

Universiti Malaysia Perlis (UniMAP) is Malaysia's 17th public institution of higher learning. It was approved by the Malaysian Cabinet on May 2001. Originally known as Kolej Universiti Kejuruteraan Utara Malaysia (KUKUM), or Northern Malaysia University College of Engineering, it was renamed as Universiti Malaysia Perlis (UniMAP) in 1 st February 2007. The establishment of UniMAP aims to produce highly skilled and competent engineers to meet and support the agenda of National Industrial Plan. The first intake consisted of 116 engineering students who started classes on June 2002. At the beginning, the School of Materials Engineering has offered a Bachelor of Materials Engineering and Metallurgical Engineering program (June 2003). The Polymer Engineering Programme at UniMAP was first offered in 2007/2008 academic session with an enrolment of 34 students and this first cohort of students has graduated in June 2011. The expertise in rubber field were produced once the Polymer Engineering Programme offered in UniMAP.

Mission: *To produce holistic human capital that contributes to the nation's development and industrial competitiveness agenda.*

Vision: *An internationally competitive academic and research institution.*





UNIVERSITI MALAYSIA PERLIS

SUBJECT AREA **ENGINEERING & TECHNOLOGY**

WORLD'S TOP 500
ASIA'S TOP 148



RANKED IN 1 SUBJECT AREA
RANKED IN 2 SUBJECTS
SCORED IN 16 SUBJECTS

SUBJECT **ENGINEERING – MECHANICAL,
AERONAUTICAL & MANUFACTURING**

WORLD'S TOP 300
ASIA'S TOP 98



SUBJECT **ENGINEERING – ELECTRICAL & ELECTRONIC**

WORLD'S TOP 350
ASIA'S TOP 110



SCORED IN 16 SUBJECTS

COMPUTER SCIENCE & INFO SYSTEMS | ENGINEERING – CHEMICAL | ENGINEERING – ELECTRICAL | ENGINEERING – MECHANICAL | AGRICULTURE & FORESTRY | BIOLOGICAL SCIENCES | CHEMISTRY | ENVIRONMENTAL SCIENCES | MATERIALS SCIENCE | MATHEMATICS | PHYSICS & ASTRONOMY | BUSINESS & MANAGEMENT STUDIES | EDUCATION | ECONOMICS & ECONOMETRICS | SOCIAL POLICY & ADMINISTRATION | SPORTS RELATED SUBJECTS |

SOARING UPWARDS
MALAYSIAN HIGHER EDUCATION

ACHIEVEMENTS



State-of-the-art Equipment & Facilities





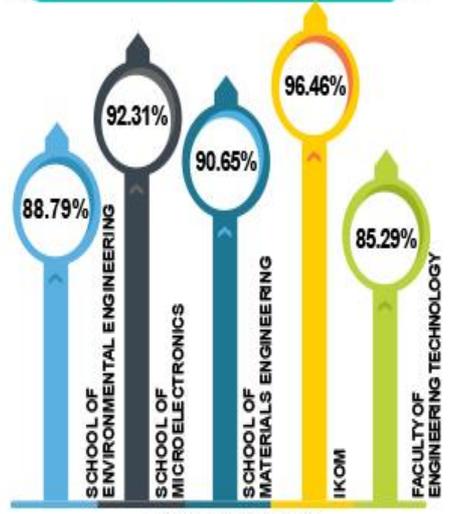
UNIVERSITI MALAYSIA PERLIS ACHIEVEMENTS 2017

