

# LIVE ONLINE DATA SCIENCE BOOTCAMP

## 2021 CATALOG



### **Welcome to**

Metis's Live Online Data Science Bootcamp

Metis

750 Third Avenue New York, NY 10017

<http://thisismetis.com>

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# **INSTITUTION INFORMATION**

## **Mission and Purpose**

Our mission at Metis is to educate people to find value in data. Our interactive distance learning course, designed by world-class industry practitioners, provides immersive and intensive data science training, access to an extensive network of speakers and mentors, and ongoing career coaching and job placement support. Our goal is to prepare you to succeed in the field of Data Science and Analytics.

Metis is the vocational program owned by Kaplan, Inc. The mission of Kaplan is to help individuals achieve their educational and career goals --- “We Build Futures: One Success Story at a Time.”

## **Philosophy**

We strive, we sweat, we swear.

We go the extra mile.

We stage, we fail.

We try again. Get it right.

We learn. Connect. Come together.

Welcome to Metis.

## **Organizational Structure and Background**

Metis was founded in 2014 and is owned by Kaplan, Inc. Kaplan, Inc. is a subsidiary of the publicly traded Graham Holdings Company. Established in 1938, Kaplan is a premier provider of educational and career services for individuals, schools and businesses. With a comprehensive menu of online offerings as well as a complete array of print books and digital products, Kaplan offers preparation for professional licensing exams for attorneys, physicians and nurses.

## **Facilities**

Metis students will receive 100% of the instruction remotely through interactive distance learning and will not be required to physically attend any facility.

Students will log in to the Metis Data Science Live Online Bootcamp platform using the meeting ID number provided upon enrollment. Through the online platform, students will engage in scheduled instruction and complete pair programming challenges. The instructors lecture and demonstrate programming in real-time, via their laptop which is visible through screenshare within the online simulcast.

Students will have access to a digital Resource Center with reference materials, articles and screencasts on the subject matter taught.

## **Accreditation & Approvals**

### **Accrediting Agencies**

The Metis Data Science online training is not accredited.

### **Approvals**

The Metis Data Science Live Online program operates in accordance with state laws.

Many states do not regulate exclusively online instruction. The select states in which we obtained specific approval to offer the Live Online Data Science program include:

The **Workforce Training and Education Coordinating Board** under Chapter 28C.10 RCW. Inquiries or complaints regarding this private vocational school may be made to:

Workforce Training and Education Coordinating Board

128-10th Avenue Southwest, Olympia, Washington 98504

360-709-4600

[workforce@wtb.wa.gov](mailto:workforce@wtb.wa.gov)

### **Disclaimer Statement**

As a prospective student, you are encouraged to review this catalog prior to signing an enrollment agreement. The student should be aware that some information in the catalog may change. It is recommended that students considering enrollment check with the Program Manager to determine if there is any change from the information provided in the catalog. Not all programs are available in all states. Please see the Appendix for state specific disclaimers.

## **Metis Administration, Staff, and Faculty**

### **Administration**

President, Jason Moss

Chief Operating Officer, Caryn Pochron

Executive Director - Strategy, Roberto Reif

Executive Director - Content, Sophie Searcy

Director of Program Operations, Leah Nicolai

Program Manager, Caroline Csernus

Program Manager, Jesel Roosevelt

Director of Career and Student Support, Jennifer Raimone

Career Advisor, Ashley Purdy

Director of Admissions, Amy Ramnath

Senior Admissions Manager, Josh Shaman

### **Data Science Faculty**

Senior Data Scientist, Alice Zhao, M.S. Analytics

Senior Data Scientist, Joseph Eddy, B.A. Mathematics

Senior Data Scientist, Kim Fessel, PhD Mathematics

Senior Data Scientist, Vinny Senguttuvan, M.S. Computational Engineering

Data Scientist, Brian McGarry, B.S. Chemistry, B.A. Philosophy

Data Scientist, Chris Bruehl, M.S. Analytics

Data Scientist, Joan Wang, M.S. Computational Analysis and Public Policy

Data Scientist, Leon Johnson, M.S. Mathematics

Data Scientist, Richard Chiou, M.E. Electrical Engineering and Computer Science (Data Science and Systems)

### **Ownership**

The Metis campuses are owned by Kaplan, Inc., a subsidiary of Graham Holdings Company and operates schools at the following locations:

Main Campus/Administrative Site for Live Online ONLY

Kaplan Prep & Achieve

750 Third Avenue

New York, NY 10017

The institution does not have a pending petition in bankruptcy, is not operating as a debtor in possession, has not filed a petition within the preceding five years, or has not had a petition in bankruptcy filed against it within the

preceding five years that resulted in reorganization under Chapter 11 of the United States Bankruptcy Code (11 U.S.C. Sec. 1101 et seq.).

**Catalog Certification**

Kaplan certifies that the information contained in this publication is current and correct, but is subject to change without notice, and does not constitute a binding agreement on the part of Kaplan or the Administration.



Caryn Pochron, Chief Operating Officer, Metis

# ADMISSION INFORMATION

## Acceptance to Metis

Admission into the Metis program is selective. Prospective students, who are at least 18 years of age, must submit a written application with supporting documentation as described below. Applications are reviewed by an Admissions Committee consisting of a combination of Metis Staff and Faculty. In determining whether to advance a prospective student's application into the next round of review, the Admission Committee evaluates the applicant's education and experience including (1) programming experience; (2) statistics experience; (3) effective communication skills; and (4) personality traits of curiosity, grit, and passion.

Prospective students who are advanced to the second round of screening are then sent three challenges that include a technical assessment, an exploratory data analysis, and a data science project challenge, which they have 3 hours to complete. Then, during their subsequent interview, conducted either in-person or online (e.g., Zoom) by at least one Metis Staff or Faculty member, the applicant presents his/her responses to the challenges (and the extra credit problems). In conducting the interview, the interviewer(s) will evaluate a second time for an applicant's demonstration of (1) programming experience; (2) statistics experience; (3) effective communication skills; (4) personality traits of curiosity, grit, and passion; as well as (5) motivation and (6) overall fit within Metis. Interviews are recorded and subsequently viewed by at least one Metis Staff member. If the Metis Faculty member(s) and Staff member(s) agree that the person has the potential to succeed at Metis, the applicant is informed in writing of his or her acceptance into the program within two weeks of the interview.

Metis operates its program on an ongoing basis. Application deadlines are driven by the program start dates as listed on page 31 of the Catalog. Applications must be received at least three weeks before the program start date. **Not all programs are available in all states.**

## Admission Requirements

1. State regulatory oversight agencies require that we maintain proof of a student's educational qualifications in our admission records. To prove completion of high school or some college-level coursework, you will need to submit one of the following documents:
  - College or university diploma or transcript. (Graduation not required).
  - High school diploma or transcript (Graduation required)
  - General Education Development (GED) certificate showing completion
2. Students must be able to speak, read, and write English fluently as all courses are taught in English. Acceptable documentation of English proficiency includes graduation from a high school, college or university that teaches all non-foreign language courses in English, or an acceptable minimum score on any of the following exams: A TOEFL iBT (internet based test) score of 71, a TOEFL pBT (paper based test) score of 530, a TOEFL cBT (computer based test) score of 197, a TOEIC score of 710 or an IELTS score of 6.
3. Demonstrate through the application process, including the coding challenges, that they have programming experience (i.e., writing code) and experience studying or using statistics (or machine learning or computational modeling) by way of previous coursework, research, or job-related experience.



## **Technology and Equipment Requirements for Digital Instruction**

Every student must use his or her personal laptop to connect to the scheduled online instruction equipped with the following:

- An Apple OS X operating system.
- At least 8GB RAM
- At least 2GHz
- At least 100 GB HD
  
- A video camera (students are required to be on-camera at all times during scheduled instruction)
  
- Download free video conferencing software (currently Zoom is required)
  
- Optional: Headphones and/or microphone so students are able to interact online with instructors and other virtual students under optimal conditions.

