**jHub Coding Scheme (JCS)**

*[Notes: this document is current as of 31st March 2022. The latest version can be found by sending a blank Email with ‘Superpowers’ in the subject title to* [*UKStratCom-JHUB-Coding@mod.gov.uk*](mailto:UKStratCom-JHUB-Coding@mod.gov.uk) *(if you haven’t done so already). For version control purposes – please never share this document, just the poster please! ]*

This document details the [aim](#Aim) of the JCS (**jHub Coding Scheme**), [eligibility](#eligibility), [how it works](#how_it_works), the [modules available](#modules), the [assessments](#assessments), how [payment](#payment) is made, and the [collaboration platform](#collab_platform).

**Aim**

The **jHub Coding Scheme** aims to give serving personnel the opportunity to gain valuable coding and AI skills, whilst getting paid to do so, so that they might use these skills to enable an information advantage.

**Eligibility**

It is important to us that everybody has the opportunity to take part in this scheme. However, since we are only be able to make payments through DBS (i.e. the JPA and HRMS pay systems), we unfortunately cannot pay incentives to those who receive their salaries from other sources. This includes but is not limited to: Sponsored reservists, Locally Employed Civilians and civil service fast stream. Those on University Air Squadrons/DTUS/University Office Training Corp’s/University Royal Naval Units. The scheme is still open to them to submit assignments and have them marked, however, the incentive payment must be arranged locally if possible.

**How it works**

The scheme works as follows:

1. **Choose:** You decide upon the skill-set you would like to develop (or demonstrate, should you already have these skills). These are listed below in the modules section.
2. **Learn:** You take an online course to develop these skills – the modules section below features a list of appropriate free or low-cost courses accessible on the internet for you to take to reach the required levels. Please attach a copy of your certificate (or a screenshot of completed modules if the course doesn’t include a certificate) to your submission on Defence ideas to ensure you get full payment if successful. For security reasons it may be a good idea to sign up to courses with a personal email address not a MOD one not to talk about military experience on discussion boards.
3. **Demonstrate:** Once you’ve finished your course, sign-up to the assessment platform and demonstrate your competency.
4. **Reward:** We mark your assessment and, if successful, will pay you the appropriate award (£100-£500) as detailed in the payment section.
5. **Collaboration:** The platform also has a collaboration area in which you can develop your skills and portfolio of projects, by working to solve problems for other users in defence - delivering innovative new capability and having a real impact on the way defence operates.

**Modules**

*[DISCLAIMER] Lots of the courses are on “Udemy” – this website is great, but the RRP’s of the courses are huge (~£200) -* ***never pay this****, as they are frequently (fortnightly) on sale for a tenth of the price i.e. £10-20! Just come back a few days along the line and there’ll be on sale or take one of the alternatives listed.*

Below is the list of the modules, and suggested (not mandatory) courses to reach the level required. If you already have the skills covered by the modules below, you can take the assessments and still receive a financial reward, but it will be half the value of that denoted below.

You can do as many modules as you like!

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| --- | --- | --- |
| ***Module*** | ***Description*** | ***Reward*** |
| [**Module 1**](#module1)**a** | Creating a website | £300 |
| [**Module 1b**](#module1b) | Create a dynamic website and application | £200 |
| [**Module 2**](#module2) | Creating an app | £300 |
| [**Module 3**](#module3) | Learning “python” – the fastest growing coding language | £300 |
| [**Module 4**](#module4) | Machine Learning and Artificial Intelligence | £300-500 dependent upon level |
| [**Module 5**](#module5) | Natural Language Processing | £300 (£200 from 01 Nov 20) |
| [**Module 6**](#module6) | Agile project management | £100 |
| [**Module 7**](#module7) | User Experience (UX) | £100 |
| [**Module 8**](#module8) | Innovation Bootcamp | £50 |
| [Module 9](#module9) | Cloud Computing | £100 – 250 dependent on the challenge |

**Module 1a: I want to be able to make an eye-catching website** (Incentive: £300)

*Suggested courses:*

**Option 1:** <https://www.udemy.com/the-web-developer-bootcamp/>

47hrs of video, with many end-to-end projects.

Cost:varies greatly with Udemy as noted above – usually around £10, occasionally as high as £200 – if the latter, just mark it on your wishlist and they’ll email you once it’s on sale, or take the course below.

