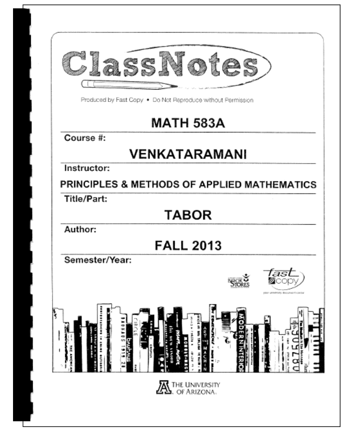
**typos in MATH 583A&B class notes**

2016-04-13, 07:23

On the right is the cover of the class notes that I have. If you have some other version, and the page numbering seems to be different — please tell me.

Thanks to: Dwight Nwaigwe, Kenneth Plackowski, Kenneth Yamamoto.




**cover**

$\boxed{\text{MATH 583A}} \longrightarrow \boxed{\text{MATH 583A\&B}}$

**page 235**

near the top of the page: $\boxed{B_0 = \frac{2}{L}\int_0^L f(x)dx} \longrightarrow \boxed{B_0 = \frac{1}{L}\int_0^L f(x)dx}$

**page 241**

in 2 places: $\boxed{T : H \to \mathbb{R}} \longrightarrow \boxed{T : H \to \mathbb{C}}$ — no need to bound ourselves to reals, and in the beginning of the page 243 complex conjugates do appear.

**page 250**

near the middle of the page: $\boxed{s \to 0} \longrightarrow \boxed{\sigma \to 0}$

**page 263**

not a typo, but a simpler proof of **Theorem 7**: Assume $\lambda$ is in the residual spectrum of $L$. Then (by Theorem 6) $\bar{\lambda}$ is an eigenvalue of $L^* = L$. Then (by the consequence of the proof of Theorem 5) $\lambda$ is real, so $\lambda = \bar{\lambda}$ is an eigenvalue of $L$, *i.e.*, it is in the point spectrum of $L$.

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proof of **Theorem 7**: $\boxed{y \in \mathcal{N}(L - \bar{\lambda})} \longrightarrow \boxed{y \in \mathcal{N}(L^* - \bar{\lambda})}$ — although $L^* = L$ here, anyway.

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footnote [72]: $\boxed{k \neq 1} \longrightarrow \boxed{k > 0}$ — otherwise rank is never equal to 1, which is the rank of “not generalized” eigenvectors

**page 264**

beginning of **6.5.2**: $\boxed{\text{domain of } S} \longrightarrow \boxed{\text{range of } S}$

**page 265**

$\boxed{\sigma_p(S) = \{0\}}$ $\longrightarrow$ $\boxed{\sigma_p(S) = \emptyset}$ — $\{0\}$ usually means "a set with one element, namely 0".

**page 267**

near the bottom of the page: $\boxed{\text{centered on } \lambda = 1}$ $\longrightarrow$ $\boxed{\text{centered on } \lambda = 0}$

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near the bottom of the page: $\boxed{\text{shows that } |\lambda| > 0}$ $\longrightarrow$ $\boxed{\text{shows that } |\lambda| > 1}$

**page 277**

(7.7): $\boxed{\int_0^x}$ $\longrightarrow$ $\boxed{\int_a^x}$

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(7.9): $\boxed{(\xi - x)}$ $\longrightarrow$ $\boxed{(x - \xi)}$

**page 278**

end of 7.1: $\boxed{\text{Section 1.3}}$ $\longrightarrow$ $\boxed{\text{Section 7.3}}$

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(7.18): $\boxed{f(t)dt}$ $\longrightarrow$ $\boxed{f(\tau)d\tau}$

**page 281**

near the top of the page: $\boxed{\text{Sturm Liouville}}$ $\longrightarrow$ $\boxed{\text{Sturm–Liouville}}$

**page 283**

near the middle of the page: $\boxed{\text{Sturm Liouville}}$ $\longrightarrow$ $\boxed{\text{Sturm–Liouville}}$

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before (7.49): $\boxed{\text{Heaveside}}$ $\longrightarrow$ $\boxed{\text{Heaviside}}$

**page 290**

(7.85): $\boxed{pu'' + p'u + qu}$ $\longrightarrow$ $\boxed{pu'' + p'u' + qu}$

**page 300**

near the top of the page: $\boxed{Lu = f}$ $\longrightarrow$ $\boxed{Lu = g}$

**page 302**

the very bottom of the page: $\boxed{1\frac{1}{2}\xi^2 + c_1}$ $\longrightarrow$ $\boxed{-\frac{1}{2}\xi^2 + c_1}$

**page 303**

right after (7.165): $\boxed{\int_\xi^x K_> dx}$ $\longrightarrow$ $\boxed{\int_\xi^1 K_> dx}$

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footnote [85]: $\boxed{K_2'|_{x=\xi}}$ $\longrightarrow$ $\boxed{K_<'|_{x=\xi}}$

**page 309**

between (7.189) and (7.190): $\boxed{\text{sides of (192)}}$ $\longrightarrow$ $\boxed{\text{sides of (189)}}$

**page 321**

after (8.21): $\boxed{(1-\lambda\alpha_{11}c_1)}$ $\longrightarrow$ $\boxed{(1-\lambda\alpha_{11})c_1}$

**page 323**

near the bottom of the page: $\boxed{\begin{pmatrix} \frac{1}{2} \\ \frac{1}{2} \end{pmatrix}}$ $\longrightarrow$ $\boxed{\begin{pmatrix} \frac{1}{2} \\ \frac{1}{3} \end{pmatrix}}$

**page 328**

(8.39): $\boxed{\lambda_m \int_a^b u_m(\xi)}$ $\longrightarrow$ $\boxed{\lambda_n \int_a^b u_m(\xi)}$

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the very bottom of the page: $\boxed{\frac{\lambda m}{\lambda m} \int_a^b}$ $\longrightarrow$ $\boxed{\frac{\lambda_m}{\lambda_n} \int_a^b}$

**page 335**

after (8.62): $\boxed{\text{powers of } \lambda}$ $\longrightarrow$ $\boxed{\text{powers of } \mu}$

**page 341**

near the top of the page: $\boxed{\text{campact}}$ $\longrightarrow$ $\boxed{\text{compact}}$

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upper half of the page: $\boxed{T = \lim_{n\to\infty} T_n}$ — we have $\|T_{n+1} - T_n\| = 1$, so there is no limit here.

**page 347**

(9.16): $\boxed{\frac{\partial L}{\partial q} +}$ $\longrightarrow$ $\boxed{\frac{\partial L}{\partial q}\delta q +}$

**page 351**

(9.42): $\boxed{y^2 x}$ $\longrightarrow$ $\boxed{y_x^2}$

**page 376**

the lower half of the page: the 20$^{th}$) century $\longrightarrow$ the 20th century)