At specific times during the program, students will be required to install specific software or to connect to specific platforms. Those include:

- Python
- Jupyter
- Emacs, SublimeText or other text editor of their choice
- Git
- Github
- Google Chrome
- PostgreSQL
- MongoDB
- bash
- Numpy
- Scipy
- Scikit.learn
- Pandas
- Flask
- Spark
- Hadoop
- Hive

# STUDENT INFORMATION AND SERVICES

## Student Responsibilities

Students accepted into the Metis program have certain rights and responsibilities. These rights and the associated responsibilities shall establish a student code of professional conduct. Primary to this code is access to an environment free from interference in the learning process.

1. Students have the right to an impartial, objective evaluation of their performance and their pace relative to their peers. Students shall receive in writing information outlining the method of evaluating student progress (including pace) toward, and achievement of skills required for the program.
2. Students will be treated in a manner conducive to maintaining their worth and dignity. Students shall be free from acts or threats of intimidation, harassment, mockery, insult, or physical aggression.
3. Students will be free from the imposition of disciplinary sanctions without proper regard for due process. Formal procedures have been instituted to ensure all students subjected to the disciplinary process are adequately notified.
4. When confronted with perceived injustices, students may seek redress through grievance procedures outlined in the Grievance Policy. Such procedures will be available to those students who make their grievances known in a timely manner.
5. Students may take reasoned exception to the data or views offered in any program of study and may form their own judgment, but they are responsible for learning the academic content of any program in which they are enrolled.
6. Students will be given full disclosure and an explanation by Metis of all fees and financial obligations.
7. Students have the right and responsibility to participate in program and instructor evaluations and to give constructive criticism of the services provided by Metis.
8. Students have the right to quality education. This right includes quality programs; appropriate instructional methodologies and content; instructors who have sufficient educational qualifications and practical expertise in the areas of instruction; the availability of adequate materials, resources, and facilities to promote the practice and application of theory; and an environment that stimulates creativity in learning as well as personal and professional growth.
9. Students have the responsibility to conduct themselves in a professional manner within Metis and to abide by the policies of Metis.
10. Students are expected to conduct all relationships with their peers, Metis staff and faculty with honesty and respect.
11. Students are to comply with directions by Metis faculty and staff members who are acting within the scope of their employment, subject to their rights and responsibilities.
12. Students are encouraged to apply creativity in their own learning processes while striving for academic excellence, and to share their knowledge and learning experiences with fellow students in the interest of greater learning and better practice of the profession.

## Conduct

In today's competitive job market, professional conduct is a crucial factor in obtaining and keeping a job. Emphasis is continually placed on regular attendance, promptness, honesty, and a positive attitude. Students must not engage in the following:

1. All forms of dishonesty including cheating, plagiarism, forgery, and intent to defraud through falsification, alteration, or misuse of Metis documents. Except for permitted uses of third party content or code, such as open source code, copying other's work or written text from any source, including the Internet, without properly crediting the source of information, is plagiarism and violates a third party's intellectual property rights.
2. Theft, deliberate destruction, damage, misuse, or abuse of Metis property or the private property of individuals associated with Metis.
3. Inappropriate or profane behavior that causes a disruption of teaching, research, administration, disciplinary proceedings, or other Metis activities.
4. Being under the influence of alcoholic beverages or controlled substances on the Metis property, including the purchase, consumption, possession, or sale of such items.
5. The use of any tobacco products in Metis campus buildings, or any location other than designated areas.
6. Bringing dangerous items such as explosives, firearms, or other weapons, either concealed or exposed, onto the Kaplan property.
7. Failure to comply with Metis officials acting within the scope of their employment responsibilities.
8. Violence or threats of violence toward persons or property of students, faculty, staff, or Metis.
9. Improper use of e-mail and Internet access. Failure to comply with federal software piracy statutes forbidding the copying of licensed computer programs.
10. Inappropriate use of pagers, cell phones, or other electronic devices at a Metis facility.
11. Audio or video recording of any class or lecture offered by Metis is not permitted.
12. Physical abuse, verbal abuse, intimidation, harassment, coercion, stalking, or any conduct that threatens or endangers the physical or psychological health/safety of another person.
13. Rape, including acquaintance rape and/or sexual assault, in any form.
14. Aiding or abetting others in any of the aforementioned conduct violations.

A student found responsible for involvement in any of the violations listed above may be sanctioned accordingly. Sanctions range from a written letter of reprimand to immediate dismissal from the Metis program. Students dismissed due to violations of conduct are not eligible for readmission.

### **Intellectual Property Protection and Ownership**

Metis respects intellectual property rights and ownership. These policies ensure against unauthorized use of copyrighted material and information technology systems and provide guidance as to ownership of intellectual property.

Metis may provide opportunities for Students to create projects, post comments or contribute their own writing, designs, images, code or other content as part of or in connection with Programs ("**Student Content**"). Students are solely responsible for their own Student Content. Metis does not endorse Student Content and has no responsibility or liability for Student Content. Each Student represents and warrants that his or her Student Content is original and he or she has the unrestricted right to share such Student Content. If Students share any ideas with Metis about our Programs or our business ("**Suggestions**"), students agree that Metis has the unlimited right to use Suggestions without compensation to the Student.

The Program, the Metis website(s), all associated logos and trademarks, all materials to which Students are given access as part of the Program ("**Materials**"), whether those materials be digital or hard copy, all belong to Metis, its partners or its licensors (collectively, "**Metis IP**"). Metis IP may not be copied, reproduced, republished, uploaded or distributed in any way without Metis' prior written consent. Students may not share, sell, rent, give away or otherwise transfer Materials or other Metis IP to any other party without Metis' written consent.

## **Student Complaint Procedure/Grievance Policy**

The institution encourages students to bring all complaints or grievances about academically related situations to its attention. Many questions or concerns that students may have can be resolved simply through discussion.

A student may present a grievance through the following complaint and dispute resolution procedures. Metis will investigate all complaints or grievances fully and promptly.

A grievance is defined as a student's written expression of dissatisfaction concerning conditions of enrollment or treatment by instructors, other students, or staff. Grievances may include misapplication of Metis' policies, rules, regulations, and procedures, or unfair treatment.

### **STEP 1**

A student should first bring the grievance to the attention of the appropriate instructor.

### **STEP 2**

The student should next bring the grievance to the attention of the Program Manager.

### **STEP 3**

Should the student's grievance not be resolved to the student's satisfaction after completing steps 1 and 2, or if steps 1 and 2 are otherwise impracticable because the grievance is related to those individuals, the student should next bring the grievance to the attention of the Director of Program Operations.

### **STEP 4**

Should the student's grievance not be resolved to the student's satisfaction after completing steps 1 and 2 and 3, or if steps 1 and 2 and 3 are otherwise impracticable because the grievance is related to those individuals, the student should next bring the grievance to the attention of Metis leadership by emailing [info@thisismetis.com](mailto:info@thisismetis.com).

*See Appendix for state-specific policies and information if applicable to your state of residence.*

## **Nondiscrimination Policy**

The institution encourages diversity and welcomes applications from all minority groups. We do not discriminate against students or potential students on the basis of race, creed, color, religion, ancestry, national origin, age, gender, veteran or military status, sexual orientation, marital status, or the presence of any sensory, mental, or physical disability or the use of a trained guide dog or service animal by a person with a disability. Sexual harassment is a prohibited aspect of sexual discrimination under this policy.

It is the institution's policy to maintain an environment in which all individuals are treated with respect and dignity. Each individual has the right to learn in an atmosphere free from discriminatory practices, including sexual harassment and harassment based on race, religion, gender, color, sex, age, national origin, disability, marital status, sexual orientation, gender identity, veteran status, or any other legally protected status. Discrimination of any kind is unacceptable and will not be tolerated.

Harassment is verbal or physical conduct that denigrates or shows hostility or aversion towards an individual because of his or her protected status, or that of persons with whom the individual associates. For example, racial

harassment includes harassment based on an immutable characteristic associated with race (e.g., skin color or facial features).

