circuits with various level of modeling and verify the functionality with the tool.</li> </ul>
<b>MATLAB for Bio-Signal Processing</b>	<b>VASD190119</b>	<p><b>Summary Report of Course :</b></p> <p>Main tool for writing code in MATLAB. MATLAB has four basic decives a programmer can use to control de flow of commands. Programming. Debugging. Application 1: Bisection Algorithm 2.Optimization toolbox: FMINCON</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>At the end of this Course students will be able to understand the concepts of MATLAB for Biosignal Processing.</li> </ul>
<b>Automation using Arduino with IOT</b>	<b>VASD190109</b>	<p><b>Summary Report of Course :</b></p> <p>IoT and automation can work together to power security systems. A combined solution can recognize authorized employees and unlock and lock doors to high-risk facilities such as bank vaults. The technologies can also restrict or grant privileges for operating specific machinery.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>At the end of this Course students will be able to understand the concepts of Automation using Arduino with IOT.</li> </ul>
<b>PLC in Industiral Applications</b>	<b>VASD190110</b>	<p><b>Summary Report of Course :</b></p> <p>A programmable logic controller (PLC) is an electronic device used in many industries to monitor and control building systems and production processes. The major areas of Application of PLC are Steel Industry, Glass Industry, Paper industry, Textile industry, Cement Industry, Chemical industry, Automobile industry, Food Processing System and so on.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>At the end of this Course students will be able to construct PLC in Industrial Applications.</li> </ul>
<b>Design of Photovoltaic System</b>	<b>VASD190128</b>	<p><b>Summary Report of Course:</b></p> <p>Solar photovoltaic modules are where the electricity gets generated, but are only one of the many parts in a complete photovoltaic (PV) system. In order for the generated electricity to be useful in a home or business, a number of other technologies must be in place. A solar PV system design can be done in four steps: Load estimation, Estimation of number of PV panels, Estimation of battery bank, Cost estimation of the system, Base condition:2 CFLs(18 watts each),2 fans (60 watts each) for 6hrs a day.</p> <p style="text-align: right;"><i>Attested</i></p>



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		<p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>At the end of this Course students will be able to design the Photovoltaic system.</li> </ul>
<p><b>Arduino implementaiton in Industrial Automation</b></p>	VASD190137	<p><b>Summary Report of Course :</b></p> <p>Adriano is typically used in the processing and manufacturing industry, typically either as a tool to improve automated processes or to control manufacturing equipment such as CNC machines. Best Microcontroller for Industrial Applications - Beagle Bone Black. The Beagle Bone Black is one of the top microcontrollers you can find. Powered by an Octavo Systems OSD3358 1GHz ARM Cortex-A8 processor, the Beagle Bone Black is mated to 512MB of DDR3 RAM.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>At the end of this Course students will be able to choose the Adriano in Industrial automation.</li> </ul>
<p><b>Industrial Automation using PLC with SCADA</b></p>	VASD190111	<p><b>Summary Report of Course :</b></p> <p>Automation is basically the delegation of human control function to technical equipment. It is the use of control systems such as computers, PLCs, Microcontrollers to control machinery and processes to reduce the need for human sensory and mental requirements as well. Industrial Automation i.e. to "Automate Industry" is the basic need of almost every type of manufacturing and production unit today.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>At the end of this Course students will be able to discuss the Industrial Automation and PLC with SCADA control systems.</li> </ul>
<p><b>3D Printing Technology and its Applications</b></p>	VASD190112	<p><b>Summary Report of Course:</b></p> <p>The course duration of 05 days covering around 30 hours exclusively utilized by the students, which is the prime motto of conducting the value added course. The course coordinator Dr. KG. Saravanan, Global CADD Center had taken an immense effort in imparting the basic knowledge product making.</p> <p><b>Outcome of the Course:</b></p> <ul style="list-style-type: none"> <li>The main motto of conduction of the Value Added Course on 3D Printing is to make an expose with the latest available technology in the field of manufacturing.</li> <li>This comes under the type of Additive type of manufacturing wherein the scraps or wastage is of minimal level.</li> <li>The current industrial scenario is exposed with the course.</li> </ul>
<p><b>Value Added Course on NX Cad</b></p>	VASD190127	<p><b>Summary Report of Course:</b></p> <p>The course duration of 06 days covering around 35 hours exclusively utilized by the students, which is the prime motto of conducting the value added course. The course coordinator Mr.K.Shanmugavel, CADD Center had taken an</p>



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		<p>immense effort in imparting the basic knowledge product making.</p> <p><b>Outcome of the Course:</b></p> <ul style="list-style-type: none"> <li>The Value Added Course on NX CAD targets the audience with the implementation of Machine Drawing with the help of Software making use of personal computer to visualise the final product. Knowledge exposure is done to students with the NX CAD.</li> </ul>
Value Added Course on Electrical Wiring Harness	VASD190129	<p><b>Summary Report of Course:</b></p> <p>The course duration of 07 days covering around 35 hours exclusively utilized by the students, which is the prime motto of conducting the value added course. The course coordinator Mr.M.Ragesh, Sri Amman Industrial Training Center., had taken an immense effort in imparting the basic knowledge on Electrical Wiring Harness.</p> <p><b>Outcome of the Course:</b></p> <ul style="list-style-type: none"> <li>The main intention of this Value Added Course on EWH is to impart knowledge to the students on various types and methods and facilities available in the electrical wiring of the automobile and the wagons starting from light, medium and heavy duty applications.</li> </ul>
Value Added Course on Solid Works	VASD190114	<p><b>Summary Report of Course:</b></p> <p>The course duration of 07 days covering around 40 hours exclusively utilized by the students, which is the prime motto of conducting the value added course. The course coordinator Mr.S.Prasanth, CADD Center had taken an immense effort in imparting the basic knowledge solid works.</p> <p><b>Outcome of the Course:</b></p> <ul style="list-style-type: none"> <li>The Value Added Course on NX CAD targets the audience with the implementation of Machine Drawing with the help of Software making use of personal computer to visualise the final product. Knowledge exposure is done to students with the NX CAD.</li> </ul>
Programming in C++	VASD190103	<p><b>Summary Report of Course :</b></p> <p>The prime purpose of C++ programming was to add object orientation to the C programming language, which is in it one of the most powerful programming languages. The core of the pure object-oriented programming is to create an object, in code, that has certain properties and methods.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>Understanding a functional hierarchical code organization. Ability to define and manage data structures based on problem subject domain. Ability to work with textual information, characters and strings.</li> </ul>
Zigbee Technology	VASD190126	<p><b>Summary Report of Course :</b></p> <p>Zigbee Technology is to use the devices in unwire application so that it can reduce the cost of development of these network devices. Low complexity</p>

