HSR–Stud Document Classes

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Contents

1 Purpose of this document class

The following document class was made by and for the HSR-Stud organization. This class is intended to be used to create beautiful summaries and cheat sheets.

2 Class Options

sans Use Sans-Serif fonts.

concrete Use the "Concrete Roman" and "Concrete Math" fonts.

header Use the HSR–Stud standard header. The option `noheader` disables the header.

margin=<size> Sets up margins to reasonable size.

* Any other given option is passed to the underlying class (article).

Size	H	V	Size	H	V
huge	45	40	small	20	30
large	35	35	tiny	10	20
big	30	30	minimal	5	20
normal	25	30			

Table 1: Sizes for the `margin` option. All sizes are in millimeters

3 Extra Metadata

Thanks to the `titling` package, normal metadata informations are available throug the following commands: `\theauthor`, `\thedate`, `\thetitle`. Additionally, more metadata variables have been created for this class, to conserve informations related to the university course.

`\course` The degree programme of the discussed subject. Example: `Elektrotechnik`

`\module` Short name of the module according to the class schedule. Example: `ComEng1`

`\semester` Semester during which the summarized subject was taught. Example: `FS20`

`\institute` Internal institute in which the module was taught. This field is optional. Example: `ICOM`

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5 Implementation

```
1 \NeedsTeXFormat{LaTeX2e}
2 \ProvidesClass{hsrzf}[2020/04/04 v0.1 HSRStud Summary class]
3
4 %^^A%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
5 % Coding Packages (Dependencies)
6
7 \RequirePackage{iftex}
8 \RequirePackage{kvoptions}
9 \RequirePackage{etoolbox}
10
11 %^^A%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
12 % Class options
13
14 \SetupKeyvalOptions{
15     family=hsrzf,
16     prefix=hsrzf@
17 }
18
19 %% Quicker compilation and little changes
20 % \DeclareBoolOption[false]{draft}
21
22 %% Quicker compilation and little changes
23 % \DeclareBoolOption[false]{twocolumn}
24
25 %% Use header and footer
26 \DeclareBoolOption[false]{header}
27 \DeclareComplementaryOption{noheader}{header}
28
29 %% Use a sans-serif font
30 \DeclareBoolOption[false]{sans}
31 \DeclareBoolOption[false]{concrete}
32
33 %% Configures the geometry package
```

```
34 %%
35 %% Possible values:
36 %%  - huge    (45mm, 40mm)
37 %%  - large   (35mm, 35mm)
38 %%  - big     (30mm, 30mm)
39 %%  - normal  (25mm, 30mm)
40 %%  - small   (20mm, 30mm)
41 %%  - tiny    (10mm, 20mm)
42 %%  - minimal ( 5mm, 20mm)
43 \DeclareStringOption{margin}[huge]
44
45 %% Configures the polyglossia package
46 % \DeclareStringOption[]{lang}[german]
47
48
49 %% Pass other options to the class
50 \DeclareDefaultOption{%
51 \ifx\CurrentOptionValue\relax
52 \PackageWarningNoLine{\@currname}{%
53 Unknown option ``\CurrentOption''\MessageBreak
54 is passed to package ``color''%
55 }%
56 % Pass the option to package color.
57 % Again it is better to expand \CurrentOption.
58 \expandafter\PassOptionsToClass
59 \expandafter{\CurrentOption}{article}
60 \else
61 % Package color does not take options with values.
62 % We provide the standard LaTeX error.
63 \@unknownoptionerror
64 \fi
65 }
66
67 \ProcessKeyvalOptions{hsrzf}
68
69
70 %^^A%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
71 % Setup Class
72 \LoadClass[a4paper]{article}
73
74 %% Style deps
75 \RequirePackage{geometry}
76 \RequirePackage{fancyhdr}
77 \RequirePackage{titling}
78
79 %% Insert metadata in the pdf
80 \PassOptionsToPackage{plainpages=false, pdfpagelabels, pdfusetitle}{hyperref}
81 \RequirePackage{hyperref}
82
83 %% Create new metadata fields
84 \newcommand{\hsr@course}{Magic}
85 \newcommand{\hsr@module}{Ma1}
86 \newcommand{\hsr@semester}{FS00}
87 \newcommand{\hsr@institute}{Evil}
88 \newcommand{\hsr@contributors}{}
89
90 %% TODO
91 % \newcommand[1]{\subject}{\renewcommand{\hsr@subject}{#1}}
```

