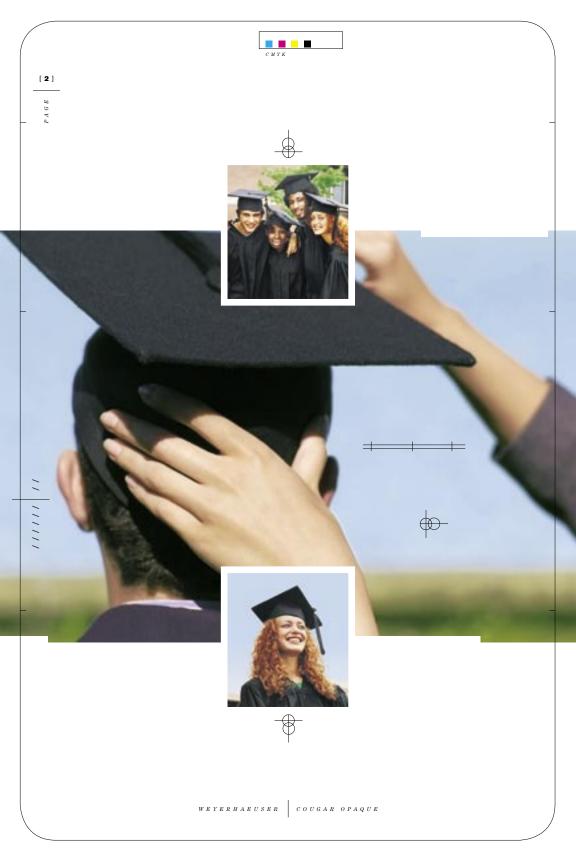




BOOK THREE: AN OVERVIEW { Congratulations!

You've become well versed in printing on uncoated paper. Many of you have even completed a number of press checks. So you're probably thinking you've got one foot out the door. But the pursuit of knowledge is neverending, and looking beyond the fundamentals can enhance your work and your career. With that in mind, the upper level courses at Paper University explore advanced techniques on uncoated paper — including new ways to reproduce photography, independent study on alternative inks, a discussion on color application, and topics such as finishing and bindery. So as you prepare to apply your newly acquired knowledge, think of these as ways to pad your résumé.



PAGE



GRADUATING TO ADVANCED PRINTING

MAXIMIZING YOUR PROJECT'S POTENTIAL { Up to now,

we've studied how designers and printers can achieve bold, highly tactile effects on uncoated paper by manipulating variables to compensate for uncoated paper's inherent traits. In this book, you'll discover that there are even more options when it comes to working with uncoated. The first section focuses on effects that can be applied while your project is still on press. We'll define duotones, tritones, and quadtones to push the envelope on tonal range. You'll learn how to weigh the factors in specifying metallic inks on uncoated paper to add depth and dimension. We'll look at alternative inks specifically suited for uncoated, along with other methods of controlling dot gain. This section also includes tips for using touchplates and replacement color to enhance photography. The final chapters take the uncoated sheet into new dimensions both on- and off-line — where techniques such as die cutting, foil stamping, and embossing are used to bring new levels of texture to finished projects. This section ends with a look at bindery processes that go beyond the expected even when you're on a student's budget.

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B O O E C H A P T E R)

SPOT ON: DUOTONES AND CURVES

at a printed black-and-white image. If you notice a broad tonal range, intense shadows, defined midtones, or even a hint of color, it's not simply black ink on white paper. Duotones are made by printing the same half-tone image twice — using two different spot colors on two separate plates. By manipulating the curves for each color (see Book One, Chapter 3), you can achieve unlimited effects:

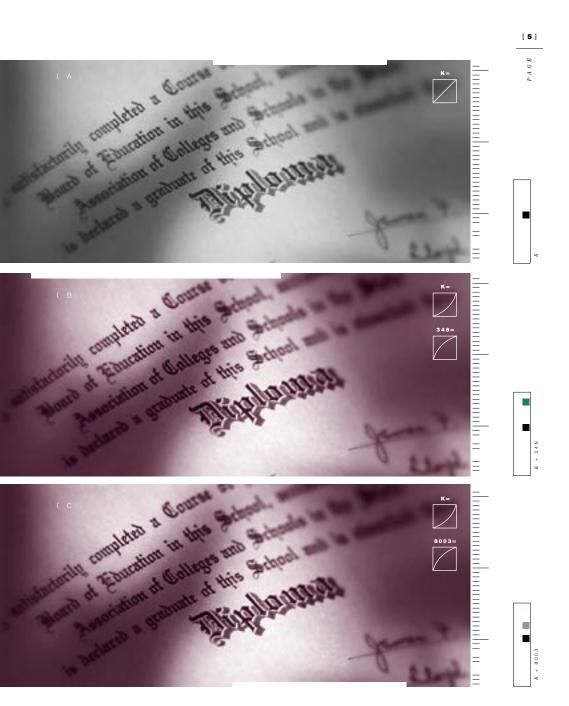
(A . TRADITIONAL BLACK-AND-WHITE PHOTOS { adjusted for uncoated. Here, the curves that affect contrast and tonal range have been left unchanged.