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		<p>and high mobility of Zigbee network motivate large number of people to develop lightweight wireless networking hardware in future.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>ZigBee protocol, to act as a communicable medium between transmitter and receiver modules, which is suitable for the industrial environment. ZigBee is a wireless technology used for transmits data from one intelligent device to another in low cost and low power.</li> </ul>
IOT with Raspberry Pi	VASD190116	<p><b>Summary Report of Course :</b></p> <p>Raspberry Pi (RPI) defines as a series of single-board computers that are now increasingly being used to connect IoT devices. RPi can be plugged into a computer monitor. It is a capable little device that enables people to explore computing and learn how to program in languages like Scratch and Python.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>Improved productivity of staff and reduced human labor efficient operation management Better use of resources and assets Cost-effective operation.</li> </ul>
Ethical Hacking	VASD190130	<p><b>Summary Report of Course :</b></p> <p>Ethical hacking is generally used as penetration testing to detect vulnerabilities, risk and identify the loopholes in a security system and to take corrective measures against those attacks. Ethical hacking is a key component of risk evaluation, auditing, and counter-frauds.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>Ethical hacking is to prevent data from being stolen and misused by malicious attackers, as well as: Discovering vulnerabilities from an attacker's POV so that weak points can be fixed. Implementing a secure network that prevents security breaches.</li> </ul>
Animation and Graphics Design	VASD190105	<p><b>Summary Report of Course :</b></p> <p>It is a creative field and if you are passionate about art and design then this can be very good career option for you. A good graphic designer needs interpersonal and marketing skills, in addition to an eye for details and strong knowledge of electronic media packages.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>Develop self-awareness, understanding, and empathy for the environment while immersing students in multiple realities in order to help them grow as adaptable and resilient designers.</li> </ul>
Digital Marketing with Google	VASD190122	<p><b>Summary Report of Course :</b></p> <p>This course focuses on tools and techniques for Digital Marketing and promotion of products through digital marketing.</p> <p style="text-align: right;"><b>Attested</b></p>



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		<p><b>Course outcome:</b></p> <ul style="list-style-type: none"> <li>To learn the different tools that can be used for digital marketing with Google.</li> <li>To understand the impact of digital marketing over conventional marketing.</li> <li>To creating a digital marketing camping.</li> </ul>
Productivity and Employability Skill Training	VASD190125	<p><b>Summary Report of Course :</b></p> <p>This course focuses on imparting employability skills and there by increases the productivity of the organizations.</p> <p><b>Course outcome:</b></p> <ul style="list-style-type: none"> <li>To learn the different skills required to be placed in a reputed organization.</li> <li>Technical, interpersonal and team working skills to attain the organizations key objectives.</li> <li>To create a skilled pool of employees to improve the productivity of the organizations.</li> </ul>
Corporate Skills for Executive	VASD190138	<p><b>Summary Report of Course :</b></p> <p>This course focuses on training students to attain corporate standers of job profile in an executive role.</p> <p><b>Course outcome:</b></p> <ul style="list-style-type: none"> <li>To learn the different corporate skills required like leadership, interpersonal skills, and decision making skills.</li> <li>To understand and use corporate visual tools to betterment your corporate presentation.</li> <li>To create a corporate culture which includes dressing and other etiquettes required for student.</li> </ul>
Introduction to Basic Electronics Devices and its Circuit Applications	VASD190132	<p><b>Summary Report of Course :</b></p> <p>An electronic component is any component in an electronic system either active or passive. Components are connected together, usually by being soldered to a printed circuit board (PCB), to create an electronic circuit with a particular function. Components may be packaged singly, or in more complex groups as integrated circuits. Passive electronic components are capacitors, inductors, resistors, whilst active components are such as semiconductor devices; transistors and thyristors, which control current flow at electron level.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>At the end of this Course students will be able to gain knowledge in basics of components used in circuits and usage of components in the electrical circuits.</li> </ul>

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<p><b>Hands on Training for Biomedical Equipments</b></p>	<p>VASD190124</p>	<p><b>Summary Report of Course :</b></p> <p>Biomedical equipment technology is a profession that requires broad knowledge of biomedical system instrumentation. Necessary knowledge includes system usage, maintenance responsibilities, and ways to obtain data on an extensive range of monitoring, diagnostic, therapeutic, and surgical instrumentation.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>At the end of this Course students will be able to handle the medical equipments easily.</li> </ul>
<p><b>Biological Signal Analysis using MATLAB</b></p>	<p>VASD190136</p>	<p><b>Summary Report of Course:</b></p> <p>Main tool for writing code in MATLAB, MATLAB has four basic decives a programmer can use to, control de flow of commands, Programming, Debugging, Application 1: Bisection Algorithm 2.Optimization toolbox: FMINCON</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>At the end of this Course students will be able to understand the concepts of MATLAB for Biosignal Processing.</li> </ul>
<p><b>Ceramic Materials and Domestic and HiTech Appliances</b></p>	<p>VASD190140</p>	<p><b>Summary Report of Course:</b></p> <p>Recognize different rocks and minerals, Describe various types of natural and synthetic ceramic minerals, Define the properties and applications of natural and synthetic ceramic minerals, and Employ the testing methods to analyze the raw materials.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>At the end of course student will able to know about type of ceramic materials in Hi Tech Appliances.</li> </ul>
<p><b>Membrane Based Separation: Fundamentals and Applications</b></p>	<p>VASD190144</p>	<p><b>Summary Report of Course:</b></p> <p>Recognize different rocks and minerals, Describe various types of natural and synthetic ceramic minerals, Define the properties and applications of natural and synthetic ceramic minerals, Employ the testing methods to analyze the raw materials.</p> <p><b>Outcome of the Course:</b></p> <ul style="list-style-type: none"> <li>At the end of course student will able to know about various techniques involved in membrane based technology.</li> </ul>
<p><b>Wearable Technology in Healthcare Devices</b></p>	<p>VASD190142</p>	<p><b>Summary Report of Course :</b></p> <p>Wearable technology is any kind of electronic device designed to be worn on the user's body. Such devices can take many different forms, including jewelry, accessories, medical devices, and clothing or elements of clothing.</p> <p><b>Outcome of the Course :</b></p>

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RASIPURAM-637 408, NAMAKKAL Dt.,  
TAMILNADU.**



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		<ul style="list-style-type: none"> <li>At the end of this Course students will be able to understand how wearable Technology is used in Healthcare.</li> </ul>
First Aid and Emergency Care in Hospitals	VASD190145	<p><b>Summary Report of Course :</b></p> <p>First aid is the first and immediate assistance given to any person suffering from either a minor or serious illness or injury, with care provided to preserve life, prevent the condition from worsening. First aid is generally performed by someone with basic medical training. Mental health first aid is an extension of the concept of first aid to cover mental health.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>At the end of this Course students will be able to understand the commonly used first aid techniques and how to deal at the emergency case.</li> </ul>
Entrepreneurial Opportunities in Medical Textiles	VASD190143	<p><b>Summary Report of Course :</b></p> <p>Medical textiles are fiber-based products and structures used in a medical environment either for the treatment of an injury or for the provision of an appropriate condition in the clinical treatment of a wound or an illness.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>At the end of this Course students will be able to use the opportunities in medical textiles.</li> </ul>
Virtual Reality	VASD190195	<p><b>Summary Report of Course :</b></p> <p>Virtual Reality (VR) is a computer-generated environment with scenes and objects that appear to be real, making the user feel they are immersed in their surroundings. Virtual reality is a technology that simulates vision to end up with a 3D environment in which a user appears to be immersed while browsing through it or experiencing it.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>The students will be able to know about how Virtually Reality will diversely enrich and revolutionize our world in many areas.</li> </ul>
Artificial Intelligence with Machine Learning	VASD190193	<p><b>Summary Report of the Course :</b></p> <p>Artificial intelligence is a technology that enables a machine to simulate human behavior. Machine learning is a subset of AI which allows a machine to automatically learn from past data without programming explicitly.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>At the end of the course the students will be able to enable a machine to look like a human behavior with the help of Artificial Intelligence.</li> </ul>
Big Data and Hadoop	VASD190188	<p><b>Summary Report of Course :</b></p> <p>Big data it contains greater variety, arriving <del>attested</del> increasing volumes and</p>



