



## Faculty of Industrial Sciences & Technology (FIST)

### Chronological record of the establishment of FIST

2001

- The government approved to establish a university at Pahang

2002

- Establishment of University College of Engineering & Technology Malaysia (KUKTEM)

2006

- KUKTEM is known as Universiti Malaysia Pahang (UMP); endorsed by the Cabinet
- Approval of paperwork of establishment of FIST by senate

2007

- Refining paperwork of establishment of FIST and its academic programme

2008

- Approval of paperwork by Ministry of Higher Education Malaysia

**FIST was officially established on 1 May 2008**

## Vision & Mission



### Vision

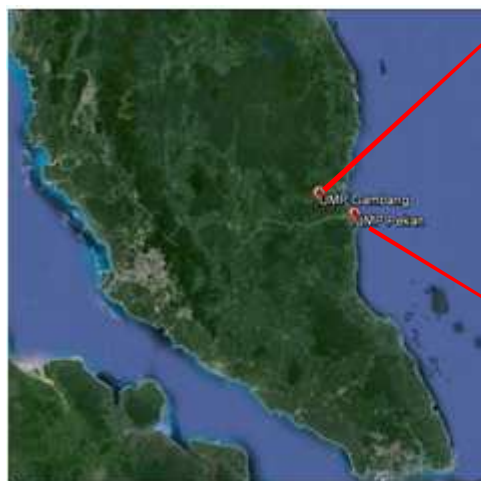
*We offer academic programs and consultancy as well as research in Science and Technology that emphasize industrial elements to produce holistic manpower to meet the stakeholders' need*



### Mission

*To be a Science and Technology based faculty that meets industrial needs and serves as main reference center*

## Campuses



Skills and practical based tertiary education



Specializes in engineering and technology

## Faculties in UMP

Gambang Campus



1. Industrial Sciences & Technology
2. Chemical & Natural Resources Engineering
3. Civil Engineering & Earth Resources
4. Computer Systems & Software Engineering
5. Engineering Technology
6. Industrial Management

Pekan Campus







7. Mechanical Engineering,
8. Manufacturing Engineering
9. Electrical & Electronics Engineering




## Staff of Material Technology Programme



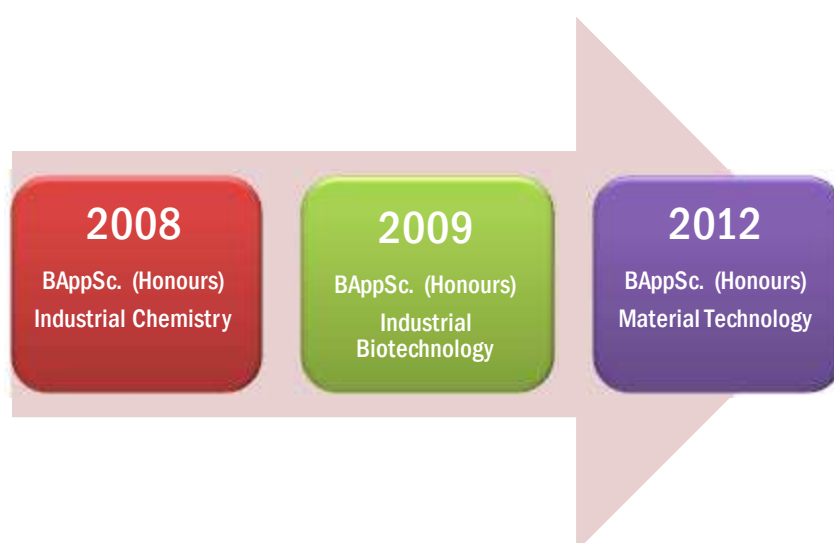
## Staff and Expertise

			
Energy Materials Processing	Nanomaterials (Photovoltaic & Energy Storage)	Catalyst	Microwave materials

