# galvanize

# CATALOG

ARIZONA

Version 2019.1
Effective December 11, 2018 – December 31, 2019

602-363-2670
www.galvanize.com

## Table of Contents

## NOTES

**Catalog Revisions**

This Galvanize Catalog, Arizona, is updated at least annually, but Galvanize reserves the right to revise it more frequently at its discretion. The most recent edition of the Catalog is the one posted on the Galvanize website, which can be downloaded at www.galvanize.com. A copy of the current Catalog can be requested by sending an email to info@Galvanize.com or by calling the school at (720) 468-0776. Such changes will not negatively affect currently enrolled students.

**Location of Classes**

All Arizona classes are conducted at 515 E Grant Street Phoenix AZ 85004.

**Management**

Galvanize is a private institution owned by Galvanize Inc. The officers of Galvanize Inc.

| Alfonso Rosabal | CEO |
|---|---|
| Dessa Bokides | CFO, COO |
| Daniel Pianko | Director |
| Paul Mariani | Director |
| Denise O'Leary | Director |
| Jerry Miller | Director |
| Tyler Newton | Director |

The General Manager of Galvanize – Arizona is Diana Vowels. The Regional Program Director of Galvanize – Arizona and San Francisco is Meryl Krich.

**Accreditation**

Galvanize is not accredited by an accrediting agency recognized by the United States Department of Education and is not eligible to participate in federal student financial assistance programs. Galvanize does not offer any programs that prepare students for any official licensure exam in the state of Arizona.

**Complaints**

This school is licensed by the Arizona State Board for Private Postsecondary Education. I In accordance with State law, if a complaint cannot be resolved after exhausting all the institution's' grievance procedures, the student may file a written complaint with the Arizona State Board for Private Postsecondary Education. A complaint must be filed within three years of the student's last date of attendance.

Arizona State Board for Private Postsecondary Education 1740 W
Adams Street, Suite 3008 Phoenix AZ 85007 Web: https://ppse.az.gov/
Phone: (602) 542-5709

## INTRODUCTION TO GALVANIZE
### Galvanize Mission

Galvanize offers a re-imagination of professional and technical education. Our mission is to enable the next generation of data scientists and developers to gain access to practical, real-world skills that provide pathways into industry. Programs at Galvanize include the theoretical understanding of computer science, statistics, and software engineering, paired with industry-focused skills in visualization, business acumen, and the scientific method. Our primary focus is student outcomes, by providing the practical education students need to succeed in the new information economy.

In 2018, Galvanize Inc. acquired Hack Reactor, joining two of the strongest providers of immersive technology programs in their markets. With complementary operations Galvanize and Hack Reactor expect to be able to offer a fuller choice of curriculum to students and enterprise clients by optimizing operations and increasing overall size as a result of the transaction.

### Mission Statement
Hold yourself and others accountable and responsible
Create for the future with pride, passion, and urgency
Win with trust, integrity, and inclusion
Be a team. Do you job. Be a pineapple
Continuously learn, grow, and hustle

### Galvanize Educational Objectives
- Providing theoretical and practical learning based on industry needs and student feedback
- Cultivating an environment of student immersion and collaboration
- Employing qualified faculty who offer students personalized attention and professional expertise

## PROGRAMS OFFERED

### Galvanize Data Science Immersive
13 Week duration full-time, in-person program
Total lecture: 108 in-person hours; Total lab: 372 in-person hours
Total contact hours: 480 in-person hours

**Program Outcomes**
The Data Science Immersive prepares students to become data scientists. There are no license requirements for general work in this career field.

**Class Schedule**
Students are expected to be at Galvanize for Data Science instruction from 9:30AM – 6:30PM Monday through Friday for the full 13-week course. There are weekly evening events which students are strongly encouraged to attend. A class calendar with holiday closures will be made available to students during the enrollment process. When an unexpected closure occurs due to extraordinary conditions such as inclement weather, students will be notified as soon as possible via email.

**Program Description**
Galvanize's 13-week Data Science Immersive program is designed for individuals who have most of the skills needed to obtain a position as a data scientist. The curriculum spans statistical analysis of data, software engineering, machine learning, and data engineering management. The tools and techniques that we teach are the ones that industry partners regularly tell us are most important in making decisions about hiring.

**Graduation Requirements**
In order to qualify for graduation and successfully complete the Data Science Immersive, students should meet the attendance requirements, meet the minimum technical competency, and participate in the Career Services program.

- **Attendance:** Students are required to attend at least 85% of total class hours, all-inclusive (excused and unexcused absences combined.) Students must not exceed 3 unexcused absences throughout the course, or 5% of total class time.
- **Technical Competency:** Students are required to meet and maintain at least a 30% cumulative average on all assessments as outlined by the Data Science academic team
- **Career Services Program:** Students are required to complete all relevant activities in the Career Services Program which could include tasks such as completing a resume and online profile, conducting mock interviews and phone screens with Galvanize staff and delivering a capstone project proposal to the lead instructor.
- **Delivery of Capstone Project**: In order to attain a Complete graduation status, a student must deliver a capstone project approved by Lead Instructor.

Students are also required to fulfill all financial obligations to Galvanize before they graduate.

**Total Charges:**
Tuition: $17,780.00
Registration Fee: $1200.00
Total tuition: $17,980.00

**Program Outline**

| Course Title | Lecture | Lab | Total |
|---|---|---|---|
| DSI 101 Software Engineering & Data Exploratory Data Analysis | 12 | 28 | 40 |
| DSI 102 Statistics and Probability | 12 | 28 | 40 |
| DSI 103 Regression | 12 | 28 | 40 |
| DSI 104 Supervised Learning | 12 | 28 | 40 |
| DSI 105 Natural Language Processing | 12 | 28 | 40 |
| DSI 106 Unsupervised Learning | 12 | 28 | 40 |
| DSI 107 Data Engineering | 12 | 28 | 40 |
| DSI 108 Case Studies | 12 | 28 | 40 |
| DSI 109 Capstone Projects | 12 | 108 | 120 |
| DSI 110 Interview Preparation | 0 | 40 | 40 |
| **Total** | **108** | **372** | **480** |

## Hack Reactor Software Engineering Immersive

12 weeks of full-time, in-person program
Total Lecture: 45.75 hours, Total Lab: 530.25 hours
Total Contact Hours: 576 hours in-person

**Program Outcomes**

During the first half of the onsite immersive, students work through a large amount of new material, at an extraordinary pace. In the second half of the course, students deploy their newly acquired skills to build projects, while learning new technologies. By the time they graduate, students become autonomous engineers, capable of tackling unique problems, and building complex applications. We have developed the immersive program to help support students in achieving this endgoal.

**Program Description**

The onsite immersive is built around learning advanced programming concepts and becoming familiar with industry-standard applications and tools. (Git, Backbone, Rails, Unix, and TDD testing frameworks.) The program provides a strong professional-support network starting at the application process extending through the student's job-search. This support lead to students garnering higher salaries, better benefits, and greater career satisfaction. We judge student outcomes by performance on technical interviews for relevant professional roles and job search success rate within six months of completing the program.

**Class Schedule**

Students will attend class Monday – Friday from 9am to 8pm and Saturday from 9am to 5:30pm for 12 weeks. The 12 weeks are split by one week without instruction, called "solo week", so students can work on personal projects, review lessons, or outline thesis projects with the assistance of mentors before entering the second half of the program. Students take a 1-hour study hall/lunch break from 12:30pm to 1:30pm daily and a dinner break from 5:30pm to 6:30pm and may take breaks as they wish throughout the day or continue working. Every other day, students are given an extended lunch break. During this time, they are encouraged to exercise and overall, regain a healthy work/life balance.

**Total Charges**

Tuition: $17,780.00
Registration Fee: $200.00
Total Tuition Charges: $17,980.00

### Hack Reactor Software Engineering Online Immersive

12 weeks of full-time, online
Total Lecture: 45.75 hours, Total Lab: 530.25 hours
Total Contact Hours: 576 hours in-person

**Program Description**

Hack Reactor Software Engineering Online (aka Remote) takes the time-tested curriculum of the Hack Reactor immersive and makes it accessible to students everywhere. Students learn from instructors face-to-face over video conference. They pair program with classmates throughout the course, so they are never working alone. We give them intimate access to teachers, a Help Desk that's ready to answer questions, and a strong peer community, all immediately available through messaging and video chat.