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		<p>with more velocity. Hadoop enables distributed parallel processing of huge amounts of data across inexpensive, industry-standard servers that both store and process the data. With Hadoop, no data is too big data.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>At the end of the course the students will able to know about extract meaningful insights from data, and the in-memory technology helps faster data access.</li> </ul>
PCB Design and Simulation	VASD190194	<p><b>Summary Report of Course :</b></p> <p>Tools used for PCB designing, Placing and editing electrical symbols, Creating Netlist and foot print generation, Routing guideline and DRC checking, Design PCB for electrical or electronics circuits</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>Students can able to design a PCB for the given circuit.</li> </ul>
Machine Learning	VASD190162	<p><b>Summary Report of Course :</b></p> <p>ML Techniques overview, Eigen values, Eigen vectors and distance based clustering, k-Mode and density-based clustering, Routing guideline and DRC checking, SVM for classification and regression problems.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>Students can able to explain the various clustering techniques.</li> </ul>
Industrial Application based Embedded System	VASD190197	<p><b>Summary Report of Course :</b></p> <p>Arduino Architecture &amp; Arduino IDE, Power diode, Opto coupler and Driver circuit, Configuring I/O ports and Timers, Introduction to hardware design, Over view of Automation System and Types of Automation</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>Students can able to develop a circuit for Industrial Application.</li> </ul>
Building blocks of Java	VASD190164	<p><b>Summary Report of Course :</b></p> <p>Overview of Java and its application, Java Commenting Syntax and variables, Method Overloading ,Instance Variables, Multifunction Operators, Strings, Default Variable Initializations, Runtime Environments.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>The students can able to write Java code the required application.</li> </ul>
PC Based Instrumentation	VASD190170	<p><b>Summary Report of Course :</b></p> <p>PC Based Instrumentation and Control is a guide to implementing computer control, instrumentation and data acquisition using a standard PC and some of the more traditional computer languages. Numerous examples of configurations and working circuits, as well as reprogrammable software, make</p>



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		<p>this a practical, hands-on guide to implementing PC-based testing and calibration systems and increasing efficiency without compromising quality or reliability. Guidance is given on modifying the circuits and software routines to meet the reader's specific needs.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>At the end of the course students will be able to Summarize various types of sensors and actuators used in automobile control system.</li> </ul>
<b>Control of Electric Drives</b>	<b>VASD190169</b>	<p><b>Summary Report of Course :</b></p> <p>Electrical drives have become the most essential equipment now days in the electrical motors and other rotating machines. We know that electrical drives mainly accomplishes three kinds of work, Starting, Speed control, Braking. It can be said that the electrical drives enable us to control the motor in every aspect. But control of electrical drives is also necessary because all the functions accomplished by the drives are mainly transient operations i.e the change in terminal voltage, current, etc are huge which may damage the motor temporarily or permanently.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>At the end of the course students will be able to classify types of electric drives systems based on nature of loads, control objectives, performance and reliability.</li> </ul>
<b>Process Control</b>	<b>VASD190198</b>	<p><b>Summary Report of Course :</b></p> <p>Process control aims to ensure that process variability is controlled within specifically defined boundaries, and derived from current product and process understanding, to guarantee quality of the product. At a minimum, the process control strategy should address monitoring and control of critical process parameters.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>At the end of the course students will be able to explain the basic principles &amp; importance of process control in industrial process plants.</li> </ul>
<b>Safety and Hazards control in Industries</b>	<b>VASD190168</b>	<p><b>Summary Report of Course :</b></p> <p>An Effectively control and prevent hazards, employers should, Involve workers, who often have the best understanding of the conditions that create hazards and insights into how they can be controlled. Identify and evaluate options for controlling hazards, using a "hierarchy of controls."Use a hazard control plan to guide the selection and implementation of controls, and implement controls according to the plan. Develop plans with measures to protect workers during emergencies and no routine activities. Evaluate the effectiveness of existing controls to determine whether they continue to provide protection, or whether different controls may be more effective. Review new technologies for their potential to be more protective, more reliable, or less costly.</p>

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		<p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>At the end of this course, Students can conduct safety audit and write audit reports effectively in Safety Auditing.</li> </ul>
<p><b>Robotic Process Automation Tools</b></p>	<p>VASD190171</p>	<p><b>Summary Report of Course :</b></p> <p>The Robotic Process Automation (RPA) specialization offers comprehensive knowledge and professional-level skills focused on developing and deploying software robots. It starts with the basic concepts of Robotic Process Automation.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>Boost Productivity Across the Board Improve Efficiency to Generate Savings Hit Accuracy Goals with Reliable Consistency Improve Business Data Security.</li> </ul>
<p><b>Introduction to Snowflake</b></p>	<p>VASD190184</p>	<p><b>Summary Report of Course :</b></p> <p>Navigate the Snowflake UI, Create a database and compute resources, Load data into Snowflake. Run queries on the loaded data. Explore cool features including zero-copy cloning and time travel.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>Snowflake offers data-warehouse-as-a service or cloud-based data storage and analytics services. In less than a decade, Snowflake has emerged as one of the most reliable platforms for data warehousing.</li> </ul>
<p><b>Serverless Computing in AWS</b></p>	<p>VASD190181</p>	<p><b>Summary Report of Course:</b></p> <p>Server less enables you to build agile applications, so you can innovate and respond to change faster. With server less computing, infrastructure-management tasks like capacity provisioning and patching are handled by AWS, so you can focus on only writing code that serves your customers.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>Server less on AWS. AWS offers technologies for running code, managing data, and integrating applications, all without managing servers. Server less technologies features automatic scaling, built-in high availability, and a pay-for-use billing model to increase agility and optimize costs.</li> </ul>
<p><b>Full Stack Development Technologies</b></p>	<p>VASD190173</p>	<p><b>Summary Report of Course :</b></p> <p>Full stack technology refers to the entire depth of a computer system application, and full stack developers straddle two separate web development domains: the front end and the back end. The front end includes everything that a client, or site viewer, can see and interact with.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>Accomplished web/app developers Versatility Vast experience Timely delivery.</li> </ul>