		
Photovoltaic & Realistic Modelling	Energy storage	Solid Electrolyte

## Undergraduate Programmes

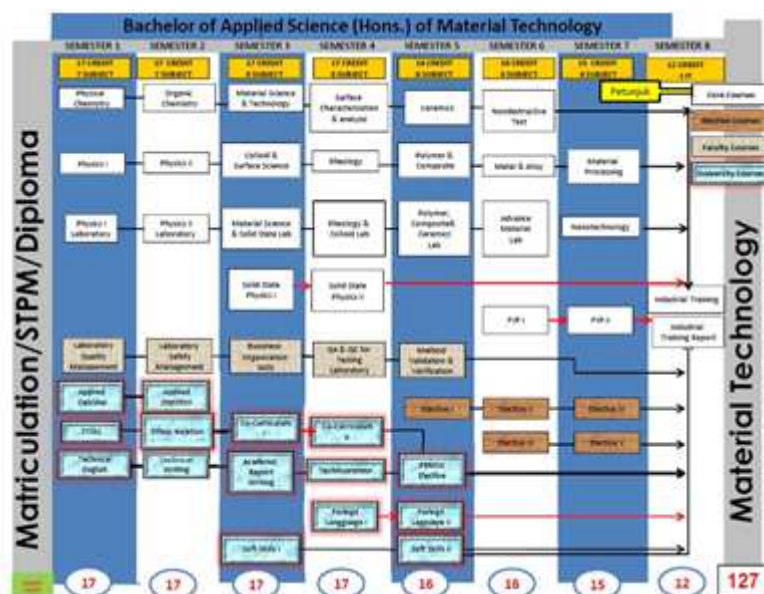


## MATERIAL TECHNOLOGY CURRICULUM

Types of Courses	Credit Hours	Description
Core	(58+ *6 + **12 = 76)	Courses, *FYP, **Industrial Training
Elective	15	
Faculty	16	Applied Calculus, Applied Statistics, LQM, LSM, MVV, QAQCTL, Business Organization
University	20	Soft skills, language, co-curriculum, technical/report writing
<b>Total Credit</b>	<b>127</b>	Graduation Requirement = 127 credit hours

Type of courses	SEMESTER							
	1	2	3	4	5	6	7	8
Core								
Elective								
Faculty								
University								
Final Yr. Project								
Ind. Training								

## Courses Offered by Material Technology



## Elective Courses

- Thin Film Technology
- Supercapacitor Technology
- Solar Cell Technology
- Corrosion
- Liquid Crystals Technology
- Molecular Modelling
- Semiconductor Devices
- Recycle Technology
- Computational Physics