**Option 2 (FREE!):** Freecodecamp: <https://learn.freecodecamp.org/> “Responsive web design certification”, takes a couple of months of your spare time for the complete beginner, but I can vouch that it is very fun to complete, and you pick up skills rapidly! Costfree

***Want to take your learning further and go the extra-mile?*** Why not try module 7 – the User Experience (UX) module?

**Module 1b: I want to be able to make a dynamic website and application using APIs** (Incentive: £200)

*Suggested courses:*

**Option 1:** [Angular - The Complete Guide](https://www.udemy.com/course/the-complete-guide-to-angular-2/)

**Option 2:** [React - The Complete Guide](https://www.udemy.com/course/react-the-complete-guide-incl-redux/)

Cost:Both courses are Udemy and itvaries greatly with Udemy as noted above – usually around £15, occasionally as high as £200 – if the latter, just mark it on your wishlist and they’ll email you once it’s on sale.

Time expected

* 1. 20-30 Hours (learning)
  2. 8-15 Hours (Assignment)

**Module 2: I want to be able to make phone app that will work on both apple & android!** (remuneration £300)

**NOTE:** This is a challenging module - you will require to have taken Module 1 beforehand then need to complete both modules below.

**Step 1:** Take the Angular course [here](https://www.udemy.com/the-complete-guide-to-angular-2/). 37 hours of video. Cost: usually ~£10, but sometimes ridiculous money – add it to your wishlist on the site and wait until a discount if it’s more than £20. Discounts are very frequent.

**Step 2:** Take the ionic course [here](https://www.udemy.com/ionic-2-the-practical-guide-to-building-ios-android-apps/).15 hours of video, costs as noted above.

***As an extra for those who want to go the extra mile:*** *I want to make a progressive web app (i.e. a webpage with similar function to an app on your phone)*

<https://www.pluralsight.com/courses/web-apps-progressive-getting-started> 2 hours of video, ~£29/month

**Module 3: I want to gain a foundation in “coding” (in this case Python – the fastest growing programming language, and that used by the Defence Cyber School) which** **can not only solve problems, but also create games** (Remuneration: £300)

**Recommended courses:**

* <https://www.udemy.com/complete-python-bootcamp/> , 24 hours of videos, cost: varies greatly with Udemy as noted above – usually around £10, occasionally as high as £200 – if the latter, just mark it on your wish list and they’ll email you once it’s on sale.

Or

* **[Works on MoDNET!]** <https://www.udacity.com/course/introduction-to-python--ud1110> - this course is free.

If you want to start writing python code; you can do so on a MoDNET terminal [here](https://www.onlinegdb.com/online_python_compiler) or download a package (on civilian IT) that works offline like those available on [anaconda](https://www.anaconda.com/distribution/).

**Module 4: I want to analyse my data with machine learning/Artificial Intelligence and make predictive model to solve complex problems!** (Remuneration at three levels: 4a = £300, 4b = £400 (or just £100 if 4a also claimed), 4c = £500 (or a further £100 if 4a & 4b already claimed).

**(4a) Weka (for beginners, no coding needed):**  <https://machinelearningmastery.com/machine-learning-mastery-weka/> , eBook with 3 end-to-end projects that are easy to follow, ~£29.

**(4b) Machine learning in Python** (Module 3, or equivalent skillset, required)

<https://www.udemy.com/machinelearning/> , 41 hours of videos, Cost: varies greatly with Udemy as noted above – usually around £10, occasionally as high as £200 – if the latter, just mark it on your wishlist and they’ll email you once it’s on sale.

**(4c) Deep learning/Neural Networks** (will need to have completed prior course unless significant prior experience): <https://www.udemy.com/deeplearning/> , 23hrs of videos, Cost: as above.

**Module 5: I want to learn skills in natural language processing (using machine learning to interpret text), creating a spam filter along the way!** (incentive payment £300 (£200 from 01 Nov 20))

Module 3 & 4b or c is recommended as a pre-requisite to this course.

**Option 1:** <https://www.udemy.com/data-science-natural-language-processing-in-python/> **,** 8hrs of video, cost: varies greatly with Udemy as noted above – usually around £10, occasionally as high as £200 – if the latter, just mark it on your wishlist and they’ll email you once it’s on sale  .

**Option 2:** <https://www.pluralsight.com/courses/tensorflow-sentiment-analysis-recurrent-neural-networks>, 3 hours of high quality video, ~£30/month

**Module 6: I want to learn how to manage projects using “Agile” project management techniques!** (incentive payment £100). There are no pre-requisite modules for this course.

