

INFORMATION LEAFLET

How to create a thesis in PDF/A format

Instructions on how to create the thesis

Since the winter term 2009, theses that have been written and supervised at the Medical University of Vienna, have been published via MEDonline. In this case the digital version of the thesis has to be made available in PDF/A format, a format which has been developed for long-term archiving of electronic documents and which conforms to the ISO-standard 19005. Files in PDF/A-1a format are optimal, PDF/A-1b can, however, be accepted as well (see further information on page 8).

In order to avoid complications on the submission of theses and to spare students additional input of time and work particular emphasis is placed on the following restrictions, which should be considered by students from the very beginning of writing their papers:

Fonts

Only fonts which are not subject to third party's rights may be used. Times New Roman, Arial, Helvetica, for example, are well suited. Should you use a font which does not meet these requirements, this font may be replaced during PDF/A export. Thus the page layout of the thesis will be changed completely or partly.

Images

Ideally, images should be provided in JPG format (for photos) or in PNG format (for charts or graphics). Already while creating your paper you should be careful to use images, which show a resolution of 300 dpi in displayed size.

Transparency

Transparency information gets lost during export or is displayed incorrectly. When creating your paper be careful not to use any effects such as shadows, watermarks or transparent backgrounds with graphics, charts, and tables in graphic form. Avoid text boxes (with transparency effects) as their content may get lost during PDF/A export or may become illegible. If you cannot avoid them, do a trial export and check if text boxes can be displayed correctly in the PDF/A document with the software combination you use. Thus you can avoid later additional work.

Specific objects

Embedded audio- and video data are not permitted and get lost during export.

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Instructions on the further procedure after creating the thesis

After completion of your paper there are several choices of generating a valid PDF/A. Consider from the very beginning that a change of the generating programme (e.g. from Word 2007) and a later conversion can result in additional time and effort as layout information can get lost.

Please check the content of the PDF/A file after export. Should you detect inconsistencies in the page layout or discover missing elements, check the respective passages by going through the above-mentioned restrictions once more. Consider that the text layout might show non-conformity. This is no mistake as long as the electronic version is identical with the printed layout view with regard to format and content.

Note:

Whether a PDF file is shown in PDF/A format is not discernible from the file extension, this will in any case be ".pdf". The correctness of the export can only be ascertained by validation, for example by means of the preflight function of Adobe Acrobat 8 Professional and any later versions.

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Examples of conversion into PDF/A format:

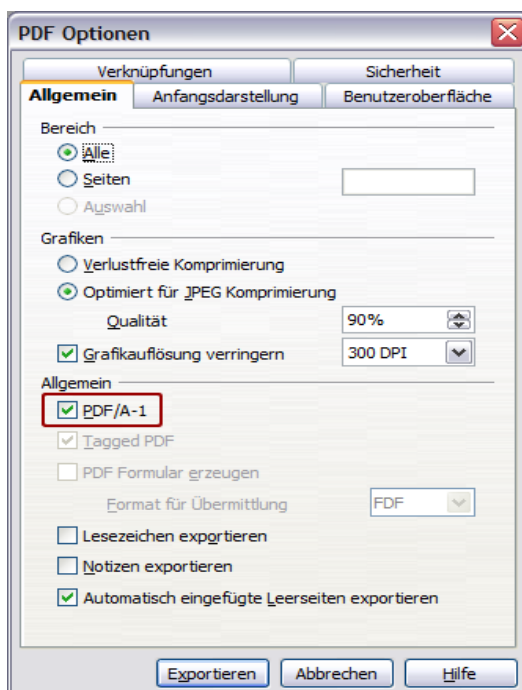
Version OpenOffice

Platforms: Windows, Mac OS X, Linux

Requirements: OpenOffice from Version 2.4 onwards

In the file menu click "Exportieren als PDF..."

In the following setting-up dialogue mark the check box "PDF/A-1".



Click "Exportieren" and save the file in a location on your hard disk where it can be recovered.

Avoid spaces and special characters in the file name.

Note:

OpenOffice has the widest support of operating systems and delivers the fastest and most reliable valid PDF/A documents. Should there not be any opportunity of managing faultless export by means of another software combination, the detour via OpenOffice will be the best solution. Consider, however, that formatting in MSWord might not be taken over into OpenOffice at 100%. Even within the MSWord family there can be formatting inconsistencies with different versions.