INDUSTRIAL REVOLUTION 4.0

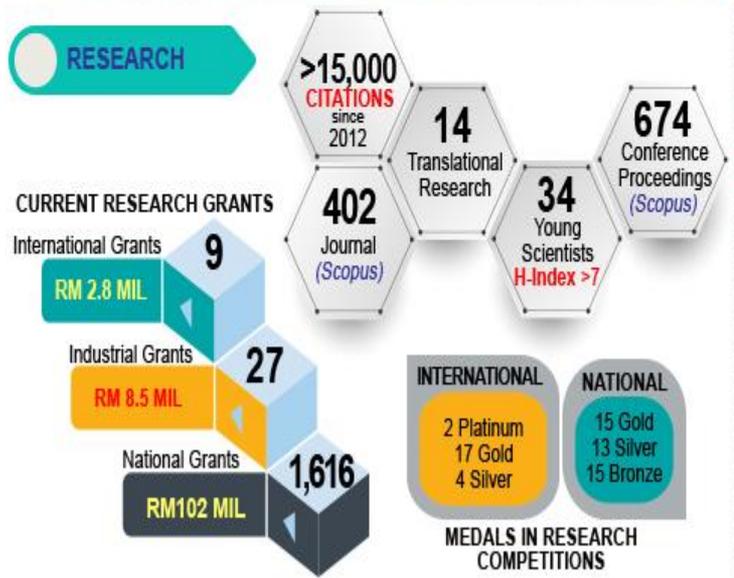
UniMAP FACTS & FIGURES



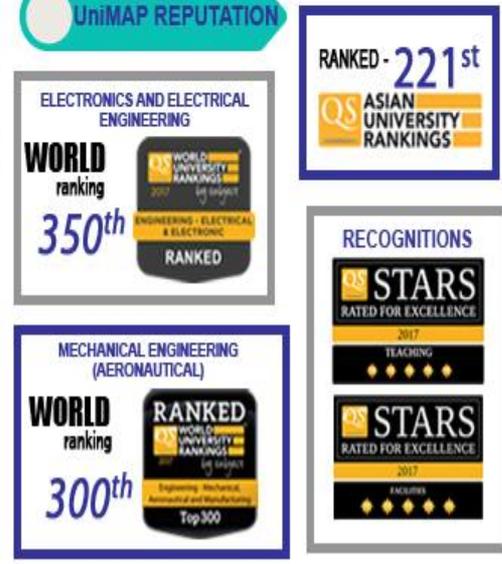
GRADUATES EMPLOYABILITY



RESEARCH



UniMAP REPUTATION



5 Schools with Highest Percentage of Graduates Employability



Graduates Employability Percentage based on Sectors



Awards & Recognition

Loreal Women in Science - Latex from tapioca
ITEX Best of the best – New glove from tapioca
IBM – Antimicrobial coating
ITEX – High toughness macrosphere from recycle tyre
IPITEX (Thailand) – High toughness Rubber macrosphere



Industrial Collaborations

Ansell N.P Sdn Bhd (Melaka)

- 1.Design Online Monitoring Water Quality System Of Leaching Tank In Surgical Glove Production Line
- 2.Characterization of rubber gloves after exposing to different simulated biological fluids

Malaysia Rubber Board

- 1.Epoxidized natural rubber (Ekoprena) with Butadiene Rubber
- 2.Investigation on Thermal-Mechanical Degradation of Silica filled Polypropylene -High Density Polyethylene Composite

ITW Meritex (Impro) Sdn.Bhd

Analyze the defective in Gen 4MM and suggest a solution proposal by using simulation proces

Continental Tyre Sdn Bhd , Mergong, Kedah

High End Industry Graduate Internship Programme (HEIGIP)-every semester break

Top Glove

Research collaboration on product from recycle glove



Scopes of Research

Development of new materials

Latex from tapioca
 Antioxidant from Gambir
 Nano cellulose
 Antimicrobial coating
 Macrosphere from recycle tyre
 Macrosphere from rNBR glove

Testing
 Rubber ageing
 Biodegradation
 Protein allergy

Process

Modification of leaching for curing
 Modification of Dunlop in foam
 Ternary Blend for thread tyre
 Implementation of IOT
 Online monitoring leaching quality tank



