

IT NUMBER		MODULE	SCOPE	EXAMINATION
PL: 181401	Commercial and Packaging Printing	6	8	PL: KL, 120 Min.
181401a	Lithographic Printing	2	3	
181401b	Flexographic Printing	2	3	
181401c	Gravure Printing	2	2	

LEARNING OUTCOME

- Ability to demonstrate an understanding of theoretical knowledge in packaging printing;
- Ability to demonstrate written and oral communication skills in communicating printing-related topics;
- Ability to demonstrate an understanding of the analytical methods required to interpret and analyse results;
- Ability to draw conclusions, supported by data;
- Ability to apply knowledge of printing and engineering to solve problems related to printing and packaging;
- Ability to collaborate effectively on multidisciplinary teams;
- Broad education necessary to understand the impact of engineering and scientific solutions in a global, economic, environmental, and societal context.

LEARNING OUTCOME (practical sessions)

- Students will demonstrate proficiency in the acquisition of data using a variety of laboratory instruments and in the analysis and interpretation of such data, using statistical, computational, or mathematical methods;
- Students will demonstrate an understanding of the analytical methods required to interpret and analyze results and draw conclusions as supported by their data;
- Students will gain the ability to employ a wide range of printed and electronic resources and information technologies to support their research on physical systems and present those results in the context of the current understanding of physical phenomena.

LITHOGRAPHIC PRINTING

In indirect, or offset printing, the image is first transferred from the image carrier to the blanket cylinder and then to the substrate. Lithography, currently the dominant printing technology, is an indirect (offset) process.

CONTENT

- Categorizing
- Lithographic Applications
- Lithographic Printing Presses
- Principles of Lithography
- The Image Carrier (plates and imaging)
- CTP
- Plate Technologies
- Halftone technologies
- Inks
- Press Technologies
- Manufacturing principles
- Proofing and Colour Management
- The Pressroom
- Substrates and Chemicals

FLEXOGRAPHIC PRINTING

Flexographic printing or flexography (often abbreviated to flexo) is a form of printing process which utilises a flexible relief plate, a photopolymer printing plate. It is essentially a modern version of letterpress which is largely employed for printing all types of substrate, including plastic, metallic films, cellophane, and paper. It is widely used for printing on the non-porous substrates required for various types of food packaging (it is also well suited for printing large areas of solid colour). The course deals with various pre-press processes, manufacture of photopolymer plates, flexographic printing and finishing.

Content

- Categorising
- Flexographic Applications
- Flexographic Printing Presses
- Principles of Flexography
- The Image Carrier (types and systems)
- Plate Chemistry
- Plate Processing (technologies)
- Halftone technologies
- Inks
- Printing Plates & Press
- Manufacturing principles
- Proofing and Plate Making
- Mounting
- The Pressroom
- Substrates and Adhesives

GRAVURE PRINTING

Gravure printing – also known as rotogravure printing – is primarily a long-run, high-speed, high-quality printing method. Like engraving, gravure is a form of intaglio printing that produces fine, detailed images.

Gravure printing predominates in the high-volume printing of décor printing. Although less common, it also works for printing magazines, greeting cards, and high-volume advertising pieces.

Content

- Categorizing
- Rotogravure Applications
- Gravure Presses
- Principles of Gravure Printing
- The Cylinder
- Imaging Technologies
- Cylinder Processing
- Halftone technologies
- Inks
- Press Technologies
- Manufacturing principles
- Proofing and Colour Management
- The Pressroom
- Substrates