(B.BLACK + PMS SPOT GREEN { adjusted for uncoated. In this example, midtone detail was reduced in the black halftone. Conversely, the curve for the green plate was adjusted to add ink in the midtones, while leaving shadows and highlights unchanged. As a result, green becomes the dominant midtone color in the final image.

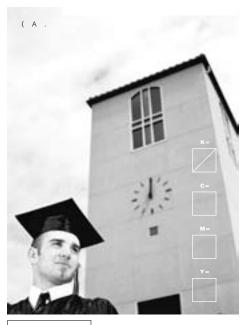
ed. Even using the same curves as those in Example B, the effect is noticeably different. Metallic ink gives the image extra warmth and depth. But since the silver reads more as a "gray" or midtone, the image appears more like a natural halftone.

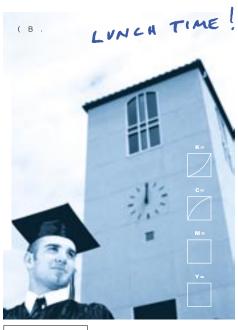
WHLH W/ 300TT

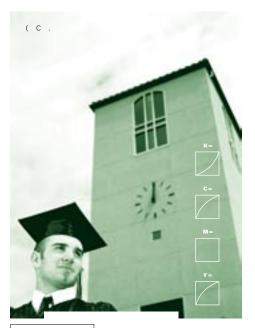
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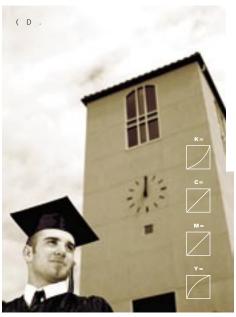


TRY DUOTONES ON PAPER ASSIGNMENT









EXTRA CREDIT: CMYK DUOTONES, TRITONES, AND QUADTONES

the most impressive black-and-white photos on uncoated paper are actually printed using the 4-color (CMYK) process outlined in Book Two. By using the black plate plus one, two, or three of the other process colors, you can not only achieve duotone or other color effects, but also enhance the overall depth and tonal range of an image simply meant to read as black and white. In the examples below, each image was first adjusted for uncoated paper.

- (A. TRADITIONAL BLACK-AND-WHITE PHOTO { Curves have been left unchanged.
- (B. $DUOTONE\ USING\ BLACK(K)\ AND\ CYAN(C)$ { The curve for cyan has been adjusted to fill in the midtones.
- (c. TRITONE USING BLACK(K), CYAN(C), AND YELLOW(Y) {

 Because the midtones in the black have been adjusted down, cyan and yellow have filled in giving the midtones a green cast.
- Magenta and cyan are printed as straight halftones.

 Black has been adjusted to give depth to shadows, while the yellow curve has been modified to help define midtones.





METALLICS + COUGAR OPAQUE = A WINNING TEAM

RAISING THE [METALLIC] BAR { If you find yourself on a team with a printer who has a few extra "wells" (capacity for additional inks) on his press, consider going the extra mile and adding metallic ink to your game plan. They perform like spot colors, but they contain actual metallic particles that really shine — so you can give your final project a competitive edge. There are a number of ways to bring metallics into play:

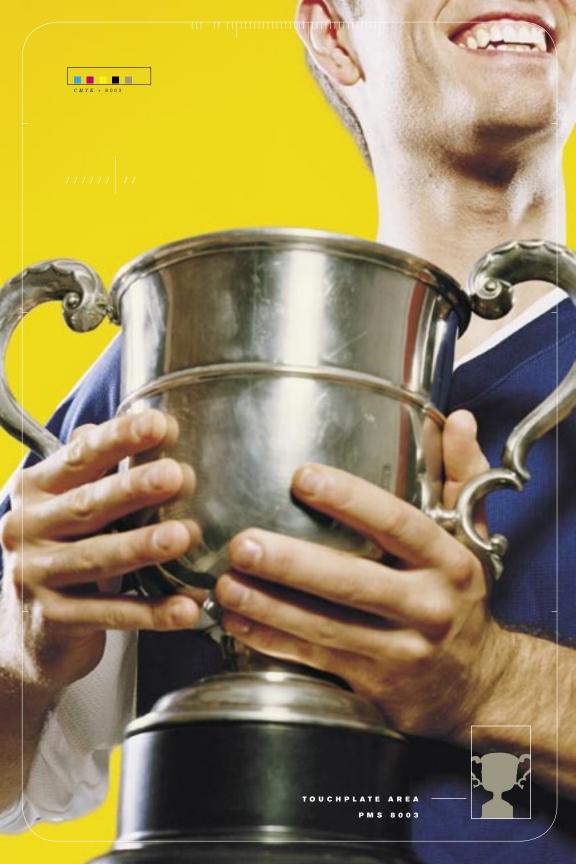
ENHANCING PHOTOGRAPHY { The contrast between uncoated paper and metallic ink is truly inspiring, so use metallics to warm up a duotone — or to make metal objects appear amazingly lifelike.

