

Collaborative Lesson Development for South African Higher Education

The Carpentries as Case Study

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RCCP II/ASAUDIT Blended Learning SIG Meeting
Johannesburg
19 November 2018

RCCP*II*

Questions During or After the Presentation?

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Etherpad:

<https://pad.carpentries.org/2018-11-19-BLS>

The Rural Campuses Connection Project

- Running since 2010
- Funded by DHET, managed by USAf, implemented by TENET
- Mostly hardware component to funding
- Smaller capacity development component
- Coming to completion in March 2019
- <https://tenet-rccpii.github.io/rccpii-2018/>

Theory of Change: RCCPII

Theory of Change: Rural Campus Connection Project II

Due to connectivity challenges...



Faculty, Students &
Support Staff at Rural
Campuses in SA

- ... Have restricted access to online resources compared to urban counterparts

- ... Have limited exposure to online communication and collaboration with broader academic community

- ... Can often not participate in existing in-person training opportunities due to financial and time constraints associated with travel

Context

By providing connectivity to rural and peri-urban sites through RCCP II it would be possible to decrease the digital divide between these sites and metro institutions

a) For IT Staff

1. Specific workshops for networking staff related to Network service provision
2. Specific workshops (in-person and online) for general IT staff to improve service delivery practices
3. FAQs to better support video conferencing

b) For T&L and Research Support Staff

4. Enablers workshops and online resources providing context of the changing landscape of core business at universities and how it can be supported using technology and the internet

c) For Internet Users

5. Workshops to improve digital and computational literacy
6. Troubleshooting and etiquette guide for video conferencing software users

12 Combined Initiatives

7. Online conversations about current research and teaching and learning landscape including enabling tools, practices, events, and emerging concepts
8. Mobility funding to participate in events to support knowledge sharing and development of community of practice
9. Disseminate information about RCCP II activities, opportunities, and resources

Interventions

The Carpentries

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We teach foundational coding
and data science skills to
researchers worldwide.



What we do

The Carpentries teach foundational coding, and data science skills to researchers worldwide. Software Carpentry and Data Carpentry workshops are based on our lessons. Workshop hosts, Instructors, and learners must be prepared to follow our [Code of Conduct](#).



Who we are

We are a diverse, global community of [volunteers](#). Our community includes [Instructors](#), helpers, [Trainers](#), [Maintainers](#), [Mentors](#), community champions, [member organisations](#), supporters, workshop organisers, [staff](#) and a whole lot [more](#).



Get involved

See all the [ways you can engage](#) with the Carpentries. Get information about upcoming events such as workshops, meetups, and discussions from our [community calendar](#), or from our twice-monthly [newsletter](#), *Carpentry Clippings*. Follow us on [Twitter](#), [Facebook](#), and [Slack](#).

<https://carpentries.org/>

The Carpentries' Reach and Impact

76
Member
Organisations

38K
Learners
Reached

"In my opinion the most revolutionary thing about The Carpentries is not *what* we teach, but *how* we teach it."
- Damien Irving

1.6K
Trained
Instructors

1.7K
Workshops
Run

"...The Carpentries is the best way to prove that it is easy to learn new skills, it is fun to do it together, and that you don't need to be a super specialist to help other people solve their problems."
- Gladys Nalvarte