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<p><b>Clinical usage of Forensic Psychology</b></p>	<p>VASD190177</p>	<p><b>Summary Report of Course :</b></p> <p>Forensic psychology is a specialty in professional psychology characterized by activities primarily intended to provide professional psychological expertise within the judicial and legal systems. It has many applications in Medical field.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>At the end of this Course students will be able to know the use of Forensic Psychology in medical field.</li> </ul>
<p><b>Role of Bioinformatics in Healthcare sector</b></p>	<p>VASD190175</p>	<p><b>Summary Report of Course :</b></p> <p>Bioinformatics is defined as the application of tools of computation and analysis to the capture and interpretation of biological data. Bioinformatics is the use of computers to collect and analyze biological information, especially for the field of genetics and genomics. An example of bioinformatics is the use of computer analysis on the Human Genome Project, which has recorded the three billion basic pairs of the human DNA system.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>At the end of this Course students will be able to know how bioinformatics is helpful in Healthcare sector.</li> </ul>
<p><b>Applications of Renewable Energy Source in Medical Field</b></p>	<p>VASD190183</p>	<p><b>Summary Report of Course :</b></p> <p>Renewable resources include biomass energy (such as ethanol), hydropower, geothermal power, wind energy, and solar energy. Biomass refers to organic material from plants or animals. This includes wood, sewage, and ethanol.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>At the end of this Course students will be able to know how bioinformatics is helpful in Healthcare sector.</li> </ul>
<p><b>Net Zero Carbon</b></p>	<p>VASD190214</p>	<p><b>Summary Report of Course :</b></p> <p>Study of Carbon Emission. Behaviors and collaborations required to deliver zero carbon in nature. Zero carbon design and engineering skills. Need of net zero carbon Building.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>At the end of course student will able to know about net zero carbon emission materials.</li> </ul>

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## Academic Year (2018-19)

Name of the Value Added Courses	Course Code	Summary Report of Course With Outcome
E-TAB/SAP	VASD180104	<p><b>Summary Report of Course :</b></p> <p>ETABS is a highly efficient analysis and design program developed especially for building systems. It is loaded with an integrated system with an ability to handle the largest and most complex building models and configurations. The software has powerful CAD-like drawing tools with a graphical and object-based interface. It increases the productivity of structural engineers. It saves a significant amount of time and money over the general purpose programs.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>At the end of the course the students will able to acquire in-depth details about the different procedures and simplified analysis aspects of the design models.</li> </ul>
Foundation Course on Civil Engineering	VASD180105	<p><b>Summary Report of Course :</b></p> <p>The objective of this course is to learn about types and purposes of different foundation systems and structures. To provide students with exposure to the systematic methods for designing foundation. To discuss and evaluate the feasibility of foundation solutions to different types of soil conditions considering the time effect on soil behavior.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>At the end of the course the students will able to Understand about behavior/nature of the soil.</li> </ul>
Ni LABVIEW	VASD180121	<p><b>Summary Report of Course :</b></p> <p>Explore LabVIEW, NI Data Acquisition (DAQ) devices, Explore resources, tips and tricks for using LabVIEW, Explore components of LabVIEW loop structures Explore basic concept of file I/O.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>The students can able to design circuits with LABVIEW.</li> </ul>
Arduino & Robotics	VASD180112	<p><b>Summary Report of Course :</b></p> <p>Arduino is a micro-controller. This small computer is used as the brain of the robot. It can be programmed to control the way buttons, motors, switches, lights, and other electronic parts work together. Arduino is hands-on, which is one of the many reasons it's appealing to kids.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>At the end of the course, students will be able to understand the value and importance of learning a coding language.</li> </ul>

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<p><b>Solar Power Systems</b></p>	<p>VASD180113</p>	<p><b>Summary Report of Course :</b></p> <p>A solar system is a setup that generates electricity by utilizing the solar energy system. A typical solar system consists of solar panels (which absorb sunlight), inverter (which converts DC into AC), mounting structure (that hold the panels in place), batteries (to store the extra power generated), grid box and balance of systems (wires, nuts etc.). A solar system comes in various sizes like 1 kWh, 2 kWh 3kW, 5kW, 7.5 kW, and 10kW.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>At the end of the course, students will be able to outline the technologies that are used to harness the power of solar energy.</li> </ul>
<p><b>Recent Trends in Electrical Harness Design and Schematic Design</b></p>	<p>VASD180117</p>	<p><b>Summary Report of Course :</b></p> <p>A wiring harness is an organized set of wires, terminals and connectors that run throughout the entire vehicle and transmit information and electric power, thereby playing a critical role in "connecting" a variety of components. The integrated wire harness lifecycle management solution leverages the Teamcenter robust requirements management, workflow management, configuration management, change control and manufacturing management functionalities, enabling design teams to accelerate time-to-market and reduce development cost.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>At the end of the course, students will be able to design Electrical wiring systems.</li> </ul>
<p><b>Arduino and its Applications</b></p>	<p>VASD180123</p>	<p><b>Summary Report of Course :</b></p> <p>Arduino is an open-source electronics platform based on easy-to-use hardware and software. Arduino boards are able to read inputs - light on a sensor, a finger on a button, or a Twitter message - and turn it into an output - activating a motor, turning on an LED, publishing something online. Arduino is a really great development board to use for: Technology education. Electronics hobby. Hardware product prototype (early phase).</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>At the end of the course, students will be able to develop skills to design and implement various smart system applications.</li> </ul>
<p><b>Solar PV System Design using PV System</b></p>	<p>VASD180115</p>	<p><b>Summary Report of Course :</b></p> <p>Solar photovoltaic modules are where the electricity gets generated, but are only one of the many parts in a complete photovoltaic (PV) system. In order for the generated electricity to be useful in a home or business, a number of other technologies must be in place. A photovoltaic (PV) system is able to supply electric energy to a given load by directly converting solar energy through the photovoltaic effect. The system structure is very flexible. PV modules are the main building blocks; these can be arranged into arrays to increase electric energy production.</p>

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Robotics	VASD180107	<p><b>Summary Report of Course:</b></p> <p>The course duration of 06 days covering around 30 hours exclusively utilized by the students, which is the prime motto of conducting the value added course. The course coordinator Mr.M.Ragesh, Sri Amman Industrial Training Center., had taken an immense effort in imparting the basic knowledge on Robotics.</p> <p><b>Outcome of the Course:</b></p> <ul style="list-style-type: none"> <li>The students are exposed to the various dismensions of robotics with respect to its construction, material available for the various sensing units like camera, proximity sensor, range sensor, motor capacity calculation, configuration of robots. Knowledge level with repect to the field is increased with the conduction of the program to the students.</li> </ul>
Solids Works	VASD180109	<p><b>Summary Report of Course:</b></p> <p>The course duration of 06 days covering around 30 hours exclusively utilized by the students, which is the prime motto of conducting the value added course. The course coordinator Mr.B.Vinoth, Infoem Solutions had taken an immense effort in imparting the basic knowledge PLC and Automation.</p> <p><b>Outcome of the Course:</b></p> <ul style="list-style-type: none"> <li>The students are exposed PLC Automatiion which is the industrial need of the hour. Automation is an automatic process, typically controlled by computers and sensors.</li> <li>There is usually very little human intervention. Input devices, such as sensors and switches, will work with a controller or PLC to activate output devices like motors or other machinery.</li> </ul>
EDM and CNC	VASD180111	<p><b>Summary Report of Course:</b></p> <p>The course duration of 06 days covering around 30 hours exclusively utilized by the students, which is the prime motto of conducting the value added course. The course coordinator Mr.J.ArunKumar, Techno CADD Solutions Ltd., had taken an immense effort in imparting the basic knowledge EDM &amp; CNC.</p> <p><b>Outcome of the Course:</b></p> <ul style="list-style-type: none"> <li>The main intention of this Value Added Course on Electrical Discharge Machining is to make an exposure to the Non Traditional Machining process of Electrical Discharge Machining in which various machining methods available in market is explained to the students with the practical applications of industrial tool room. The course is conducte with the Sparkoniz ZNC type of Die sinking type of ED Machine.</li> </ul>