Prohibited sexual harassment includes, but is not limited to:

- Coerced sexual acts
- Touching or assaulting an individual's body, or staring, in a sexual manner
- Graphic, verbal commentary about an individual's body or sexuality
- Unwelcome or offensive sexual jokes, sexual language, sexual epithets, sexual gossip, sexual comments or sexual inquiries
- Unwelcome flirtations, advances or propositions
- Continuing to ask an individual for a date after the individual has indicated that he or she is not interested
- Sexually suggestive or obscene comments or gestures
- The display of graphic and sexually suggestive objects, pictures, or graffiti or any computer-generated sexually explicit pictures or graffiti
- Negative statements or disparaging remarks targeted at one's gender (either men or women), even if the content of the verbal abuse is not sexual in nature
- Any form of retaliation against an individual for complaining about the type of behavior described above or supporting the complaint of the alleged victim

We encourage individuals who believe they are being harassed or discriminated against to firmly and promptly notify the alleged offender that his or her behavior is unwelcome. However, whether or not the individual chooses to discuss the incident with the alleged offender, anyone who either experiences or observes harassment or discrimination should report the incident immediately by speaking with the Program Manager, or follow the Student Complaint Procedure/Grievance Policy in the Catalog. The Administration will take any necessary action to promptly investigate the complaint to resolution. We cannot address allegations unless it is made aware of the complaint.

We recognize that false accusations of harassment can cause serious harm to innocent persons. If an investigation results in a finding that the complainant knowingly, falsely accused another person of harassment, the complainant will be subject to disciplinary action, and may be subject to expulsion from the Metis program with due process.

### **No Retaliation**

The institution will not retaliate against any individual who makes a report of perceived harassment or discrimination, nor will it permit such behavior by any person in the Metis program. Retaliation is a serious violation of the institution's policy, and those who feel they have been subjected to any acts of retaliation should immediately report such conduct to the Program Manager.

### **Students Seeking Reasonable Accommodations**

Information pertaining to an applicant's disability is voluntary and confidential. If this information is supplied, it will be used to reasonably attempt to overcome the effects of conditions that affect the admissions process and/or limit the participation of qualified disabled students. All inquiries about accommodations should be made to [accessibility@kaplan.com](mailto:accessibility@kaplan.com). Reasonable accommodations will be made on an individual basis. However, it is the responsibility of persons with disabilities to seek available assistance and to make their needs known to the Kaplan Accessibility Team as soon as those needs arise.

## **Career Services**

The Metis Live Online Data Science Bootcamp program offers career services to all its graduates. Organized by Metis' team of Career Advisors, these career services include:

- Workshops, resources, and individualized support on resume writing, interviewing, identifying job openings, salary negotiation, technical interviewing, and other job search activities.
- Direct access to potential employers through the organization of a live online Speaker Series that runs throughout the program, and the organization of a job seeker package that includes posting each student's resume and final project presentation on the Metis website for Employers to access.
- Post-graduation support in the form of techniques on seeking and securing employment, including introductions to employer contacts, if possible; access to MADE, our proprietary online hiring portal; networking events; and integration into Metis' online private alumni network.

While placement assistance will be provided, it is understood that Metis does not promise or guarantee employment, level of anticipated income or wage rate to any student or graduate. If a student fails to attend a job interview arranged by the Metis Careers team, the service may no longer be available to that student.

Students are responsible for informing the Metis Careers team of their employment information. Although average wage information based on data received from employers and graduates may be available to prospective students, no employee of the institution can guarantee that a graduate will earn any specific amount. Each student's program of study, academic performance, employer needs and location, current economic conditions, and other factors may affect wage levels and career prospects.

## **Housing**

Because the program is online only, you will not have any lodging, transportation, meals, insurance and other expenses in connection with your Enrollment and study in the Program.

## **Summary of Delivery System**

After completing pre-work described below prior to the class start at their own pace, students must be ready to participate in scheduled intensive, online classroom instruction. Students will log into the online classroom via the Metis Zoom conferencing link. They will utilize virtual breakout rooms to engage in pair programming with other virtual students as well as one-on-one meetings with their teachers and TA. Students will attend lectures virtually through the same webinar software. Students will interact with the instructor or TA during the simulcast lecture via the "chat" feature in Zoom. Students will use Slack and GitHub to communicate with others in class, submit project plans, provide updates on their progress, and submit projects for grading. Students will also present each project online using the same webinar conferencing software.

## ***Prerequisite Work***

The pre-work takes approximately 25 hours of academic review through open source online resources and additional hours to get set-up, download software, and review introductory materials, depending on the student's level of programming experience and statistics background. Students are required to follow and complete a full

Command Line Crash Course; become familiar with Python; follow a number of install package tutorials (i.e., NumPy, SciPy, Pandas, Scikit.learn); and engage in some preliminary statistics and linear algebra work.

The pre-work is intended to provide students with the essential background knowledge they'll need in order to start the Metis Data Science program. The pre-work is continuously reviewed by the Metis Faculty member(s) to ensure students are progressing and understanding the material. Students have online access to one another, as well as to the Metis Faculty member(s), through Slack, an online group chat forum.

Following enrollment, students will have access to the following support services:

- Access to the Program Manager
- Access to the Data Science Teaching Assistant(s) through Slack, an online discussion forum
- Option to meet virtually through web conferencing with Metis Staff and Faculty member(s)

### **Family Educational Rights and Privacy Act**

Student records are maintained for a minimum of five years from the student's last day of attendance, with academic transcripts maintained indefinitely. The Family Educational Rights and Privacy Act (FERPA) affords eligible students and their parents certain rights with respect to their education records including:

- The right to inspect and review the student's education records at the New York offices during normal school hours with an appointment within 45 days of the day the Program Manager receives a written, dated request for access. The institution does not permit students to inspect or review confidential student guidance notes maintained by Metis Administration, or financial records (including any information those records contain) of their parents or guardians.
- The right to request amendment of educational records that the student believes are inaccurate, misleading, or a violation of privacy. Students requesting amendment of an education record should submit a written, dated request to the Program Manager, clearly identify the part of the record they want changed, and specify why it is inaccurate, misleading, or a violation of privacy. If the Metis administration decides not to amend the record, we will notify the student in writing and/or verbally of the decision and of the student's right to an administrative hearing regarding the request for amendment. Additional information regarding the administrative hearing procedures will be provided to the student when he/she is notified of the right to a hearing.
- The right to consent to disclosures of personally identifiable information contained in the student's education records, except to the extent that FERPA authorizes disclosure without prior consent from the parents or the eligible student, as applicable. The institution may neither release nor disclose personally identifiable information contained in the student's education records to outside employers, agencies, or individuals without first securing a written release from the parent or eligible student, as applicable, unless permitted by the Act.

One exception to the above student record release policy permits disclosure without consent to school officials with legitimate educational interests. A school official is a person employed by Kaplan in an administrative, supervisory, academic or research, or support staff position (including law enforcement unit personnel and health staff) or a person or company with whom Kaplan is affiliated or has contracted (such as an attorney, auditor, or collection agent). A school official has a legitimate educational interest if the

official needs to review an education record in order to fulfill a professional responsibility.

Upon request, the institution may disclose educational records to officials of another school in which a student seeks or intends to enroll.

- The right to file a complaint with the U.S. Department of Education concerning alleged failures by Metis Administration to comply with the requirements of FERPA. The name and address of the office that administers FERPA is:

Family Compliance Office  
U.S. Department of Education  
400 Maryland Avenue SW  
Washington DC 20202-4605

Students who are the age of 18 or older or attend a school beyond the high school level are eligible students and shall have the right to file such a complaint. Students who are under 18, their parents shall have such rights.

## **ACADEMIC INFORMATION**

### **Class Size**

There are four Data Scientist instructors assigned to teaching each unit within the program with a student-to-teacher ratio maximum of 30:1 for lab and 80:1 for lecture. There may be periods of the program in which the one instructor will be teaching with the administrative support of one or more Teaching Assistants.

### **Hours of Operation**

The normal hours of operation are as follows:

#### **Classes**

Weeks 1-12: MON-FRI ..... 9:30am - 5:30pm ET\* (Early Section)

or

Weeks 1-12: MON-FRI ..... 11:30am - 7:30pm ET\* (Late Section)

Each class day consists of 4 hours per day of lab and lecture, 3 hours per day of individual project work, and a 1-hour lunch break.

