



## MECHANICAL DEPARTMENT NEWS LETTER

### HOD DESK

Greetings to Dear students, Faculty and Friends!

. Congratulation to SAE team "INVICTO (BAJA)" for successfully participating in the "International SAE competition held at Illinois, USA" from 7-10 June 2017. Teams persistence and hard work is to be commended, as they have overcome all financial and technical hurdles to take the team to such prestigious competition.

It is the beginning of another academic year and it is my privilege to welcome all the newcomers of ME batch 2017-19. Department is following outcome based educational programme, and every course outcome is met by classroom studies, laboratory work and project works. Workshops/seminars/industrial visits/projects etc need to be planned to ensure curriculum gap with respect programme outcomes are filled. I am sure that together we will maintain high standard of academic and co-curricular activities in this academic year also.

Cdr Raju K Kuriakose (retd)

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## JYOTHIRGAMAYA 2017



### VISION

"To become a center of excellence in Mechanical Engineering, producing innovative and creative mechanical engineers to meet the global challenges"

### MISSION

- To provide a platform to the students towards attaining quality education in Mechanical Engineering.
- To educate students about professional & ethical responsibilities and train them to build leadership and entrepreneurship qualities for their career development.
- To create opportunities and guide students in acquiring career oriented jobs in the field of Mechanical Engineering

Vimal jyothi engineering college Jyothitgamaya 2017 has conducted on 17<sup>th</sup> July 2017 at Msgr.Mathew M Chalil Auditorium. The programme was inaugurated by His Grace Mar George Njaralaakkattu (Arch Bishop, Arch-Diocese of Thalassery ). Principal Dr.Benny Joseph gave welcome speech, and Rev.Dr. Thomas melvettath gave presidential address during the function. Oath taking ceremony was lead by Rev.Fr.George Asarikunnel.

## FUSION 360 IN SCHOOL HANDS ON WORKSHOP



*Dept. of Mechanical Engineering VJEC has conducted Fusion 360 (in school hands on workshop) in association with AUTODESK on 06/08/2017 at CAD lab. The programme given higher exposure to students about 3-D modeling by using Fusion 360. Mr. Jestin C Jose coordinated the programme.*

## SANKETHAPRA VESHAM 2017



The live telecast of KTU induction Program Sankethapravesham 2017 was conducted on 27<sup>th</sup> July at Vjec .The first year students gets motivated from Metroman E Sridaran's speech.

## GATE 2018



DEPARTMENT OF  
MECHANICAL ENGINEERING  
VIMAL JYOTHI ENGG.  
COLLEGE

# GATE 2018

Graduate Aptitude Test in Engineering

*A basic introduction about GATE 2018, Question patterns and importance was conducted to the enrolled students on 05/08/2017. And the coaching lasses started from 06/08/2017 onwards.*

## **WELCOME TO OUR NEWLY JOINED FACULTIES.....**



**Ms. Rohini  
Vijayan**  
**B Tech, M Tech**  
**Assistant  
Professor,**  
**Specialization:Thermal Engineering**



**ALEX GEORGE**  
**B Tech, M Tech**  
**Assistant  
Professor**  
**Specialization:Engineering Design**



**ARJUN P**  
**B. Tech, M.Tech**  
**Assistant  
Professor**  
**Specialization:  
Materials Technology**



**Mr. Gokulnath R**  
**B Tech, M Tech**  
**Assistant  
Professor**  
**Specialization:  
Thermal Power  
Engineering**



**Mr. Nikhil Babu**  
**B Tech, M Tech**  
**Assistant  
Professor**  
**Specialization:  
Thermal Power  
Engineering**

## **All the Very Best.....**



*We wish you all the very best dear colleagues Mr. Divesh Kumar, Mr. Dinish Chacko, Ms. Kavitha Nayanar, Mr. Charles Jacob, Ms. Vidya Radhakrishnan and Mr. Sinesh T M for your new Ventures. Your great contributions to Mechanical Engineering Department will be always remembered*

*we stand among the best 3 other teams from India in terms of technical knowledge and in fact we are proud to announce ourselves as the first team from the state of Kerala to take part in an SAE BAJA International which is event the toughest of one SAE competition inst category. The event helped team in learning technical and non- technical in immense detail. We truly got a glimpse of the real corporate world.*



## Forthcoming Events



### VIMAL JYOTHI ENGINEERING COLLEGE

Chemperi, Kannur - 670 632.

#### ENTREPRENEURSHIP AWARENESS CAMP

10<sup>th</sup> – 12<sup>th</sup> August 2017

Sponsored by



National Science & Technology Entrepreneurship  
Development Board (NSTEDB)



Department of Science & Technology, Government of India, New Delhi

Through

Entrepreneurship Development India, Ahmedabad

Under

DST-NIMAT Project 2017 -2018

Organized by

Department of Mechanical Engineering

VIMAL JYOTHI ENGINEERING COLLEGE, CHEMPERI, KANNUR-670632.

## Program Educational Objectives

### (PEO's):

- **PEO1:** Graduates will be able to pursue successful professional career in Mechanical Engineering with sound technical and managerial capabilities.
- **PEO2:** Graduates will have skills and knowledge to formulate, analyze and solve problems in mechanical engineering to meet global challenges.
- **PEO3:** Graduates will be capable of pursuing mechanical engineering profession with good communication skills, leadership qualities, team spirit and professional ethics to meet the needs of the society.
- **PEO4:** Graduates will sustain an appetite for continuous learning by pursue higher education and research in the allied areas of science and technology.