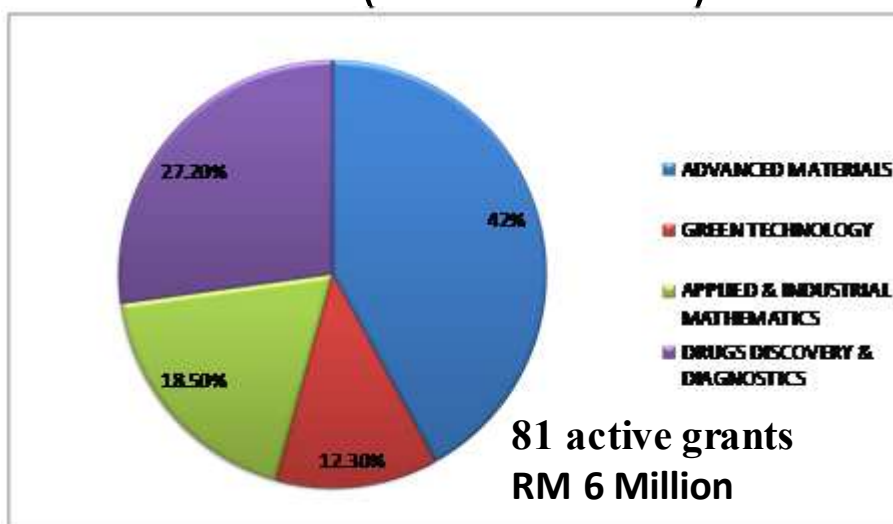
## Postgraduates

Advanced Materials & Physics	Chemistry & Industrial Chemistry	Biotechnology	Mathematics and Statistics
<ul style="list-style-type: none"> <li>• Nanostructured Materials</li> <li>• Renewable Energy Materials and Devices</li> <li>• Supercapacitors</li> <li>• Semiconductor Physics</li> <li>• Optical Physics</li> <li>• Polymer Nanocomposites</li> <li>• Biomaterials</li> <li>• Other Advanced Materials and Physics Related Field</li> </ul>	<ul style="list-style-type: none"> <li>• Natural Products</li> <li>• Fine &amp; Specialty Chemicals</li> <li>• Catalysis</li> <li>• Oleochemical</li> <li>• Petrochemical</li> <li>• Polymer Chemistry</li> <li>• Analytical Chemistry</li> <li>• Environmental Pollution Monitoring</li> <li>• Food Chemistry</li> <li>• Organometallic Chemistry</li> <li>• Other Chemistry Related Field</li> </ul>	<ul style="list-style-type: none"> <li>• Bioprocess and Fermentation</li> <li>• Enzyme/Protein Technology</li> <li>• Industrial Biochemistry</li> <li>• Industrial Microbiology</li> <li>• Bionanotechnology</li> <li>• Biosensor/Diagnostic Kits</li> <li>• Bioremediation</li> <li>• Cell Culture Technology</li> <li>• Food Microbiology</li> <li>• Drug Delivery and Discovery</li> <li>• Omics Technology</li> <li>• Plant Biotechnology</li> <li>• Carbohydrate Technology</li> <li>• Bioinformatics</li> <li>• Molecular Biology</li> <li>• Other Biotechnology Related Field</li> </ul>	<ul style="list-style-type: none"> <li>• Mathematical Modelling/ Fluid Flows/ Heat Mass Transfer</li> <li>• Fluid Dynamic</li> <li>• Solid Mechanics</li> <li>• Numerical Analysis</li> <li>• Mathematical Education</li> <li>• Group Analysis</li> <li>• Bio-mathematics</li> <li>• Computer Aided Geometric Design (CAGD)</li> <li>• Rainfall Modelling</li> <li>• Pattern Recognition</li> <li>• Structural Equation Modelling</li> <li>• Stochastic Modelling</li> <li>• Time Series Analysis</li> <li>• Multivariate Analysis</li> <li>• Operational Research</li> <li>• Interdisciplinary Research</li> <li>• Quality &amp; Productivity</li> <li>• Circular Statistics</li> <li>• Environmental Statistics</li> <li>• Other Mathematical Related Field</li> </ul>

