	Introduction to S programming: a teaching experience and a manual	Αι
Who?	Vincent Goulet	Con
From?	École d'actuariat, Université Laval Québec, Canada	
	নাচন বিচনাইচন ই তৎজ The teaching experience	
Audience	First year Actuarial Science students	
-	Goal is to learn the programming language, not the statistical software	
•	Second programming language (after VBA)	
Constraints	Large group of students (around 80)	
	Limited access to computer labs Very little time devoted to the topic (4 weeks)	

The teaching experience

Audience

- First year Actuarial Science students
- Goal is to learn the programming language, not the statistical software
- Second programming language (after VBA)

Constraints

- Large group of students (around 80)
- Limited access to computer labs
- Very little time devoted to the topic (4 weeks)

The lab: to go or not to go?

Pros

- Hands-on approach to learning
- Variable pace per student
- Lab work can be done at home

Cons

- "Theory" difficult to teach
- Easy for students to do "something else"
- Limited number of PCs: some just watch

◆□▶ ◆□▶ ◆三▶ ◆三▶ ・三 ・ のくで

	The lab: to go or not to go?		My solution
Pros I Cons I I I I I I I I I I I I I I I I I I I	Hands-on approach to learning Variable pace per student Lab work can be done at home "Theory" difficult to teach Easy for students to do "something else" Limited number of PCs: some just watch	Compromise	Time spent in class Time spent in the lab 1 hour per week Presentation of concepts, functions, etc. Basically no examples 2 hours per week Students mainly execute provided script files Some interventions by the instructor
	My solution		(ロト・個ト・ミト・ミー ショーののの My solution
Compromise In class	Time spent in class Time spent in the lab	Compromise In class	Time spent in class Time spent in the lab
:	1 hour per week Presentation of concepts, functions, etc. Basically no examples	:	1 hour per week Presentation of concepts, functions, etc. Basically no examples
In lab In lab	2 hours per week Students mainly execute provided script files Some interventions by the instructor	In lab	2 hours per week Students mainly execute provided script files Some interventions by the instructor

The manual: *Introduction to S* programming

What it is

- Collection of class notes and scripts
- Much influenced by chapters 1–3 of MASS

▲□▶▲□▶▲□▶▲□▶ ▲□ シタの

- Fully indexed
- Published under the GNU FDL

Also covers

- Optimization functions
- Linear regression
- Time series analysis
- Random number generation
- Efficient simulation
- Emacs and ESS

The manual: *Introduction to S programming*

What it is

- Collection of class notes and scripts
- Much influenced by chapters 1–3 of MASS
- Fully indexed
- Published under the GNU FDL

Also covers

- Optimization functions
- Linear regression
- Time series analysis
- Random number generation
- Efficient simulation
- Emacs and ESS

▲□▶▲圖▶▲≣▶▲≣▶ ≣ の�?