*\* Please note: class hours may be extended to make up for missed hours due to holidays.*

#### **Online Administrative Office Hours**

MON-FRI .....9:00 a.m. to 5:00 p.m. ET



## **Required Study Time**

Apart from scheduled classroom instruction and participation work, outside study and independent practice is required to successfully complete the program. The amount of time will vary according to the individual student's abilities and complexity of the projects. Students should expect to **spend an additional 3 to 4 hours per day outside of class** completing the assigned projects. Students will have access to the TA and instructors Monday through Friday until 5:30pm ET or 7:30pm ET, depending on the class schedule selected, for questions and assistance.

Students are responsible for completing any assignments issued by their instructors. All assignments must be turned in at the designated time.

## **Changes in Programs or Policies**

The institution has the right, at its discretion, to make reasonable changes in program delivery, content, materials, schedules, or sequences of content in the interest of improving the student's education, or where deemed necessary due to industry changes, academic scheduling, or professional requirements.

We are required to make changes in programs or policies when ongoing federal, state, or accrediting changes affect students currently in attendance.

These changes will not negatively affect currently enrolled students and will be vetted with the state oversight agencies, if required, prior to enrolling future students.

## **English as a Second Language Instruction**

The Metis program does not offer English as a Second Language instruction. In fact, students must be able to speak, read, and write English fluently as all courses are taught in English.

## **Attendance/Tardiness Policy**

Attendance is critical to build the proper skills. Active participation each day is required to succeed in the Data Science programs because much of the program is conducted in a hands-on environment. Students must appear through video on-screen to be marked present for the scheduled instruction. Metis instructors take attendance daily and the attendance records are maintained at the school at all times.

Attendance will be taken in the following manner:

1. Attendance will be taken approximately ten minutes after the morning session begins. A minimum of 80% attendance during Week 1 –through Week 8 is required. [80% of 40 online instruction days is 32 days of instruction required]. Additionally, in Weeks 9-12 where students are building their Final Project, a minimum of 80% attendance is required [80% of 20 days is 16 days].
2. Students arriving 30 minutes late for a session or leaving early from a session will be marked tardy. Tardiness disrupts the learning environment and is discouraged. Continued excessive tardiness or absences in the

sessions could lead to disciplinary action up to and including expulsion. Six instances of tardiness will be counted as one absence. Students will be contacted by phone and email each time s/he is absent from a session.

### **Dismissal Policy for Nonattendance**

Students are expected to attend and actively participate each day because a significant portion of the Data Science program is hands-on or practical skill based. Missing any portion of the program (failure to attend required check-ins and discussion posts) makes it very difficult for students to adequately complete the required Projects that are graded assessing these specific skills sets.

- Students who are absent from the Metis program for more than five (5) consecutive instructional days during Week 1 – Week 8 (excluding holidays, breaks, and emergency closures due to unforeseen circumstances such as weather) will be dismissed from the program.
- If a student is absent more than five (5) consecutive instructional days, the student will be considered dropped from the program. Metis Administration will advise the student in writing and phone of the student's status and will discuss the opportunity to provide reasons for withdrawal, which will be in the student's file. If appropriate, the student will be considered for a leave of absence to restart the program with the next available cohort and tuition paid will remain valid.
- If a dismissed student wishes to complete the program, s/he may apply for admission into a new cohort after six months from dismissal.
- Students may follow the process outlined in the Grievance Policy outlined in this catalog if they feel an error has been made in their attendance calculation.

### **Make-Up Standards**

Weeks 1 – 8 of the program are especially hands-on and students must be in the virtual classroom every day and on time. If instructional time is missed, it is the student's responsibility to make an appointment with the instructor to determine if the missed work can be made up comparable to the content, time, and delivery of the instruction missed and if applicable, to make a plan to learn the material covered while absent. During weeks 9-12 when students exclusively work on their Final Passion Project, there is more latitude for making up work, as long as plans for continued work on the Final Passion Project have been approved in advance by the Instructors or the Director (Program Manager) . Make-up work must be completed by the program end date. Make-up work cannot be used to excuse an absence and completing make-up work does not change the student's recorded attendance.

### **Leave of Absence Policy**

The program is intensive and hands-on where daily online attendance is required to complete the Project Deliverables, so a leave of absence will be granted only in the event of extenuating circumstances, such as medical necessity or death in the family, and only during weeks 9-12. To apply, the student must submit a written request with supporting documentation to the Program Manager. If approved, the student may be absent for no more than 10 days and will be permitted to rejoin the same cohort. Students must sign and date the leave of absence request form and submit it prior to the leave, citing the specific reasons for the leave and the timeframe for when the student's return will be expected.

## **Suspension and Dismissal**

All students are expected to conduct themselves as responsible adults, to attend online classes regularly, and to maintain a satisfactory level of academic achievement. The institution reserves the right to suspend or dismiss any student who:

- exhibits conduct found by the administration to be detrimental to fellow students, other individuals, the community, or Metis staff, as addressed in the Conduct section of this catalog;
- fails to maintain satisfactory academic progress;
- fails to meet attendance standards; or
- fails to meet financial obligations of the Metis program.

Time on suspension will be counted as an absence from the Metis program and cannot exceed the allowable absences stated in the attendance policy.

## **Graduation Requirements**

In order to receive a Certificate of Completion in the Data Science program, students must

- successfully complete the Project Deliverables;
- meet 80% attendance; and
- fulfill all financial obligations to the institution prior to graduation unless previous satisfactory arrangements have been made.

If satisfactory financial arrangements are not made, the graduation credential will be withheld.

## **Transcripts**

Current or former students may request a free copy of their unofficial transcript by submitting a written request to Metis administration including their name and physical address and/or email address where the unofficial transcript should be mailed or emailed. Transcripts will be marked to indicate they are unofficial copies.

Students may request official transcripts through [info@thisismetis.com](mailto:info@thisismetis.com). Official transcripts will not be released for students who have a past-due account with Metis. *Residents of the State of Washington, please see the Appendix for state specific information.*

## **Transfer of Credit to Other Schools**

### **Transfer or Articulation Agreements**

The institution has no transfer or articulation agreements with any other college or university that provides for the transfer of credits earned in the program of instruction.

### **NOTICE CONCERNING TRANSFERABILITY OF CREDITS AND CREDENTIALS EARNED AT OUR INSTITUTION**

The transferability of credits you earn in the Metis program is at the complete discretion of an institution to which you may seek to transfer. Acceptance of the certificate you earn in the program is also at the complete discretion of the institution to which you may seek to transfer. If the credits or certificate that you earn in the Metis program are

not accepted at the other institution to which you seek to transfer, you may be required to repeat some or all of your coursework at that other institution. For this reason you should make certain that your attendance at the other institution will meet your educational goals. This may include contacting an institution to which you may seek to transfer after attending the Metis program to determine if your credits or certificate could be transferred.

### **Post Graduate Services**

Career services are offered to graduates of the Metis Live Online Data Science program. Organized by Metis' Career Advisor, these career services include:

- Workshops, resources, and individualized support on resume writing, interviewing, identifying job openings, salary negotiation, technical interviewing, and other job search activities.
- Direct access to potential employers through the organization of a live online Speaker Series that runs throughout the program, and the organization of a job seeker package that includes posting each student's resume and final project presentation on the Metis website for Employers to access.
- Post-graduation support in the form of techniques on seeking and securing employment, including introductions to employer contacts, if possible; access to MADE, our proprietary online hiring portal; networking events; and integration into Metis' online private alumni network.

# ACADEMIC STANDARDS

## Grading System

The institution uses a grading system of 0-25 for its Certificate Programs and an overall grade of Pass/Fail on the transcript. Students must maintain satisfactory progress on each required Project Deliverable to receive a Pass for the program. Individual assignments or projects are evaluated by faculty and student learning pace is monitored.

The teaching methods used are hands-on/practical skill and the assessments that demonstrate these skills are Data Science projects. Thus, grading and satisfactory progress focus on acquiring knowledge of five key skills: Design, Data, Algorithm, Tools, & Communication. Each of these five skills are number graded on a 1-5 scale (1 being unsatisfactory, 2 being below average, 3 being average, 4 being above average and 5 being excellent). The maximum score a student can achieve on each project is a 25. [A grade of 3 in each skill set would total 15, the equivalent of a “C” letter grade]. These five skills are assessed throughout the program with five required Unit Project Deliverables and with an Optional Challenge Assignment. Students must receive a minimum average score of 15 overall on the Unit Project Deliverables to receive a Pass for the program. A grade of zero (Incomplete) is reserved for students who fail to take the assessment at all.

