

Errata

The entries below are arranged by page number. A negative sign before a line number indicates that it is to be counted from the bottom up.

Page 14, line -1.

Both words in **trivial solution** should be in blue italics.

Submitted by the authors on May 1, 2006.

Page 15, Answer to problem 1.

Insert a period at the end.

Submitted by the authors on July 13, 2009.

Page 15, line 3.

Both words in **nontrivial solution** should be in blue italics.

Submitted by the authors on May 1, 2006.

Mathematica notebook and Maple worksheet for Tutorial 1.3.

In the Note at the end of subsection 1.3.3, last sentence, change **than** to **as**.

Submitted by the authors on October 15, 2008.

Page 54, problem 4 lines 3-4.

Change (**i.e., an ellipse, a hyperbola, a parabola, or a pair of intersecting lines**) to (**e.g., an ellipse, a hyperbola, or a parabola**).

Submitted by the authors on May 1, 2006.

Page 54, problem 4, line -1.

Change of the four types to type.

Submitted by the authors on July 18, 2008.

Page 65, line -5.

Change the parallel line L through the origin and a point \mathbf{p} to the line L that goes through the origin and is parallel to the given line and a point \mathbf{p} .

Submitted by the authors on July 18, 2008.

Page 70, problem 3.

Change the beginning of the second sentence to Add sketches and labels of the following vectors to the figure:

Submitted by Al Hibbard on September 26, 2006.

Page 70, problem 4.

At the end of the second sentence, change \overrightarrow{PQ} to \overrightarrow{PQ} . That is, switch the period and parenthesis.

Submitted by the authors on July 13, 2009.

Page 70, problem 6.

Insert $y = mx + b$ after “Cartesian equation.”

Submitted by Al Hibbard on September 26, 2006.

Pages 70-71, problem 7 lines 1 and 2, problem 8 lines 2 and 3, problem 9 line 1, problem 12 lines 1 and 4, problem 16 line 1.

Change the font of the symbol L to bold and not italic.

Submitted by the authors on May 1, 2006.

Page 71, problem 12 line 2.

Change $\mathbf{w} = \mathbf{p} - \mathbf{v}$ to $\mathbf{r} = \mathbf{p} - \mathbf{v}$.

Submitted by the authors on May 1, 2006.

Page 71.

The bleed (i.e., the vertical blue strip containing the word “TUTORIAL”) should be on the right edge of the page, not the left edge.

Submitted by the authors on May 1, 2006.

Page 73.

In the answer to Exercise 2, change the (1, 3) entry of M from -20 to 20 .

Submitted by Al Hibbard on February 11, 2008.

Mathematica notebook for Tutorial 2.2.

At the end of the tutorial, in Theorem 1, third displayed line: Change $\mathbf{u} + \mathbf{0} = \mathbf{0}$ to $\mathbf{u} + \mathbf{0} = \mathbf{u}$.

Submitted by Al Hibbard on September 26, 2006.

Page 82, problem 1 lines 1 and 4.

Remove the underline for the problem number 1 itself, and insert an underline below (a).

Submitted by the authors on May 1, 2006.

Page 92, problem 3 line 3.

Change $\leq b \leq 1$ to $0 \leq b \leq 1$.

Submitted by the authors on May 1, 2006.

Page 109, caption to figure 2.1.

Change v, w to \mathbf{v}, \mathbf{w} . That is, change these variables to the bold font.

Submitted by the authors on July 13, 2009.

Page 112, problem 11 line 3.

Just before **that have the same span**, insert **(other than $\mathbf{v}_1, \mathbf{v}_2, \mathbf{v}_3, \mathbf{v}_4$)**.

Submitted by the authors on May 1, 2006.

Mathematica notebook for Tutorial 3.1.

In subsection 3.1.2, Exercise 5(b), change **$A\mathbf{x} - \mathbf{b}$** to **$A\mathbf{x} = \mathbf{b}$** .

Submitted by Al Hibbard on September 26, 2006.

Page 137, problem 7(b).

Change the first two sentences to **Which of the following pairs of matrices commute and which do not: R and S , R and T , S and T ? Explain.**

Submitted by the authors on July 18, 2008.

Page 139, problem 6 line 1.