*“I would recommend this course to anyone who is interested in methods for optimising high performing teams and getting ‘stuff’ done.”* **Lt Col and former 22 SAS Sqn Commander**

**Course contributor:** SAC Gary Maccabe

**Suggested minimum required course reading:**

1. Udemy - Agile Crash Course: Agile Project Management; Agile Delivery - [*https://www.udemy.com/course/agile-crash-course/*](https://www.udemy.com/course/agile-crash-course/)– **1.5 hours**,usually costs around £10-20 on sale; if more just wait until the next sale (every 1-2 weeks) and do the course below first.

**AND**

1. *GOV.UK’s Agile Delivery page* [*https://www.gov.uk/service-manual/agile-delivery*](https://www.gov.uk/service-manual/agile-delivery)*. –* **5-10 hours,** cost: £free. **[Works on MoDNET]**

**Suggested additional:**

1. To further your understanding of the tools and practices available within Agile development (and DevOps) and when it is appropriate to use them, have a look at The Open Practice Library <https://openpracticelibrary.com/>
2. DevOps Fundamentals: Gain Solid Understanding - <https://www.udemy.com/devops-fundamentals/> (Learn the fundamentals of DevOps including the entire software development lifecycle. Agile, Scrum, and CI/CD with Demos) – **2.5 hours**

A close up of a map

Description automatically generated**Module 7: “User Experience (UX)” I want to understand how users interact with products and make applications and websites that are effortless to use!** (incentive payment £100). There are no pre-requisites for this course.

**Course contributor:** SAC Gary Maccabe

**Suggested minimum required course reading:**

1. UX Research for Apps: User-centric from Concept to Launch: <https://www.udemy.com/course/app-design-ux-research-from-concept-to-launch/>- **3 hours of video.  
   Cost:** £9.99 with discount activated, otherwise £199.99 (discounts are activated periodically on Udemy site, please do not pay the full price!) **AND**
2. Government Digital Services (GDS) User research **mandatory reading** (suggested chapters below) - <https://www.gov.uk/service-manual/user-research> **[Works on MoDNET]**

* **Understanding User Research**
* **User Research in Different Design Phases**
* **Preparing for User Research**
* **User Research Methods**
* **Analysing and Sharing Findings**

*Additional Courses (if you want to learn a bit more…):*

* <https://www.coursera.org/learn/visual-elements-user-interface-design> , 17 hours to complete, cost: 7-day free trial then £38/month
* Followed by: <https://www.coursera.org/learn/ux-design-fundamentals> , 32 hours to complete, cost: 7-day free trial, then £38/month

**A picture containing person, dark

Description automatically generatedModule 8: “Innovation Bootcamp” The jHub Innovation Bootcamp is aimed at providing you with skills and knowledge that will enhance your ability to achieve desired outcomes that may provide competitive advantage. Design led thinking aligned to real needs, along with methods allowing rapid prototyping will assist you in driving towards growth and iterative change in the context of your environment.**

**Whether in commercial profit focussed business or the impact focussed public sector, the ability to do the right thing (be relevant) and do it well (quality) using the methods introduced in the Bootcamp will aid you in your role to meet organisational challenges. Be Netflix not Blockbuster!**

(incentive payment £50). There are no pre-requisites for this course and there is currently no final assignment.

***Course contributor:*** *Capt David Emmerson*

This module is currently different from the rest in that it is a free course and currently only asks that students complete the mandatory training called Innovation Bootcamp (estimated 6 hours online learning) and submit a screen shot of each completed module, of which there are 4 on the course, as an idea via the jHubCrowd website as normal.

You will need a licence to undertake the training, which can be obtained by registering your interest on the DLE (Go to Course-Digital Academy- Digital Academy Admin Services- Apply for the Innovation Bootcamp) or click [here.](https://dle.ice.mod.gov.uk/mod/feedback/view.php?id=1032621)

Once you have received your log on details via email you can access the training here - [Link](https://gbr01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fjhub-innovation.teachable.com%2Fp%2Fjhub-innovation-bootcamp&data=04%7C01%7CDavid.Emmerson391%40mod.gov.uk%7C3aa57f23db2c40349d7c08d903e84dbe%7Cbe7760ed5953484bae95d0a16dfa09e5%7C0%7C0%7C637545118559333186%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C1000&sdata=n99xAgg5nNUeku1Z6OnP2V3T0DvQ6xECkedS3nWTNrM%3D&reserved=0). Please use a web browser on a personal device to complete the training as MODnet will not play the videos.