## Satisfactory Academic Progress

Satisfactory academic progress (SAP) standards apply to all Metis students.

All students must complete their program of study in the normal duration of pre-work prior to start and 12 weeks of 240 online contact hours. In order to graduate, a student must successfully complete 100% of the required assignments, and maintain attendance throughout the program.

Any student who receives a score of 10 or below on a Unit Project Deliverable will receive notification by the Program Manager via email that s/he has been placed on academic probation and is required to sign up for extra help with the instructors. A minimum of two hours with the instructor is required. In addition, the student will be placed on an Academic Improvement Plan which includes remedial work to address the student’s skill deficiencies. Students may not repeat any of the units within the program unless they withdraw and defer their enrollment to a later cohort. In this case, the student will receive a grade of Incomplete. Any student who wants to appeal the grade(s) received may do so by contacting the Program Manager who will have an independent instructor review the student’s Project Deliverable. The procedure for appealing a project grade is as follows: (i) email the Program Manager with the request within 10 days of receiving the grade; (ii) include a statement as to specific areas of the Project Deliverable that is disputed or needs to be re-evaluated. The Chief Data Scientist will make the final decision of any appeal and provide the decision to the student prior to the next Project Deliverable deadline.

Any student on academic probation who receives a score of 10 or below on a subsequent Unit Project Deliverable will be dismissed from the Program. Any student who submits an Optional Challenge Assignment for grading will have the opportunity to use the grade on the Optional Challenge Assignment to replace it with the grade on a required Unit Project Deliverable. The Optional Challenge Assignment is due before the presentation of the following project deliverable. Students who do not maintain satisfactory progress and are subsequently dismissed from the program are not eligible for readmittance. If a dismissed student wishes to complete the program, s/he may apply for admission into a new cohort after six months from dismissal.

UNIT	Project Deliverable	Scores on each Skill using the following scale: 1-Unsatisfactory, 2-Below average, 3-Average, 4-Above average, 5-Excellent					TOTAL GRADE (0 - 25)
		Design	Data	Algorithm	Tools	Communication	
1	Group Presentation						
2	Presentation						
3	Interactive Dashboard						
4	Report						
5	Presentation						
If submitted	Optional Challenge Assignment						

Schedule for Evaluation: Satisfactory academic progress will be reviewed five times (each Project Deliverable) during the Program: Week 1, Week 3, Week 6, Week 8, and Week 12. Students will receive their final scores via email on the next class day following each Project Due Date.

**Satisfactory Progress Standard:**

Students are expected to receive no less than a “3” on each skill set. Students must maintain satisfactory progress by an average grade of 15 or more on each of the required Unit Project Deliverables to receive a Pass for the program. Satisfactory academic progress will be checked after each Unit Project Deliverable in Week 1, Week 3, Week 6, Week 8, and Week 12.

The Bootcamp being immersive, hands-on practical skill training must be completed in the 12- week on-site time frame with the exception being that the final Passion Project Deliverable deadline may be extended no more than three (3) weeks with permission of the Program Manager.

# FINANCIAL INFORMATION

## Scholarships

The Metis team recognizes that certain groups are underrepresented in Science, Technology, Engineering, and Mathematics (STEM), and technology careers such as Data Science. We are committed to creating more avenues for talented individuals from underrepresented demographic groups to help drive our future economic growth. Applicants who belong to these groups may apply to only one of the three scholarships listed below. Admitted students will have the opportunity on the enrollment agreement to select one group they belong to and must apply through the Enrollment Agreement only. Scholarship recipients will see a reduced payment obligation in the tuition invoice emailed to students upon the processing of their enrollment. An award of \$3,000 will be awarded to up to 30 students per cohort and will be applied as reduced tuition.

### **Diversity Scholarship**

Effective March 30, 2020, a \$3,000 scholarship towards Metis tuition is available for women and for individuals from an underrepresented demographic (African-American, Hispanic/Latino-American, Native American, Pacific Islander, mainland Puerto Rico) underrepresented in technology careers.

### **Military Scholarship**

Effective March 30, 2020, a \$3,000 scholarship towards Metis tuition is available for active members and veterans of the U.S. military.

### **LGBTQ Scholarship**

Effective March 30, 2020, a \$3,000 scholarship towards Metis tuition is available for members of the LGBTQ community, which is comprised of individuals who sexually identify as lesbian, gay, bisexual, transgender or queer (and/or questioning).

## Financial Aid

**The institution does not participate in federal and state financial aid programs.**

## Tuition and Fees

### **Live Online Data Science Bootcamp**

Fee Type	Fees and Tuition
Registration Fee	\$100
Course Tuition	\$16,900
TOTAL	\$17,000

[There are no additional charges for books or supplies. All instructional materials used are open source and available for free].

**Method of Payment:** You may either pay the Tuition in total by check or credit card upon Execution of the Enrollment Agreement, or you may provide a deposit of \$1,500 followed by three installment payments of \$5,166.67 until the outstanding balance is paid. If you are eligible for a scholarship for either Spring, Summer or Fall, the tuition and any installment payments will be adjusted accordingly.

**Timeliness of Payments:** Students who pay in installments will receive via email monthly notifications from the Program Manager indicating the amount owed. Students are responsible for making payment within seven (7) days of receipt of the email. Students who do not pay on time will receive up to two email reminders, and an in-person reminder. If a student has still not paid, Metis administration may decide to involve a collections agency and will withhold the graduation credential.

**Refund Policy**

**Students who wish to cancel their seat in the program are encouraged to notify the school and may contact the Program Manager by any means so that their seat may be opened for another admitted student on a waiting list. If notification is not provided and the student fails to attend, the school will automatically terminate the enrollment and process a refund as a no-show.**

**Student’s Right to Cancel**

**CANCELLATION POLICY**

The school will provide a full refund if the student is not admitted into the Program or if the Program is cancelled by the school. The school may retain an established registration fee equal to ten percent of the total tuition cost, or one hundred dollars, whichever is less, if the applicant cancels past the fifth business day after signing the contract or making an initial payment. A registration fee is any fee charged by a school to process student applications and establish a student record. If you are a resident of California or Texas, please see the appendix for state specific Cancellation Policies.

**REFUND POLICY**

1. Refund computations will be based on attendance in the Program through the last date of attendance. Leaves of absence, suspensions and school holidays will not be counted as part of the scheduled class attendance.
2. The effective date of termination for refund purposes will be the last day of recorded attendance or:
  - a. when the school receives notice of the student’s intent to withdraw from the program; or
  - b. when the student’s enrollment is terminated for violation of a published school policy which provides for termination; or
  - c. when a student, without notice, fails to attend the program for thirty calendar days.
3. After expiration of the cancellation privilege and the student does not start the online prework, not more than \$100 shall be retained by the school for the entire Program.
4. Once the student starts the Program and withdraws or is otherwise terminated after the cancellation period, the school shall retain \$100 plus the percentage of tuition in accordance with the table below. The numbers reflected below are the result of comparing the state’s refund policy and the ACCET refund



policy and selecting the refund policy that is most favorable to the student. *See Appendix for state-specific refund policies and information if applicable to your state of residence.*

<b>If the drop/termination occurs</b>	<b>School keeps</b>
During the first week	\$1000 + \$100 [The prorated amount of tuition withheld will not exceed 10% of the stated tuition up to a maximum of \$1,000]
During the second week	16.67% of tuition + 10% of unearned tuition + \$100
During the third week	25% of tuition + 10% of unearned tuition + \$100
During the fourth week	33.33% of tuition + 10% of unearned tuition + \$100
During the fifth week	41.67% of tuition + 10% of unearned tuition + \$100
During the sixth week	50% of tuition + \$100
During the seventh week or beyond	100%

Unearned Tuition: Represents the weeks that the student did not complete. By way of example, if a student drops/terminates during the fourth week, the student’s enrollment has 8 weeks of Unearned Tuition.