Change the font of the symbol **v** to bold and not italic.

Submitted by the authors on May 1, 2006.

Page 142, topmost displayed expressions.

Change the $(3, 2)$ entry of B^T from **5** to **-5**.

Submitted by David Moore on October 16, 2006.

Page 143, line -5.

In the second half of the displayed formula, insert **=** between the next-to-last and last matrices.

Submitted by Al Hibbard on September 26, 2006.

Page 146, fourth line from the end of the section.
Change $((AB)^T)_{ij} = (AB)_{ij}$ to $((AB)^T)_{ij} = (AB)_{ji}$.

Submitted by David Moore on October 16, 2006.

Page 171, problem 3 line 1.
Delete the word **four**.

Submitted by the authors on May 1, 2006.

Page 179, proof of Theorem 8, line 10.
Delete the comma in **we obtain, $A = B^{-1}$** .

Submitted by the authors on July 13, 2009.

Mathematica notebook for Tutorial 3.5.
In *Mathematica* problem 9(c), change the second row operation from $2r_2 + r_3 \rightarrow r_3$ to $2r_1 + r_3 \rightarrow r_3$.

Submitted by Al Hibbard on September 26, 2006.

Page 183, definition of “residue of m modulo n ”.
In the second sentence, insert **(non-negative)** before **remainder**.

Submitted by the authors on October 15, 2008.

Page 198, problem 3(b).
At the end of the problem, change **R** to **S** .

Submitted by Al Hibbard on September 26, 2006.

Page 198, problem 6.
At the end of the second sentence, change **direct calculation** to **using rules of matrix algebra**.

Submitted by Al Hibbard on September 26, 2006.

Mathematica notebook for Tutorial 4.2.

In subsection 4.2.1, near the beginning, in the line that begins “Thus T maps”, in the vector at the end of that line, change the second entry from $2/2$ to $3/2$.

Submitted by Al Hibbard on September 26, 2006.

Page 217, problem 8(b) line -5 and 8(c) line -1.
Change **Subsection** to all lowercase.

Submitted by the authors on May 1, 2006.

Page 218, problem 7 line 1.
Change **Subsection** to all lowercase.

Submitted by the authors on July 13, 2009.

Page 231, problem 8 line 7.
Change x , y , and z axes to x -, y -, and z -axes.

Submitted by the authors on May 1, 2006.

Mathematica notebook and Maple worksheet for Tutorial 4.5.
In Problem 4, second sentence, delete the first occurrence of **the**.

Submitted by the authors on October 15, 2008.

Mathematica notebook for Tutorial 5.2.

In subsection 5.2.1, just after Example C, at the end of the **Note**, change $\text{din}(\mathbf{R}^n) = n$ to $\text{dim}(\mathbf{R}^n) = n$.

Submitted by Al Hibbard on September 26, 2006.

Mathematica notebook for Tutorial 5.2.

In subsection 5.2.1, at the end of Theorem 6, change **the W has a basis** to **then W has a basis**.

Submitted by Al Hibbard on September 26, 2006.

Page 271, problem 11(g) line -1.

Change **is** to **must be**.

Submitted by the authors on May 1, 2006.

Mathematica notebook for Tutorial 5.4.

In *Mathematica* problem 2, change the label for the second part of the problem from **(c)** to **(b)**.

Submitted by Al Hibbard on September 26, 2006.

Page 289, problem 12 lines 1 and 2.

At the end of the first sentence, insert **and \mathbf{b} is a vector in \mathbf{R}^n** . In the second sentence, delete **for every vector \mathbf{b} in \mathbf{R}^n** .

Submitted by the authors on May 1, 2006.

Page 295, problem 1(a) line 1, problem 1(b) line -1, and problem 2 line 1.

Change **Subsection** to all lowercase.

Submitted by the authors on May 1, 2006.

Page 296, problem 6(c) line 2 and problem 6(d) line 1.

Change **Subsection** to all lowercase.

Submitted by the authors on May 1, 2006.

Page 304, problem 5(b).

Remove the underline from the label (b).

Submitted by Al Hibbard on September 26, 2006.

Page 304, problem 11, first sentence.

Change the right-side column vector from $\begin{bmatrix} 0 \\ 0 \end{bmatrix}$ to $\begin{bmatrix} 0 \\ 0 \\ 0 \end{bmatrix}$.