7
Continents

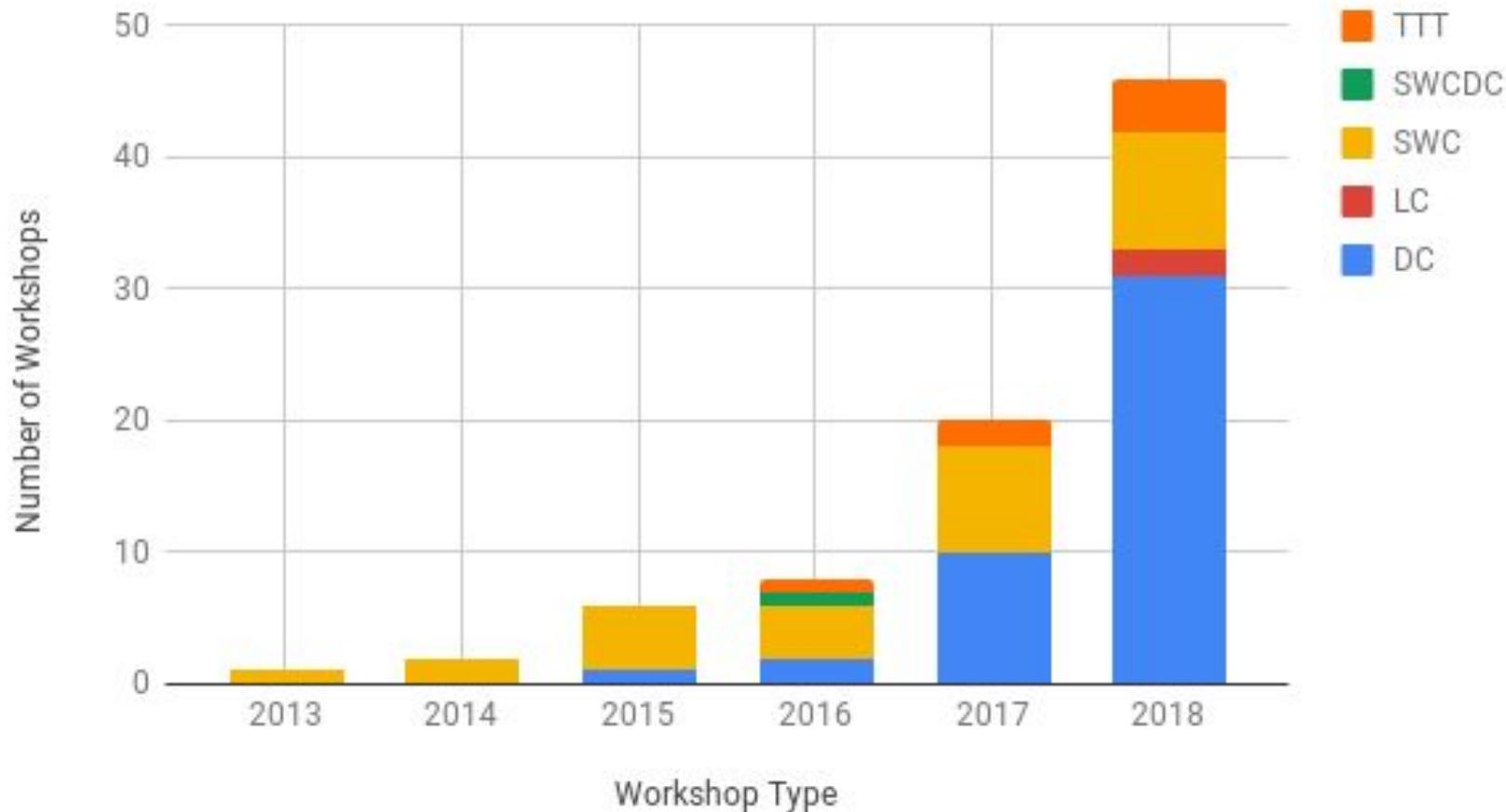
46
Countries

"One of the reasons I got the job is that I am a qualified Software Carpentry instructor! Will definitely be using some of the materials to teach my colleagues."
-Raissa Philibert

74%

of learners surveyed would recommend Carpentries workshops to a friend or colleague.

Carpentries Workshops in Africa (2013 - 2018)



(Unpublished data from The Carpentries' Database)

The Carpentries and RCCPII

- Target audience:
 - IT staff, Librarians, Other T&L or Research or Admin support staff
 - Researchers, Lecturers, Postgraduate students
- Improve digital and computational literacy
- Teach about online resources and how to get help on the internet and from existing communities
- Teach about the benefit of developing communities of practice to support continuous learning
- Teach evidence-based practices for improving teaching



University of Venda
Creating Future Leaders

RCCP II

Academics, Support Staff and Postgraduate Students: Join us to learn about freely available tools that will make your data analysis more effective

You will learn about:

- Formatting data to enhance analysis and sharing
- OpenRefine for data cleaning and augmenting
- R for data analysis and visualisation

Requirements:

- No programming skills required, novice friendly
- Please bring your own laptop

Date: 13 - 15 November 2018

Venue: ICT Lab 016, University of Venda,
Thohoyandou

Cost: FREE

Contact: Alphonse.Bere@univen.ac.za
Or
anelda.vdwalt@gmail.com

Website: <https://tenet-rccpii.github.io/2018-11-13-UNIVEN/>

Learning To Teach Better

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Instructor Training

Over the last hundred years, researchers have discovered an enormous amount about how people learn and how best to teach them. Unfortunately, much of that knowledge has not yet been translated into common classroom practice, especially at the university level.

This two-day class has the following overall goals:

- Introduce you to evidence-based best-practices of teaching.
- Teach you how to create a positive environment for learners at your workshops.
- Provide opportunities for you to practice and build your teaching skills.
- Help you become integrated into the [Carpentries](#) community.
- Prepare you to use these teaching skills in teaching [Carpentries](#) workshops.

What Does All of This Have To Do With T&L?

“We collaboratively develop openly-available lessons
and deliver these lessons
using evidence-based teaching practices.”