SPOTCOLOR { Metallic inks perform great on their own, so as halftones or solids they'll stand out every time.

TRICK PLAYS { Later in this book, we'll discuss embossing and foil stamping. If you want a look that's similar to foil without the additional cost, try a metallic with a registered emboss.

11 111111

WEYERHAEUSER COUGAR OPAQUE







14K Gold
[PURE BRILLIANCE:]

K + 876

Stainless Steel
[STRONG & SHINY :]

METALLICS ON UNCOATED { To make your piece truly memorable, only metallics will do. They have a style that's unique — and uniquely their own. Whether it's a classic understatement or a bold declaration, it's a look that can enter the room even before you do. And regardless of the setting, it's always appropriate. Of course, there are a few guidelines to follow to make sure you get the most from your metallics.

MATERIALS AND TECHNIQUES (To sharpen up an uncoated surface using metallic inks, choose a well-formed paper with good ink holdout. That way, you can maximize the shine and minimize dryback. Thanks to its exceptional surface formation, Cougar® Opaque is a bright choice. You'll want to allow for drying time, and you may also find that it's necessary to protect the ink's reflective qualities. If you do decide to upgrade your piece with a varnish, choose a matte or dull finish.

111111

[LOOKS SO REAL!:]

K + 8641

PAPER

ORDER RING!

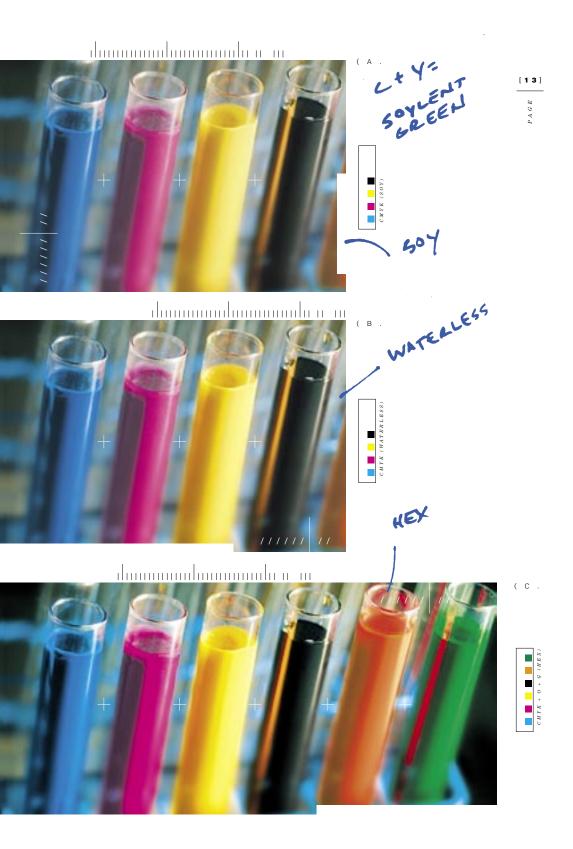


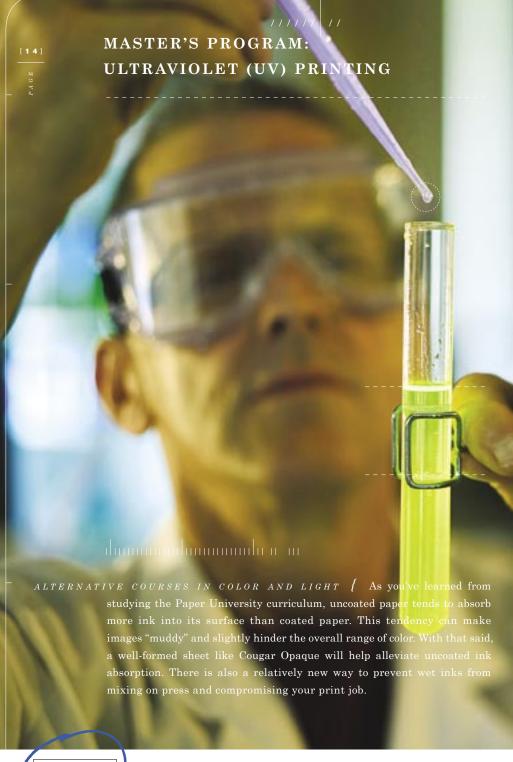
ELECTIVE STUDY: NON-TRADITIONAL PRINTING