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<p><b>Autodesk Fusion 360</b></p>	<p>VASD180108</p>	<p><b>Summary Report of Course :</b></p> <p>The course duration of 06 days covering around 30 hours exclusively utilized by the students, which is the prime motto of conducting the value added course. The course coordinator Mr.K.Shanmugavel, CADD Center had taken an immense effort in imparting the basic knowledge ON Autodesk Fusion 360.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>The Value Added Course on Autodesk Fusion 360 targets the audience with the implementation of Machine Drawing with the help of Software making use of personal computer to visualise the final product. Knowledge exposure is done to students with the Fusion 360.</li> </ul>
<p><b>Block Chain</b></p>	<p>VASD180127</p>	<p><b>Summary Report of Course :</b></p> <p>Use in Digital Advertising, Implementation in Finance, Consolidation of Cloud Storage, Supply Chain Management.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>Block chain technology are decentralization, immutability, security, and transparency. The block chain technology allows for verification without having to be dependent on third-parties.</li> <li>The data structure in a block chain is append-only. So, the data cannot be altered or deleted.</li> </ul>
<p><b>Biometrics</b></p>	<p>VASD180126</p>	<p><b>Summary Report of Course :</b></p> <p>A biometric or biometric identifier is an objective measurement of a physical characteristic of an individual which, when captured in a database, can be used to verify the identity or check against other entries in the database.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>High security and assurance - Biometric identification provides the answers to "something a person has and is" and helps verify identity.</li> </ul>
<p><b>Deep Learning</b></p>	<p>VASD180131</p>	<p><b>Summary Report of Course :</b></p> <p>It is very much possible that deep learning development tools, libraries, and languages could become standard components of every software development tool kit. These tool kits with modern capabilities will pave the way for easy design, configuration, and training of new models.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>Deep learning, when applied to data science, can offer better and more effective processing models. Its ability to learn unsupervised drives continuous improvement in accuracy and outcomes.</li> <li>It also offers data scientists with more reliable and concise analysis results.</li> </ul>

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<p><b>Data Science</b></p>	<p>VASD180145</p>	<p><b>Summary Report of the Course :</b></p> <p>Data science is deals with vast volumes of data using modern tools and techniques to find unseen patterns, derive meaningful information, and make business decisions. It maintains Data Warehousing, Data Cleansing, Data Staging, Data Processing, Data Architecture. This covers taking the raw data and putting it in a form that can be used.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>At the end of this course students will able to build predictive models to use various machine learning algorithms.</li> </ul>
<p><b>Virtual Instrumentation</b></p>	<p>VASD180142</p>	<p><b>Summary Report of Course :</b></p> <p>Virtual Instruments in Tinkercad-Measurement analysis-Open source tools for Instrumentation, Data and Data Types in general programming-LabVIEW Basics: Front Panel, Block Diagram. Introduction to Data Acquisition System – Simple exercise with virtual instruments.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>At the end of this course student will be able to do exercise with virtual instruments.</li> </ul>
<p><b>Micro Electro Mechanical Systems</b></p>	<p>VASD180133</p>	<p><b>Summary Report of Course :</b></p> <p>MEMS Technology is used to manufacture different sensors like Pressure, Temperature, Vibration and Chemical Sensors. Accelerometers, Gyroscopes, e-Compass etc. are some of the commonly used MEMS Sensors in cars, helicopters, aircrafts, drones and ships. The three main functions of the MEMS package are mechanical support, protection from the environment and electrical connection to other system components.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>At the end of this course student will be able to explain micro sensors, micro-actuators, their types and applications.</li> </ul>
<p><b>DevOps Tools</b></p>	<p>VASD180144</p>	<p><b>Summary Report of Course :</b></p> <p>Course helps to understand the devops methodology in detail and help them learn the devops tools and gain hands-on experience on the tools thereby: Apply DevOps strategies to your projects. Understand Continuous Delivery. Automate the deployment process.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>DevOps tools provide these very hooks into planning, development, testing, deployment, operating, and monitoring of applications. Furthermore, tools with a whole view of the entire process serve the need of orchestrating the many pieces involved.</li> </ul>

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RASIPURAM-637 408, NAMAKKAL Dist.,  
TAMILNADU.



# MUTHAYAMMAL ENGINEERING COLLEGE

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<b>Professional Ethics and Human Values</b>	<b>VASD180132</b>	<p><b>Summary Report of Course :</b></p> <p>This course focuses on teaching the professional ethics, ethical crises in decision making.</p> <p><b>Course outcome:</b></p> <ul style="list-style-type: none"> <li>• Learn the professional ethics for managers.</li> <li>• Understand the need for ethics in emerging business environment.</li> <li>• Create a ethical platform for a successful business.</li> </ul>
<b>Academic Year (2017-18)</b>		
<b>Name of the Value Added Courses</b>	<b>Course Code</b>	<b>Summary Report of Course With Outcome</b>
<b>Total Station</b>	<b>VASD170107</b>	<p><b>Summary Report of Course :</b></p> <p>A total station (TS) or total station theodolite (TST) is an electronic/optical instrument used for surveying and building construction. It is an electronic transit theodolite integrated with electronic distance measurement (EDM) to measure both vertical and horizontal angles and the slope distance from the instrument to a particular point, and an on-board computer to collect data and perform triangulation calculations.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>• At the end of the course the students will able to Understand about the use total station in the field of civil engineering land survey.</li> </ul>
<b>Bar Bending Techniques</b>	<b>VASD170108</b>	<p><b>Summary Report of Course :</b></p> <p>Bar bending schedule or schedule of bars is a tabular representation of reinforcement bar. It is generally represented for each type of R.C.C work. With the help of bar bending schedule the requirement of different length and sizes of bars may be known and can be arranged and bent-up during the time of construction.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>• At the end of the course the students will able to improve construction quality and minimize steel wastage making construction economical.</li> </ul>
<b>Fundamentals of Stress &amp; Strain and Axial Loading</b>	<b>VASD170111</b>	<p><b>Summary Report of Course :</b></p> <p>Fundamentals of Stress &amp; Strain and Axial Loading course explore the topic of solid objects subjected to stress and strain. The methods taught in the course are used to predict the response of engineering structures to various types of loading, and to analyze the vulnerability of these structures to various failure modes. Axial loading will be the focus in this course.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>• At the end of the course the students will able to know about axial loading and gain an understanding of what causes stress and strain on solid objects, which will help you problem solve and plan according to design-stable structures.</li> </ul>