~ *From The Carpentries' Annual Report 2018* ~

Collaborative Lesson Development

1. Clarify your audience



2. Make lessons modular



3. Teach best practices for lesson development



4. Encourage and empower contributors



5. Build community around lessons



6. Publish periodically and recognize contributions



7. Evaluate lessons at several scales



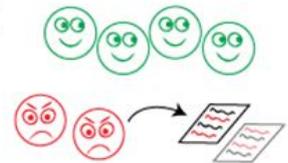
8. Reduce, re-use, recycle



9. Link to other resources



10. You can't please everyone



What Does a Carpentry Lesson Look Like?

This lesson is being piloted (Beta version)



Home

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Data Organization in Spreadsheets for Social Scientists

Good data organization is the foundation of any research project. Most researchers have data in spreadsheets, so it's the place that many research projects start.

Typically we organize data in spreadsheets in ways that we as humans want to work with the data. However computers require data to be organized in particular ways. In order to use tools that make computation more efficient, such as programming languages like R or Python, we need to structure our data the way that computers need the data. Since this is where most research projects start, this is where we want to start too!

In this lesson, you will learn:

- Good data entry practices - formatting data tables in spreadsheets
- How to avoid common formatting mistakes
- Approaches for handling dates in spreadsheets
- Basic quality control and data manipulation in spreadsheets
- Exporting data from spreadsheets

In this lesson, however, you will *not* learn about data analysis with spreadsheets. Much of your time as a researcher will be spent in the initial 'data wrangling' stage, where you need to organize the data to perform a proper analysis later. It's not the most fun, but it is necessary. In this lesson you will learn how to think about data organization and some practices for more effective data wrangling. With this approach you can better format current data and plan new data collection so less data wrangling is needed.

Getting Started

Data Carpentry's teaching is hands-on, so participants are encouraged to use their own computers to insure the proper setup of tools for an efficient workflow.

<https://datacarpentry.org/spreadsheets-socialsci/>

And What Happens in the Back?

datacarpentry / **spreadsheets-socialsci** Watch 6 Star 4 Fork 15

[Code](#) [Issues 5](#) [Pull requests 0](#) [Projects 0](#) [Wiki](#) [Insights](#)

Lesson on spreadsheets for social scientists. <http://datacarpentry.github.io/spread...>

727 commits 3 branches 11 releases 43 contributors [View license](#)

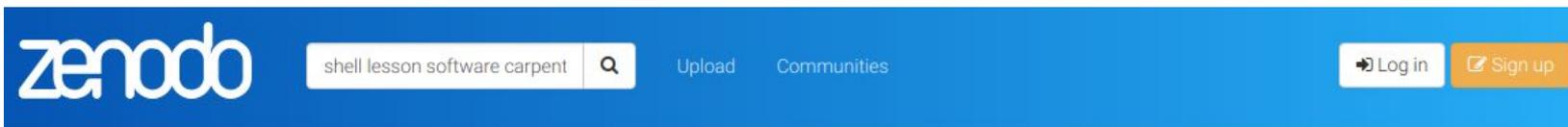
Branch: **gh-pages** [New pull request](#) [Create new file](#) [Upload files](#) [Find file](#) [Clone or download](#)

chris-prener Merge pull request #74 from Shiobhan/patch-1 Latest commit fe5e1a5 5 days ago

.github	Suggest template language	2 years ago
_episodes	move historical discussion to main text of lesson (issue 67)	24 days ago
_episodes_rmd	move data/ into _episodes/ and _episodes_rmd/	2 years ago
_extras	update instructor guide with notes from multiple issues	24 days ago
_includes	Merge branch 'gh-pages' of github.com:carpentries/styles into gh-pages	3 months ago
_layouts	include base_path where needed	3 months ago
assets	Merge pull request #345 from maxim-belkin/margin0	3 months ago
bin	Reflect Apple's rebranding	3 months ago
code	Preparing for June 2016 release	2 years ago

<https://github.com/datacarpentry/spreadsheets-socialsci>

How Do Contributors Get Credit?



April 30, 2017

Lesson Open Access

Data Carpentry Spreadsheet Ecology Lesson v2017.04.0

Tracy Teal; Erin Becker; Greg Wilson; Aleksandra Pawlik; Raniere Silva; Laurent Gatto; Francois Michonneau; Juan Steyn; Abigail Cabunoc; Christie Bahlai; Hilmar Lapp; Ethan White; Kari L. Jordan; Ben Marwick; Sebastian; leonorgg; Rémi Emonet; Piotr Banaszekiewicz; Angel Corpuz; Rudi Brauning; Amy Nurnberger; Anelda van der Walt; Casey Bergman; Harriet Dashnow; James Allen; Jon Pipitone; Karthik Ram; Maxim Belkin; Michael Hansen; Moritz Neeb; Nick Young; Zack Brym; evanwill; Alexander Konovalov; Bill Mills; Carlos Martinez; Dave Beck; Francisco Rodriguez-Sanchez; Gabriel A. Devenyi; Ian Carroll; Jaclyn Saunders; Jeffrey W. Hollister; Jonah Duckles; Kara Woo; Martin Dreyer; Timothée Poisot; W. Trevor King; rcarns