**Total Charges**

Tuition: $17,780.00
Registration Fee: $200.00
Total Tuition Charges: $17,980.00

### Hack Reactor Software Engineering Online Immersive - Part Time

36 Week duration, Part time, online program
Total Lecture: 45.75 hours, Total Lab: 530.25 hours
Total Contact Hours: 576 hours

**Program Description**

Hack Reactor Software Engineering Online Immersive – Part Time (aka Online Part Time, "OPT") delivers the same curriculum as our Hack reactor Software Engineering Immersive over 38 weeks consisting of 36 weeks of instruction and 2 "solo" weeks when students get

additionaltimetoworkonsoloprojectswith mentorship.OPTstudentshaveaccesstotheHelp Desk and messenger services and all other softwaretoolsnecessaryfortakingthecourseas statedabove.Bothcurriculumandsupport are identical to the remote program.

## Class schedule

Students attend lectures and have designated pair-programming hours monitored by instructorseveryTuesdayevening(6:00p.m.to9:00p.m.PT),3hoursofsupportedlearning during the week that students may schedule at their convenience, and 8 hours every Saturday (9:00 a.m. to 6:00 p.m. with breaks).

## Total Charges

Tuition: $17,780.00
Registration Fee: $200.00
Total Tuition Charges: $17,980.00

## Program Outline

Hack Reactor Software Engineering Immersive
Hack Reactor Software Engineering Online Immersive
Hack Reactor Software Engineering Online Immersive – Part Time

| Course Title | Lecture | Lab | Total |
|---|---|---|---|
| Orientation and Pre-Course Review | 5 | 12 | 17 |
| Data Modeling and Classes | 6 | 11 | 17 |
| Data Structure and Complexity Analysis | 3 | 12.5 | 15.5 |
| Inheritance Patterns | 2 | 15 | 17 |
| Algorithms | 1.5 | 15.5 | 17 |
| Browser apps, jQuery, and AJAX | 1.5 | 14 | 15.5 |
| ES6, APIs, React, and React – Redux | 4 | 30 | 34 |
| Servers and Node | 1 | 14.5 | 15.5 |
| Server-side Techniques | 1.5 | 15.5 | 17 |
| Databases | 2 | 15 | 17 |
| Authentication and Full Stack Development | 1.5 | 14 | 15.5 |
| Mini-Apps | 0 | 34 | 34 |
| Full-Stack Overview | 0 | 15.5 | 15.5 |
| Technical Assessment | 0 | 8.5 | 8.5 |
| Front End Capstone (FEC) Phase | 5 | 77.5 | 82.5 |
| Professional Resume Sprint & FEC Presentation | 0.75 | 7.25 | 8 |
| System Design Capstone (SDC) Project | 7 | 124 | 131 |
| MVP Project | 0.5 | 23.5 | 24 |
| Mini-Apps Part 2 | 1 | 31 | 32 |
| Hiring Sprint | 2.5 | 40 | 42.5 |
| **Total** | **45.75** | **530.25** | **576** |

**Hack Reactor Extended Software Engineering Immersive**
**Hack Reactor Extended Software Engineering Online Immersive**

18 Week duration, full time, remote and in-person program.

Total Lecture: 84.75 hours, Total Lab: 692.25 hours

Total Hours: 777 hours

### Program Description

During the first six weeks of the Extended Immersive, students work to develop their understanding of JavaScript fundamentals to ensure that they can hit the ground running in the Immersive Program. The program will begin by covering JavaScript basics covering some newer, more-creative practice projects to reinforce key building blocks. It will then cover some challenging parts of the immersive program in order to give students more time with the material. The first six weeks of the program takes place online (all times are Pacific), then feeds straight into the standard immersive at whichever campus the student selects (Onsite or Remote).

### Class Schedule

Students will attend class Monday – Friday from 9am to 8pm and Saturday from 9am to 5:30pm for 12 weeks. The 12 weeks are split by one week without instruction, called "solo week", so students can work on personal projects, review lessons, or outline thesis projects with the assistance of mentors before entering the second half of the program. Students take a 1-hour study hall/lunch break from 12:30pm to 1:30pm daily and a dinner break from 5:30pm to 6:30pm and may take breaks as they wish throughout the day or continue working. Every other day, students are given an extended lunch break. During this time, they are encouraged to exercise and overall, regain a healthy work/life balance.

### Program Outline

Hack Reactor Extended Software Engineering Immersive
Hack Reactor Extended Software Engineering Online Immersive

| Intro Phase | Lecture | Lab | Total |
|---|---|---|---|
| Problem Solving and Building Blocks | 8.5 | 17 | 25.5 |
| Koans | 1.5 | 4.5 | 6 |
| Underbar | 12.5 | 39.5 | 52 |
| Test Builder | 2.75 | 11.25 | 14 |
| Twiddler | 3.25 | 15.75 | 19 |
| Reading Documentation | 2 | 11 | 13 |
| Recursion | 6 | 27 | 33 |
| Project Phase | 2.5 | 36 | 38.5 |
| **Junior Phase** | **Lecture** | **Lab** | **Total** |
| Orientation and Pre-Course Review | 5 | 12 | 17 |
| Data Modeling and Classes | 6 | 11 | 17 |
| Data Structure and Complexity Analysis | 3 | 12.5 | 15.5 |

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| Senior Phase | Lecture | Lab | Total |
|---|---|---|---|
| Inheritance Patterns | 2 | 15 | 17 |
| Algorithms | 1.5 | 15.5 | 17 |
| Browser apps, jQuery, and AJAX | 1.5 | 14 | 15.5 |
| ES6, APIs, React, and React – Redux | 4 | 30 | 34 |
| Servers and Node | 1 | 14.5 | 15.5 |
| Server-side Techniques | 1.5 | 15.5 | 17 |
| Databases | 2 | 15 | 17 |
| Authentication and Full Stack Development | 1.5 | 14 | 15.5 |
| Mini-Apps | 0 | 34 | 34 |
| Full-Stack Overview | 0 | 15.5 | 15.5 |
| Technical Assessment | 0 | 8.5 | 8.5 |
| Front End Capstone (FEC) Phase | 5 | 77.5 | 82.5 |
| Professional resume Sprint & FEC Presentation | 0.75 | 7.25 | 8 |
| System Design Capstone (SDC) Project | 7 | 124 | 131 |
| MVP Project | 0.5 | 23.5 | 24 |
| Mini-Apps Part 2 | 1 | 31 | 32 |
| Hiring Sprint | 2.5 | 40 | 42.5 |
| **Total** | **84.75** | **692.25** | **777** |

**Hours**

At all physical campuses, students will attend class Monday – Friday from 9am to 8pm and Saturday from 9am to 5:30pm for 12 weeks. The 12 weeks are split by one week without instruction, called "solo week", so students can work on personal projects, review lessons, or outline thesis projects with the assistance of mentors before entering the second half of the program. Students take a 1-hour study hall/lunch break from 12:30pm to 1:30pm daily and a dinner break from 5:30pm to 6:30pm and may take breaks as they wish throughout the day or continue working. Every other day, students are given an extended lunch break. During this time, they are encouraged to exercise and overall, regain a healthy work/life balance.

## ADMISSIONS REQUIREMENTS & ENROLLMENT PROCEDURES

Each of Galvanize's full-time, immersive programs requires an application, and all candidates are interviewed before an enrollment decision is made. Galvanize does not discriminate based on race, sex, religion, ethnic origin, or disability. Galvanize strongly encourages students from backgrounds underrepresented in the technology industry to apply.

While Galvanize accepts international students, Galvanize does not assist with visa requirements.

Galvanize collects evidence of a high school or equivalent degree or higher before enrollment in a Galvanize program. Galvanize does not accept ability to benefit students.

Galvanize students must be at least 18 years of age.

Students must enroll in an entire Galvanize program, and no credits from any other institutions will transfer to satisfy successful completion of any part of our programs. Galvanize does not award credit for experiential learning towards completion of course requirements and has not entered into any transfer agreement with any other college, university, or school.