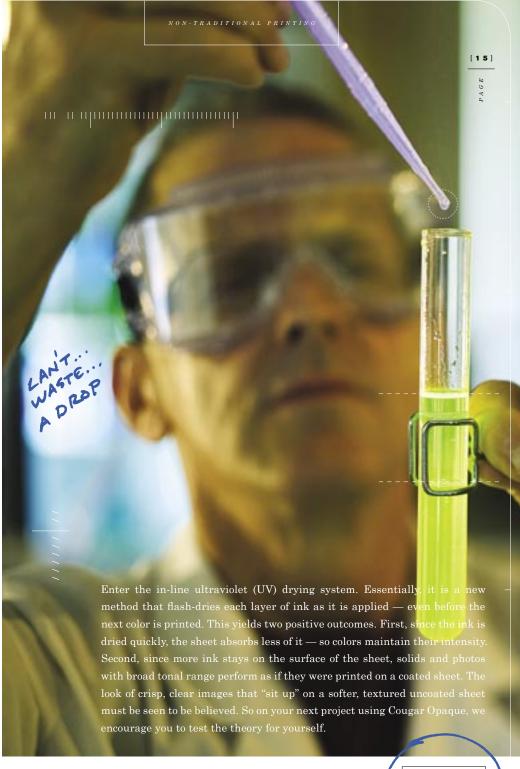
APPLYING INK THEORY TO UNCOATED PAPER { Not only have printing and paper technologies improved greatly in the relatively short history of the craft, but ink itself has also undergone a number of changes — some of which are of particular interest to the student of uncoated paper. Advantages of using the following alternative inks include increased color range, better ink density, less dot gain — and even environmental benefits.

- (A. SOY Soy or vegetable inks go back to the Gutenberg days, but have also increased in popularity lately due to their environmental friendliness. These inks are less "tacky," or more "wet," so while they work well for solids, you should watch for dot gain in photography.
- (B. WATERLESS { Holdout is sometimes an issue on uncoated paper, so waterless printing offers a refreshing alternative. First, since the process uses no water (hence the name), papers like Cougar Opaque will absorb only about half of the ink—so what sits up on the sheet is full of rich color and detail.
- (c . HEXACHROME ® { To achieve cleaner, brighter images and a broader color range than 4-color process printing, consider Hexachrome. It's simply CMYK, plus two additional colors (orange + green), which brings the total to six.

WEYERHAEUSER COUGAR OPAQUE







MA O

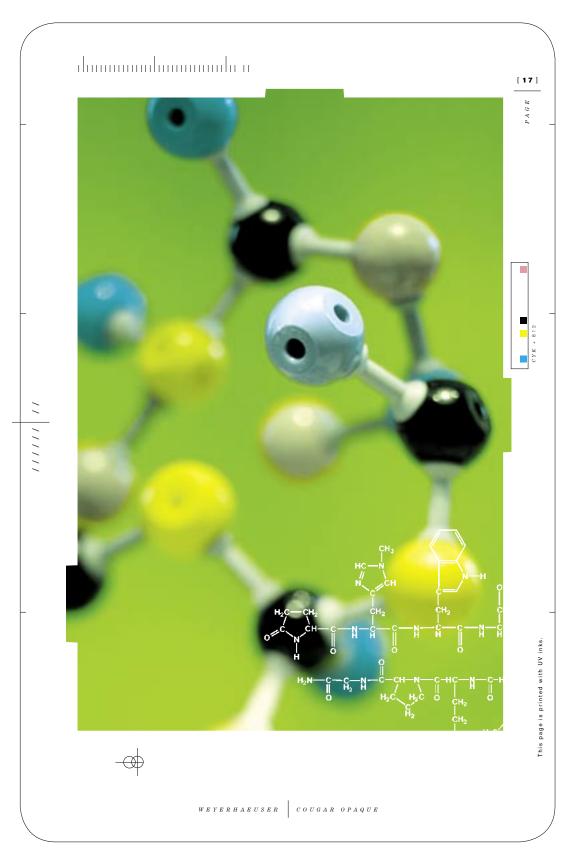
MANY STUDENTS WILL EXPERIMENT WITH COLOR IN COLLEGE

And mastering the art of color replacement can be a fulfilling practice. The concept: simply substitute one of the traditional process colors with a PMS spot color, a fluorescent ink, or even a metallic. You can use replacement color to emphasize a particular hue within an image, add depth overall, or create effects that are as vivid as your imagination.

