### Active/Self-Paced/Blended/On-Line Differential Equations: (How) Does It Work?

Bernd Schröder

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- 3. Regarding remote delivery: Motivation is the key, *natural* applications can help.

Clientele

Curriculum starts

Clientele

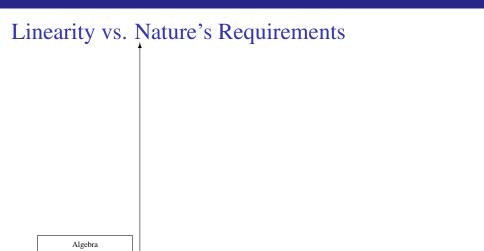
Curriculum starts

Curriculum ends

Curriculum starts Topics presented vs. used

Math (dashed) vs. Engr. & Sci. (solid)

Curriculum ends



Topics presented vs. used

Math (dashed) vs. Engr. & Sci. (solid)

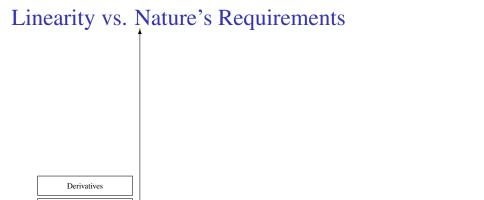
Clientele

Curriculum ends

Curriculum

## Linearity vs. Nature's Requirements Limits Algebra Topics presented vs. used Curriculum Curriculum ends starts Math (dashed) vs. Engr. & Sci. (solid)

Clientele



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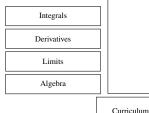
Topics presented vs. used

Curriculum ends

Limits Algebra

Curriculum





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Curriculum ends



Vector Calculus

Integrals

Derivatives

Limits

Algebra

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Linear Algebra

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Curriculum

Statistics Linear Algebra Diff. Eq. Vector Calculus Integrals Derivatives Limits Algebra

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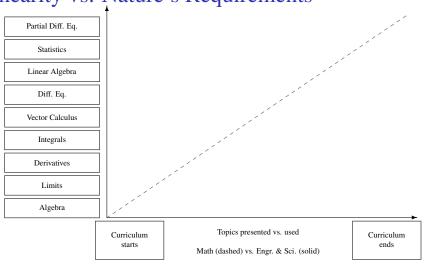
Partial Diff. Eq. Statistics Linear Algebra Diff. Eq. Vector Calculus Integrals Derivatives Limits Algebra

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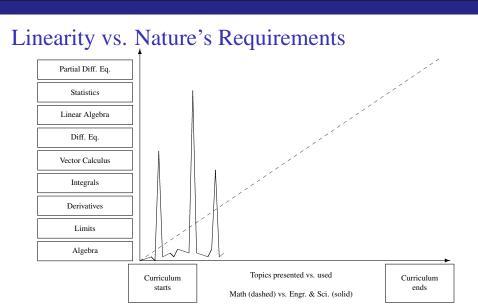
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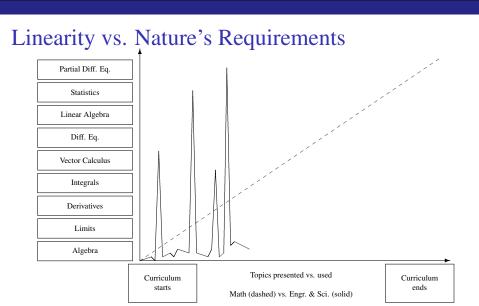
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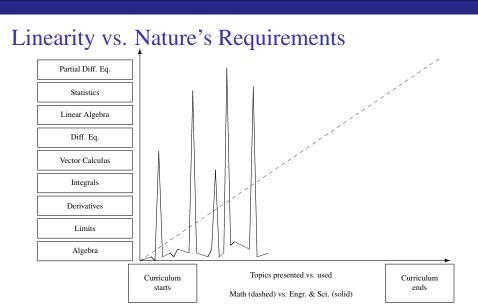
ends

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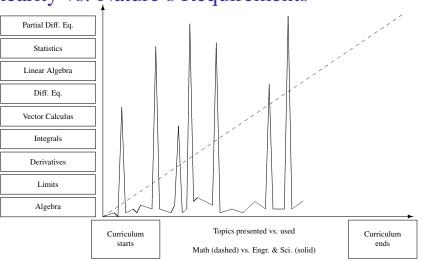
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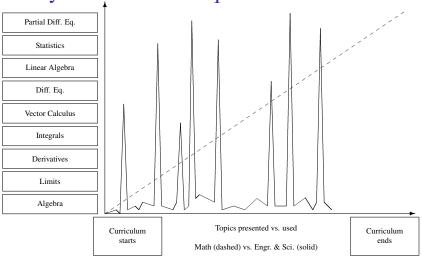
Algebra

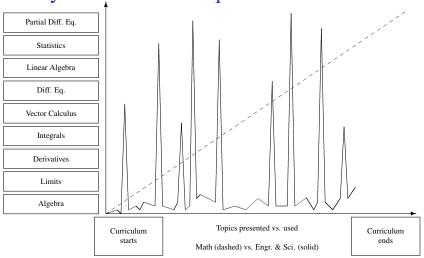
Curriculum

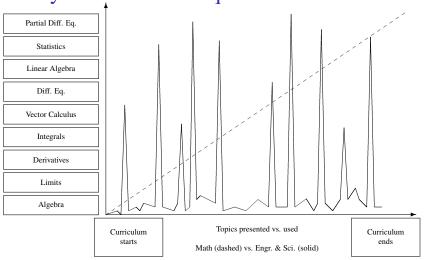
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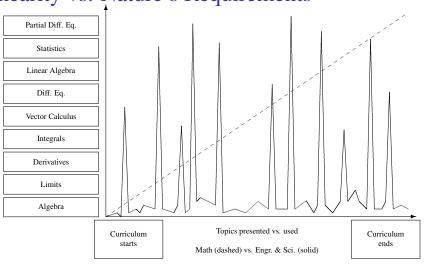
Curriculum











#### The Text

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1. Standard topics

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Course Materials On-Line Delivery Adding the Two Reactions

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(I consider it confusing to have too many places where stuff needs to be done.)

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## Why On-Line Delivery is Different

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- 4. Establish that on-line classes are not "the easy way out". If anything, they are harder, but they can leave you better prepared. (If you can teach yourself mathematics, you can teach yourself anything.)
- 5. To start, pick a course that is not impeded too much by limited presentation space.

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# Remote Delivery of Mathematics (Tools and Resources)

1. WeBWorK

http://webwork.maa.org/wiki/Main\_Page

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2. MikTeX http://www.miktex.org (beamer included), WinEdt http://www.winedt.com/, TeXnicCenter http://www.toolscenter.org/, TeXCAD http://texcad.sourceforge.net/, Graphe Easy http://www.grapheeasy.com/index2.php?lang=en

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- 6. It can be eye-opening to ask questions like: "Is ... really the right requirement for ...?"