### Galvanize Data Science Immersive

To be considered for this program, students must be at least 18 years old and have at least 3 years college experience in a quantitative discipline (preferred,) some programming experience, and excellent communication skills. Programming experience can be either academic or with self-teaching. They also must be comfortable with college-level statistics and mathematics.

The application process includes:
1) Online application form
2) Take-home coding assessment
3) Technical Python interview
4) Technical statistics interview

### Hack Reactor Software Engineering Immersive (All)

To be considered for this program, students must be at least 18 years old and have a high school diploma or equivalent. You must be able to demonstrate your understanding of the fundamentals of JavaScript, including a deep understanding of high-order functions. Written and spoken proficiency in English, and excellent communication skills.

The application process includes:
1) Online application form
2) Complete the Admissions Challenge
3) Technical JavaScript interview
4) Completion of online Pre-course materials

## ACCOMODATIONS

Students who seek accommodations related to a disability should contact their campus General Manager or Program Director at info@galvanize.com or by calling 602-362-2670. Galvanize aims to provide reasonable accommodations to individuals who wish to participate in our educational programs.

## PAYMENT INFORMATION

**Payment is not required until an applicant has successfully completed the full admissions process and received acceptance into a Galvanize Immersive program.**

An accepted student shall receive his/her Enrollment Agreement from an agent of Galvanize. After reviewing the Enrollment Agreement and agreeing to the terms, an accepted student shall sign the agreement, and the Agent shall countersign.

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## Payment Terms

| Payment Option | Deposit | Payment Schedule | Payment method |
|---|---|---|---|
| Option 1 - Upfront | $2000 due at time of signing enrollment agreement | Tuition remainder due the first day of class (week 1, day 1). | All payments can be made online, fee free, by card or ACH payment. |
| Option 2 - Installment | $2000 due at time of signing enrollment agreement | ½ tuition, less deposit, due the first day of class (week 1, day 1)<br><br>Tuition remainder due at week 5, day 1. | All payments can be made online, fee free, by card or ACH payment. |
| Option 3 – Full or Partial Tuition Loan Finance | $2000 due at time of signing enrollment agreement | Students who are eligible can finance full tuition through Galvanize's private lending partners, SkillsFund and Climb Credit AND Students must confirm financing application (application number) for any loan prior to the first day of class (week 1, day 1) | Lending partner transfers funds to Galvanize directly.<br><br>**For students electing to finance partial tuition**, the tuition remainder will be due at week 5, day 1. |

The deposit is required to secure seat in the program. Seats are available on a first come first serve basis based on payment of deposit. There is a non-refundable registration fee of $200 that will not be returned to you in the event of cancellation.

### Loans

If the student obtains a loan to pay for an education program, the student will have the responsibility to repay the full amount of the loan plus interest. Galvanize is not eligible to participate in federal student financial assistance programs.

### Tuition Assistance

Galvanize is committed to helping individuals with the aptitude, drive and determination to pursue careers in technology. We provide numerous opportunities for financial support including lending partners, sponsorships, scholarships and veteran education benefits.

## POSTPONEMENT CLAUSE

The School may decide to postpone a program start date. Postponement of a starting date requires a written agreement signed by the student and the School. The agreement will set forth whether the postponement is for the convenience of the school or student, the deadline for the new start date, beyond which the start date will not be postponed.

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If the course is not commenced, or the student fails to attend by the new start date set forth in the agreement, the student will be entitled to an appropriate refund of prepaid tuition and fees within 30 days of the deadline in accordance with the School's refund policy and all applicable laws and rules.

## TRANSFER OF CREDIT

Transfer of credits for prior training will be evaluated on an individual case basis and students will be required to submit official transcripts for evaluation. Credit for Prior Training is at the discretion of the enrolling school's administration.

Credits earned at Galvanize may or may not be transferable to other institutions depending upon the policies of the receiving institution.  Students wishing to transfer credits outside of Galvanize, should contact the receiving institution to determine which courses and how many credits may be transferable. If the certificate earned at this institution is not accepted at the institution to which the student seeks to transfer, the student may be required to repeat some or all coursework at that institution.

Galvanize does not award credit for prior or experiential learning.

## LANGUAGE OF INSTRUCTION

Galvanize does not offer English as a Second Language instruction. The entire program of study, textbooks, materials and all means of communication are delivered only in English. Applicants must be fluent in written and spoken English at the time the application is submitted.

Applicants who do not use English as their primary language must demonstrate the ability to undertake a rigorous, fast-paced academic program in English. All applicants must schedule an interview with admissions personnel as part of the application process. Galvanize may consider the interview in evaluations an applicant's English proficiency.

## FACULTY

The faculty at Galvanize is selected for their experience in the industries for which the programs aim to prepare students. They are also selected for their teaching ability, as demonstrated by an example lecture presented to current instructional staff.

## CANCELLATION, TERMINATION, AND WITHDRAWAL

### Student's Right to Cancel
**Three-Day Cancellation**
An applicant who provides written notice f cancellation within three days (excluding Saturday, Sunday and Federal and State holidays) of signing an enrollment agreement is entitled to a refund of all monies paid. No later than 30 days of receiving the notice of cancellation, Galvanize shall provide a 100% refund.

Cancellations shall occur when you give written notice via email to bursara@galvanize.com showing that you no longer wish to be bound by this Agreement.

**Other Cancellations**

An applicant requesting a cancellation more than three days after signing an enrollment agreement and making an initial payment, but prior to entering the school, is entitled to a refund of all monies paid, less the $200.00 registration fee.

Cancellations shall occur when you give written notice via email to bursara@galvanize.com showing that you no longer wish to be bound by this Agreement.

If an applicant is denied admission, a full refund will be provided.

## School's Right to Terminate

Galvanize reserves the right to terminate a student for unsatisfactory progress, failure to comply with the Galvanize Code of Conduct, nonpayment of tuition, or any other breach of the student's agreements with Galvanize. In such a case, the student's official termination date is the date on which the student violates the policy or agreement, which provides the basis for termination.

## Refunds Due to Termination or Withdrawal

Students who cancel their enrollment agreement prior to the commencement of classes, Galvanize will retain the registration fee of $200.00 plus a percentage of tuition and fess, which Is based on the percentage of contact hours attended in the program, as described in the table below. The refund calculation is based on the official date of termination or withdrawal.

| Refund to which a student is entitled upon termination or withdrawl based on % of the clock hours attempted: | |
|---|---|
| 10% or less | 90% |
| More than 10% and less than or equal to 20% | 80% |
| More than 20% and less than or equal to 30% | 70% |
| More than 30% and less than or equal to 40% | 60% |
| More than 40% and less than or equal to 50% | 50% |
| More than 50% | No refund |

When calculating refunds, the official date of a student's termination is the last day of recorded attendance.

> a. When the school receives notice of the student's intention to discontinue the training program; or,
>
> b. When the student is terminated for a violation of a published school policy which provides for termination; or,
>
> c. When a student, without notice, fails to attend classes for thirty calendar days.

## Withdrawal Procedures

1. A student who wishes to withdrawal from Galvanize on or after the commencement of classes should provide written notice by emailing the lead instructor and bursar@galvanize.com

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515 E Grant Street Phoenix AZ 85004

2. Upon receiving Upon receiving a written request from the student, Galvanize may grant a leave of absence for acceptable and unavoidable reasons in accordance with the leave of absence policy in the Galvanize catalog. If the student fails to return from the leave of absence, the student's official withdrawal date will be the date Galvanize determines that the students is not returning or the day following the expected return date, whichever is earlier

3. Galvanize will administratively withdraw a student who misses seven consecutive, unexcused instructional days without an approved leave of absence. In such a case, the student's official withdrawal date is the student's last day of attendance.

4. All refunds will be provided to the student within 30 days of termination of withdrawal.

## DEFERMENT POLICY

Admitted students seeking to defer to a later start date before the commencement of class must seek permission from the Admissions Officer at least 3 weeks prior to the course start date. Pre-start date deferment is contingent upon availability in the desired program.

As a general rule, Galvanize does not offer deferment options after the commencement of class, except in the case of acceptable and unavoidable reasons. Eligible students seeking to move to another cohort must withdraw per aforementioned withdrawal procedures and re-apply in an abridged admissions process. Contact the Registrar for more information on this policy and process.