**Module 9: “Cloud computing” This module is broken into three discrete challenges aimed at providing you with the skills and knowledge to understand the benefits of cloud computing, creating a deployed cloud project and how to implement a cloud project within the MOD framework.** (incentive payment Challenge A £150 – Challenge B £250 Challenge C £100). There are no pre-requisites for the course however, Challenge B options draws on the experience gained from Graduates of Modules 1a, 1b, 2 and 3.

***Course contributor:*** *Ft Lt Dan Leedham*

**Recommended courses:**

Students should complete a course that provides an overview of Cloud computing. For graduates of previous modules, you may wish to use your preferred provider such as Udemy or Skillsoft. Popular courses are often specific to a Cloud service provider such as:

1. AWS Cloud Practitioner Fundamentals <https://www.aws.training/Details/eLearning?id=60697> or similar course on [Udemy](https://www.udemy.com/course/aws-certified-cloud-practitioner-new/)
2. Azure Fundamentals Part 1 <https://docs.microsoft.com/en-gb/learn/paths/az-900-describe-cloud-concepts/> Look out for Microsoft Courses available to the MOD via the Enterprise Skills Initiative: <https://modgovuk.sharepoint.com/sites/20100/SitePages/Microsoft-Enterprise-Skills-Initiative-(ESI)-program.aspx>

**Assessments:**

The assessments can be found on the **jHubCrowd** website, which is cleared to Official Sensitive (OS) and available on personal and MoDNET devices. Instructions for how to register, and complete the assessment are below.

1. **Registration:** You will first need to register here: <https://def-ideas.wazoku.com/> from a MoD terminal or using an @armymail address. It is straight-forward, and validation can be performed immediately just by clicking a validation email sent to your official email address. You will then be able to access the platform from a personal device.
2. **Enter the jHubCrowd site:** once registered and on the site, click “Search” in the top right corner and search for “**jHubCrowd**”. Below the search bar there will be five options – ensure that just “Idea’s space” is checked. “**jHubCrowd**” should now be visible in the options, and you can click it to enter the site.
3. **Assessments:** To navigate to the assessments from the **jHubCrowd** home page, click on the “activity” tab on the left underneath the logo and type in “coding assessment”
4. Choose the appropriate assessment area and follow the instructions on the site! The mark schemes are denoted on the site.
5. **Pass/fail:**
   1. **Pass:** If you pass you will be paid on your payslip (no action required from you).
   2. **Fail:** If you fail you will be given feedback and two further opportunities for re-sit.

**Payment**

The amounts to be paid for completion of each course are denoted in the “Modules” section above. To claim the incentive, simply complete the required assessment on the **jHubCrowd** site and attach the certificate of completion of the coding course you have taken (no certificate attached = half payment. This is the case for all modules, without exceptions. We will not chase for certificates if they are not attached – apologies, we simply do not have capacity, and this cannot be rectified retrospectively!).

The **jHub Coding Scheme** team does a monthly trawl of the assessments section (first fortnight of every month) and, if you’ve passed, you will receive payment on your payslip within two months. It will be subject to tax and national insurance.

**Reservists** are not eligible to claim reserve pay for time spent completing the courses, they are only able to claim the incentive payment.

**The Collaboration platform (jHubCrowd)**

The **jHubCrowd** is a collaboration platform that allows users with problems to set challenges for those with the ideas and skills to solve them.

For example, this could mean that you, with your newfound coding or datascience skills, could help a military healthcare professional to solve a problem that has impact on the health and wellbeing of service personnel, or perhaps help create an innovation that significantly improves the workplace… solving defence problems using the power of the crowd.

**Contact details**

Feedback is welcomed, to [UKStratCom-jHub-Coding@mod.gov.uk](mailto:UKStratCom-jHub-Coding@mod.gov.uk) . Similarly, if you are interested in becoming part of the community that keeps the **jHub** **Coding Scheme** ticking, then please also get in touch on the same email!

Thank you,

JHub Coding Scheme, brought to you by the Digital Academy.

Join a growing community to become a [Digital and Data Buddy](https://emea01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fmodgovuk.sharepoint.com%2Fsites%2Fmod-digitalbuddies&data=04%7C01%7CSarah.Bramall-Coffield100%40mod.gov.uk%7C549b336a5cea41ccf92708d9372249b9%7Cbe7760ed5953484bae95d0a16dfa09e5%7C0%7C0%7C637601442810952086%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C1000&sdata=q6mVsqO%2FuzSVlW%2B28AHM2J9t9jwjf34vnNEMc8UhvRQ%3D&reserved=0)

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