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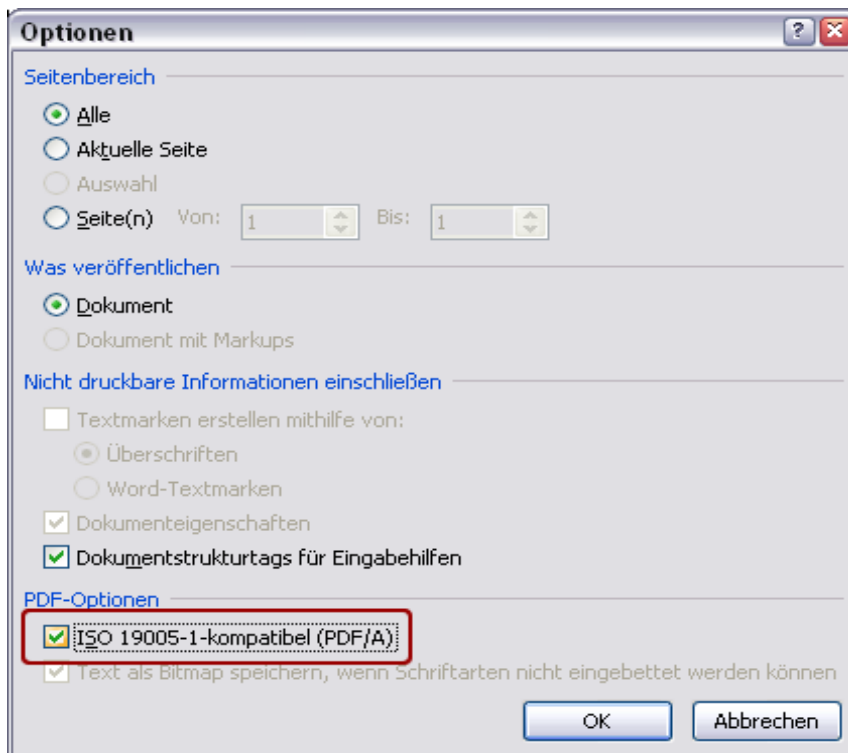
Version MS Office 2007 with Add-in

Platform: Windows

Requirements: valid versions of MS Windows, MS Office 2007 plus Add-in 2007
installed Microsoft Office: "Save as PDF or XPS"

The Add-in is not included in the software package and has to be installed later.
Instructions please find in Office Help.

Click "Speichern unter" where the option "PDF oder XPS" is available. After selecting this option you can mark "PDF" in the dropdown list of the file type in the following window. After that click the button "Optionen" in order to do your settings. Mark the check box "ISO 19005-1-kompatibel (PDF/A)".



Apply your settings by clicking "OK".

Save the file in a location on your hard disk where it can be recovered.

Avoid spaces and special characters in your file name.

Note --- Word 2007 / Excel 2007:

If charts from Excel 2007 are not embedded as graphics in Word, errors can occur during PDF/A export, which can result in restricted legibility of the charts displayed. See notes on "Transparency".

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Version *MS Office with Adobe Acrobat*

