42's curriculum manual

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Summary: Welcome to 42 ! But how does it work ?

.1 Goals

The goal of 42 is to allow you to grow your skills for digital, and thus be able to find your spot on this booming market which is constantly looking for new skilled professionals.

.2 General intents

The main idea behind the school is that the academic system does not train like it should, nor enough professionals. 42 was created to allow talented people to apply to the curriculum independently from their education, financial or social background. The selection, first online then during the piscine, aims to identify those established or emerging talents. The curriculum's contents, and its developpment, were conceived precisely to allow such talents to mature while being compatible with the professionnal market's expectations. The following parts of this document will focus on the main themes of the school and its methodology : the peer-learning.

.3 How to progress in the curriculum ?

At 42, no classes, no sessions (except for purely administrative topics), no schedules, no lectures, no timetable. Mainly practical projects to succeed. You are free, but you must act, take control of yourself, choose your next actions, make choices, experiment with these choices, correct them, determine your schedule, and create your very own self-discipline. We will offer you challenges, with some access restrictions, that you will choose to do or not. Each succeeded challenge is one step closer towards the goal : being a digital professional. This is a personal goal, your own experience make you progress differently from your neighbors. The only two elements in common to everybody are the professional integration, and the ability to solve new problematics, either on personal, collaborative or technologic side.

.4 The main steps of the curriculum

The curriculum has been designed to last about 3 years and a half, and is split into 4 main steps : the first step, right after the piscine, will tighten the basics of programming and algoritmics, then gently guide you towards more complex technologies. The second is a first professional experience. This first intership will give you a taste of the real world of IT, and let you become aware of the set of skills you already acquired during the first step. The third step give access to more complex projects in various topics, most of them being team projects : security, artificial intelligence, network, functional programming, etc. These projects are large, as real world as possible and even sometime directly created by actual IT companies. The fourth and last step is the final intership.

.5 The intranet

The intranet is the main tool for the curriculum. You can find there your current status, your curriculum, your progress in the curriculum, etc. It looks like a RPG, using experience points for each of the 17 available skills that will allow you to level up as they grow.

These skills include technical skills as well as soft skills, each craved and acclaimed by IT companies.

Each one of the 4 steps of the curriculum matches an in game experience level: 0 for the first step, 7 for the second step, 10 for the third one, and 20 for the last step. Reaching level 21 (and also complying with various obligations) marks the end of the curriculum, even though this level can be exceeded.

The intranet is also the place to find the projects and their attachements. Some of them are recommended to you, some others are not, and some are forbidden. We advise you to work only on recommended projects to avoid facing too much difficulty. The curriculum is guided at first, but soon enough you'll gain more and more freedom. Finally, the intranet hosts the e-learning and its videos as well as the forum.

.6   Asynchronous curriculum

One of the main ideas of our pedagogy is that everyone must be able to learn at his or her own pace, because everyone is different. The main part of the curriculum consists in projects that have no start date and no end date. Everyone is free to start and finish a project whenever he or she feels ready. As a consequence, everyone can spend as much time as needed to complete a project. As a consequence, the actual time span of the curriculum is specific to each student. Some student need only 2 years to complete the curriculum, whereas some other need 4 or 5 years.

But, sadly that much freedom is sometimes mixed up with the opportunity to slack off. Spending the required time to complete a project is fine. Succeeding only a couple projects a year is NOT. 42 IS difficult and IS a long journey ! Spending less than 70 hours per week at school is a solid indication that something is going horrifyingly wrong and that you are progressing towards critical failure. You have been warned.

In real world business, time restrictions do exists. As a consequence, some project are scheduled and you'll have to adapt you own schedule to fit it. For instance : piscines, rushes and some professionnal projects are scheduled for you.

.7   Projects and peer-learning

A project can't be succeeded without peer-learning because the staff won't provide any teaching of any kind. You are alone, facing a project for which you don't know the solution. This project is a challenge to beat including technical, planning, relationship, and why not time constraints in regards of the result you're seeking. How can you success, even with those constraints ?

IT changes very fastly. Digital is booming. As a consequence, it's far more relevant to learn how to find the latest solutions than to learn one specific solution that is going to be outdated next year. To achieve such a goal, you must comply to several rules.

First, you must gather informations. The internet might look like a no-brainer, but first it must be tamed. Don't go for the first answer you find, look for other points of view, sort and select your datas. Your classmates have their very own experience and ideas to share with you. Moreover, their ideas will cover a wider range and will be more fit to your context. They are undoubtedly the first source of information you should seek. Hence, the peer-learning. Constructive debates is a key to your success.

After data is collected, comes the tests. By tests, I mean a hypothesis, some tests, some failures, some adaptation of the hypothesis and starting over. For this step, Google won't be as much as a friend as it used to be, but your peers are going to prove themselves unvaluable. Please, don't be afraid of failure ! We don't ask you to succeed at first try ! If you feel like you should start to project over, please do ! It is NOT a race. It is your school and your pace.