## LEAVE OF ABSENCE

Upon receiving a written request from a student, Galvanize may grant a leave of absence for a maximum of seven consecutive days for acceptable and unavoidable reasons.

A request for a LOA must be made in writing to the Lead Instructor before the beginning of the LOA, unless unforeseen circumstances prevent the student from doing so, and must include the reasons for the LOA. If unforeseen circumstances prevent the student from requesting the LOA in person, the student will be required to provide the required LOA request by email. The faculty team will evaluate the LOA request, and the student will be notified of the outcome of the LOA request by email.

The request will then be evaluated by the Program Director and the student will be notified of the outcome of their request by email. A student who is granted a leave-of-absence will be assessed upon their return and assigned a new completion date.

If the student fails to return after the expiration of the leave of absence, the student will be withdrawn from the program, which includes the appropriate refund policy calculations, and the student's official withdrawal date will be the last date of recorded attendance.

# ATTENDANCE REQUIREMENTS
## Galvanize Data Science Immersive

Regular attendance has a positive impact on a student's success in the program.  Students are expected to be in class for all regularly scheduled class periods and to report to class on time. Galvanize instructors record attendance every morning 15 minutes after class begins and after lunch.

Absences are considered excused if the student has communicated and approved by the instructor prior to the time of class, or if the absence is a result of an unforeseen emergency (e.g. sickness) and the student has provided adequate documentation of the unforeseen emergency. Excused absences must be accompanied by a plan to complete missed work followed by evidence that the work has been completed. Excused and unexcused absences combined must not exceed **15% of the program**.

Late arrivals, early departures and extended lunch leave without prior consultation with the instructor may be considered unexcused. Late arrival is considered 20 minutes late to any class. **Three partial unexcused absences** equal **one full day unexcused absence** and will be counted towards the attendance policy noted above.

Once a student has received **two unexcused absences** the student will receive a warning from the Instructor and be placed on probation.

After a student has received **three unexcused absences** the student is subject to automatic administrative dismissal at the discretion of the Program Director and Lead Instructor.

## Hack Reactor Immersive (All)

Hack Reactor's program is immersive, so missing a single day of instruction is highly likely to impede a student's academic success. We understand that absence is sometimes unavoidable, but we request that students let us know ahead of time when possible and have a really compelling reason. An absent student disrupts the cohesion of our classroom container so much that missing more than two days during the course, will trigger a discussion with the student about whether their learning goals can still be achieved. In some cases, excessive absences may lead to removal from the class, in other cases, Academic Intervention may be required to continue.

With that in mind, an absence counts as three (3) points, a tardy is one (1) point and leaving early is one (1) point. Students enrolled in our Hack Reactor Software Engineering Immersive Program, Hack Reactor Software Engineering Online Immersive and Hack Reactor Software Engineering Online Immersive – Part Time are allowed a maximum of nine (9) attendance points.

Students who are enrolled in our Hack Reactor Extended Software Engineering Immersive Program(s) are allowed a maximum of five (5) points during the first 6-weeks of the program and an additional nine (9) points in weeks seven through eighteen.

# SATISFACTORY PROGRESS

## Galvanize Data Science Immersive

Data Science students will have regular weekly written assessments to check for understanding on the materials and skills covered in that week. Students must received

**1.) Technical Competency**
Students must complete class projects and homework and contribute to group projects as assigned. Galvanize does not assign grades, but feedback following formal assessments are distributed electronically to students by instructors. The instructor team will counsel students who do not show adequate progress in class and/or during assessments, and an individualized learning plan will be discussed and created with the student. Completion of academic learning modules is at the discretion of instructors such that the student is deemed capable of satisfying graduation requirements.

**2.) Career Services Requirements**
Galvanize Immersive Courses focus both on acquiring technical competencies, building an employment portfolio, and preparing to succeed in interviews for roles relevant to the course content. In order to complete a Galvanize Immersive program, a student must participate in the Career Services Program which could include such activities as; complete an **approved resume**; complete approved **online profile(s)** assigned by Career Services Team; **complete a mock recruiter phone screen** with Career Services Team and **technical interview** with a designated Instructor.

**3.) Graduation Standards**
Failure to satisfy Attendance, Technical, and Career Services requirements and/or deliver an approved Capstone project can result in dismissal from the program and an inability to graduate from the program. Students that are not on track to graduate may be issued a verbal or written warning. Students who do not make progress towards meeting Graduation Requirements after appropriate intervention will be dismissed and will not graduate from the program.

**Galvanize Data Science Immersive Grading/Probation**
Data Science Immersive students will have regular weekly written assessments to check for understanding on the material and skills covered that week. Students must receive 30% or higher on all assessment tests. 0-10 indicates little/no mastery, or little/no attempt to answer. 11-20 indicates a failed attempt. 21-30 indicates some progress but insufficient mastery, 31-50 indicates sufficient mastery with room to learn/grow, and 51-100 indicates above and beyond sufficient mastery.

Students who receive fewer than 30% average score on assessments will be placed on academic probation and required to show improvement before the following written assessment. An instructor will inform students who are underperforming of their progress. If a student on probation continues to perform below this minimum level after the next written assessment could be administratively withdrawn from the program.

A student who is administratively withdrawn from the program due to unsatisfactory technical competency may reapply to a subsequent program after their original program has concluded.

## Hack Reactor Programs (All)

This is a serious course for serious students. We expect students to work hard, act professionally and ask for help as needed. The program curriculum is divided into topical sprints, usually lasting anywhere from 1-3 days each. These sprints incorporate exercises that help cement the concepts reviewed in lectures and assignments. We use assessments at the end of each sprint to monitor progress. If a student cannot pass the assessments, we will do everything we can to give them support, guidance, and further instruction. But, ultimately, assessments will determine whether a student graduates. Instructors will communicate guidelines to individual students during the course of the program explaining what in particular would be expected of them given these and other factors.

### Technical Skills

The program features periodic self-assessments that are tested by an automated system and then reviewed and graded by instructional staff. The system identifies students that may be having technical difficulties encouraging them to set up office hours with instructional staff. Additionally, staff will proactively monitor student results and reach out to provide feedback and help students refine their technical strategies.

The Technical Assessment is a full-day coding challenge at the halfway point of the Immersive Program and an additional coding challenge at the end of the first 5 weeks of the Extended Program. Both of these tests the knowledge and skills developed in the first half of the course. It is a significant portion of the gating Summary Evaluation, which means failure to perform sufficiently on the Technical Assessment could result in removal from the course.

### Soft skills

Students are regularly graded on a *"[no] reason for concern"* basis by staff observing students as they collaborate. Students with multiple "reason for concern" notes will be approached with feedback and areas for improvement.

### Summary Evaluation

The Summary Evaluation is a midterm evaluation of proficiency in the course, largely centered around the question "Would Galvanize hire this person onto one of our teams?" The Summary Evaluation takes into consideration technical proficiency, ability to successfully collaborate with pairs and groups, as well as student engagement with classroom requirements and expectations.

The Summary Assessment gates participation in the second half of the course.

### Assessment Frequency and Evaluation

Assessments are typically performed at the end of each 1-3-day sprint. Students' technical proficiency and soft skills are evaluated constantly, and instructional staff meet weekly to review individual student progress. Progress reporting typically occurs at the end of a sprint by way of self-assessments and directed feedback from staff.

Students receive a detailed testing analysis of their code from Spectator, our self-assessment tool as well as individualized feedback from instruction staff throughout the program. Students receive a copy of their marks via email, with a red (X) indicating incorrect answers. Students are encouraged to schedule check-ins with technical staff as needed. Scoring a 2 or above on a 0-3 scale for all self-assessments demonstrates satisfactory technical progress.

Galvanize instructional staff conduct student evaluations, considering the student's project completion, assessment performance, emotional health, and daily attendance in real time. A student who is struggling with the technical aspects of the Program may be offered remedial instructional exercises at any point of the program.

