A List of Misprints for “Lecture Notes on Functional Analysis”

- p. 21, line -8: replace the subscript $k_n$ with $n_k$.

- p. 25, formula (2.21). Replace with

$$A_k \doteq \{ x \in \Omega; \ |x| \leq k, \ B(x,k^{-1}) \subseteq \Omega \}$$

where $B(x,k^{-1})$ is the open ball centered at $x$ with radius $k^{-1}$.

- p. 46, line 7. Better notation: $|f_N(y) - f(y)| < \varepsilon/3$ for every $y \in E$.

- p. 52, line 2. Should be: $\text{Im}(f) = \frac{f - \bar{f}}{2i}$.

- p. 52, line 12. Replace $\overline{\mathcal{A}}$ with $\mathcal{A}$.

- p. 56, line 9: $\Omega \subseteq \mathbb{R}^n$.

- p. 58, line -1: $h_1, \ldots, h_N$

- p. 64, Corollary 4.5. “$\Lambda : X \mapsto Y$ is a linear continuous bijection”

- p. 65, line 13: “consisting of all bounded, continuously differentiable functions…”

- p. 75, last line: “Namely, the closure of each set $S_n \doteq \{ y \in Y; \ |y|_Y \leq n \}$ is a nowhere dense subset of $X$.”

- p. 98, line 3: should be $G(v_1, \ldots, v_n)$

- p. 102, line 10: “Pythagoras’ theorem”

- p. 110, lines 12-13: Replace by:

$$H_0^\perp \cap \overline{H}^\perp \subseteq H_0^\perp \cap H_0 = \{0\},$$
proving that $\text{span}(H_0 \cup \widetilde{H})$ is dense in $H$.

- p. 118, line 12: “the family $\{e^{tA} \mid t \in \mathbb{R}\}$

- p. 122, line 6 from bottom: should be: $\lim_{h \to 0^+} \left\{ S_{t-h} \left( \frac{S_h \bar{u} - \bar{u}}{h} \right) - S_tA\bar{u} \right\}$.

- p. 125, line 7: $u(\tau) \approx E_{\tau/n} \circ \cdots \circ E_{\tau/n} \bar{u} = \cdots$

- p. 126, last line: $R_\lambda R_\mu = \frac{R_\lambda - R_\mu}{\mu - \lambda} = \frac{R_\mu - R_\lambda}{\mu - \lambda} = R_\mu R_\lambda$.

- p. 127, line 9: $\cdots \leq \int_0^\infty e^{-t\lambda} \|S_t\| \|u\| \, dt \leq \cdots$

- p. 133, formula on line 5: $Bu = \lim_{t \to 0^+} \frac{S_t u - u}{t}$

- p. 134, line 9: “depending only on $\omega$, $\theta$, and $t$.”

- p. 170, line 5 from bottom: “The product of the remaining $n - 1$ factors”

- p. 177, formula (8.76), second line: $(\|u_{m_j} - u_{\varepsilon m_j}\|_{L^q} + \|u_{m_j} - u_{\varepsilon}\|_{L^q})$

- p. 194, last line: $\int_0^\pi (2u \cos 2x)_x \, dx$.

- p. 200, line 20-21: “the coefficients $a^{ij}$ and $b^i$ satisfy the stronger regularity conditions $a^{ij}, b^i \in W^{1,\infty}(\Omega)$.”

- p. 207, formula (9.67) should be: $Lu = -\sum_{i,j=1}^n (a^{ij}(x)u_{x_i})_{x_j}$.

- p. 207, replace $g$ and $h$ respectively by $f$ and $g$, in (9.71) and (9.72).

- p. 230, line 5 from bottom: “we can choose $\rho > 0$ . . .”

- p. 232, line 6: should be: $\int_{B(x,\varepsilon)} J_{\varepsilon}(x - y)f(y) \, dy$. 