Submitted by Al Hibbard on September 26, 2006.

Page 305, problem 16, part (b).

Change to $\{\log(x^2 + 1)^3, \log(x^2 + 1)\}$.

Submitted by the authors on July 13, 2009.

Page 309, Theorem 1.

In the equation in the first displayed line, fix the appearance of the factor C_{ij} so the sum appears as follows: $\sum_{j=1}^n a_{ij}C_{ij}$.

Submitted by Al Hibbard on September 26, 2006.

Page 322, problem 9 line 1.

Change **Theorems 5 and 6** to **Theorems 4 and 6**.

Submitted by the authors on May 1, 2006.

Page 324, line -6.

Insert a blue square at the right margin (to indicate the end of the proof of Theorem 3).

Submitted by the authors on July 13, 2009.

Page 327, problem 1 line 7.

Change **described above** to **of vectors \mathbf{u} and \mathbf{v}** .

Submitted by the authors on May 1, 2006.

Page 342, problem 16 line 4.

Change **Subsection** to all lowercase.

Submitted by the authors on May 1, 2006.

Page 343, problem 24 line 1.

Change $A^2 = 0$ to $A^2 = O$. That is, change the zero to capital “oh”.

Submitted by the authors on July 13, 2009.

Page 354, problem 6(c) line 1.

Delete the redundant word **nonzero**.

Submitted by the authors on May 1, 2006.

Page 355, problem 19(abc).

Change **0** to **O** (zero to capital “oh”) in four places: (a) line 3, (b) line 2, and (c) lines 2 and 4.

Submitted by the authors on July 13, 2009.

Page 370, problem 2(b) line 2.

At the end insert the phrase **with three linearly independent eigenvectors**.

Submitted by the authors on May 1, 2006.

Page 370, problem 4.

Change **Subsection** to all lowercase.

Submitted by the authors on July 18, 2008.

Page 388, problem 7(b), last line.

Change **the columns of M add to 1** to **that each column of M adds to 1**.

Submitted by the authors on July 13, 2009.

Page 408, line -4.

Insert a hyphen: **x -axis**.

Submitted by the authors on July 13, 2009.

Page 411, problem 9 line 3.

Change the last sentence to **Prove that if \mathbf{v} is real then λ is real**.

Submitted by the authors on May 1, 2006.

Page 411, problem 10 line 3.

Change **a complex eigenvalue** to **a nonreal complex eigenvalue**.

Submitted by the authors on May 1, 2006.

Pages 418-419.

Move the blue square signaling the end of the Answer to Exercise 3 from the middle of page 419 (just before Example G) to the bottom of page 418.

Submitted by the authors on October 15, 2008.

Page 429, problem 5 line 4.

Change the word **reserve** to **preserve**.

Submitted by the authors on May 1, 2006.

Page 430, problem 9 line -4.

Delete the comma at the end of the displayed formula.

Submitted by the authors on May 1, 2006.

Page 446, problem 2(a) line -3.

Change **Subsection** to all lowercase.

Submitted by the authors on May 1, 2006.

Page 458, line -3.

Insert a blue square at the right margin (to indicate the end of Example A).

Submitted by the authors on July 13, 2009.

Page 482, problem 3(c) line 1.

Change **A vector** to **A nonzero vector**.

Submitted by the authors on May 1, 2006.

Page 496, problem 5 line -2.

Change **Subsection** to all lowercase.

Submitted by the authors on May 1, 2006.

Page 497, Example A, line 7.

Delete t in **$Au \cdot tAw$** .

Submitted by the authors on July 13, 2009.

Page 499, line -4.

Change **finite-dimenstonal finite-dimensional** (that is, replace “t” by “i”).

Submitted by the authors on July 13, 2009.

Page 501, problem 12(a) line -1.

This line should be indented so it lines up with the paragraphs above and below it.

Submitted by the authors on May 1, 2006.

Page 506, line 4.

Change **Magnitude** to lowercase.

Submitted by the authors on October 3, 2006.

Page 511, line 2.

