

IT Toolbox: Module Guide



16 September 2008 Version 2.0

led by Professor Jonathan Briggs with Dr Jarek Francik

Welcome to Toolbox

This is a new module about modern IT taught in a new way around a set of activities. This guide sets out how to get the best out of the module and how it fits into your course as a whole. We hope you enjoy the module!

In the past IT was taught as a set of ideas you just had to learn, computers were expensive and Facebook had not been invented.

In 2008, students coming to university are already immersed in the web, mobile phones, social networking, programming, games and virtual reality and so this module is about making sense of that world rather than starting from somewhere else.

Goals of the module

Our aim is to help you build your own mental picture of some of the key ideas in modern IT through experimenting with these ideas on your own. Instead of simply listening to lectures we will push you to try things out; difficult things.

You will make mistakes, hit innumerable road blocks, just like IT professionals and you will learn to solve them, find online help and ask colleagues and friends for support and advice. By trying things yourself you will gain in confidence and by the end of this module you will have a set of tools that will

set you up for the rest of your course and for your career; whatever you decide to do.

During this module students will:

- Run their own web servers
- Design and run a blog
- Make money from ecommerce affiliates
- Describe the workings of search engines
- Distinguish between client and server side processing
- Create small web prototypes
- Discuss the importance of social networks and reputation
- Create mashups
- Experiment with CSS & Javascript for web design

Many of these activities are not typically taught until the final year of other courses but we decided to get you in the deep end early. Our job is to teach you to swim!



Jonathan Briggs

Jonathan Briggs is Professor of eCommerce at Kingston University. Since 1994 he has also been a Director of the OTHER media, a web and eCommerce

company based in London Bridge. the OTHER media employs over 30 staff and works for clients such as Paul Smith, ZSL London Zoo, BAFTA and Which?

In 1994 Jonathan and some friends bought an old Swedish prison and started a school of digital media which we called Hyper Island. This module is based on that experience.

If you are interested in finding out more, check out www.othermedia.com and www.hyperisland.se. Oh and you'll need www.jonathanbriggs.com to guide you through this module.

Activities



At the heart of this module are 10 activities.

By completing them at home or in the university you will gain an understanding of some of the key ideas of modern computing plus equip yourself for the rest of your course.

Each activity will be presented as a guided series of instructions and as you work through them you'll be asked to think about what is going on behind the scenes.

At the end of each activity you will feedback your results and your thoughts online and within a short while you'll get feedback.

Expectations



This module expects you to work hard and you'll find it tough if you don't spread the work out over the whole semester.

You'll quickly notice that Toolbox is different from other modules and it's meant to be.

We won't stand in front of you and show you how to do things - you'll have to work those out for yourself.

We will show you other tools and approaches that work for us and we will support you when things are difficult.

We expect you to get involved and try things out!

Problem solving



Many ideas in computing cannot be taught simply by listening. You need to try things out and when you do things will not behave as you expect. They'll go wrong and you'll have to fix them.

When you have fixed them, and that will sometimes take a long time, you will have learned much more than if someone had simply told you the answer.

In this module things are going to go wrong and you are going to have to learn to solve problems. But these problem solving strategies are exactly what you will need to become a professional in our industry

The activities

Each week we will publish a different activity on www.jonathanbriggs.com. You should aim to complete the activity in the same week. Each activity will take around 3-4 hours but some may take a little longer. Here are some examples.



Start a WordPress blog

Today's computing is about user generated content and you have to be part of that. Some of you probably run blogs already but we want to get you using WordPress so that you have a platform for experimenting with all aspects of web design including layouts, graphical design, ecommerce, content management and client and server scripting. By running your own blog on your own server you will be able to create prototypes for other modules as well as build a portfolio for showing potential employers and customers.



Create dynamic websites

Websites used to be built as a set of individual pages linked together. Not anymore. Most sites are generated automatically from databases using content management and publishing systems. We'll help you experiment with the first stages of linking databases to the web. There is a steep learning curve and plenty of pitfalls on the way but we are confident we can get you there.



Explore mashups

Today's web world is full of sites that are automatically linked together; mashed up to share content, services, advertising and technology. We'll help you explore some of the underlying tools behind mashups so that you can see what is going on and starting thinking about mashups of your own.

Getting the best from the module

Come to the lectures

You'll miss lots of tips and tricks if you don't come to the lectures. We promise to try not to be boring if you come ready to discuss and get involved. This is not a school lesson and you can feel free to ask difficult questions.

Please make sure that you are there on time!

Register for the module

Although you are already registered for the course I find it useful to know who is actually on the course and how best to contact them.

Do the activities properly

Activities will normally be set at least a week before the suggested deadline and published on www.jonathanbriggs.com. You will normally get an email or text reminder when new activities are posted. Don't leave it till the last minute to look at what is involved. Get into the habit of an activity every week.

- **Read the activity**
- **Download any documents that are presented**
- **Work your way through the first part of the activity keeping notes.**
- **If things are going well try to work out what is happening behind the scenes**
- **If things go wrong, use some of the suggested sources of help to try to find a solution or discuss with a friend**
- **Fill in the feedback form/survey/test for the first part of the activity. You will be provided with a link to an online form. Always keep notes so that if the online form fails (and it is a commercial and very reliable service so it won't), you will have a way of reentering the information again.**
- **Repeat with the second part of the activity (if you want to get a good mark)**

We will always try and give you an indication of how long each activity should take. Remember, the activities replace workshop time in other modules as well as the independent study that is always part of a university course so don't be surprised if some weeks you are spending 5-6 hours on this module

Use www.jonathanbriggs.com to add comments, suggestions and give feedback on the module.

