Errata for Measure Theory: A First Course

p.v. Replace "You" by "you"

p.viii, line -10. Replace "corection" by "correction"

p.3, line 12. Replace $\{X, \mathcal{X}\}$ by $(X, \mathcal{X})$

p.3, line -8. Replace "once" by "since"

p.3, line -3. Replace $\{\mathbb{N}, \mathcal{N}\}$ by $(\mathbb{N}, \mathcal{N})$

p.4, line -14. Replace $\{X, \mathcal{X}\}$ by $(X, \mathcal{X})$

p.6, lines 1 and 3. Replace $X^{\mathbb{R}}$ by $\mathbb{R}^X$

p.12, line 4. Delete $\alpha >$

p.15, line 1. Replace "spaces" by "space"

p.15, line -10. Replace "is *separable* if it has a countable base." by
"is *separable* if it has countable dense subset."

p.15, line -3. Replace "coincide" by "coincides"

p.23, line 5. Replace "complement on N" by "complement of N"

p.23, line -8. Insert "a" between "is" and "nonnegative"

p.31, line 6. Replace $\lambda\colon \Re \to \mathbb{R}$ by $\lambda\colon \Re \to \overline{\mathbb{R}}$

p.31, line 17. Replace $\mathcal{X}$ by $\Re$; μ by λ; and X by $\mathbb{R}$

p.31, last line. Replace $\lambda\colon \Re \to \mathbb{R}$ by $\lambda\colon \Re \to \overline{\mathbb{R}}$

p.33, line -10. Insert "in" twice after "either" and "or"

p.33, line -9. Insert "for" before "all"

p.35, line -3. Replace "if and only if" by "if"

p.35, line -2. Replace "any" by "some"

p.40, lines 4 and 8. Replace twice $\mu\big(\bigcup_n E_n\big)$ by $\lambda\big(\bigcup_n E_n\big)$

p.40, lines 17 and 19. Replace three times $d\mu$ by $d\lambda$

p.42, line 6. Replace $\lim_n f$ by $\lim_n f_n$

p.42, line 9. Replace $\mu(E) = 0$ by $n\mu(E) = 0$

p.46, line 5. Delete "Finally,"
Insert at the end "(if the integrals are finite)"

p.50, line 15. Replace $\big\{x \in X\colon\ f \geq 0\big\}$ by $\big\{x \in X\colon\ f(x) \geq 0\big\}$

p.50, line 15. Replace $\big\{x \in X\colon\ f \leq 0\big\}$ by $\big\{x \in X\colon\ f(x) \leq 0\big\}$

p.50, line 24. Replace $\sup_{x\in\mathcal{X}}$ by $\sup_{x\in X}$

p.52, line 13. Delete comma. Replace $\mathcal{M}(X, \mathcal{X},)$ by $\mathcal{M}(X, \mathcal{X})$

p.53, line 12 (displayed formula). Replace the first f^- by f^+

p.53, line 12 (displayed formula). Insert $d\mu$ after the first integral

p.56, line 8 (item (a) in Problem 4.4). Replace $f \leq g$ with $0 \leq f \leq g$

p.56, line 11. Replace "(a) Verify that $f^+ \leq g^+$ and $g^- \leq f^-$ μ-a.e., and apply" by
"(a) Apply"

p.57, line 2. Delete "a" (...and, in this case,)

p.57, line -2. Insert "measurable" between "countable" and "partition"

p.62, line 5. Replace "(i) and (ii)" by "(i), (ii), and (iii)"

p.63, line 5. Replace "is" by "be" and replace"an" by "a"

p.68, line 15 (displayed formula). Replace $\leq$ by $=$

p.69, line 4. Replace "Problems" by "Problem"

p.69, line 8 (displayed formula). Replace $|f_{n_k}| = \sum_{j=k}^{\infty} \big(|f_{n_{j+1}}| - |f_{n_j}|\big)$ by $|f_{n_k}| \leq \big|\sum_{j=k}^{\infty} \big(|f_{n_j}| - |f_{n_{j+1}}|\big)\big|$

p.69, line 9. Replace $|g|$ by g

p.69, line -5 (displayed formula). Replace $\leq$ by $<$

p.70, line 6 (displayed formula). Replace $|f_n(x) - f_n(x)|$ by $|f_n(x) - f_n(y)|$

p.71, line 13 Replace. "the previous problem" by "Problem 5.1"

p.74, line 4 (displayed formula). Replace $\int_{[0,1]} f(x)$ by $\big(\int_{[0,1]} |f(x)|^p \, dx\big)^{\frac{1}{p}}$

p.74, line 11 (displayed formula). Replace $2nt$ by $2nx$

p.74, line 13. Replace "Verify the" by "Verify that"

p.78, line -6. Insert "of" (a sequence of functions...)