3

```latex
92 % \newcommand[1]{\semester}{\renewcommand{\hsr@semester}{#1}} %% TODO: add season option
93 % \newcommand[1]{\email}{\expandafter\renewcommand\hsr@authoremail{#1}}
94
95 %^^A%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
96 % Setup Style Packages
97
98 %% TODO: fix title
99
100 %% Configure Sans-Serif font
101 \ifhsrzf@sans
102 \renewcommand{\familydefault}{\sfdefault}
103 \fi
104
105 %% Configure concrete font
106 \ifhsrzf@concrete
107 \PassOptionsToPackage{T1}{fontenc}
108 \RequirePackage{fontenc}
109 \PassOptionsToPackage{boldsans,amssymb}{concmath}
110 \RequirePackage{concmath}
111 \fi
112
113 %% configure geometry
114 %% defaults to big
115 \newlength{\hsr@hmarginswidth}
116 \newlength{\hsr@vmarginsheight}
117
118 \ifx\hsrzf@margin\@empty
119     \setlength\hsr@hmarginswidth{30mm}
120 \else
121     \expandafter\ifstrequal\expandafter{\hsrzf@margin}{huge}{
122         \setlength\hsr@hmarginswidth{45mm}
123         \setlength\hsr@vmarginsheight{40mm}}{}
124     \expandafter\ifstrequal\expandafter{\hsrzf@margin}{large}{
125         \setlength\hsr@hmarginswidth{35mm}
126         \setlength\hsr@vmarginsheight{35mm}}{}
127     \expandafter\ifstrequal\expandafter{\hsrzf@margin}{big}{
128         \setlength\hsr@hmarginswidth{30mm}
129         \setlength\hsr@vmarginsheight{30mm}}{}
130     \expandafter\ifstrequal\expandafter{\hsrzf@margin}{normal}{
131         \setlength\hsr@hmarginswidth{25mm}
132         \setlength\hsr@vmarginsheight{30mm}}{}
133     \expandafter\ifstrequal\expandafter{\hsrzf@margin}{small}{
134         \setlength\hsr@hmarginswidth{20mm}
135         \setlength\hsr@vmarginsheight{30mm}}{}
136     \expandafter\ifstrequal\expandafter{\hsrzf@margin}{tiny}{
137         \setlength\hsr@hmarginswidth{10mm}
138         \setlength\hsr@vmarginsheight{20mm}}{}
139     \expandafter\ifstrequal\expandafter{\hsrzf@margin}{minimal}{
140         \setlength\hsr@hmarginswidth{ 5mm}
141         \setlength\hsr@vmarginsheight{20mm}}{}
142 \fi
143
144 \newgeometry{
145     left=\hsr@hmarginswidth, right=\hsr@hmarginswidth,
146     top=\hsr@vmarginsheight, bottom=\hsr@vmarginsheight
147 }
148
149
```

```
150 %% Configure headers
151 \fancypagestyle{hsrzf}{%
152     \fancyhf{} % clear
153     \fancyhead[C]{\thetitle}
154     \fancyhead[R]{\rightmark}
155     \fancyhead[L]{\leftmark}
156     \fancyfoot[R]{\thedate}
157     \fancyfoot[L]{\theauthor}
158     \renewcommand{\headrulewidth}{.5pt}
159     \renewcommand{\footrulewidth}{.5pt}
160 }
161
162 \fancypagestyle{hsrzf-norulers}{%
163     \fancyhf{} % clear
164     \fancyhead[C]{\thetitle}
165     \fancyhead[R]{\rightmark}
166     \fancyhead[L]{\leftmark}
167     \fancyfoot[R]{\thedate}
168     \fancyfoot[L]{\theauthor}
169     \renewcommand{\headrulewidth}{0pt}
170     \renewcommand{\footrulewidth}{0pt}
171 }
172
173 \ifhsrzf@header
174 \pagestyle{hsrzf}
175 \fi
176
```