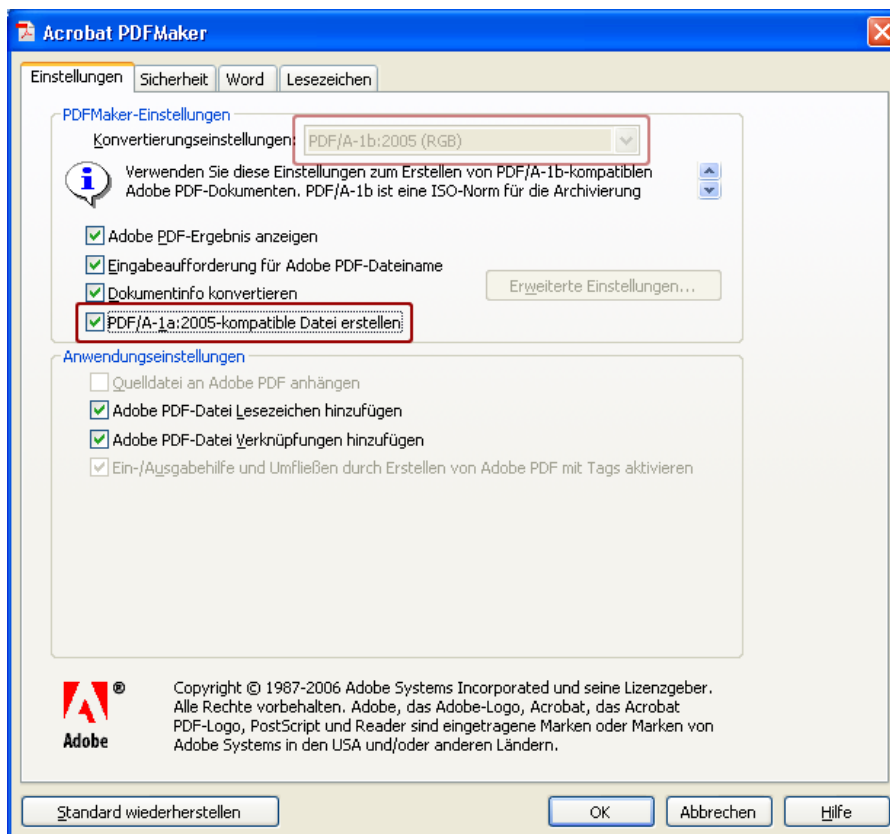
Platform: *Windows*

Requirements: *minimum MS Office 2000 (recommended 2003),
Adobe Acrobat 8 Professional*

As soon as Adobe Acrobat 8 Professional has been installed, further menu options are automatically shown in the products supported by Office.

In the file menu "Adobe PDF" click the tab "Konvertierungseinstellungen ändern". In the following dialogue mark the check box "PDF/A-1a:2005-kompatible Datei erstellen".

In the pulldown "Konvertierungseinstellungen" the setting "PDF/A-1b:2005 (RGB)" is then automatically set.

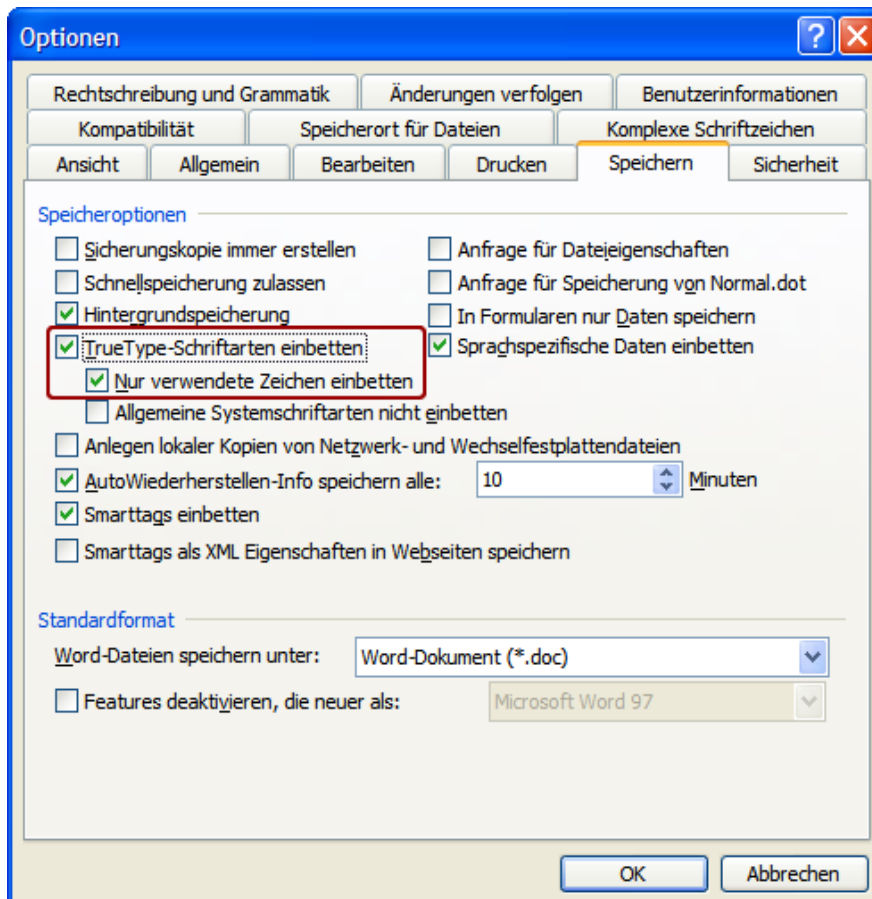


Apply your settings by clicking "OK".