TOUCHPLATES { Sometimes images on uncoated can benefit from a "touch" of color to give them a boost — and to help bring out detail that might not be achieved in a single pass of ink. In these cases, a separate plate is added to the press with dot information selectively placed for maximum "punch." Examples include overprinting metallics on images of jewelry, or using PMS colors to enhance a process image that features large areas of solid color

WEYERHAEUSER

COUGAR OPAQUE



FLUORESCENTS MAKE COLOR MORE APPETIZING



WHERE TO GET THE BEST FOOD AT PAPER UNIVERSITY {

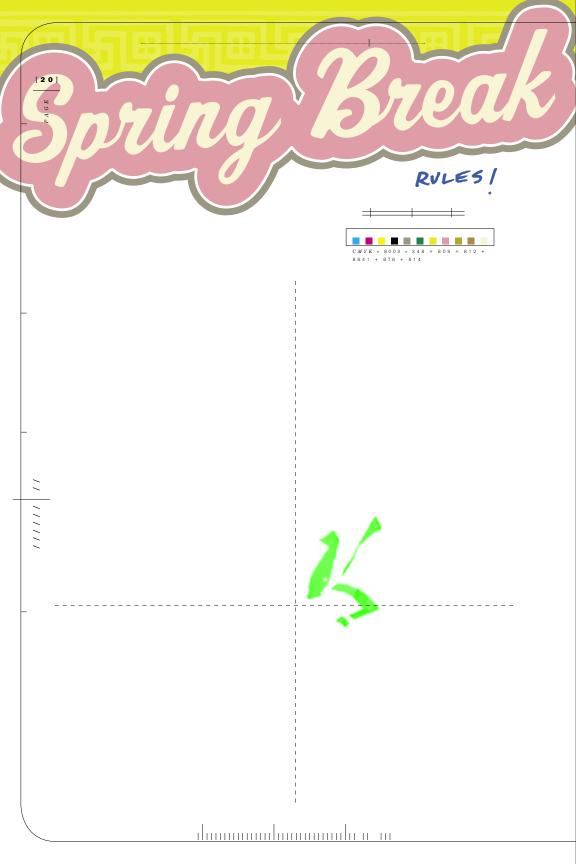
Fluorescent inks reflect two to three times more light than conventional printing inks—and produce cleaner, more vibrant color. You can add a touch of fluorescent ink as a separate plate to enhance a particular color on press—or mix fluorescent inks right in with traditional inks (up to about a 50/50 ratio) to help give the whole job a little kick.

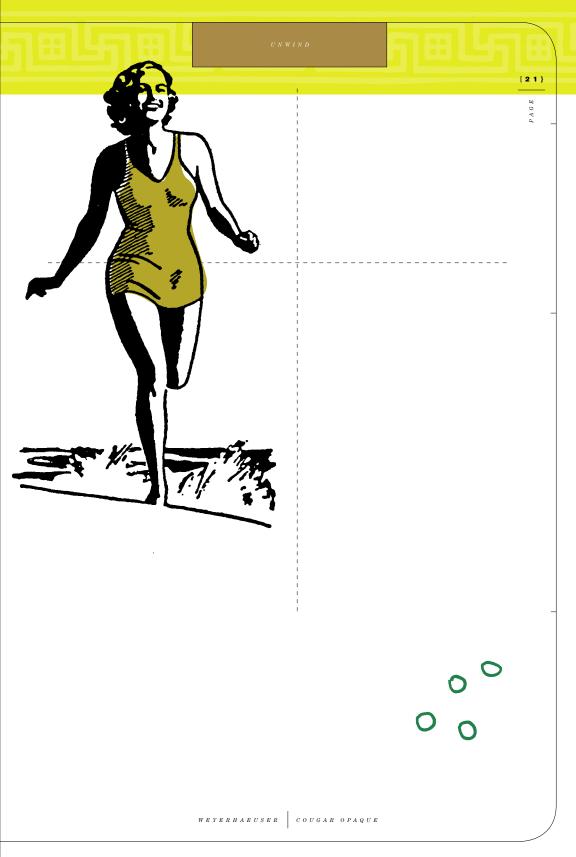
A tasteful way to use fluorescents is in food photography, where fresh, true color is critical. Not only do they brighten up the image overall, but they can also help to increase ink opacity — so colors on uncoated become even richer

WEYERHAEUSER

COUGAR OPAQUE







U CHAPTER)

POST-GRADUATE STUDIES: OFF-LINE SPECIAL TECHNIQUES

 $\textit{EXTRA} \quad \textit{TOUCHES} \quad \textit{COMMAND} \quad \textit{ATTENTION}$

FROM EMPLOYERS { To get the boss's stamp of approval, you have to go above and beyond. That's why Cougar Opaque lets you really push the envelope — or the letterhead, for that matter. Here are some good ways to make your mark:

A . EMBOSS/DEBOSS { A die is made which stamps the sheet from behind, creating an embossed — or raised — image. To achieve a debossed effect, the die is struck on the front of the sheet, leaving an indentation of the desired image. A blind emboss or deboss is one that has no color or other treatment applied. To color or varnish an embossed or debossed image, specify a registered emboss or deboss.