p.79, line -2. Replace 1^{-n} by $(-1)^n$

p.80, line 12. Replace $|f'-f''| \leq |f_n - f''|$ for all n by $|f'-f''| \leq \limsup_n |f_n - f''|$

p.80, line 14 (displayed formula). Replace $\leq \int |f_n - f''|^p \, d\mu = \|f_n - f''\|_p^p \to 0$ by $\leq \limsup_n \int |f_n - f''|^p \, d\mu = \lim_n \|f_n - f''\|_p^p = 0$

p.80, line -8. Insert "in" (i.e., it is in $[f]$)

p.80, line -2. Insert "a" (let f be a real-valued...)

p.81, line 8 (displayed formula). Replace $2g^p$ by $(2g)^p$

p.82, line 15 (displayed formula). Replace $\|f_n - f\|_p$ by $\|f_n - f\|_p^p$

p.85, line 15. Delete "a" (which defines the real-valued...)

p.85, lines -7 and -5. Replace twice E'_k by $E_{k'}$

p.86, line 9. Insert "a" (let f be a real-valued...)

p.87, line -9. Replace 1^{-n} by $(-1)^n$

p.88, line 15. Delete "a" (This defines the real-valued...)

p.91, line 18. Replace $n \geq 2m$ by $n = 2m$; and $(n-m)m \geq m^2$ by $\frac{n-m}{n} = \frac{1}{2}$

p.91, last line. Replace "once" by " since"

p.92, line 20. Replace μ by λ

p.92, line -8 (displayed formula). Replace $x \in [0, 1\,]$ by $x \in (0, 1]$

p.103, lines 4 and 9 (displayed formulas). Replace twice $\big(\frac{1}{2}\big)^m$ by $2\big(\frac{1}{2}\big)^m$

p.110, line -4. Replace $\mathcal{X}^{\mathbb{R}}$ by $\mathbb{R}^{\mathcal{X}}$

p.112, line 11. Replace $\lambda \ll \mu$ by $\nu \ll \mu$

p.116, line -7. Replace "once" by "since"

p.117, lines 17 and 19. Replace twice $E \cup E_n$ by $E \cap E_n$

p.117, line 18. Replace "Proposition 2.2(b)" by "Proposition 2.2(a)"

p.119, line 11. Replace twice F_n by F_i

p.121, line 16. Replace $A \subseteq \mathcal{A}^*$ by $\mathcal{A} \subseteq \mathcal{A}^*$

p.121, line -10. Replace A^* by $\mathcal{A}^*$ ($\mathcal{A}$ over $\mathcal{A}^*$)

p.125, line -3 (displayed formula). Replace a by α

p.126, line -5. Replace "infinite sum (which is finite)" with "indexed sum"

p.127, line 5. Delete "and"

p.127, line -13 (displayed formula). Replace the first $\leq$ by $=$

p.128, line 14 (displayed formula). Replace $\ell^*(F)$ by $\ell^*(S)$

p.130, line 17. Replace "Thus." by "Thus," — replace dot with comma

p.129, line -5. Replace $(\mathbb{R}, \Im^*, \mu^*)$ by $(\mathbb{R}, \Im^*, \lambda^*)$

p.133, line 10 (Problem 8.3(b)). Delete "the"

p.133, last line. Replace "once" by "since"

p.135, line 12. Replace "refereed" by "referred"

p.135, line -5 (displayed formula). Replace $S \backslash G$ by $G \backslash S$

p.135, line -3. Replace $\inf_{U \in \mathbb{R}}$ by $\inf_{U \in \Re}$

p.136, line 1. Replace $\sup_{F \in \mathbb{R}}$ by $\sup_{F \in \Re}$

p.136, line 9. Replace E by E'

p.136, line 11. Replace $\subseteq$ by $\supseteq$

p.136, line 14. Replace $\lambda^*(E \backslash F_\varepsilon) = \varepsilon$ by $\lambda^*(E \backslash F_\varepsilon) \leq \varepsilon$

p.136, line 14. Replace $= \lambda^*(F_\varepsilon) + \varepsilon$ by $\leq \lambda^*(F_\varepsilon) + \varepsilon$

p.143, line -4. Replace "infinite sum (which is finite)" with "indexed sum"

p.145, line 15. Replace "and" by "the"

p.146, line 19. Replac $x \in \mathcal{X}$ by $x \in X$

p.146, line -7. Replace "a important" by "an important"

p.153, line -4. Replace $\int_{X \backslash N} f_{h^-}\, d\mu - \int_{X \backslash N} f_{h^-}\, d\mu$ by
$\int_{X \backslash N} f_{h^+}\, d\mu - \int_{X \backslash N} f_{h^-}\, d\mu$

p.157, line -10. Replace $\lambda \times \nu$ by $\lambda \times \mu$

p.158, line -5. Replace $n \in \mathbb{N}$ by $m \in \mathbb{N}$

p.163, line 1. Replace "absolute" by "absolutely" — change order (alphabetical)

p.164, line 21. Replace "2" by "3" (De Morgan Laws, 2)

May 25, 2015