Then comes the evaluation. The intranet manages all of defenses and a full scale documentation about peer-evaluation is available to you. Please read it. By all means, please do not focus on technical aspects of the project. You would miss a lot. Review your performances, and adapt ! How was your team management ? How was your involvement ? What could you improve ?

Last but not least, do not cheat. Seems obvious, uh ? Well... It's not. Cheating is not only turning in a program, or parts of a program you did not write yourself. Cheating is also turning in a program you are not able to rewrite again by yourself without any help. Pay attention to this, because it can happen more than you think. For instance, let say that you're talking with a peer and that peer explains you how to solve a problem. You are happy with it but, are you sure that you did not just applied the solution without really understanding it ? Pride is your foe.

.8   The community

As you might understand, peering takes a major place in your progress along the curriculum. But peering can't be reduced to projects only. Living at 42 must also be a peer-living. 42 needs everybody to exist and progress. And I'm not talking about the pedagological part of 42. Go to events, barbecues and parties ! Attend to conferences, attend to hackathons ! The school needs everybody to shine and gleam ! Attend to some initiatives, or even take your own. Respect people and equipments, meet new friends and act as a proud member of our community !

.9   The staff

The role of the 42 staff is to create the specific learning context suitable to you to improve your skills and talents for digital. Providing a clean work area, a reliable network, digital tools suitable to your administrative procedures and allowing you to progress in you curriculum.

We set the goals and manage the settings, we organize your journey through the curriculum, but we do not guide you, we do not help you to find the informations you

need if we consider that you should find them by yourselves. You can come to us to talk, abou the curriculum, we can discuss the weather, the latest news, your personal problems and the tunings you might need for your curriculum. But if somebody tells you to go away, to read a manual, or to ask Google, it's because we consider it wouldn't be a favor to answer you because it would prevent you to find the answers you seek by yourselves.

.10 What does a "regular" curriculum looks like ?

We ask you to think outside the box ! Explore, try, test, fail ! Fail as much as you can ! Exploring your own way to success will leads you there more efficiently than any specific sequence of projects provided by the pedago team.

If you really need somebody to hold your hand at first, focus on recommended projects. At first, only 2 or 3 projects will be available. But with enough time and experience, you'll gain self confidence as more and more projects are available and recommended for you.

The first part of the curriculum focuses on solo projects using C language to help you grow your Rigor, Algorithmics and Unix skills. Reaching level 5, you will start facing larger team projects and other programming languages. Once you reach level 7 and the first intership completed you will be ready for virtually anything. Start by the introduction project of different topics : security, web, network, object-oriented programming, artificial intelligence, etc. or better, start with the matching piscine if such piscine exists. At this point, you shouldn't need any guidance. The end of the curriculum is "open". We want to make digital professionals, but each of you must have his or her unique set of best skills. There is no such thing as a "regular 42 student". There is no such thing as a "regular 42 curriculum" !

.11 Community services ? Punishment ? Exclusion ?

The major risk you would face, should you not follow the pedagogical rules of the school, not progress through the curriculum, is wasting your time. Maybe we did a mistake allowing you to join the school because our pedagogy does not suit you. Please, drop by and talk with the staff. Together, we can find solutions.

Sadly, we know for sure that some students will lie to themselves until the end. Theses students will be happy to come to school to enjoy the building, the vibes, the free internet connection, long story short, to slack off in a cozy place. As we don't have classes, promotions and such, there is no such thing as failing a year and be forced to repeat it. But at some point, we will consider that such students use a seat that would be better used be someone else. Hopefully, the "black holes" come to the rescue. We'll check your progress on a regular basis and students who are really (like really) too slow will be excluded from the school. Three stages of black holes exist : 3 months to reach level 1 with at least 20 hours logged in per week, 12 months to reach level 5, and 18 months to fullfil the conditions to access the first internship. Of courses, special situations such as

professional opportunities, a year off or health condition will be taken into account.

We usually don't assign community services to slacking off students because community services should be only used for disciplinary issues. If you harm in any way 42's community, you're in debt to that community, and you will pay that debt with a community service. Community services are willingly boring and brainless. Of course, if you mibehaved really bad, stronger punishements will occur, included definitive exclusion.

.12   For those who wonder : why such a pedagogy ?

Well, first of all, because it does work ! For the last 15 years, 42's pedago team has been experimenting with this pedagogy in the fields of teaching new technologies, and it's been a huge success ever since. But it doesn't come from nowhere : for many years, even a century, world wide experimentations prove the efficiency of alternative pedagogies. Freinet and Montessori approaches, the Finnish education system, practical and problem solving oriented teaching, active pedagogies, all these approaches have already proven themselves. They share a personnalized learning pace, mixing age groups, and self appropriation of knowledge. Piaget and Vytgosky theorized the concept of "sociocognitive conflict" that we try our best to include into our peer-learning that states that given multiple peers with no prior knowledge regarding a situation, constructive debates and talking are granted to emerge.

We not trying to be different for the sake of being different, our pedagogical approach makes sense, and matches a real need in the real IT world. If you'd like to know more, drop by at the bocal or contact the pedago team !