5. Refunds for items of extra expense to the student, such as books, tools, or other supplies are separate from refund of tuition and other academic fees. The student will not be required to purchase instructional supplies, books and tools until such time as these materials are required. Once these materials are purchased, no refund will be made.
6. The payment of refunds will be totally completed such that the refund instrument issued or credit card credited into the proper account(s), within 30 days after the effective date of termination. If a third party paid for tuition on your behalf, the refund will be made to that third party in the amount of the refund due (but in no event greater than what that third party paid to us). If there is an excess balance of the refund after payment to that third party, that amount will be refunded to you.

If a third party paid for tuition on your behalf, the refund transaction will be made to that third party in the amount of the refund due (but in no event greater than what that third party paid to us ). If there is an excess balance of the refund after payment to that third party, that amount will be refunded to you. If you obtained a loan to pay for the Program, you will be responsible for repaying the full amount of the loan plus interest, less the amount of any refund.

The institution reserves the right to delay or cancel the start of a planned Program for reasons such as low enrollment. If you choose not to begin the Program on the delayed starting date or the Program start is cancelled, then we will refund all Fees paid including the non-refundable registration fee.

All refunds due will be made within 30 days of the student's effective withdrawal date or cancellation. The refund calculation will be based on the scheduled days of class attendance. The last date of actual attendance is used in calculating any refund amount.

In case of prolonged illness, accident, death in the family, or other circumstances that make it impractical to complete the program, a refund that is reasonable and fair to both parties shall be made, but in no event will the amount refunded be less than that reflected in the applicable refund schedule.

# ACADEMIC PROGRAMS

## Live Online Data Science Bootcamp Certificate Program

### Program Description

Upon graduating from the Data Science Bootcamp, a student will be prepared with the core data science skills ready to take an entry-level position in the field of Data Science. Job titles range based on the industry but are typically Data Scientist, Data Analyst, Data Engineer, Jr or Associate Data Scientist, Data Science Consultant and Machine Learning Engineer.

The Data Science program is 240 clock hours over a period of 12 weeks, not including time spent working independently on required projects. Prior to graduation, students are required to complete a Passion Project that they can present to potential employers during Career Day as the final piece in their online portfolio. Proposals for Passion Projects will be reviewed and approved in advance by the Metis Faculty member(s). Upon successful completion of the program, graduates will be awarded a Data Science Certificate.

This program is designed to prepare graduates to pursue entry-level employment in the field, or jobs in related fields, the specific job titles of which may not be represented in the program title or described above. Although the school will assist students with job placement, finding a job is the individual responsibility of the student. The school does not guarantee that any student will be placed in any of the jobs described, or placed at all.

### Curriculum

#### *Program Objectives*

After completing this course a student is expected to:

- Have a fluid understanding of and practical experience with the process of designing, implementing, and communicating the results of a data science project.
- Be a capable coder in Python and at the command line, including the related packages and toolsets most commonly used in data science.
- Understand the landscape of data science tools and their applications, and be prepared to identify and dig into new technologies and algorithms needed for the job at hand.
- Know the fundamentals of data visualization and have experience creating static and dynamic visualizations for data and models.
- Have introductory exposure to modern big data tools and architecture such as the Hadoop stack, know when these tools are necessary, and be poised to quickly train up and utilize them in a big data project.

#### *Program Outline and Hours*

#### **Online Scheduled Instruction (Weeks 1-12 x 20 hours/week = 240 hours)**

*These hours exclude a 60-minute daily lunch break and 3 hours per day of independent project work.*

Unit #	Unit Title	Lecture	Lab	Total
1.0	Mini Data Science Project	10	10	20
2.1	Design Process, Web Scraping	12	8	20
2.2	Regression, Communicating Results	7	13	20
3.1	Databases, Machine Learning Concepts, Intro to Supervised Learning	13	7	20
3.2	Supervised Learning and Visualization	11	9	20
3.3	Introduction to NLP and NOSQL	4	8	12
4.1	NLP fundamentals, NoSQL, Unsupervised Learning	11	17	28
4.2	Handling Big Data	5	15	20
4.3	Big Data ML, Deep Learning, Ethics	10	10	20
5.0	Passion Project, Technical Skills Workshop	0	60	80
<b>Total Hours for Program Completion</b>		<b>83</b>	<b>157</b>	<b>240</b>

### Unit 1 (Mini Data Science Project)

In the first week, students will complete an entire (mini) data science project from start to finish. Students will gain confidence in the Jupyter environment, start programming under version control, use commands from the pandas package to perform statistical analysis on their data, and visualize the results using the Matplotlib package. The goals of this unit are to:

- Introduce and gain familiarity with Unix, Git, Jupyter, pandas, and Matplotlib.
- Finish a mini data science project to completion & communicate results to the public.

### Unit 2.1 (Design Process, Web Scraping)

Students will start understanding the decisions and tools they used in the first unit's project in more depth. They will learn the possible contexts of projects in different domains and the iterative design process involved in a data science project. As students start their second project, they will learn web scraping and start fitting simple models to data. The goals of this unit are to:

- Introduce the design process and dimensions of data science projects.
- Provide experience working with realistic, unstructured data.
- Begin working with models.

## Unit 2.2 (Regression, Communicating Results)

Students will focus on regression and developing skills for communicating results. The packages used in this week will include regression modules of Scikit.learn and Matplotlib in more depth. Choosing among the analysis methods and approaches to reporting their results, students will finish the second project and present their findings. The goals of this unit are to:

- Deepen understanding of and facility with simple models.
- Increase expertise in python-based data manipulation packages.
- Complete second analysis and communicate results to each other.

## Unit 3.1 (Databases, Machine Learning Concepts, Intro to Supervised Learning)

This unit will start off with (relational) databases such as SQL, and more ways of obtaining, cleaning and maintaining data. We will then introduce models used for classification and supervised learning including logistic regression and KNN. The goals of this unit are to:

- Become proficient with SQL databases and writing simple queries.
- Understand core machine learning concepts and apply a supervised learning algorithm.
- Start building intuition around feasibility of projects, size and time limitations.

## Unit 3.2 (Supervised Learning and Visualization)

This unit will introduce the last of the fundamental supervised learning algorithms. It will then cover more advanced techniques for supervised learning, including addressing class imbalance and using ensembling to improve models. Finally, the unit will cover deploying models to a web app in order to create interactive visualizations.

The goals of this unit are to:

- Know the space of supervised learning algorithms and the selection process.
- Understand the fundamentals of web apps, including how HTML, CSS, and Javascript are used to build them..
- Load a saved data science model so that it can be used in an external application, such as an interactive visualization.
- Create interactive visualizations around both data and models.

## Unit 3.3 (Introduction to NLP and NOSQL)

Students will finish project 3 and gain further practice in communicating the results of a full data science project. We then introduce the theory and practice of using NOSQL databases to capture unstructured data. Finally we provide an overview of Natural Language Processing techniques and provide the students' first exposure to an unsupervised learning algorithm. The goals of this unit are to:

- Use a NOSQL database to store unstructured data at large scales.

### **Unit 4.1 (NLP fundamentals, NoSQL, Unsupervised Learning)**

The project for the fourth unit will involve text data. Students will learn the fundamentals of dimensionality reduction and apply this to the NLP-specific approach of topic modeling. We will wrap up our coverage of clustering unlabeled data. We introduce essential deep learning concepts and show students how deep learning can be used in an NLP context to obtain and use word embeddings. Finally, we introduce recommendation systems. The goals of this unit are to:

- Extract topic vectors from a text corpus and use those vectors for insight into real NLP data.
- Understand the fundamentals of deep learning and how those are used to build word embeddings.
- Incorporate a recommendation system into an existing data science project

### **Unit 4.2 (Handling Big Data)**

Students will learn about how large amounts of data are handled, parallel computing and Hadoop MapReduce. They will also be introduced to designing experiments, especially in the A/B testing context. The goals of this unit are to:

- Understand the purpose of big data tools and have an idea of the landscape.
- Use these big data tools on real projects.
- Design and interpret the results of experiments, including A/B tests.

