Printing your books, manuals, etc. professionally?

The following just represents my opinion, other customers may have different opinions, we invite anyone to provide comments which we would include here.

Professional book prints become relatively cheap and easy to obtain. Therefore, more and more companies even print their manuals professionally, but there is a learning curve and you can easily double the costs with beginner mistakes. Some print companies allow for just one book being printed, i.e., this may become even interesting for hobbyists.

Be careful. Briefly, spend a few days and look carefully through the
 various web sites and compare offers. You will be able finding dozens on-line shops. Major (!) price and service differences exist. Cheapo offers typically do not have a good customer service. China printing starts at $\$ 5,000$ and more. Every format mistake you make will cost you. Some companies charge $\$ 100 /$ hour for fixing format mistakes: "they nickel and dime you" for everything. Need to add a blank page in a PDF file?: \$35. (No kidding.) Need to upload a corrected file?: \$40 extra. Checking format?: \$50 extra, etc. I should write they "silver and platinum eagle" you. Perhaps look for a local store to save on shipping costs and improved communication, perhaps.

Formats. Get a new Adobe PDF writer (Adobe Arobat IV Pro, \$200 in 2013). Most print companies will ask you for a PDF/X-1a file which is apparently the latest ISO standard. (Some use PDF/X4) Typically two files will be provided to the print company. A text file and one complete cover page file (back-spine-front cover), both in that special PDF format. (Some companies generate a spine automatically for you.) Use CMYK to export figures and use at least 300 DPI. Embed figures directly into your text in the final size of the image. Embedded text fonts only. The book layout needs to be in the final print format. Doing this the first time, it is unlikely that you will be able generating these PDF files without any format mistakes - that's how they make money. By the way, one can get a fully operational demo version of the Adobe Acrobat Pro program to check this out. Adobe comes with a "preflight" program that checks for print formatting. Run your PDF files through that preflight program. The print company will do the same anyway, some of them charge $\sim \$ 50$ for that service.

Costs. Color prints are about by a factor of $\sim 2.5$ more expensive than gray scale prints. Gray scale prints come, however, with "full" color cover pages - that's standard. The binding you want is "perfect bind", i.e., paperback print. Hardcover is quite expensive. Doubling the number of copies does not increase the cost that dramatically. Similarly, doubling the number of pages does not increase the costs by a factor of two - it's much less. Most expensive to print are a few copies of short books, at least when considering the costs per book. 25-50 copies is typically the smallest number they will go with. They expect payment in advance. Printing B\&W books at home (LASER printer, "private" desktop publishing) is at least by a factor of two more expensive than professional book printing. However, you need to invest $\$ 300-\$ 500$ (in 2013) even when ordering only 50 copies printed professionally. Therefore, LatheCity did indeed produce books using that private desktop idea for the first 1-2 years. In that case, your investment per book copy is below $\$ 10$ using a spiral binding system from an office supply store. No risk, you print only what has been ordered. Sales of books are difficult to predict. You can get books reprinted without going through the PDF formatting jazz again. Since price breaks require quite large print numbers anyway, it may be smart to stay with small orders and get it reprinted if required. Printing a book takes just one week plus shipping.

Simple Formatting mistakes. Read carefully the format specifications of your print company or you will lose a lot of money and delay your project. A few standard issues are given here.

- Assuming you select $6 \times 9$ in. as your paper size (book trim size). The cover likely needs to be formatted as $6.25 \times 9.25 \mathrm{in}$; read the format specifications of your print company. (The $0.125^{\prime \prime}=1 / 8^{\prime \prime}$ rim they call bleed, that part will be cut off on both sides, i.e., make the cover by 0.25 " larger.)
- The even page numbers are on the binding side (left) of the book. Simplest way to avoid this complication, place page numbers centered on the footer.
- Similarly, the inside margin should be wider than the outside margin. If you use format templates of the print company then they usually use uneven margins. However, the fine-tuning of the formatting is up to you even if their template has a mistake.
- Print margin requirements? Typical is minimum 7/8" left and right text margins and a minimum 1/8" top and bottom margins.
- CMYK color for your cover pages. (This is typically for all professional prints also Ads in journals are saved as 300 DPI CMYK and not RGB)
- Embedded fonts and figures.
- The number of pages in the book should end on an even number (for best binding).
- Left side pages should be even numbered and right side pages should be odd numbered.
- Usually you need to insert two blank pages at the beginning and end of the text. (This costs extra, of course.)

Preflight issues. Usually you will obtain meaningless error messages from the Adobe software. Therefore, the following may help.

- If you obtain wired and meaningless error codes then copy and paste the entire book and the errors usually disappear.
- Any unusual characters used such as --;), e.g. smileys don't work with PDF. Export/import the smiley as an image.
- Transparent text boxes don't work.
- If you think you are finished with proof reading then do it again.

Cost estimate example. Book printed in 2014, 128 pages, best binding, total costs for 50 copies $\$ 340$ ( $\$ 6.80 /$ book), estimated sales price $\$ 19.99 /$ book, total fees $\$ 4.40 /$ book, shipping $\$ 4 /$ book, profit $\$ 11.59 / b o o k$, breakeven point about 30 books, total profit approx. $\$ 200$ when 50 copies are sold, it's worse the effort? As a self-publisher you may realistically sell 10-200 copies/per year /per title.

Ads. Get your book reviewed which will boost sales more than Ads. You may see more sales in November (Xmas) then the rest of the year - don't panic \& be ready. Some print companies offer advertisement gizmos for free.

Good luck \& don't order too many copies - - $^{\text {. }}$

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## Try out the following links:



Price comparison (Nov, 2014): 250 pages, b/w text, cover (outside) color, cover (inside) blank, $11 \times 8.5,25$ copies, cheapest paper, + US shipping, on-line quote, we do not guarantee that this information is correct it was obtained as an online quote

Best Book Printing $\quad \$ 870+$ shipping (!)
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or type LatheCity at eBay/Amazon/Google and you will find us.