## MAJOR ADVANCEMENT OF 3D PRINTING IN MEDICAL FIELD

3D printing may seem a little unfathomable to some, especially when you apply biomedical engineering to 3D printing. In general, 3D printing involves taking a digital model or blueprint created via software, which is then printed in successive layers of materials like glass, metal, plastic, ceramic and assembled one layer at a time. Many major manufacturers use them to manufacture airplane parts or electrical appliances.

Some of the most incredible uses for 3D printing are developing within the medical field. Some of the following ways this futuristic technology is being developed for medical use might sound like a Michael Crichton novel, but are fast becoming reality.

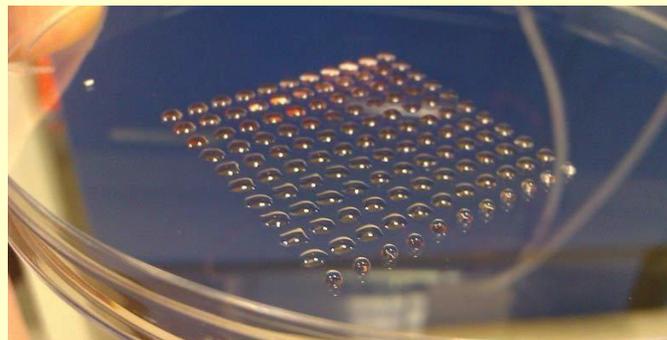
Bio-printing is based on bio-ink, which is made of living cell structures. When a particular digital model is input, specific living tissue is printed and built up layer by cell layer. Bio-printing research is being developed to print different types of tissue, while 3D inkjet printing is being used to develop advanced medical devices and tools.

### ➤ Organs



While an entire organ has yet to be successfully printed for practical surgical use, scientists and researchers have successfully printed kidney cells, sheets of cardiac tissue that beat like a real heart and the foundations of a human liver, among many other organ tissues. While printing out an entire human organ for transplant may still be at least a decade away, medical researchers and scientists are well on their way to making this a reality.

### ➤ Stem cells



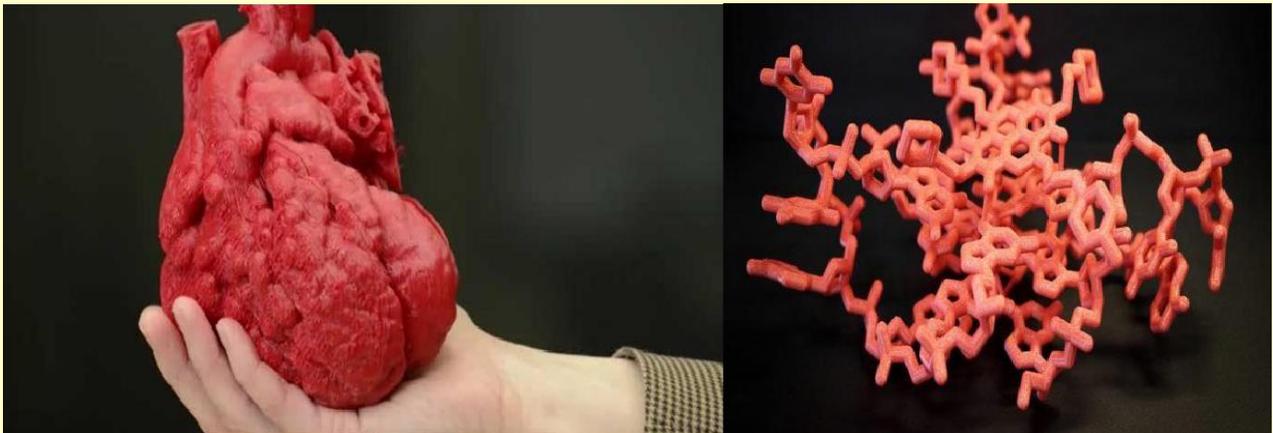
Stem cells have amazing regenerative properties. We can re produce many different kinds of human tissues. Now stem cells are bio printed in several university research labs. Stem cell printing was the precursor to printing other kinds of tissues and could eventually lead to printing cells directly into parts of the body.

➤ **Bone and Cartilages**



Hod Lipson, a Cornell engineer, prototyped tissue bio-printing for cartilage within the past few years. Though Lipson has yet to bio-print a meniscus that can withstand the kind of pressure and pounding that a real one can, he and other engineers are well on their way to understanding how to apply these properties. Additionally, the same group from Germany who bio-printed stem cells is also working toward the same results for bio-printing bone and others parts of the skeletal system.

➤ **Heart, Blood vessels and Cancer research**



The human cell heart patches have gone through successful testing on rats, and have also included development of artificial cardiac tissues that successfully mimic the mechanical and biological properties of a real human heart. There are plenty of other developments being made with 3D and bio printing, but one of the biggest obstacles is finding software that is advanced or sophisticated enough to meet the challenge of creating the blueprint. While creating the blueprint for an ash tray, and subsequently producing it via 3D printing is a fairly simple and quick process, there is no equivalent for creating digital models of a liver or heart at this point.

In the same way that tissue and types of organ cells are being printed and studied, disease cells and cancer cells are also being bioprinted, in order to more effectively and systematically study how tumors grow and develop. Such medical engineering would allow for better drug testing, cancer cell analyzing and therapy development. With developments in 3D and bio printing, it may even be a possibility within our lifetime that a cure for cancer is discovered.

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