NOT JUST LES!

thin layers of metallic foil, translucent film or even opaque film are applied to the sheet using a stamping die. If a foil stamp touches nearby ink on the page or is raised by embossing, it is known as a registered stamp.

(c . ENGRAVING { Simply a different process for applying ink to paper, engraving is achieved by etching an image in relief onto a flat metal plate. The plate itself is inked, then the paper is rolled over the plate on a cylinder to make the impression.

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[23}

(A . A









PAPER LA PER LA PERPER LA PERPER LA PER LA PERPER LA PERPE



(B .





8003 + 348

(C .

DIE CUTTING: ADDING BY SUBTRACTION

MAKING AN IMPRESSION WITHOUT INK { Die cutting is a process by which paper is cut and punched in special shapes and patterns by custom blades, or dies. Common applications include rounded corners, windows in brochure covers, and slits for business cards. Modern technology allows for a virtually unlimited variety of shapes that yield engaging effects.

(A . TRADITIONAL DIE CUTTING { Artwork is sent to an engraver, who shapes thin metal blades that correspond with the desired pattern to be cut. Each printed sheet of paper is run through a press, where it is "struck" with the die to make the finished cut.

(B. LASER DIE CUTTING $\{$ Steered by a computer, a fine laser beam cuts through hundreds of sheets with perfect precision — achieving intricate shapes that were once unattainable. The engraver must use caution to avoid burning the paper.

> The most important consideration when utilizing die cutting is the integrity of the paper. And at Paper University, integrity is our cornerstone. So we've engineered Cougar Opaque with a solid foundation that performs well as both a text and a cover.