**UNIVERSITI
MALAYSIA
PERLIS**

**VISIBILITY AND
FEASIBILITY OF
RUBBER RESEARCH
(UNIMAP)**

Academic Programme



Accredited Programme (10 years)

Bachelor of Engineering (Honours) (Polymer Engineering)
 Master of Science Mixed Mode (Polymer Engineering)

Facilities & Equipment

Two-roll mill, Brabender, Injection Moulding, Twin screw extruder, z-blade internal mixer, Equipment for characterization & dipping, Capillary Rheometer, Rheometer, Viscometer, Brookfield Viscometer, FESEM, FTIR, DSC, TGA
 Compression Moulding, Instron



Skills. Knowledge. Experiences. Researchers



Assoc. Prof. Dr. Hakimah Osman
 15 years
 Gloves, Tyre, Foam, Composites, Latex Formulation & Processing, IOT
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Assoc Prof Dr. Teh Pei Leng
 10 years
 Rubber toughening electronic material, Rubber wearable material
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Dr. Nor Azura Abdul Rahim
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 Rubber toughening Rubber foam
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Mr Ismail Ibrahim
 7 Years
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Dr. Du Ngoc Uy Lan
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Dr. Zunaída Zakaria
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 Polymeric Foam, Latex, recycle tyre, rNBR Glove
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Dr. Mohamad Syahmie Mohamad Rasidi
 3 Years
 Biodegradable Polymer, Biocomposites, Natural fibers
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PROJECTS

Top Glove

Research collaboration on product from recycle glove

Malaysia Rubber Board

Establishment of Eoprena/NR/SBR and Ekoprena/NR/BR triblends

Continental Tyre Sdn Bhd , Mergong, Kedah

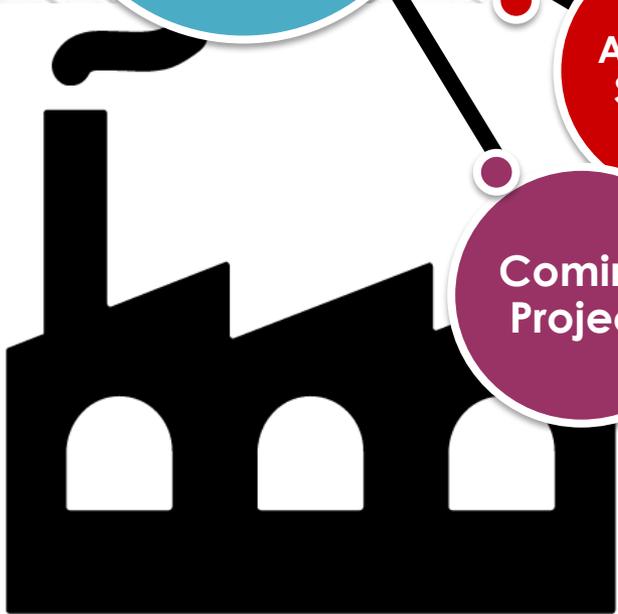
High End Industry Graduate Internship Programme (HEIGIP)-every semester break. Rubber compounding and testing

Ansell N.P Sdn Bhd

- 1.Design Online Monitoring Water Quality System Of Leaching Tank In Surgical Glove Production Line
- 2.Characterization of rubber gloves after exposing to different simulated biological fluids

Coming Project

- 1.Latex properties improvement-Yield improvement (eliminate blister)- Bard Sdn Bhd
- 2.Alternate material for Wingstay-L for latex compounding. Bard Sdn Bhd
3. Production of Green Silica from Rice Husk and its Utilization in Rubber Product. Dibuk Sdn Bhd
4. Antimicrobial, Latex Extrusion, IOT





**RESEARCH &
DEVELOPMENT
(R&D)
CAPABILITIES**

**Attachment
@
Mobility**



**Materials
Testing &
Characterization**



**Consultation
&
Assessment**



**Expertise &
Industrial Experience**





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Thank You

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