The small print about the activities

This module is assessed through coursework; the activities. That is unless you do very badly in which case we will make you sit an examination. If you complete the activities no examination!

Every activity will have two components and its up to you whether you do both or choose just to do the first. You can pass the module by just completing the first component of each activity.

You should aim to complete every activity in the week that it is set so that you don't fall behind but if you do miss a week you can still take missing activities. In theory you could try and do all of the activities at the end of the module (and mess up your other modules) but we stop you doing that by making you take the examination if you have not completed enough of the activities (the first part) by the middle of the semester.

You can go back and do an activity again if you found it hard.

You are expected to do all activities on your own. Of course we don't mind if you discuss each week's activity with friends but the work you actually produce needs to be your own. We will check! If we discover that you are submitting the same work as someone else then we will make you sit the examination.

Passing and more than passing

You will pass the module if you complete 8 out of the 10 activities by completing the first component of these activities. That's it. You will have passed.

If you want to do better than that:

8 basic activities = Pass

8 basic activities + 4 second component activities = C

8 basic activities + 6 second component activities = B

8 basic activities + 8 second component activities = A

So even for an A you do not need to complete all 10 activities. But we think you should.

The small small print

Completing an activity means completing the tasks in an activity and submitting the required information to show that you have completed it. This may mean submitting the answers to questions or URLs pointing to pieces of work that you have completed.

We reserve the right to randomly call you in for an interview to check that the work that is being submitted is really yours.

In the event that you are sick or have other mitigating circumstances that render you unable to complete an activity on time we urge you to complete it as soon as possible after the proposed deadline.

Running your own server



You will buy your own domain and server space

We've thought about this very hard and although a University can supply you with hard disk space and computers to test out your ideas upon, for this module we believe that it is essential that you rent some server space and your own domain name.

The benefits are just enormous and all stem from you being in charge. With your own space you will be able to experiment with email, forums, blogs, databases, spam filtering, web publishing, image and video hosting, ecommerce, communities, social networks, a multitude of languages and scripting.

We'll make clear recommendations on what you should buy and help you spend as little as possible. Other courses will ask you to buy a key textbook. We won't! Instead we'll ask you to spend the same amount of money to equip yourself with some shiny server space and a domain name of your very own.

In fact, we believe that if you follow all the activities in this module you'll be able to use your server space to earn enough money to make back all the money you invest. And even if you don't, we guarantee that running your own server will give you a significant advantage when it comes to summer jobs, placements and part time work within our industry.

Do I have really have to spend my own money?

Yes. Well no, actually. You can do all of the activities through free hosting on advertising supported servers and you're free to make that choice if you want to. But its a lots less straightforward, a lot less interesting and full of nasty rules and pop-ups. There are other strategies you can use for minimizing the costs but all require you to do more work.

Frequently asked questions

Because this is a brand new course these cannot really be frequent asked can they, but they are the sort of questions I expect will come up.

Will there be lectures like other modules?

There will be a lecture every week but it may be different from others modules. We will have a chance to discuss big issues that are emerging from the activities but the main purpose of the lectures is to show you other ways of doing similar things and further tools that will help you now and in the future. Please make sure that you are on time for every session.

Will there be workshops?

There are no workshops. The activities are designed to be completed by you either at home or using university computing facilities. Part of the design of the module is that you have to solve the problems that arise yourself.

What happens when I have a problem?

We'll always try and point you in the direction of sites and online forums where you can discuss problems you have with activities. Helping you find ways of solving your own problems is what this course is really all about; that is what every IT professional has to do every day.

Do I have to have my own computer?

It will help enormously if you have your own machine and a broadband connection but it is not essential. You can always use the university facilities. We don't care whether a machine you have runs Windows XP or Vista or Mac OSX or any flavour of Linux. In fact, if you are thinking of buying a machine then buying a Mac that runs Windows and Unix is always a good choice. That is what I have and it allows me to run and experiment with everything!

What software do I need?

We don't expect you to buy any software except that which comes with your machine. The activities are designed around Open Source software that works on all the major types of computers and is free to download and use.

How does this fit in with the rest of the course?

The full course team has been involved with the planning of this module and is highly supportive. We are always experimenting with ways of improving what we do and welcome feedback from you. This module has been designed to provide a range of skills that will be useful in the other modules and whole course,

What books do I need to buy?

There are no set texts for this module although we can always recommend books to take ideas further.

Why is this module being taught so differently from the others?

As computing changes there is more and more that an IT professional needs to know. It is disappointing when at the end of the final year some students still have not explored what is going on behind the scenes in the major systems (such as Facebook and Google) that we are all using. This module has been designed to address this directly.

Contact

You will have been assigned a personal tutor and this is often a good first person to go and see about personal and academic issues. They have been asked to see you three times during this module to make sure that you are keeping up to speed.

www.jonathanbriggs.com

The main point of contact with me will be my site and you should use this to discuss issues and problems around each activity. There is a comment box after each article. I will try and answer within 24 hours. Please read the other comments and replies before posting your own.

email

I get a lot of email every day and it is impossible to answer all of it although it normally gets read. My university email address is j.briggs@kingston.ac.uk

Please make sure that ALL emails contain a subject line and your full contact details (mobile if you have one) so that I can contact you easily.

mobile

I will communicate with you sometimes by SMS and you will usually be able to reply to these.