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<p><b>Android Application Development and Firebase Technology</b></p>	<p>VASD170101</p>	<p><b>Summary Report of the Course :</b></p> <p>Android is an open source and Linux-based operating system for mobile devices such as smartphones and tablet computers. It deals the basic Android programming and will also take you through some advance concepts related to Android application development. The Firebase is a Backend-as-a-Service (BaaS) that offers the developers a wide spectrum of tools and services to develop high-quality apps at a much faster pace.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>At the end of the course the students will develop an android app with the help of firebase.</li> </ul>
<p><b>ORACLE</b></p>	<p>VASD170112</p>	<p><b>Summary Report of Course :</b></p> <p>Oracle database is a relational database management system (RDBMS) from Oracle Corporation. This course will explain a complete overview of the Oracle database, features, history, and editions. Before discussing the oracle, we will first need to know about the database.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>At the end of the course the students know to store and maintain a data with the help of oracle.</li> </ul>
<p><b>Java and J2EE</b></p>	<p>VASD170102</p>	<p><b>Summary Report of the Course :</b></p> <p>J2EE is an extension of the Java SE based on the Java programming language used for developing and deploying web-based enterprise applications. It consists of a set of APIs, services, and protocols that provide the functionality to develop multi-tiered web-based applications.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>At the end of the course the students able to know developing and deploying web-based enterprise applications.</li> </ul>
<p><b>Web Designing</b></p>	<p>VASD170127</p>	<p><b>Summary Report of the Course :</b></p> <p>Contains a basic introduction to familiarize students with the basics of designing a website to its tools, software applications and themes. Here are the key topics covered under the web designing: How to design a website Creating different themes for different layouts How to design the look and feel of a website How to create and design banners, advertisements, etc. Learning about the tools and techniques of web design covers using software applications.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>At the end of the course the students should know how to design a website using various scripting languages.</li> </ul>
<p><b>PHP &amp; MySQL</b></p>	<p>VASD170115</p>	<p><b>Summary Report of Course :</b></p> <p>PHP is the most popular scripting language for web development. It is free, open source and server-side (the code is executed on the server). MySQL is</p>



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		<p>a Relational Database Management System (RDBMS) that uses Structured Query Language (SQL). It is also free and open source.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>The students understand the basic concepts of PHP and its applications. Demonstrate various MySQL database queries.</li> </ul>
<b>Circuit Design using Electronic Simulator</b>	VASD170106	<p><b>Summary Report of Course :</b></p> <p>Introduction to Tinkercad Electronic Simulator, LTSpice Electronic Simulator, Selection and placement of electronic components, Design of Electronic circuits, Execution and analysis of the designed circuits.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>Students can able to design circuits with electronic simulator.</li> </ul>
<b>Intelligent Instrumentation Smart Sensors</b>	VASD170116	<p><b>Summary Report of Course :</b></p> <p>Units and standards of measurement, Statistical methods, Variable Transducers, Interfacing conventional transducers 5. Calibration features and sensors</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>Students can able to use transducers for measurements.</li> </ul>
<b>Solar Power Plant Design</b>	VASD170109	<p><b>Summary Report of Course :</b></p> <p>As the trend of energy consumption is changing, so is the source of energy. Due to energy crises and cost factor, people are getting more and more fascinated by the cheaper and environment-friendly alternatives of the same. As we have been reading, we know that solar energy is one of the best in this category. More and more enthusiasts are getting involved in the solar market. The government is also providing a lot of resources as well as awareness about the same. But when it comes to installing one at your place, people feel reluctant towards the same. It may be due to the presence of a lot of factors affecting the design. It is not that difficult, and it is tricky, though. We will discuss various criteria for designing a solar power plant at your home.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>At the end of the course student will be able to design solar power plant.</li> </ul>
<b>Design of PV Cells for Different Applications</b>	VASD170113	<p><b>Summary Report of Course :</b></p> <p>Sun is a powerhouse of energy and this energy moves around in the form of electromagnetic radiations. These radiations are of several types such as light, radio waves, etc. depending upon the wavelength of the radiations emitted. A very less percentage of sun's radiations reach the earth's atmosphere in the form of visible light. Solar cells use this visible light to make electrons. Different wavelength of light is used by different solar cells. Solar cells are made up of semiconductor materials, such as silicon, which is used to produce electricity. The electricity is conducted as a stream of tiny particles called electrons and the</p>

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		<p>stream is called electric current. Two main types of electric currents are; DC (direct current) in which the flow of current is in the same direction while in AC (Alternating current) it may reverse the direction of current. A typical solar cell has two layers of silicon, which is n-type at the top and p-type at the bottom. When sunlight strikes the solar cell, the electrons are absorbed by silicon, they flow between n and p-layers to produce electric current and the current leaves the cell through the metal contact. The electricity generated is of AC type.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>At the end of the course student will be able to will have knowledge of basics of standalone and grid connected solar PV topologies and basic components of a solar PV system.</li> </ul>
Robotics with Arduino Technology	VASD170123	<p><b>Summary Report of Course :</b></p> <p>Arduino is a micro-controller. This small computer is used as the brain of the robot. It can be programmed to control the way buttons, motors, switches, lights, and other electronic parts work together. The Arduino Robot is the first official Arduino on wheels. The robot has two processors, one on each of its two boards. The Motor Board controls the motors, and the Control Board reads sensors and decides how to operate. Each of the boards is a full Arduino board programmable using the Arduino IDE.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>At the end of the course student will be able to construct Robots with Arduino Technology.</li> </ul>
Value Added Course on Electrical Wiring Harness	VASD170125	<p><b>Summary Report of Course:</b></p> <p>The course on Electrical Wiring Harness with duration of 5 days covering around 30 hours had been conducted by the department of Mechanical Engineering in association with Institution of Engineers (I) by Mr. S. Boopathi, Assistant Manager, CGS Technologies, and Chennai and also it is rightly utilized by the students.</p> <p><b>Outcome of the Course:</b></p> <ul style="list-style-type: none"> <li>The main intention of this Value Added Course on EWH is to impart knowledge to the students on various types and methods and facilities available in the electrical wiring of the automobile and the wagons starting from light, medium and heavy duty applications.</li> </ul>
Value Added Course on Ansys	VASD170114	<p><b>Summary Report of Course:</b></p> <p>The course on ANSYS with duration of 5 days covering around 35 hours had been conducted by the department of Mechanical by Mr. K.G. Saravanan, Manager-Training, Global CADD Centre and also it is rightly utilized by the students.</p> <p><b>Outcome of the Course:</b></p> <ul style="list-style-type: none"> <li>The target of the conduction of Value Added Course on Ansys is to impart the methods of giving input to Ansys software about the</li> </ul>