If the student is unable to demonstrate an ability to achieve satisfactory progress thereafter, their enrollment may be dismissed. This is largely determined by an independent evaluation of the student's technical and soft skill capabilities. Dismissed students are provided a refund per our refund policy and may reapply to the program. They may be re-admitted as a new student if they are able to demonstrate a clear understanding of the foundational concepts required for admission.

**Academic Intervention and Dismissal Policy**
Hack Reactor is a fast-paced, rigorous and intensive program offered over a condensed period of time. If a student is unable or unwilling to meet expectations or achieve satisfactory progress during any portion of the program, Galvanize will conduct an evaluation of the student's assessments and soft skills and determine whether academic intervention is warranted. Intervention may include remedial coursework, increased frequency of staff counseling or an opportunity to defer to restart the program in an upcoming cohort.

Academic Intervention is discretionary and may not be available in every scenario. Under circumstances where Galvanize determines that Academic Intervention would not successfully address the student's academic deficiencies, the student may be dismissed from the Program and offered a refund as required by law. In addition, a student may be dismissed for academic dishonesty or any violation of Galvanize's behavior, attendance or sexual harassment and misconduct policies.

**Hack Reactor Program Expectations (All)**
This is going to be an amazing ride, but we need to set up some Expectations before we start in order to make sure everyone is able to work in a safe, productive environment.

1. Be on time - We need to start promptly. This means being ready to start on time, not just being present in the classroom container.
2. Be present - Because of our condensed schedule, missing a day is going to put you far behind. We understand that in some rare circumstances someone might need to miss a day, but we request that you let us know ahead of time when possible and have a really compelling reason. An absent member disrupts the cohesion of our classroom container so much that if a student misses more than 2 days during the course, we will discuss with the student whether learning goals can still be achieved. In some cases, absence may

lead to withdrawal from the program.

3. Be good students - This is a serious course for serious students. We need you to work hard and ask for help when you need it. We use assessments to monitor progress and, if you cannot pass the assessments, we will do everything we can to give you more support and instruction. But, ultimately, your assessments will determine whether you progress to graduation or not. If you cannot pass the assessments, you may be withdrawn from the program.

4. Be respectful - We are going to be around each other for many very intense weeks. It is therefore really important that we go out of our way to make each other comfortable. Belittling, aggressive, sexist, racist, or discriminatory language has no place in our learning environment.

5. Have a good attitude - At times, you may feel ahead of other students. At other times you may feel behind other students. However, we request that you keep a positive, engaged, and motivated attitude. The instructors are available to discuss any situation in which someone feels that their own or someone else's attitude is affecting their own or someone else's learning. We will do our best to help.

6. No drinking - You can't drink here, and you can't party here.

7. Guest policy (onsite immersive only) - We understand that you may want to bring friends or mentors to the space. We ask that you let us know ahead of time and check if it fits with the class schedule. Please do not invite 'drop in' guests.

8. Be open and willing - Hack Reactor is not like most educational experiences and we're going to ask that you bring an open mind and a good attitude to everything we do

9. together. If you're not sure why we're doing things in a certain way, please let us know, but be prepared to be on board with a plan that you don't fully understand. Trust us.

10. Take care of yourself - We don't want you to burn out. Raise red flags with staff early if you feel like you are struggling or overwhelmed. Take care of your body, be healthy.

11. Take care of space (onsite immersive only) - All of us need to be respectful of the space and make sure that we are keeping it clean and enjoyable to be in.

12. Follow the Code of Conduct

We look forward to a really productive and educational course! If you feel that you cannot agree to any of the above, let us know and let's talk about it. Should a student violate any of the Expectations, that student may need to be removed from the class.

## STUDENT RECORDS

Galvanize maintains student financial and academic records in digital format while students are enrolled in school. Upon completion of training, student records are merged and maintained in a digital format for no fewer than the minimum number of years required by law. Student records are stored within Salesforce.com with the highest available levels of security. Only faculty and staff members who use this information in the course of their regular duties are given access to student records.

Graduates of the Immersive programs will receive a certificate of completion. Graduates may request a copy of their certificate of completion by contacting the School Administrator at registrar@galvanize.com.

# STUDENT SERVICES

Galvanize offers industry connection services to students during their time of enrollment.

**Guest Speakers:** Industry leaders are invited to the program to discuss their careers and trending topics in the field.

**Events:** Several social and networking events are held each session for students to interact with industry professionals, potential mentors and hiring partners, and members of the Galvanize community.

**Community**: Students are given access to all benefits and amenities given to members of the Galvanize Campus, including but not limited to discounts to industry events, talks and speaker series held on campus, and member-only events to facilitate industry connections.

## Career Services & Employment Opportunities

Led by the Career Services representatives for each region, Galvanize provides job search skills programming, develops and manages relationships with external hiring partners, and hosts opportunities for students to actively engage and interview with those hiring partners.

While assisting in the job search, Galvanize make no guarantee, expressed or implied, of future employment. While Galvanize does not guarantee any job, credential, salary, or bonus for any graduate of our programs, we note that our gainfully employed graduates tend to fall under the U.S. Department of Labor Standard Occupational Classification (SOC) 15-1250 Software Developers, Programmers, and Testers and/or 15-2050 Data Scientists. Current law prohibits any school from guaranteeing job placement as an inducement to enroll students. Students who are not authorized to work in the United States will receive placement assistance limited to interview preparation and resume review. Please contact the admissions team for more details at: info@galvanize.com

## Housing

Galvanize does not maintain dormitory facilities and does not offer assistance in finding housing. Upon request, however, Galvanize staff can provide a list of resources that alumni have used to find housing.

# CODE OF CONDUCT

Students are expected to act maturely and demonstrate respect for others, for themselves, and to the larger Galvanize community.

1. In order to foster a challenging and safe academic environment, students must:
2. Maintain professional relationships with fellow classmates, colleagues, instructors, community members, etc.
3. Show respect to others, themselves, and to the larger Galvanize community.
4. Be able to process constructive criticism and understand that this feedback is key to their overall learning experience.
5. Understand the impact of their behavior both upon the program and the entire Galvanize

community.

6. Be courteous and responsive in dealing with others.
7. Freely accept the responsibility for and consequences of their conduct.
8. Communicate professionally if there are issues regarding conduct of themselves or others.

In addition, the following are not permitted and are subject to disciplinary sanctions:

1. Uncooperative or disrespectful behavior to your fellow classmates, colleagues, instructors, community members, and visitors to the Galvanize campus.
2. Disruptive activity that causes the obstruction of the teaching, learning, or administration of Galvanize programs.
3. Violation of any term of the Galvanize Facilities and Portal Use Agreement, including damage to, or destruction of, Galvanize property.
4. Acts of falsity including, but not limited to, cheating, plagiarism, forgery, or other forms of academic dishonesty.
5. Theft of any kind, including seizing, receiving, or concealing property with knowledge that is has been stolen.
6. Using marijuana, tobacco, smoking on campus.
7. Possession of weapons, firearms, or illegal drugs at any time on school property.
8. Any other violation of published Galvanize policies, rules, regulations, or agreements, including the Galvanize Policy Against Harassment.

Any student may be temporarily suspended or permanently dismissed for violations of the Galvanize Code of Conduct, or program expectations.

## Policy Against Harassment

Galvanize welcomes qualified students and employees of any race, color, national or ethnic origin, sex, age, disability, religion, sexual orientation and gender identity to all the rights, privileges, programs and activities generally available through Galvanize. Consistent with its obligations under the law, Galvanize prohibits unlawful discrimination on the bases of race, color, national or ethnic origin, sex, age, disability, religion, sexual orientation, gender identity or expression, or any other characteristic protected by applicable law in the administration of the programs and activities.

Galvanize also prohibits unlawful harassment including sexual harassment and sexual violence.

Harassment includes offensive verbal comments related to gender, sexual orientation, disability, physical appearance, body size, race, religion, sexual images in public spaces, deliberate intimidation, stalking, following, harassing photography or recording, sustained disruption of talks or other events, inappropriate physical contact, and unwelcome sexual attention.  Sexual and disruptive language and imagery is not appropriate for any campus, including Galvanize and member areas and cafes.

Students asked to stop any harassing behavior are expected to comply immediately. We expect students to follow these rules at all campuses and class-related social events.  Our members, staff, and guests are also subject to this policy against harassment.