LAN BURN PAPER



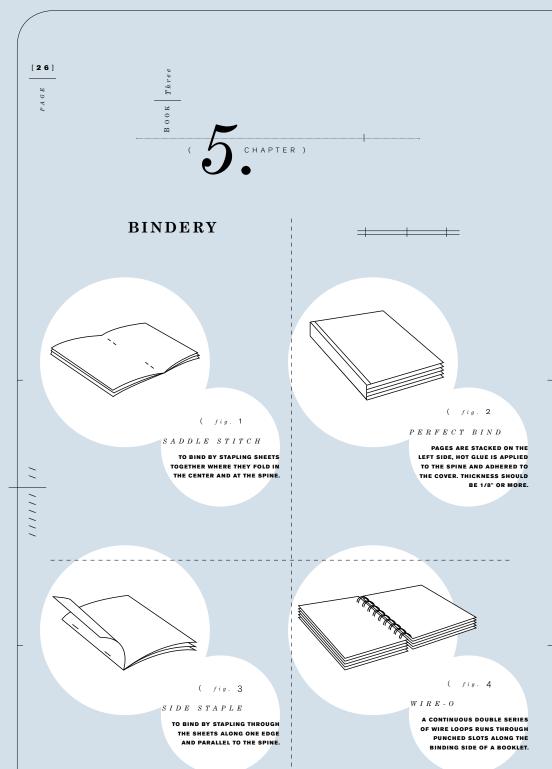


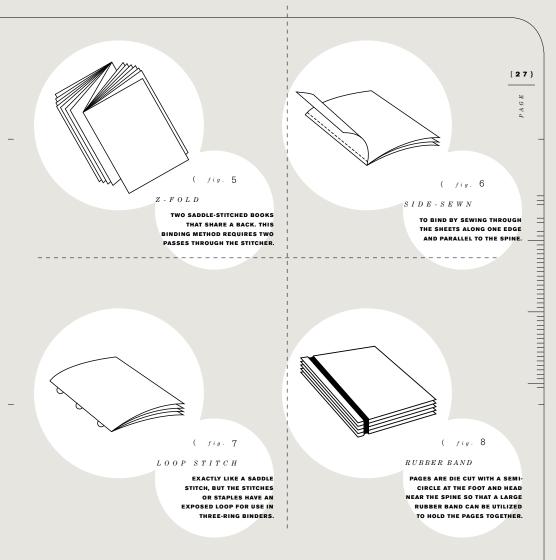


B O O K 1

WEYERHAEUSER COUGAR OPAQUE

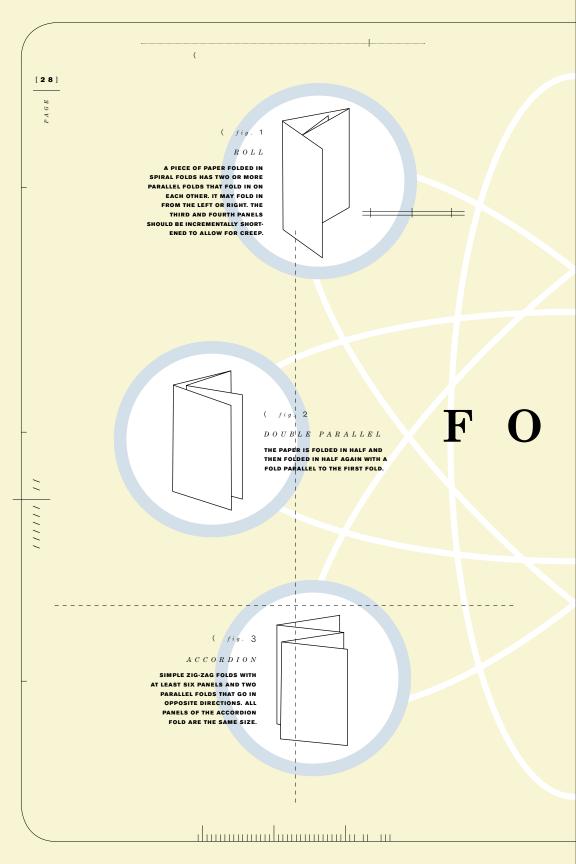






WHERE IT ALL COMES TOGETHER \ Uncoated paper is about tactile response.

So once you've printed your final project on Cougar Opaque, package your work in a way that's pleasing to hold — and compelling enough to pick up in the first place. There are countless binding and folding methods that meet practical and aesthetic needs. First, consider page count. Different options apply to larger books than to smaller books. Also, factor in the steps in the process. Interesting effects can be achieved with even the most affordable of bindings. When it comes to matters of creativity, choose a binding that supports your message. Perfect binding, for example, offers timeless professionalism, while side-sewn books can be less formal. Of course, binding is also a function of a paper's properties. So Cougar Opaque is made to withstand all kinds of folding and bindery techniques. In any case, it is imperative that you obtain a paper dummy to simulate the finished binding before choosing the best option for your assignment.





DOUBLE GATE

THREE PARALLEL FOLDS. THE LEFT AND RIGHT EDGES OF THE PAPER FOLD AND MEET IN THE MIDDLE, WITHOUT OVERLAPPING, ALONG A CENTER FOLD. THE OUTSIDE PANELS SHOULD BE SHORTENED TO ALLOW FOR CREEP.

L D

(fig. 5

MAP

FIRST, FOLD THE SHEET OF PAPER IN HALF, THEN APPLY A ROLL FOLD.



PAPER AIRPLANE

FUN TIMES TO BE HAD BY ALL, ESPECIALLY WHEN THE INSTRUCTOR IS AWAY.

[30]

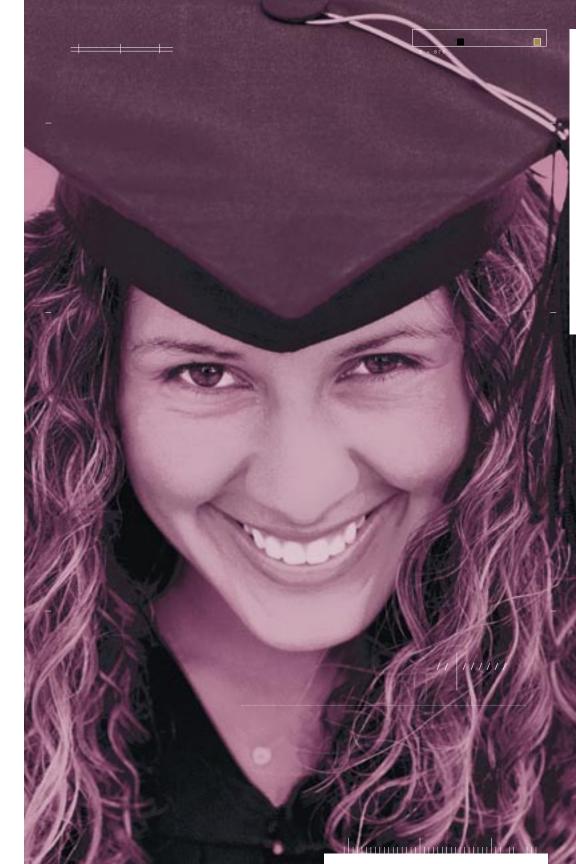
PAGE

11 1111111

TEST: BOOK 3

A. images produced using two "passes" of ink on press B. the band that plays in the Paper University lounge C. used to add depth and interest to black-and-white photos D. A and C	[6:] Selective use of single colors to enhance an image on press is called A. a touchplate B. a budget-buster C. cheating the image D. photomanipulation [7:] Which of the following images would likely NOT benefit from a
[2:] Quadtones	touch of fluorescent ink?
A. are used to enhance black-and- white images B. incorporate CMYK printing in varying degrees C. are the designer's equivalent of heated car seats D. all of the above	A. hamburgers B. tacos C. tofu, because it is inherently unappetizing D. pizza [8:] A foil stamp or emboss that
[3:] Metallic inks cannot be used within CMYK printing. A. true B. false	aligns with a printed image is called A. registered B. certified C. a pressman's worst nightmare D. double-bumped
[4:] Soy inks are used in food packaging because they produce more natural colors. A. true B. false	A. hand cutting individual shapes out of foil B. rubbing a chemically treated image against foil sheets C. the same people who make coins D. none of the above
[5:] In-line ultraviolet drying helps to control A. dryback B. dot gain C. ink density D. all of the above	[10:] Perfect binding is best used A. when the finished book is more than 1/8" thick B. when imperfect binding is not an option C. when a more formal, elegant look is desired D. A and C