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		<p>problem statement by setting the boundary conditions and also the methods available over the the choice of material selection and also about the knowledge to make messing and analysis of the choosen atmosphere of the component.</p> <ul style="list-style-type: none"> <li>It will be very helpful for their project validation when they go with non linear type of problem anaysis.</li> </ul>
Value Added Course on Piping (Creo)	VASD170122	<p><b>Summary Report of Course:</b></p> <p>Value Added Course on Piping (Creo) with duration of 5 days covering around 40 hours had been conducted by the department of Mechanical by Mr. K.G. Saravanan, Manager-Training, Global CADD Centre and also it is rightly utilized by the students.</p> <p><b>Outcome of the Course:</b></p> <ul style="list-style-type: none"> <li>The target of the conduction of Value Added Course on Piping (Creo) is to impart theknowledge of design software to the student community.</li> <li>It will be very helpful for their project validation when they go with non linear type of problem anaysis.</li> </ul>
R Programming	VASD170103	<p><b>Summary Report of Course :</b></p> <p>R is an open-source language that is contributed to developers and programmers from all around the world. It is continuously expanding and people from the whole world are contributing to its development. This has resulted in R becoming a state of the art programming language.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>Understand, Analyse, Interpret Correlation and Regression to analyse the underlying relationships between different variables. Conduct and Interpret a variety of Hypothesis Tests to aid Decision Making.</li> </ul>
Android Technology	VASD170121	<p><b>Summary Report of Course :</b></p> <p>Android is an open-source operating system based on Linux Kernel and used in smart devices like Android Phones, Watches, T.V., Tablets, etc. Android was developed by Open Handset Alliances and led by Google and other companies. Numerous people depend on Android devices then it is certain that they face some problems or need improvement on such types of devices.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>Android is an open-source platform allowing UI customization</li> <li>Supports cloud storage enabling sync of devices with G-account</li> <li>Continual improvement &amp; removal of old features</li> <li>Supports 3rd party widget &amp; information display on screen</li> </ul>
Certification Course on Business Analytics for Managers	VASD170105	<p><b>Summary Report of Course :</b></p> <p>This course focuses on enhancing the business analytics skills of students to improve the stability of the business with the help of various analytical tool.</p>



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		<p><b>Course outcome:</b></p> <ul style="list-style-type: none"> <li>• Learn the business analysis techniques.</li> <li>• To understand the Strengths and Weakness of the business.</li> <li>• Make SWOT analysis for a business</li> </ul>
<b>Analytics for Business Manager</b>	VASD170119	<p><b>Summary Report of Course :</b></p> <p>This course focuses on enhancing the business analytics skills of managers to improve the business productivity with the help of various analytical tools.</p> <p><b>Course outcome:</b></p> <ul style="list-style-type: none"> <li>• Learn the business analytics techniques.</li> <li>• To understand the tools used for business analytics</li> <li>• Make decision based on business analytics.</li> </ul>
<b>Software Testing Tools</b>	VASD170137	<p><b>Summary Report of Course :</b></p> <p>Software Testing tools are the tools which are used for the testing of software. Software testing tools are often used to assure firmness, thoroughness and performance in testing software products. Unit testing and subsequent integration testing can be performed by software testing tools. These tools are used to fulfill all the requirements of planned testing activities. These tools also work as commercial software testing tools.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>• The expected outcome in software testing is the ideal result that should be achieved once a test case has been executed.</li> </ul>
<b>Basics of Simulation tools</b>	VASD170138	<p><b>Summary Report of Course :</b></p> <p>Introduction to Multisim Electronic Simulator, Tinkercad- placement of electronic components, LTSpice Live Electronic Simulator, Design of Electronic circuits, Execution and analysis of the designed circuits.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>• Students can able to design circuits with electronic simulator.</li> </ul>
<b>Industrial Drives and Control</b>	VASD170133	<p><b>Summary Report of Course :</b></p> <p>Industrial drives are used in many different applications across the factory floor as a key part of the next generation of factory automation. There are many different types of motors used depending on the requirements, from turning shafts or driving pumps and fans. The electric motor in an industrial drive can use a range of different techniques, from brushed or brushless DC to variable-speed drives as well as single- and three-phase AC motors.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>• At the end of the course, student will be able to Identify and Analyze suitable power converter from the available configurations to achieve efficient performance of the DC Motor for specific application.</li> </ul>



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<b>Applications of Cognitive Computing</b>	<b>VASD170136</b>	<p><b>Summary Report of Course :</b></p> <p>Cognitive computing is the use of computerized models to simulate the human thought process in complex situations where the answers may be ambiguous and uncertain.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>Cognitive computing can analyze emerging patterns, spot business opportunities and take care of critical process-centric issues in real time.</li> </ul>
<b>Academic Year (2016-17)</b>		
<b>Name of the Value Added Courses</b>	<b>Course Code</b>	<b>Summary Report of Course With Outcome</b>
<b>AutoCAD for Design and Drafting</b>	<b>VASD160123</b>	<p><b>Summary Report of Course :</b></p> <p>AutoCAD is a piece of CAD software created by Autodesk and is intended for professional use in creating design plans for projects such as manufacturing, infrastructure, architecture, and construction. Additionally, AutoCAD can be used in media and in the entertainment industry to create visual effects.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>At the end of the course the students will able to Understand about the CADD software and helps to minimizes human errors and helps the users to bring their imagination to life with accuracy.</li> </ul>
<b>BIM Fundamentals for Engineers</b>	<b>VASD160115</b>	<p><b>Summary Report of Course :</b></p> <p>The course is designed for students to learn the essential concepts of BIM, and the basic technical skills to create and manipulate a BIM model. Those skills include how to retrieve information from a BIM model and how to use common modeling tools.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>At the end of the course the students will able to Understand about the essential concepts of BIM, and the basic technical skills to create and manipulate a BIM model.</li> </ul>
<b>C# and .NET Framework</b>	<b>VASD160109</b>	<p><b>Summary Report of the Course :</b></p> <p>.NET is Microsoft's strategic platform for developing enterprise systems for the modern era. ASP.NET Web applications. Mobile applications. Console applications.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>At the end of the course the students will develop web and mobile applications using C# and .NET framework.</li> </ul>