If you are being harassed, notice that someone else is being harassed, or have any other concerns, please contact Galvanize faculty or staff immediately. Galvanize faculty and staff will help students contact security or local law enforcement, provide escorts, or otherwise assist those experiencing harassment to feel safe.

### Discipline

In general, the first violation of the Code of Conduct, Program Expectations or the Policy against Harassment will result in a written warning, but conduct deemed to be sufficiently disruptive or severe, such as harassment of another student, staff member, or community member, may result in immediate suspension or dismissal.

School officials, in collaboration with instructors, will review each case and make a determination regarding the student's actions and status. If the student does not improve his or her conduct after receiving a warning, the student will be permanently dismissed.

## GRIEVANCES

### Stage 1: Informal Resolution

Basic steps in the informal process include:
- Begin by discussing the matter with the instructional staff, faculty, or person responsible for the class in which the issue originated.
- If the issue is not resolved, the next contact will be the Program Director to investigate the issue and allegations.
- If you do not know where to begin an informal resolution, the Program Director can help you identify the appropriate office or individual.

### Stage 2: Formal Complaint

If unresolved after following the appropriate informal complaint procedures, the student may choose to have the complaint "officially documented." The student completes the Student Complaint Form located at: https://galvanize.secure.force.com/apex/studentcomplaint

The complaint must contain the following information:
- Complainant's name, cohort name, mailing address, email address and telephone number.
- A detailed description of the specific actions that constituted the complaint and the names and titles of those presumed to be responsible or at fault. It is necessary to demonstrate that one has already attempted to resolve the concern through the informal procedures.
- The date(s) of the alleged improper activities or the condition developed.
- A list of witnesses, if any, including their contact information and the facts known by each. Documentation that supports the complaint if any exists.
- Dated complaint form completed.
- All communications between the student and Galvanize regarding the formal complaint will be directed to the student's email account provided in the complaint form.

### Stage 3: Formal Complaint Resolution Process

Upon submission, the Campus General Manager or his/her designee will investigate the complaint. The Galvanize staff member will acknowledge receipt of the complaint to the complainant within 2 working days. Complaints will be investigated and resolved within 14 business days of receipt. The Campus General Manager will advise the complainant if that timeline will not be met due to extenuating circumstances. If the student is not satisfied with the resolution made by the Campus General Manager, the student may appeal to the Legal & Regulatory Department by emailing: regulatory@galvanize.com

### Stage 4: Appeal

Appeals to the Legal & Regulatory Department must be received within 5 working days following communication to the Complainant of the resolution. The Legal & Regulatory Department may request additional information from the complainant and any involved Galvanize staff. Complaints will be investigated and resolved within 14 business days of receipt. The Legal & Regulatory Department will advise the complainant if that timeline will not be met due to extenuating circumstances. The Legal & Regulatory Department will issue a written determination of the appeal that shall be provided to the complainant and the impacted faculty or other individual. The Legal & Regulatory Department's determination shall be final.

Nothing in this process prevents a student from contacting the Arizona State Board for Private Postsecondary Education, 1740 W. Adams Street #3008, Phoenix AZ, 85007. Phone number 602-542-5709. Website: www.azppse.gov

## FACILITIES

Galvanize has nine campuses located throughout the United States

Arizona – 515 E Grant Street Phoenix AZ 85004
California – 44 Tehama Street San Francisco CA 940105
California - 6060 Center Drive #950 Los Angeles CA 90045
Colorado – Administrative office 1062 Delaware Street, Denver, Colorado
Colorado – 1023 Walnut Street Boulder CO 80302
Colorado – 1644 Platte Street Denver CO 80202
New York – 303 Spring Street, Floor 2 New York NY 10013
Texas – 119 Nueces Street Austin TX 78701
Washington – 111 South Jackson Street Seattle WA 98104

The Galvanize Administrative Office is located at 1062 Delaware Street, Denver, Colorado, 80204. The front desk can be reached at (303) 823-4170.

Students have access to the Galvanize workspace, conference rooms, and events during their program, and are offered a free membership to Galvanize for six months following their program as well.

The maximum class size is 30. With a student to teacher ratio of 30:1.

The normal hours of operation for the Galvanize – Phoenix location are:
- Monday through Friday from 9am to 8pm.
- Saturday from 9am to 5:30pm.

# EQUIPMENT REQUIREMENTS

### Galvanize Data Science

Galvanize requires all Data Science Immersive students to provide themselves with a Mac or Ubuntu Linux machine with 4Gs of RAM and recommends a computer from the last 3 years. Galvanize can support students using OSX/ Ubuntu Linux machines. Galvanize is unable to provide technical support to students using a Windows machine.

Galvanize provides equipment, including full paired workstations with Mac mini computers, monitors, keyboards, and mice for the Data Science Immersive students.
Galvanize also maintains a professional GitHub account with electronic instructional materials, where students complete all assignments.

### Hack Reactor Software Engineering Immersive (All)

Hack Reactor Extended, Hack Reactor and Remote Part-Time (RPT) use a custom software called Learn2, which is maintained by Technical Mentors and Core's Infrastructure Team. If students have issues, they inform Galvanize staff and the team will get to solving those problems. Being managed by our internal team not only lets us handle any issues with a speedy turnaround time, but it lets us improve the framework constantly so we're always working with a better version of the software, and student-tested improvements.

Other software includes Slack, Zoom, GitHub, Google Hangouts, Floobits, Appear.in, AwwApp, and Repl.it each supported by their respective companies. These programs are not only well kept with glitches far and few between, but they are all provided at no cost to the student.

Slack and email are the best means of communication to HR staff should there be any issues with Learn2, or third-party software. Students primarily submit their work and assessments through GitHub, though some assignments are submitted via Google Drive. Both technologies allow staff to review and provide instant feedback on student work.

Students are required provide their own computers for the program. Student computers should support a Unix-based platform (like macOS or Linux). If you choose to use Windows your computer must either; be able to run Ubuntu, and meet the following technical specifications 6GB of RAM, 20GB of drive space free, 2-core 4-thread processor, and 2GHz processor speed OR run your computer must be able to run a dual-boot system for Ubuntu. Please note that these are the basic technical specifications, as these are comparable to the equipment currently used in the engineering field.

In order to ensure student success in the Hack Reactor Program, students must have adequate and reliable access to the internet for the duration of the program. Student must ensure that they are meeting the technical requirements of their Hack Reactor Program. If a technical issue affects your learning ability in the program staff will discuss alternatives with you. Additionally, students must

actively participate in the program by keeping their webcam on during class time, except in extenuating circumstances (such as inclement weather or power outages).

**Meaningful communication**
Slack allows staff to connect with the students via instant messaging on a real-time basis. This means that there is no lag in messages sent and received, and no waiting period due to technology. Students are expected to be monitoring their Slack messages during curriculum hours for communications from students and staff. More personal touches, whether one-on- ones, small group sessions, or live Q&As with the entire class, are done face-to-face via Zoom, Appear.in, or Google Hangouts video chat, where the faculty and students have an opportunity to let their personalities shine. Video chats require full participation and engagement in the session at hand. This holds students accountable for their own learning and allows staff to measure any weak points in understanding. We also have a Help Desk feature built into Learn2 that allows students to quickly receive one-on-one support from staff if they need help or have questions about an assignment or concept via video chat.

**Time and feedback**
Galvanize has ample network bandwidth to handle all students video feeds, and communication between students and staff. Each student typically spends the class time in their own home, where the small amount of bandwidth used is small and not a problem. The mix of networking and programs used in the classroom make it that there is no lag between student submission and faculty feedback.

## INTELLECTUAL PROPERTY

The Galvanize programs and all intellectual property related thereto including but not limited to the curriculum is the exclusive property of Galvanize unless noted otherwise. All course work, including any projects performed as a student of the Program, shall be subject to an MIT-style license, which a free software license granting the right to use, study, share (copy), and modify proprietary software, including but not limited to, exercises, learning experiences, solutions, example projects, material stored in Galvanize private Git repositories, or other training material.

By enrolling in Galvanize, permission is granted free of charge to any student (and Galvanize), to deal in the software without restriction provided that the software is provided "as-is" without warranty of any kind. In no event shall the authors or copyright holders are liable for any claim, damages, or other liability.