Editor(s)

Christie Bahlai; Tracy Teal

Initial release of Data Carpentry Spreadsheet Ecology Lesson

Funding: Gordon and Betty Moore Foundation, National Science Foundation BIO Centers

Preview

198

views

1

downloads

[See more details...](#)

Available in

GitHub

Indexed in

OpenAIRE

https://zenodo.org/record/570047#.W_K018szais

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 <https://orcid.org/0000-0003-4245-8119>[View public version](#) [Display your iD on other sites?](#) [Public record print view?](#) [Get a QR Code for your iD ?](#)Biography Software Carpentry: The Unix Shell   

Zenodo

2017-08-03 | online-resource

DOI: [10.5281/ZENODO.838774](https://doi.org/10.5281/ZENODO.838774)

Source: DataCite

 Preferred source  Software Carpentry: Version Control With Git   

Zenodo

2017-08-03 | online-resource

DOI: [10.5281/ZENODO.838761](https://doi.org/10.5281/ZENODO.838761)

Source: DataCite

 Preferred source  

Support for Various Languages



The screenshot shows a website header with a navigation menu. The menu items are: Inicio, Código de Conducta, Configuración, Episodios, Extras, Licencia, and Mejora esta página. A search bar with the text "Buscar..." is located on the right. A language dropdown menu is open, showing "en: Home" and "ja: Index". The dropdown menu is highlighted with a red rounded rectangle.

Version Control with Git

Para ilustrar el poder de Git y GitHub, usaremos la siguiente historia como un ejemplo motivador a través de esta lección. El Hombre Lobo y Drácula han sido contratados por Universal Missions para investigar si es posible enviar su próximo explorador planetario a Marte. Ellos quieren poder trabajar al mismo tiempo en los planes, pero ya han experimentado ciertos problemas anteriormente al hacer algo similar. Si se rotan por turnos entonces cada uno gastará mucho tiempo esperando a que el otro termine, pero si trabajan en sus propias copias e intercambian los cambios por email, las cosas se perderán, se sobrescribirán o se duplicarán.

Un colega sugiere utilizar [control de versiones](#) para lidiar con el trabajo. El control de versiones es mejor que el intercambio de ficheros por email:

How Could This Benefit SA Universities?

Enabling Academia

These lessons are developed collaboratively by the academic community of South Africa and aim to provide a training resource for foundational skills that can enable academics to benefit from technology in the academic setting.

☀ Prerequisites

There are no pre-requisites, and the materials assume no prior knowledge about the tools.

The lessons can be used as stand-alone lessons or can be combined to offer training over a day or two-days depending on the need of the audience.

Overview of the lessons:

- [Video Conferencing Best Practices](#)
- [Lecture Capturing: Good Practices for Lecturers](#)

Lecture Capturing: Good Practices for Lecturers

This lesson forms part of the Capacity Development Programme of the [Rural Campuses Connection Project II \(RCCPII\)](#). RCCPII is funded by South Africa's Department of Higher Education and Training, managed by Universities South Africa (USAf), and implemented by the Tertiary Research and Education Network (TENET).

About This Lesson

The lesson is developed under an open license which allows anyone to use and modify it according to their needs as long as the original authors are being credited.

This lesson is aimed at lecturers who are new to lecture capturing or who want a refresher on some good practices for lecture capturing.

We welcome your comments, questions, critique, and contributions.

Prerequisites

Participants in this course should have registered their interest to have lessons recorded at their institutions' Centre for Teaching and Learning.

Schedule

	Setup	Download files required for the lesson
00:00	1. Introduction	What is lecture capturing? Why are we doing lecture capturing at my university? What does the DHET say about lecture capturing? What does the research say?
00:25	2. Students and Lecture Capturing	How should you introduce your students to lecture capturing? What should students do or refrain from doing during a lecture that is captured? How will students get access to the captured lessons?
00:40	3. Designing Visual Aids for Recorded Lectures	How can I improve my visual aids (slides, etc.) to enhance the student experience for captured lectures? What other visual aids can I use except for slides?
01:25	4. Knowing Your Rights	What is lecture capturing?

Future of Collaborative Lesson Development for SA

- Identify some common and foundational lessons that can be developed that will be useful to a group of universities
- Find a collaborator who could contribute initial content and assist with layout
- Develop one lesson and release to universities for testing
- Improve the lesson
- Provide training for contributors
- Want to collaborate? Contact me!

Questions & Comments?

Thank you for your time!

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