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How to create a thesis in PDF/A format

Take good care that all fonts used are embedded in the Word document. For carrying out this process, first click "Extras" in the file menu, then open the dialogue box "Optionen" where you click the tab "Speichern", after that you mark the two check boxes "True Type –Schriftarten einbetten" and "Nur verwendete Zeichen einbetten". Finally save the document once before continuing.



Note:

Consider that it might make sense to undo this setting after successful conversion, as it has an effect on the file size of all Word documents. Not reducing file size can have undesirable effects in everyday use.

By clicking "In Adobe PDF konvertieren" in the file menu "Adobe PDF", the conversion process gets started. Consider that during the conversion process the document is browsed in Word and the content may be displayed in a distorted way. The process as such does, however, not change the original document. Choose a file name and avoid spaces and special characters.

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Note:

Under certain conditions, it might happen that a PDF/A document generated by Adobe Acrobat 8 Professional does not deliver a positive validation result with the same software. This is a software problem, which is very difficult to detect and which, in most cases, cannot be solved by means of MS Word with Adobe Acrobat 8 Professional. In this case, conversion by means of OpenOffice or MSWord 2007 will lead to a positive solution.

Important:

Version 9.0 by Acrobat has got some serious bugs concerning the processing of PDF/A documents. Therefore, valid documents are not correctly validated and, under certain conditions, ways of processing are blocked. The version 9.1 can possibly correct errors. Nevertheless, no recommendation for the new versions 9.x can be given for the time being.

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Conversion places at the MUW

Should you not have the opportunity of generating a valid PDF/A document on your own, the following computer (with Adobe Acrobat 8 Professional) is at your disposal for conversion procedures:

>> [PC rooms](#)

PCs with OpenOffice are available in >> [ComputerLearnStudio](#)

Feedback and queries

If you have got difficulties exporting your paper into PDF/A format or if you have come across errors and you would like to give us tips which shall be included in updated editions of this information leaflet, please turn to

martin.janku@meduniwien.ac.at

Further information

These instructions are aimed at advanced users and users interested in learning more about conversions:

PDF/A-1a and PDF/A-1b

The extensions 1a and 1b indicate different levels of congruence with the PDF/A standard ISO 19005-1: Part 1, in which 1a describes the complete congruence and 1b only a minimum requirement for congruence.

In practice, this means that PDF/A-1a documents are structured in such a way that they can be displayed with a faultless and legible text reflow even on devices with limited screens (like mobile devices, PDAs, ...) or on devices according to section 508 of the "US Rehabilitation Act" (Accessibility Guidelines). This cannot be done with PDF/A-1b documents as the structural information required for processing content is not available in such documents ("tags" are missing).

With regard to long-term archiving and web content accessibility, PDF/A-1a format is to be preferred.

Validation by means of preflight function

Caution: The use of preflight functions does not make sense without the knowledge of how to deal with the respective error messages. Be cautious when using version 9.x by Adobe Acrobat, see chapter : Version MS Office with Adobe Acrobat .

With Adobe Acrobat 8 Professional the functions for validation can be found in the menu item "Erweitert" → "Preflight...". Under the rubric "PDF/A - Standard" you will find two items: "Konformität mit PDF/A-1a prüfen" and "Konformität mit PDF/A-1b prüfen".

The validation can take a few minutes and can show possible error messages in case the document should not be reproduced in a valid PDF/A format. The treatment of

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such errors is, as a rule, rather difficult as additional documentation is needed in order to find respective solutions.

Further information

You will find more information on this topic in the book "PDF/A kompakt" by Drümmer, Oettler, von Seggern; ISBN 978-3-981 1648-0-0 from page 66 onwards. This book is available at the University Library of the Medical University of Vienna.

Should a positive validation in consistency with PDF/A-1a not be manageable, consistency with PDF/A-1b will also suffice, although PDF/A-1a is to be preferred for the above-mentioned reasons.