## PROPRIETARY MATERIALS

Materials provided or furnished electronically or otherwise, by Galvanize during the course of or in furtherance of student participation belong to Galvanize and/or its licensors. Students have no right to retain the materials and Galvanize reserves the rights to all materials. Students may reproduce, disseminate materials or use materials only during the course of or participation in an immersive program.

## MEDIA AND PUBLICITY RELEASE

Upon enrollment, students grant Galvanize the absolute and irrevocable right and unrestricted

permission to use their names, likenesses, images, voices, and/or appearances as such may be embodied in any photos, video recordings, audiotapes, digital images, and the like, taken or made on behalf of the school or its partners.

Students agree that the school has complete ownership of such material and can use said material for any purpose consistent with the school's mission, without providing any compensation to the student for the use of such images, video, likenesses, etc. These school uses include, but are not limited to, videos, publications, advertisements, news releases, Web sites, and any promotional or educational materials in any medium.

## COURSE DESCRIPTIONS

**Algorithms**
Learn a process for writing solutions to computational problems. A tool for visualizing chess board positions will support student exploration of the classic 'N-Queens' algorithms problem.

**Authentication and Full Stack Development**
Shortly is a URL shortener service similar to Bitly - but is only partially finished. The goal is to build out an authentication system and other features that will enable users to have their own private set of shortened URLs.

**Browser apps, jQuery, and AJAX**
In this sprint you'll learn about HTTP, RPCs, REST, and the other mechanisms of how internet traffic is transmitted. Using jQuery, you'll practice getting data from a server without needing a page refresh by building an application that interfaces with the Parse API as its back-end.

**Data Modeling and Classes**
By implementing basic data structures like stacks and queues, students learn some of the fundamentals of software engineering, including abstraction and data modeling, as well as how those tools are used in a complex application. We'll also dive into standard code sharing patterns, including object-oriented classes and mixins.

Note that this module is comprised of 2 sprints, so students will be working with the same pair for 4 days on this one. Unlike most sprints, students gain the most from working with someone that is as close as possible to their own current skill level and comfort with basic computer science fundamentals and data-structures.

**Data Structures and Complexity Analysis**
Implement and test Queues, Stacks, Linked Lists, Trees, Graphs, Sets, Hash Tables, and Binary Search Trees. Learn Test Driven Development, Function Binding, jQuery, HTML and CSS in the context of data structures and the DOM.

**Databases**
Store data persistently using the languages provided by database packages, including both traditional relational model and more recent non-relational technologies. Students will also learn to build their own ORM, a technique for shortening the gap between in-memory programs and the Database interface.

**DSI 101 – Software Engineering & Exploratory Data Analysis**
Software Engineering & Exploratory Data Analysis introduces students to development workflow, pair programming, and data science tools including python, sql, pandas, matplotlib.

**DSI 102 – Statistics and Probability**
Statistics and Probability helps student review probability, and introduces them to

Bootstrapping, Central Limit Theorem, hypothesis testing and Bayesian Statistics.

### DSI 103 – Regression
Regression involves review of linear algebra and introduces cross validation, shrinkage methods, and classification.

### DSI 104 – Supervised Learning
Supervised Learning offers students the opportunity to review and strengthen skills from DSI 101, DSI 102, and DSI 103, and build upon them by introducing the most popular and widely used Data Science techniques:  Decision Trees, k-th Nearest Neighbor, Bagging, Random Forests, Support vector Machines, and Boosting.  The week culminates in an open-ended case study.

### DSI 105 – Natural Language Processing
Natural Language Processing introduces students to web-scraping with MongoDB and clustering, Text Classification with NLTK, scikit-learn, and TF-IDF.

### DSI 106 – Unsupervised Learning
Unsupervised Learning introduces students to the most popular and widely used unsupervised techniques in Data Science:  k-means clustering, hierarchical clustering, principal components analysis (PCA), non-negative matrix factorization (NMF), and basic recommender techniques such as collaborative filtering.

### DSI 107 – Data Engineering
Data Engineering will introduce students to working with Big Data and concepts efficient computing.   These include:  Amazon Web Services (AWS), MapReduce, Spark, and parallel processing.

### DSI 108 – Case Studies
Subject Description: Case Studies will introduce special studies in data visualization, building of web applications, and culminate the entire portion of structured curriculum in an end-to-end case study on fraud detection.

### DSI 109- Capstone Projects
In Capstone Projects/Interview prep, students focus on building their cumulative projects, practice presenting their projects, participate in Hiring day, prepare for interviews, and practice. Instructors approve project proposals prior to student construction, to ensure that the project displays a cumulation of skills acquired in the program and that the project is appropriate for the job market.

### DSI 110- Interview Preparation
In Interview prep week, students focus reviewing all the aforementioned curriculum, prepare for interviews, and do practice interviews.

### ES6, APIs, React, and React - Redux
Students dive into the largest codebase yet, building a video player using the popular React

library and features in the latest version JavaScript, ES6. They will learn how to think about web apps as components and gain more exposure sending AJAX requests to REST APIs by populating their application with real data from YouTube. From there, students will learn about Redux and the principles of flux architecture, gain exposure to front-end code bundling using Webpack, and get some experience using thunks to dispatch asynchronous actions.

### Front End Capstone (FEC) Phase
This project simulates a real-life application development scenario where multiple teams work together to build a client-side application using a service-oriented architecture approach with popular web development technologies. During the project, students get exposed to customary Project Management techniques, Code Reviews and Unit Testing. Additionally, students gain exposure with Front-End Optimization techniques.

### Full-Stack Overview
In this sprint, you will be working solo to build a Full-Stack app. The app will be built nearly from scratch. You'll be building the client, server and the database persistence layer using MongoDB. You will also get to deploy your app to Heroku for the entire world to see.

### Hiring Sprint
During this time students will learn how to effectively search and apply for a job. They will learn how to go through the interview process form phone screen to salary negotiation. During the final week at Hack Reactor, as always, it's essential that students are onsite at 9am each morning. We have critical lectures and activities scheduled each day tuned to provide students the best possible experience. It's critical that students do everything within their power to plan interviews and phone screens only during the portions of the day marked *Activity - Apply For Jobs, Attend Interviews, Research Companies* on the senior calendar. If students are unable to do this, or if they absolutely must be absent during a lecture, email attendance@ galvanize.com.

### Inheritance Patterns
In this sprint you'll learn about class inheritance, and how to implement subclassing for the commonly used instantiation patterns you've learned.

### Koans
These exercises start with failing tests, and students use the various error messages to hunt down the errors in the code. We challenge students to debug the code provided in this segment to provide more insight on the JavaScript language, and functional programming ideas.

### Mini-Apps
In this 4-day sprint, you will build four "mini apps" completely from scratch. Building small apps from scratch is something that you will be asked to do in every technical interview during your job search. Mastering these concepts is essential to landing a job.

### Mini-Apps Part 2
In this 4-day sprint, students will build four "mini apps" completely from scratch. Building small apps from scratch is something that you will be asked to do in every technical interview during your job search. Mastering these concepts is essential to landing a job. In part 1 the focus was on

functional completeness, and in part 2, the focus is on code clarity.

**MVP Project**
To build on the learning of core engineering concepts, students will build a creative project that aligns with their personal interests. Students have 3 days to produce something compelling using the skills they've honed over the past 10 weeks.

**Orientation and Pre-Course Review**
Learn the structure and rules at Hack Reactor and review the Pre-Course curriculum at lightning speed. students will refresh their understanding of scopes, closures, and the keyword this module.

**Problem Solving and Building Blocks**
This unit provides a high volume of exercises designed to drill the basics of the JavaScript language and introduce problem solving frameworks for software engineering. Students become familiar with the basic data types of JavaScript, including objects, arrays, strings, numbers and booleans; some fundamental programming patterns are also drilled, including querying simple data sets and handling edge cases. Additionally, students will be introduced to debugging and version control best practices.

**Professional Resume Sprint & REC Presentation**
Students will learn how to write a professional resume and learn how to best present student skills and projects.