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<b>VB.Net Technology</b>	<b>VASD160111</b>	<p><b>Summary Report of the Course :</b></p> <p>Visual Basic .NET (VB.NET) is an object-oriented computer programming language implemented on the .NET Framework. VB.NET is implemented by Microsoft's .NET framework. Therefore, it has full access to all the libraries in the .Net Framework.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>At the end of the course the students will develop secure and robust application using VB .NET framework.</li> </ul>
<b>Programming in C &amp; C++</b>	<b>VASD160116</b>	<p><b>Summary Report of the Course :</b></p> <p>C is an imperative procedural language supporting structured programming, lexical variable scope, and recursion, with a static type system. C++ is an object-oriented programming language which gives a clear structure to programs and allows code to be reused, lowering development costs. C++ is portable and can be used to develop applications that can be adapted to multiple platforms.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>At the end of the course the students will know how to develop operating systems, browsers, games.</li> </ul>
<b>Network Simulator</b>	<b>VASD160104</b>	<p><b>Summary Report of Course :</b></p> <p>Introduction to the basics of network layers, UDP, TCP Data traffic, Error Model and Queing Model, Network creation and simulation, Distance Vector and Link State Protocols.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>Students can able to develop a new network protocol.</li> </ul>
<b>Internet of Things (IOT)</b>	<b>VASD160112</b>	<p><b>Summary Report of Course :</b></p> <p>Introduction to IoT, IOT Protocols, IOT Architecture, Web of Things 5. Standardization for WoT.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>Students can able to develop an application with IoT.</li> </ul>
<b>Electrical Drawing using CADD</b>	<b>VASD160102</b>	<p><b>Summary Report of Course :</b></p> <p>CAD enables these engineers to create electrical and electronic diagrams, control circuit diagrams, schematics and documentation. CAD typically comes with libraries of parts and symbols which allow electrical engineers to automate design tasks and generate bills of materials (BOM) reports.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>At the end of this course students will be able to draw an electrical wiring using CADD.</li> </ul>

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<p><b>IoT - an Overview</b></p>	<p>VASD160125</p>	<p><b>Summary Report of Course :</b></p> <p>The Internet of Things (IoT) is a system of interrelated devices connected to a network and/or to one another, exchanging data without necessarily requiring human-to- machine interaction. In other words, IoT is a collection of electronic devices that can share information among themselves.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>At the end of this course students will be able to Recognise the factors that contributed to the emergence of IoT.</li> </ul>
<p><b>Design of Robots using Arduino</b></p>	<p>VASD160130</p>	<p><b>Summary Report of Course :</b></p> <p>Arduino is an open-source electronics platform based on easy-to-use hardware and software. Arduino boards are able to read inputs - light on a sensor, a finger on a button, or a Twitter message - and turn it into an output - activating a motor, turning on an LED, publishing something online. Arduino is a really great development board to use for: Technology education. Electronics hobby. Hardware product prototype (early phase).</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>At the end of the course, students will be able to develop skills to design and implement various smart system application.</li> </ul>
<p><b>Applications of PLC &amp; SCADA in Automotive Industries</b></p>	<p>VASD160114</p>	<p><b>Summary Report of Course :</b></p> <p>A programmable logic controller (PLC) is an electronic device used in many industries to monitor and control building systems and production processes. The major areas of Application of PLC are Steel Industry, Glass Industry, Paper industry, Textile industry, Cement Industry, Chemical industry, Automobile industry, Food Processing System and so on.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>At the end of this Course students will be able to construct PLC &amp; SCADA in Industrial Applications.</li> </ul>
<p><b>Value Added Course on AutoCAD</b></p>	<p>VASD160107</p>	<p><b>Summary Report of Course :</b></p> <p>The course duration of 07 days covering around 30 hours exclusively utilized by the students, which is the prime motto of conducting the value added course. The course coordinator Dr. KG. Saravanan, Global CADD Center had taken an immense effort in imparting the basic knowledge with product making.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>The Value Added Course on AutoCAD targets the audience with the implementation of Engineering Drawing with the help of Software in the digital manner with commands starting from dimensioning to 3d extrusion of the 2d shapes to visualize the final product. Knowledge exposure is done to students with the AutoCAD.</li> </ul>

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<p><b>Value Added Course on SolidWorks</b></p>	<p>VASD160124</p>	<p><b>Summary Report of Course :</b></p> <p>The course duration of 07 days covering around 40 hours exclusively utilized by the students, which is the prime motto of conducting the value added course. The course coordinator Mr.S.Prasanth, CADD Center had taken an immense effort in imparting the basic knowledge solid works.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>The Value Added Course on Solid works targets the audience with the implementation of Machine Drawing with the help of Software making use of personal computer to visualize the final product. Knowledge exposure is done to students with the Solid works.</li> </ul>
<p><b>Value Added Course on NX Cad</b></p>	<p>VASD160108</p>	<p><b>Summary Report of Course :</b></p> <p>The course duration of 07 days covering around 30 hours exclusively utilized by the students, which is the prime motto of conducting the value added course. The course coordinator Mr.K.Shanmugavel, CADD Center had taken an immense effort in imparting the basic knowledge product making.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>The Value Added Course on NX CAD targets the audience with the implementation of Machine Drawing with the help of Software making use of personal computer to visualize the final product. Knowledge exposure is done to students with the NX CAD.</li> </ul>
<p><b>Open Source Software</b></p>	<p>VASD160106</p>	<p><b>Summary Report of Course:</b></p> <p>According to the Open Source Initiative, Open Source Software "can be freely accessed, used, changed, and shared (in modified or unmodified form) by anyone." This means that if one of the more permissive licenses is chosen by software's copyright holder, that software becomes Open Source Software.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>Open source is generally much more cost-effective than a proprietary solution. Not only are open source solutions typically much more inexpensive in an enterprise environment for equivalent or superior capability, but they also give enterprises the ability to start small and scale.</li> </ul>
<p><b>Mobile Application Development</b></p>	<p>VASD160117</p>	<p><b>Summary Report of Course:</b></p> <p>The Scope of android app developers has increased and will increase in the coming years in India. Big companies like Samsung, Vivo, One Plus are launching mobile phones with a new update every year, that has increased the demand for android.</p> <p><b>Outcome of the Course :</b></p> <ul style="list-style-type: none"> <li>Strengthen customer engagement Increase accessibility Provide value for customers transforming the retail experience Boost brand awareness and recognition Unique services and payment</li> </ul>



# MUTHAYAMMAL ENGINEERING COLLEGE

(An Autonomous Institution)

(Approved by AICTE, New Delhi, Accredited by NAAC & Affiliated to Anna University)

Rasipuram - 637 408. Namakkal Dt., Tamil Nadu.

<b>Digital Marketing</b>	<b>VASD160121</b>	<p><b>Summary Report of Course :</b></p> <p>This course focuses on tools and techniques for Digital Marketing and promotion of products through digital marketing.</p> <p><b>Course outcome:</b></p> <ul style="list-style-type: none"><li>• To learn the different tools that can be used for digital marketing with Google.</li><li>• To understand the impact of digital marketing over conventional marketing.</li><li>• To creating a digital marketing camping.</li></ul>
<b>Human Resource Analytics</b>	<b>VASD160128</b>	<p><b>Summary Report of Course :</b></p> <p>This course focuses on teaching the importance of human resource management for a small and medium size business.</p> <p><b>Course outcome:</b></p> <ul style="list-style-type: none"><li>• To learn workforce management for HR Managers.</li><li>• To understand workforce management, reward and retention policies for an organization.</li><li>• To create working model for human resource analytics.</li></ul>

**Attested**

**PRINCIPAL,  
MUTHAYAMMAL ENGINEERING COLLEGE  
(AUTONOMOUS)  
RASIPURAM-637 408, NAMAKKAL Dis.,  
TAMILNADU.**