### **Unit 4.3 (Big Data ML, Deep Learning, Ethics)**

Students will learn to use big data tools for the machine learning algorithms covered in previous weeks. Students will learn state-of-the-art machine learning approaches including Extreme Gradient Boosting and Deep learning approaches based on recurrent and convolutional models. Finally, students will learn frameworks for evaluating ethical decisions in the field of data science. . The goals of this unit are to:

- Use machine learning algorithms on big data applications.
- Explain and make use of state of the art models, including XGBoost, and convolutional and recurrent Deep Learning models.
- Make informed decisions in ethics of data science.

### **Unit 5 (Passion Project, Technical Skills Workshop)**

Following the decisions they made and building upon their work up until this point, students will finish their passion project. They will learn more on cloud computing, system architectures and feasibility evaluations. Towards the end of this Unit, they will learn to communicate the technical skills demonstrated in the passion project in mock interviews and observation of best practices in the interview process. The goal of this unit is to:

- Enable students to make their own decisions for the algorithms, software tools, visualization choices and present their results.

## **Occupational Outcomes**

### ***Data Science (Certificate)***

Upon earning a certificate of completion for the *Data Science* program, the student will be prepared to pursue entry-level data scientist, data analyst, data science consultant, and data miner positions. This means a student shall:

- Have a fluid understanding of and practical experience with the process of designing, implementing, and communicating the results of a data science project.
- Be a capable coder in Python and at the command line, including the related packages and toolsets most commonly used in data science.
- Understand the landscape of data science tools and their applications, and be prepared to identify and dig into new technologies and algorithms needed for the job at hand.
- Know the fundamentals of data visualization and have experience creating static and dynamic data visualizations for data and models.
- Have introductory exposure to modern big data tools and architecture such as Hadoop and Spark, they will know when these tools are necessary, and be poised to quickly train up and utilize them in a big data project.

We provide assistance to eligible graduates in obtaining employment as entry-level data scientists. Graduate students will continue to receive support post-graduation.

#### **Potential entry-level job position titles include:**

- Data Scientist
- Data Analyst
- Data Science Consultant
- Junior/Associate Data Scientist
- Data Engineer
- Machine Learning Engineer
- Data Science Apprentice/Intern
- Analyst

#### **Related positions that certain students will newly be qualified for, depending on previous skill-sets:**

- Product Analyst
- Research Analyst
- Marketing Analyst
- Data Journalist
- Business Analyst
- Business Intelligence Analyst
- Database Administrator
- Artificial Intelligence Engineer
- Artificial Intelligence Developer

## ACADEMIC CALENDAR

<b>HOLIDAY SCHEDULE</b>	<b>2021</b>
MARTIN LUTHER KING DAY	JANUARY 19, 2021
MEMORIAL DAY	MAY 31, 2021
INDEPENDENCE DAY	JULY 5, 2021 (OBSERVED)
LABOR DAY	SEPTEMBER 6, 2021
THANKSGIVING	NOVEMBER 25-26, 2021
CHRISTMAS	DECEMBER 25, 2021

Metis operates its program on an ongoing basis. Application deadlines are driven by the program start dates as listed below. Applications must be received at least three weeks before the program start date.

### **2021 LIVE ONLINE DATA SCIENCE PROGRAM DATES**

***START DATE***

***END DATE***

JANUARY 4, 2021

MARCH 26, 2021

# Appendix

## State Specific Policies

**If you are a resident in one of the following states, please note the specific policies which shall apply to your Live Online Data Science Bootcamp enrollment.**

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### Washington

Metis is licensed under Chapter 28C.10 RCW. Inquiries or complaints regarding this private vocational school may be made to:

Workforce Training and Education Coordinating Board

128-10th Avenue SW, Box 43105

Olympia, Washington 98504

360-709-4600

wtb.wa.gov

[workforce@wtb.wa.gov](mailto:workforce@wtb.wa.gov)

Grievance Policy:

Nothing in the Live Online Data Science Bootcamp Grievance Policy prevents the student from contacting the Workforce Board at 360-709-4600 at any time with a concern or complaint:

Workforce Training and Education Coordinating Board

128-10th Avenue Southwest

Olympia, Washington 98504

360-709-4600

[workforce@wtb.wa.gov](mailto:workforce@wtb.wa.gov)

Transcripts

Current or former students may request a free copy of their unofficial transcript by submitting a written request to their Program Manager including their name and physical address and/or email address where the unofficial transcript should be mailed or emailed. Transcripts will be marked to indicate they are unofficial copies.

*Transcripts are maintained by the school for fifty years following completion/withdrawal.*

Students may request official transcripts through [info@thisismetis.com](mailto:info@thisismetis.com). Official transcripts will not be released for students who have a past-due account with Metis.



## Religious Accommodation

Metis will make good faith efforts to provide reasonable religious accommodations to students who have sincerely held religious practices or beliefs that conflict with a scheduled course/program requirement. Students requesting a religious accommodation should make the request, in writing, directly to their Program Manager with as much advance notice as possible. Being absent from class or other educational responsibilities does not excuse students from keeping up with any information shared or expectations set during the missed class. Students are responsible for obtaining materials and information provided during any class missed. The student shall work with the instructor to determine a schedule for making up missed work.

Examples of religious accommodations may include: rescheduling of an exam or giving a make-up exam for the student in question; altering the time of a student's presentation; allowing extra-credit assignments to substitute for missed class work or arranging for an increased flexibility in assignment due dates.

<b>REFUND POLICY</b> <b>for State of Washington Residents</b>	
<p>1. Refund computations will be based on attendance in the Program through the last date of attendance. Leaves of absence, suspensions and school holidays will not be counted as part of the scheduled class attendance.</p> <p>2. The effective date of termination for refund purposes will be the last day of recorded attendance or:</p> <p>(a) when the school receives notice of the student's intent to withdraw from the program; or</p> <p>(b) when the student's enrollment is terminated for violation of a published school policy which provides for termination; or</p> <p>(c) when a student, without notice, fails to attend the program for thirty calendar days.</p> <p>3. After expiration of the cancellation privilege and the student does not start the online prework, not more than \$100 shall be retained by the school for the entire Program.</p> <p>4. Once the student starts the Program and withdraws or is otherwise terminated after the cancellation period, the school shall retain \$100 plus the percentage of tuition in accordance with the table below. The numbers reflected below are the result of comparing the state's refund policy and the ACCET refund policy and selecting the refund policy that is most favorable to the student.</p>	
<b>If student drop/termination occurs</b>	<b>School keeps</b>
During the first week	\$990 + \$100
During the second week	16.67% of tuition + 10% of unearned tuition + \$100
During the third week	25% of tuition + 10% of unearned tuition + \$100
During the fourth week	33.33% of tuition + 10% of unearned tuition + \$100
During the fifth week	41.67% of tuition + 10% of unearned tuition + \$100
During the sixth week	50% of tuition + \$100

During the seventh week or beyond	100%
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Unearned Tuition: Represents the weeks that the student did not complete. By way of example, if a student drops/terminates during the fourth week, the student's enrollment has 8 weeks of Unearned Tuition.

5. Refunds for items of extra expense to the student, such as books, tools, or other supplies are separate from refund of tuition and other academic fees. The student will not be required to purchase instructional supplies, books and tools until such time as these materials are required. Once these materials are purchased, no refund will be made.
6. The payment of refunds will be totally completed such that the refund instrument issued or credit card credited into the proper account(s), within 30 days after the effective date of termination. If a third party paid for tuition on your behalf, the refund will be made to that third party in the amount of the refund due (but in no event greater than what that third party paid to Metis). If there is an excess balance of the refund after payment to that third party, that amount will be refunded to you.

## ADDITIONAL NONVOCATIONAL LIVE ONLINE COURSES

### **ADMISSION INFORMATION**

There are no general admissions requirements to enroll in the Metis professional development courses. Please note that there are technical skill recommendations for each course. Every student must bring a laptop to class every day. Metis suggests using an Apple OS X operating system, with at least 8GB RAM, at least 2GHz, and at least 100 GB HD, though some other computers can be accommodated with advance notice. Students may be required to install specific software on their laptops for practical skills training. The course hours vary from 12 to 36 hours in length, held twice a week from 6:30-9:30pm for six weeks, unless otherwise specified.