 $A\ N\ S\ W\ E\ R$ $K\ E\ Y$:



NOTES



FRONT COVER:

130 lb. Cougar Double Thick Cover, Smooth Finish. Printed Double Bump Process Black + 8003 Metallic.



PAGES 4 & 5:

100 lb. Cougar Opaque, Smooth Finish. Printed Four-Color Process + 8003 Metallic + 348 Green. Photography by Getty Images.



PAGES 10 & 11:

100 lb. Cougar Opaque, Smooth Finish. Printed Four-Color Process + 8003, 876 and 8641 Metallics + 348 Green + 614 Natural.



PAGES 16 & 17:

100 lb. Cougar Opaque, Smooth Finish. Printed Four-Color Process + 812 Fluorescent + 614 Natural. Photography by Neill Whitlock.



INSIDE COVER & PAGE 1:

130 lb. Cougar Double Thick Cover, Smooth Finish. Printed Four-Color Process. Photography by Getty Images.

100 lb. Cougar Opaque, Smooth Finish. Printed Four-Color Process + 8003 Metallic + 348 Green.



PAGES 6 & 7:

100 lb. Cougar Opaque, Smooth Finish. Printed Four-Color Process. Photography by Getty Images.



PAGES 12 & 13:

100 lb. Cougar Opaque, Smooth Finish. Printed Four-Color Process + 8003 Metallic. Photography by Neill Whitlock.



PAGES 18 & 19:

100 lb. Cougar Opaque, Smooth Finish. Printed Four-Color Process + 809 and 812 Fluorescents. Photography by Neill Whitlock.



PAGES 2 & 3:

100 lb. Cougar Opaque, Smooth Finish. Printed Four-Color Process + 614 Natural. Photography by Photonica and Getty Images.



PAGES 8 & 9:

100 lb. Cougar Opaque, Smooth Finish. Printed Four-Color Process + 8003 Metallic + 614 Natural. Photography by Getty Images.



PAGES 14 & 15:

100 lb. Cougar Opaque, Smooth Finish. Printed Four-Color Process Conventional (14) and Four-Color Process UV (15). Photography by Neill Whitlock.



PAGES 20 & 21:

100 lb. Cougar Opaque, Smooth Finish. Printed Four-Color Process + 348 Green + 8003, 876 and 8641 Metallics + 809 and 812 Fluorescents + 614 Natural. Photography by Veer.





PAGES 22 & 23:
100 lb. Cougar Opaque, Smooth Finish.
Printed Four-Color Process +

8003 Metallic + 348 Green + 614 Natural. Foil Stamp, Emboss, Deboss, Engraving.



PAGES 24 & 25:

100 lb. Cougar Opaque, Smooth Finish. Printed Four-Color Process + 8003 Metallic + 614 Natural. Photography by Neill Whitlock.



PAGES 26 & 27:

100 lb. Cougar Opaque, Smooth Finish. Printed Four-Color Process + 8003 Metallic.



PAGES 28 & 29:

100 lb. Cougar Opaque, Smooth Finish.Printed Four-Color Process + 614 Natural.



PAGE 30

& INSIDE BACK COVER:

100 lb. Cougar Opaque, Smooth Finish. Printed Process Black + 8003 Metallic.

130 lb. Cougar Double Thick Cover, Smooth Finish. Printed Process Black + 876 Metallic. Photography by Veer.



BACK COVER:

130 lb. Cougar Double Thick Cover, Smooth Finish.

Printed Four-Color Process + Double Bump Process Black + 8003 Metallic + 348 Green. Photography by David Zaitz.



DIPLOMA:

80 lb. Cougar Natural Opaque, Smooth Finish. Printed Process Black + 348 Green. Photography by Getty Images.



CONCEPT + DESIGN) Squires & Company

PHOTOGRAPHY) Neill Whitlock, David Zaitz, Getty Images, Veer, Photonica

ILLUSTRATION) Ernesto Pacheco

COPYWRITING) Wayne Geyer

PRINTING) Williamson Printing Corporation

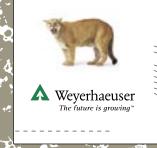
PRESS) 40" Heidelberg 12 color press using conventional, ultraviolet, metallic, and fluorescent inks, with overall dot for dot dull varnish

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