

# Printing (PRN)

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**PRN 131. Flexography I. 4.0 Credits.** Class-2.0. Clinical-0.0. Lab-4.0. Work-0.0

This course provides basic hands-on instruction in flexographic image preparation, platemaking, mounting, and printing. Emphasis is placed on taking press measurements, making and mounting plates, and obtaining quality in press operation on a narrow-web press. Upon completion, students should be able to describe and perform flexographic production procedures in pre-press, press setup, press operation, and die-cutting.

**PRN 132. Flexography II. 4.0 Credits.** Class-2.0. Clinical-0.0. Lab-4.0. Work-0.0

This course is a continuation of PRN 131 and introduces wide-web presses. Emphasis is placed on troubleshooting press problems, color matching, parts identification, make-ready, and setup of narrow-web, wide-web, or corrugated presses. Upon completion, students should be able to produce advanced projects involving all flexographic production phases. This course is a unique concentration requirement in the Flexography concentration in the Graphic Arts and Imaging Technology program. Prerequisites: Take PRN 131

**PRN 155. Screen Printing I. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0

This course covers screen printing techniques and materials. Topics include methods, materials, design, and image and stencil preparation techniques. Upon completion, students should be able to produce single- or multi-color projects.

**PRN 156. Screen Printing II. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0

This course is a continuation of PRN 155. Emphasis is placed on advanced techniques and current industry practices. Upon completion, students should be able to produce multi-color projects utilizing various photographic stencil methods and substrates. Prerequisites: Take PRN 155

**PRN 171. Introduction to Brand Protection and Anti-Counterfeiting Technology. 2.0 Credits.** Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to address the fundamental aspects of the problem of counterfeiting in the modern printing and packaging industry. Topics include current levels of security, global impact of counterfeiting, identification of counterfeit materials, how products are attacked, technology solutions available for infringement reduction, introducing brand protection to clients, and industry standards related to security printing. Upon completion, students should be able to: identify areas of security risk related to a brand, be able to develop a plan to help protect a brand from infringement, describe available technologies to combat infringement, and reference the standards related to security printing.

**PRN 221. Offset Press Operations. 3.0 Credits.** Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0

This course covers advanced lithographic theory and provides extensive hands-on operating experience. Emphasis is placed on make-ready, press operation, maintenance, and troubleshooting of multi-color jobs on sheet-fed offset presses and duplicators. Upon completion, students should be able to set up, run, maintain, and produce commercial-quality multi-color work.

**PRN 231. Flexography III. 4.0 Credits.** Class-2.0. Clinical-0.0. Lab-4.0. Work-0.0

This course is a continuation of PRN 132. Emphasis is placed on the products made and processes used in the industry. Upon completion, students should be able to demonstrate an understanding of advanced production techniques of flexographic products. This course is a unique concentration requirement in the Flexography concentration in the Graphic Arts and Imaging Technology program.

Prerequisites: Take PRN 132

**PRN 232. Flexography IV. 4.0 Credits.** Class-2.0. Clinical-0.0. Lab-4.0. Work-0.0

This course provides opportunities for advanced and specialized study in flexography. Emphasis is placed on specialized product design and production. Upon completion, students should be able to demonstrate an understanding of the comprehensive scope of the flexographic industry, products, and processes. This course is a unique concentration requirement in the Flexography concentration in the Graphic Arts and Imaging Technology program.

Prerequisites: Take PRN 231

**PRN 240. Print Estimating/Planning. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers printing economics, development of cost centers, job flow throughout departments, and material and labor costs. Topics include budgeted, hourly, cost-rate derivation; production standards and data; and analysis of other estimating procedures including computer-assisted estimating. Upon completion, students should be able to demonstrate an understanding of economic factors of the printing industry and determine all production costs of printed jobs. This course is a unique concentration requirement in the Flexography concentration in the Graphic Arts and Imaging Technology program.

Prerequisites: Take GRA 121

**PRN 241. Flexo Applications I. 4.0 Credits.** Class-2.0. Clinical-0.0. Lab-4.0. Work-0.0

This course provides an opportunity to specialize in certain applications in flexographic printing. Emphasis is placed on understanding color and production concerns in order to produce products. Upon completion, students should be able to troubleshoot color problems during printing and relate them to the production procedures. This course is a unique concentration requirement in the Flexography concentration in the Graphic Arts and Imaging Technology program.

Prerequisites: Take All: GRA 152 and PRN 131

**PRN 242. Flexo Applications II. 4.0 Credits.** Class-2.0. Clinical-0.0. Lab-4.0. Work-0.0

This course provides an opportunity to produce comprehensive projects, including color work on special substrates using specialty inks. Emphasis is placed on compensation for press limitations to produce high-quality color products. Upon completion, students should be able to produce color images on a variety of substrates and troubleshoot and solve production problems. This course is a unique concentration requirement in the Flexography concentration in the Graphic Arts and Imaging Technology program.

Prerequisites: Take All: PRN 241, GRA 153, and GRA 255

**PRN 271. Graphic Imaging for Brand Protection and Anti-Counterfeiting Technology. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

This course is designed to address the utilization of specialized software to develop secure packaging and documents that are used in the protection of trademarks and branding. Topics include the utilization of software to develop secure elements to be incorporated in packaging and documentations, development of a plan utilizing overt and covert security elements to prevent duplication, and creation of layouts for various packaging and documentation related to the security printing industry. Upon completion, students should be able to use software to develop secure elements to be utilized in packaging and documentation, create a strategy for a brand that is designed to prevent counterfeiting, create and design various packaging and documentation in relationship to the security printing industry and reference the industry standards as they pertain to pre-press for security printing.

Prerequisites: Take All: GRA 121, PRN 131 and PRN 171

**PRN 272. Brand Protection and Anti-Counterfeiting Technology Implementation. 3.0 Credits.** Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0

This course is designed to provide students with the knowledge needed to work within a secure facility and produce products that have built in security technology designed to prevent brand infringement. Topics include the handling, transporting, storing, and tracking secure materials, testing print device's limitations to accurately produce secure products, operating a printing device to produce products with security technology built into the product, and understanding the culture of security printing. Upon completion, students should be able to demonstrate appropriate demeanor for a secure facility, track and maintain all secure print materials, operate multiple printing devices to the quality standards of the secure print industry, and be able to produce printed products with security technology built into the product.

Prerequisites: Take All: GRA 121, PRN 131, and PRN 171