Change **not in $\{\mathbf{v}_1, \mathbf{v}_2, \dots, \mathbf{v}_k\}$** to **not in $\text{Span}\{\mathbf{v}_1, \mathbf{v}_2, \dots, \mathbf{v}_k\}$**

Submitted by David Moore on November 21, 2006.

Page 512, line -1.

Delete the curly braces in the first occurrence of **$\{v_1, \dots, v_p\}$** .

Submitted by the authors on July 13, 2009.

Page 518, Theorem 5'.

Change the last term in the displayed sum by raising the second occurrence of **\mathbf{v}_k** in the denominator to the numerator.

Submitted by the authors on July 13, 2009.

Page 519, line 10 (not counting the appendix title).

Change the font of the word **Help** to typewriter style.

Submitted by the authors on May 1, 2006.

Page 520.

At the bottom of the page, add the following:

WARNING: Always use the “Classic Worksheet” interface if you are using Maple 9 or later. Maple’s newer Java-based interface is not adequate for some of the *Visual Linear Algebra* graphics.

Submitted by the authors on May 1, 2006.

Page 528, line 5.

Delete the comma after **tutorial files**.

Submitted by the authors on May 1, 2006.

Page 528, line 27.

Change the font of *Command Palette* to roman.

Submitted by the authors on May 1, 2006.

Page 531, line 1.

Change the font of M^{-1} to typewriter style, and replace the curly braces by parentheses: $M(-1)$.

Submitted by the authors on July 13, 2009.

Page 532, lines -5,-6.

Change to **DrawSpline**[{p1,p2,p3}] computes and then plots the cubic spline passing through the points p_1, p_2, p_3 .

Submitted by the authors on July 13, 2009.

Page 533, GridGame.

Delete the comma in **vectors, and**.

Submitted by the authors on July 13, 2009.

Page 535, line 2.

Change **values of function** to **values of f** .

Submitted by the authors on July 13, 2009.

Page 537, Section 1.1, problem 15(a) line 1.

Change the second matrix to

$$\begin{bmatrix} 1 & 1 & 1 & 0 \\ 0 & 1 & 2 & 2 \\ 0 & 0 & k-2 & 1 \end{bmatrix}$$

Submitted by the authors on May 1, 2006.

Page 537, Section 1.1, problem 17(a) and 17(c).

Insert a period at the end of the sentence.

Submitted by the authors on May 1, 2006.

Page 538, Section 2.2, problem 4(a).

Change the font of **i** , **j** , and **k** to bold and not italic. (There are seven occurrences.)

Submitted by the authors on May 1, 2006.

Page 539, Section 3.6, problem 3 lines 1-2.

Move **I** : from the beginning of line 2 to the end of line 1.

Submitted by the authors on May 1, 2006.

Page 540, Section 4.2, problem 10 line 1.

Change the word **points** to **vectors**.

Submitted by the authors on May 1, 2006.

Page 542, Section 7.1, problem 11(b).

Change to 1 is an eigenvalue of P with associated eigenspace $y = 2x$.

Submitted by the authors on May 1, 2006.

Page 542, Section 7.2, problem 1(c) line 1.

Change $-\lambda^3 + 4\lambda^2 - 5\lambda + 2$ to $(1 - \lambda)(\lambda^2 - 3\lambda + 2)$.

Submitted by the authors on May 1, 2006.

Page 542, Section 7.3, problem 4 line -2.

Change the word **near** to **on**.

Submitted by the authors on May 1, 2006.

Page 543, Section 7.6, problem 3(a).

Change to $\langle y_1, \dots, y_n \rangle = \langle c_1 e^{k_1 t}, \dots, c_n e^{k_n t} \rangle$. A basis for the solution set is $\{e^{k_1 t} \mathbf{e}_1, \dots, e^{k_n t} \mathbf{e}_n\}$.

Submitted by the authors on May 1, 2006.

Page 543, Section 7.7, problem 7(a) lines 2-3.

Change $\langle -4 - 3i, 5 \rangle$ to $\langle 5, -4 + 3i \rangle$ and $\langle -4 + 3i, 5 \rangle$ to $\langle 5, -4 - 3i \rangle$.

Submitted by the authors on May 1, 2006.

Page 544, Section 8.7, problem 8.

Change both occurrences of t to x .

Submitted by the authors on May 1, 2006.