**Project Phase**
During the project phase, we will challenge students to create applications utilizing the skills they have developed over the past 5 weeks. During this phase, students will have the opportunity to create two basic web applications and projects to showcase their problem-solving skills, planning, and execution of code. For their capstone assignment, students will select a project to complete and work autonomously on focused on practicing the JavaScript fundamentals covered in a real-world context.

**Reading Documentation**
We will challenge students to work with a new library they have not used before. Utilizing the documentation, students will use their critical thinking skills as well as deductive reasoning to create charts. Additionally, students will learn about important concepts like inheritance and classes, as well as different patterns for instantiating objects.

**Recursion**
Recursion is a powerful concept in mathematics and computer science which makes it effortless to define and think about extremely useful data structures, such as trees and lists, as well as the algorithms which work with such data structures. Recursive algorithms can be used to find paths between two points, to traverse nested directories or the DOM, or to replace iteration in general. By the end of this unit, students will demonstrate their knowledge of recursion by implementing an elegant program for traversing a nested JSON data structure of arbitrary size

and complexity.

### Server-Side Techniques
In this sprint, students will be creating multiple Node services, and will rely on command-line server processes like Cron to build an application.

### Servers and Node
Build a custom backend in Node to replace the Parse API in a chat client application. Students will learn about CommonJS, routing, and how to debug server-side code.

### System Design Capstone (SDC) Project
This project is a continuation of the FEC Project simulating several aspects of a real-life application development scenario, including working on legacy code, data generation, database performance tuning, scaling your web server, load testing your system, working in isolation and working as a team, deployment and dev-ops.

### Technical Assessment
Students will demonstrate their ability to create a full-stack application from the ground-up independently. They will build both the front-end and back-end of the application.

### Testbuilder
We introduce students to automated testing and a couple popular testing frameworks to check the validity of their code base. Students will implement functions with expected behaviors, and tests to ensure they adhere to given specifications.

### Twiddler
Students will integrate their knowledge of HTML, CSS, and JavaScript (along with the jQuery library) to create a simple, single-page application with interactive functionalities. They are provided with a bare-bones web application with no functionalities, and must incorporate event handlers to manipulate the DOM.

### Underbar
This unit focuses on two major aspects of functional programming in JavaScript: the use of callback functions and understanding various modular patterns that functional programming libraries like underscore are designed to facilitate. Students will write their own versions of a large number of common higher-order functions, and in the end be equipped to write code in a style that is more reusable and readable. Additionally, students will be introduced to the concepts of test-driven development and will write their own tests.

## ACADEMIC CALENDAR

Galvanize observes the following Holidays:
New Year's Day – January 1, 2019
MLK Day – January 21, 2019
President's Day – February 18, 2019
Memorial Day – May 27, 2019
Independence Day – July 4, 2019
Labor Day – September 2, 2019
Thanksgiving – November 28 and November 29, 2019
Christmas – December 25 and December 26, 2019
New Year's Eve – December 31, 2020

| Program name | Start date | End date | Campus location | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | **AZ** | **CA** | | **CO** | | | **NY** | **WA** | **TX** |
| | | | Phoenix | Los Angeles | San Francisco | Boulder | Golden Triangle | Platte | New York | Seattle | Austin |
| **Galvanize Data Science Immersive** | Jan. 22, 2019 | Apr. 19, 2019 | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ |
| | May 6, 2019 | Aug. 2. 2019 | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ |
| | Aug. 19, 2019 | Nov. 15, 2019 | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ |
| | Dec. 2, 2019 | Feb. 24, 2020 | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ |
| **Galvanize Data Analytics** | Jan. 22, 2019 | Apr. 11, 2019 | | | | ✓ | | | | ✓ | |
| | May 6, 2019 | July 25, 2019 | | | | ✓ | | | | ✓ | |
| | Aug. 19, 2019 | Nov. 7, 2019 | | | | ✓ | ✓ | | | ✓ | |
| | Dec. 2, 2019 | Feb. 20, 2020 | | | | ✓ | | | | ✓ | |
| **Galvanize Data Science for Working Professionals** | Jan. 22, 2019 | July 9, 2019 | | | | | | | | | ✓ |
| | May 6, 2019 | Nov. 14, 2019 | | | | | ✓ | | ✓ | | |
| | Aug. 19, 2019 | Feb. 3, 2020 | | | | | | | | | ✓ |

galvanize

| Program name | Start date | End date | Campus location | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | | | **AZ** | **CA** | | **CO** | | | **NY** | **WA** | **TX** |
| | | | Phoenix | Los Angeles | San Francisco | Boulder | Golden Triangle | Platte | New York | Seattle | Austin |
| **Hack Reactor Software Engineering Immersive; Hack Reactor Software Engineering Online Immersive** | Jan. 2, 2019 | March 29, 2019 | | ✓ | ✓ | | | | ✓ | | ✓ |
| | Feb. 19, 2019 | May 17, 2019 | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ |
| | Apr. 8, 2019 | July 6, 2019 | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ |
| | May 28, 2019 | Aug. 23, 2019 | ✓ | | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ |
| | July 15, 2019 | Oct. 11, 2019 | ✓ | | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ |
| | Sept. 3, 2019 | Dec. 6, 2019 | ✓ | | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ |
| | Oct. 21, 2019 | Jan. 24, 2020 | ✓ | | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ |
| | Dec. 9, 2019 | Mar. 13, 2020 | ✓ | | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ |
| **Hack Reactor Extended Software Engineering Immersive Hack; Reactor Extended Software Engineering Online Immersive** | Jan. 7, 2019 | May 17, 2019 | ✓ | | ✓ | ✓ | | | | ✓ | ✓ |
| | Feb. 25, 2019 | July 5, 2019 | ✓ | | ✓ | ✓ | | | | ✓ | ✓ |
| | Apr. 15, 2019 | Aug. 23, 2019 | ✓ | | ✓ | ✓ | | | | ✓ | ✓ |
| | June 3, 2019 | Oct. 11, 2019 | ✓ | | ✓ | ✓ | | | | ✓ | ✓ |
| | July 22, 2019 | Dec. 6, 2019 | ✓ | | ✓ | ✓ | | | | ✓ | ✓ |
| | Sept. 9, 2019 | Jan. 17, 2020 | ✓ | | ✓ | ✓ | | | | ✓ | ✓ |
| | Oct. 28, 2019 | Mar. 6, 2020 | ✓ | | ✓ | ✓ | | | | ✓ | ✓ |
| | Dec. 9, 2019 | Apr. 17, 2020 | ✓ | | ✓ | ✓ | | | | ✓ | ✓ |

| Prep Courses - Online | Start date | End date |
|---|---|---|
| **Hack Reactor Structured Study Program (full-time, 4 weeks, online)** | Jan. 7, 2019 | Feb. 1, 2019 |
| | Feb. 25, 2019 | Mar. 10, 2019 |
| | Apr. 15, 2019 | May 10, 2019 |
| | June 3, 2019 | June 28, 2019 |
| | July 22, 2019 | Aug. 16, 2019 |
| | Sept. 9, 2019 | Oct. 4, 2019 |
| | Oct. 28, 2019 | Nov. 22, 2019 |
| | Dec. 16, 2019 | Jan. 17, 2020 |
| **Hack Reactor Structured Study Program (part-time, 5 weeks, online)** | Feb. 19, 2019 | Mar. 12, 2019 |
| | Apr. 8, 2019 | May 12, 2019 |
| | May 28, 2019 | June 30, 2019 |
| | July 15, 2019 | Aug. 18, 2019 |
| | Sept. 3, 2019 | Oct. 6, 2019 |
| | Oct. 21, 2019 | Nov. 24, 2019 |
| | Dec. 9, 2019 | Jan. 19, 2020 |
| **Hack Reactor Structure Study Program (part-time, 10 weeks, online)** | Jan. 7, 2019 | Mar. 14, 2019 |
| | Feb. 25, 2019 | May 9, 2019 |
| | Apr. 15, 2019 | June 17, 2019 |
| | June 3, 2019 | Aug. 15, 2019 |
| | July 22, 2019 | Oct. 3, 2019 |
| | Sept. 9, 2019 | Nov. 21, 2019 |
| | Oct. 28, 2019 | Jan. 16, 2020 |
| | Dec. 16, 2019 | Feb. 27, 2020 |