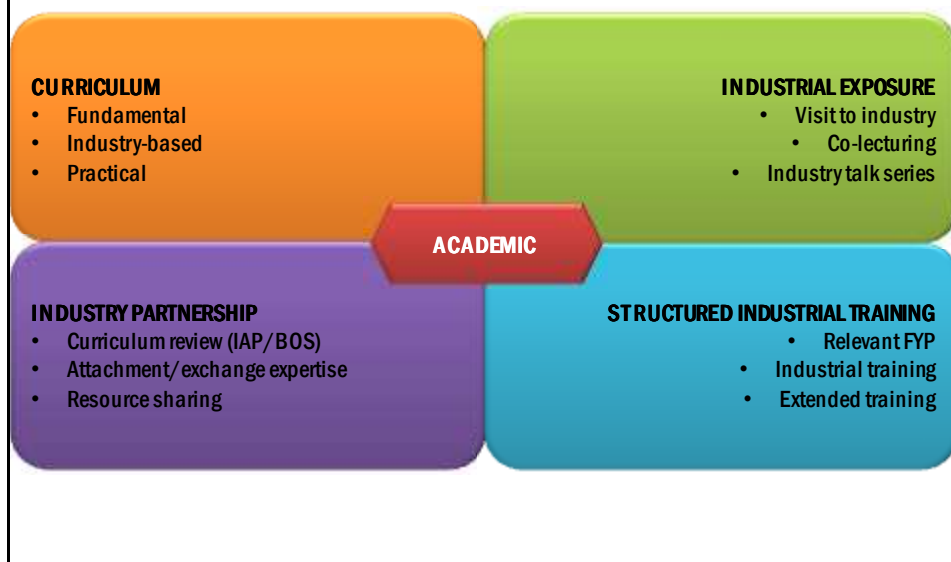
## Research Clusters

DRUG DISCOVERY & DIAGNOSTICS	ADVANCED MATERIALS	GREEN TECHNOLOGY	APPLIED & IND. MATHEMATICS
Dr. Jaya Vejjayan	Prof. Dr. Jose Rajan	Dr. Essam Makky	Dr. Mohd Sham
<ul style="list-style-type: none"> <li>• Omics Technology</li> <li>• Biodiagnostics</li> <li>• Organic Synthesis</li> <li>• Natural Products</li> </ul>	<ul style="list-style-type: none"> <li>• Functional Materials</li> <li>• Photonic Materials</li> <li>• Catalyst</li> </ul>	<ul style="list-style-type: none"> <li>• Biomass Conversion</li> <li>• Bioremediation</li> <li>• Plants, Soils &amp; Microbe</li> <li>• Renewable Energy</li> </ul>	<ul style="list-style-type: none"> <li>• Market &amp; Trends</li> <li>• Dynamical System</li> </ul>

## Grants (cluster-based)

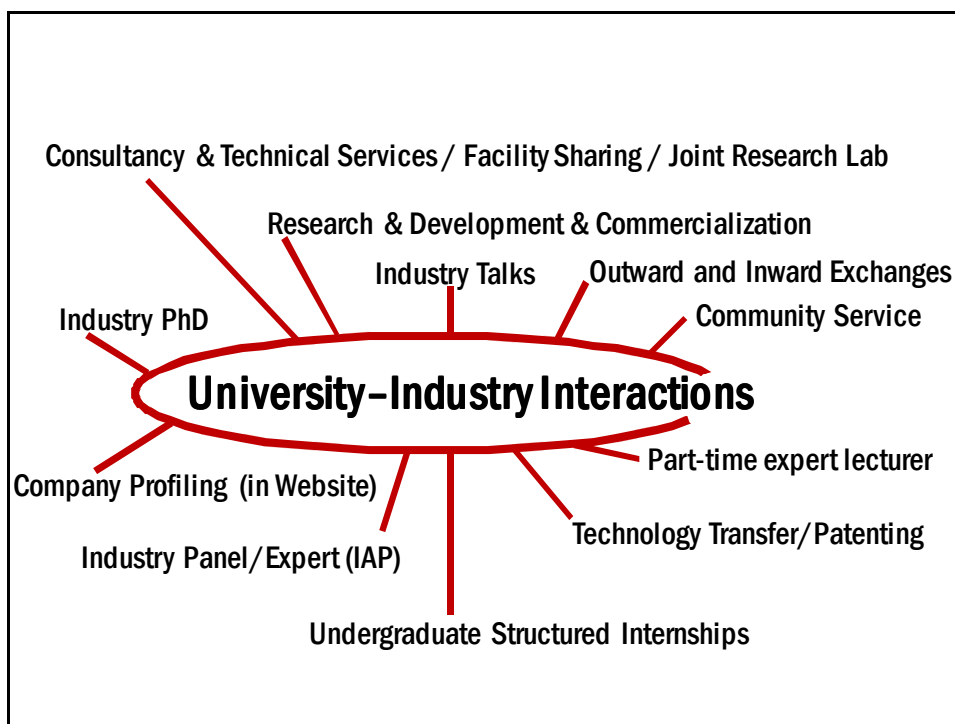


## FIST-INDUSTRY STRATEGIC PARTNERSHIP









**THANK YOU**

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