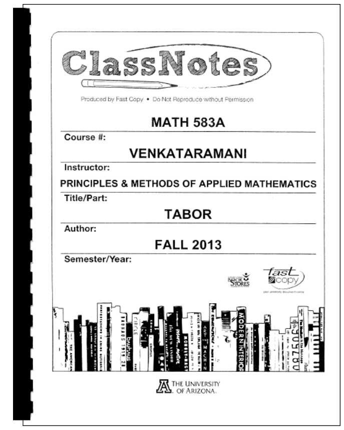
typos in MATH 583A&B class notes

2016-12-27, 12:??



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 246

near the top of the page: $\boxed{\Big| -v(x)u'(x) + v'(x)u(x)\Big|_0^1}$ $\longrightarrow$ $\boxed{\Big(-v(x)u'(x) + v'(x)u(x)\Big)\Big|_0^1}$

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next row: $\boxed{+u'(1)v(1)}$ $\longrightarrow$ $\boxed{-u'(1)v(1)}$

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after "with the associated domain is": $\boxed{v(0) = 0}$ $\longrightarrow$ $\boxed{v(1) = 0}$

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

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

page 278

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

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

page 351

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

page 354

near the top of the page: $\boxed{\left|\dfrac{\delta L}{\delta \dot{q}}\delta q\right|_{t_1}^{t_2}}$ $\longrightarrow$ $\boxed{\dfrac{\delta L}{\delta \dot{q}}\delta q\Big|_{t_1}^{t_2}}$

(9.54): $\boxed{\left|\dfrac{\delta f}{\delta y_x}\delta y\right|_{x_1}^{x_2}}$ $\longrightarrow$ $\boxed{\dfrac{\delta f}{\delta y_x}\delta y\Big|_{x_1}^{x_2}}$

page 358

$\boxed{f(k;a)=e^{ka}+e^{-ka}}$ $\longrightarrow$ $\boxed{f(k;a)=\left(e^{ka}+e^{-ka}\right)/2}$

page 360

(9.75) and (9.76): $\boxed{\dfrac{\delta F}{\delta n}}$ $\longrightarrow$ $\boxed{\dfrac{\delta F}{\delta u}}$

page 361

in the paragraph after (9.81): $\boxed{[v]}$ $\longrightarrow$ $\boxed{[\nu]}$

page 363

near the top of the page: $\boxed{(\delta u)y}$ $\longrightarrow$ $\boxed{(\delta u)_y}$

page 375

(9.162): $\boxed{\sum_i p_i d\dot{q}+\dot{q}_i dp_i-\dfrac{\partial L}{\partial \dot{q}_i}d\dot{q}_i-\dfrac{\partial L}{\partial q_i}dq_i-\dfrac{\partial L}{\partial t}dt}$ $\longrightarrow$ $\boxed{\sum_i\left(p_i d\dot{q}_i+\dot{q}_i dp_i-\dfrac{\partial L}{\partial \dot{q}_i}d\dot{q}_i-\dfrac{\partial L}{\partial q_i}dq_i\right)-\dfrac{\partial L}{\partial t}dt}$

page 376

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