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### **Introduction to Data Science (36 hours)**

This course will serve as an introduction to data science using the most popular language for doing data science, Python. Some topics covered in depth in the Data Science Bootcamp, such as exploratory data analysis, supervised and unsupervised learning models will be discussed. We will start with a high-level overview of some of the different classes of problems data science is meant to solve, and then proceed to work through some of the techniques commonly used in a typical data science workflow.

This short course will also expose students to the data science approach to thinking about and solving problems, and to help students learn to think about data-heavy problems that they will encounter in the future. Students will learn how data science is done in the wild, including data acquisition/cleaning/aggregation, exploratory data analysis/visualization, feature engineering, and model creation/validation. Students will use the Python scientific stack to work through examples that illustrate all of these concepts, with real-life use cases. Concurrently, students will learn some of the statistical and mathematical foundations that power the data scientific approach to problem solving.

### ***Recommended Technical Skills***

- Familiarity with basic statistical and linear algebraic concepts such as mean, median, mode, standard deviation, correlation, and the difference between a vector and a matrix. Knowledge of Python is highly recommended. In Python, it will be helpful to know basic data structures such as lists, tuples and dictionaries, and what distinguishes them (that is, when they should be used). Python v3 is currently used in the course.

### ***Course Objectives:***

After completing this short-course, students will have:

- The ability to tackle further data science study, particularly our full-time immersive Data Science Bootcamp

- An understanding of problems solvable with data science and an ability to attack them from a statistical perspective
- The ability to create data analytical pipelines and applications in Python
- Familiarity with the Python data science ecosystem and the various tools needed to continue developing as a data scientist

**Course Outline:**

Unit #	Unit Title	Lecture	Lab	Total
1	Computer Science/Statistics/Linear Algebra Short	3	3	6
2	Exploratory Data Analysis and Visualization	3	3	6
3	Data Modeling: Supervised/Unsupervised Learning and Model Evaluation	3	3	6
4	Data Modeling: Feature Selection, Engineering, and Data Pipelines	3	3	6
5	Data Modeling: Advanced Supervised/Unsupervised Learning and Model Evaluation	3	3	6
6	Data Modeling: Advanced Model Evaluation and Data Pipelines	3	3	6
<b>Total Hours for Program Completion</b>		<b>18</b>	<b>18</b>	<b>36</b>

The class is comprised of a roughly even mix of lectures/instruction and hands-on programming/lab work. The week-by-week breakdown is as follows:

**Unit 1 | Computer Science/Statistics/Linear Algebra Short (6 hours)**

We start with the basics. For CS, we briefly cover basic data structures/types, program control flow, and syntax in Python. For statistics, we go over basic probability and probability distributions, along with general properties of some common distributions. For linear algebra, we cover matrices, vectors, and some of their properties and how to use them in Python.

**Unit 2 | Exploratory Data Analysis and Visualization (6 hours)**

We spend a considerable amount of time using the Pandas Python package to attack a dataset we've never seen before, uncovering some useful information from it. At this point, students decide on a course project that would benefit from the data-scientific approach. The project must involve public (freely-accessible and usable) data and must answer an interesting question, or collection of questions, about that data. (Several resources of free data will be provided.)

**Unit 3 | Data Modeling: Supervised/Unsupervised Learning and Model Evaluation (6 hours)**

We learn about the two basic kinds of statistical models, which have classically been used for prediction (supervised learning): Linear Regression and Logistic Regression. We also look at clustering using K-Means, one of the ways you can glean information from unlabeled data.

#### **Unit 4 | Data Modeling: Feature Selection, Engineering, and Data Pipelines (6 hours)**

We switch gears from talking about algorithms to talk about features. What are they? How do we engineer them? And what can be done (Principal Component Analysis/Independent Component Analysis, regularization) to create and use them given the data at hand? We also cover how to construct complete data pipelines, going from data ingestion and preprocessing to model construction and evaluation.

#### **Unit 5 | Data Modeling: Advanced Supervised/Unsupervised Learning and Model Evaluation (6 hours)**

We delve into more advanced supervised learning approaches and get a feel for linear support vector machines, decision trees, and random forest models for regression and classification. We also explore DBSCAN, an additional unsupervised learning approach.

#### **Unit 6 | Data Modeling: Advanced Model Evaluation and Data Pipelines | Presentations (6 hours)**

We explore more sophisticated model evaluation approaches (cross-validation and bootstrapping) with the goal of understanding how we can make our models as generalizable as possible. Students complete data science projects and share learnings and discoveries.

#### **SCHEDULE & FEES**

**Tuition:** \$750

**Textbook:** none

**Schedule:** Please visit [www.thisismetis.com](http://www.thisismetis.com) for current schedules.

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### **Beginner Python and Math for Data Science (36 hours)**

**Recommended Technical Skills:** Students should be proficient with computers and be able to install Python on their laptops. Specifically, they need to install and verify the installation of Anaconda (for Python 3) by running a "Hello World" sample code.

This professional development course is for anyone who wants to learn data science from scratch and has no prior experience with fundamental Python programming and math concepts. Whether you're considering a new career in data science, you want to understand the basics in order to advance in your current career, or you want to be able to communicate more effectively with data-oriented colleagues, you'll complete this course with a solid understanding of some of the basic skills required.

#### **Course Objectives**

After completing this short-course, students will:

- have the ability to write basic Python code, such as functions, data manipulation, and visualization
- have an understanding of the fundamentals of mathematical concepts in linear algebra, calculus, probabilities and statistics
- have the ability to write Python code to solve mathematical problems using linear algebra, calculus, probabilities and statistics

- be prepared to tackle courses in Data Science, particularly our Introduction to Data Science and Statistics Courses

**Course Outline:**

Unit #	Unit Title	Lecture	Lab	Total
1	Python Basics	5	1	6
2	Python Advanced	5	1	6
3	Python Mathematical Libraries	5	1	6
4	Linear Algebra	5	1	6
5	Calculus and Probabilities	5	1	6
6	Statistics	5	1	6
<b>Total Hours for Program Completion</b>		<b>30</b>	<b>6</b>	<b>36</b>

**Unit 1: Python Basics (6 hours)**

We will cover an introduction to programming in Python. Learn how Jupyter Notebooks work, and cover the basics of programming including data structures, data operations, if else statements, for and while loops, and logical operations.

**Unit 2: Python Advanced (6 hours)**

We will cover advanced functionality in Python, including functions, debugging, error handling, string manipulations, and writing efficient code.

**Unit 3: Python Mathematical Libraries (6 hours)**

Learn about using libraries that are useful for data manipulation and visualization. Specifically, we will be using Numpy, Pandas and Matplotlib. These libraries will allow us to load and save data, manipulate data such as aggregating, filtering, detecting outliers, and visualizing.

**Unit 4: Linear Algebra (6 hours)**

Learn the fundamentals of linear algebra, including vectors, and vector manipulations, matrices and matrix manipulations, linear equations and its solutions, eigenvalues and eigenvectors.

**Unit 5: Calculus and Probabilities (6 hours)**

We will cover the fundamentals of calculus and gain an intuition for derivatives, integrals, determining local maximum and minimum, and limits. Similarly we will cover an introduction to probabilities and understand random variables, mean, variance, probability mass and density functions, and cumulative distribution functions.

**Unit 6: Statistics (6 hours)**

We will cover the basics of statistics and its applications. Some topics include ANOVA, hypothesis

testing and p-value, and confidence intervals.

## SCHEDULE & FEES

**Tuition:** \$750

**Textbook:** none

**Schedule:** Please visit [www.thisismetis.com](http://www.thisismetis.com) for current schedules.

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## Python for Beginners (12 hours)

**Recommended Technical Skills:** Students should be proficient with computers and be able to install Python on their laptops. Specifically, they need to install and verify the installation of Anaconda (for Python 3) by running a "Hello World" sample code.

### **Course Description:**

This course is for anyone who wants to learn the fundamentals of the Python programming language from scratch and has no prior experience.

### **Objectives:**

After completing this short-course, students will have the ability to write basic Python code, such as conditional statements, loops and functions.

### **Course Outline:**

Unit #	Unit Title	Lecture	Lab	Total
1	Python Introduction	3	1	4
2	Python Basics	3	1	4
3	Python Intermediate	3	1	4
<b>Total Hours for Program Completion</b>		<b>9</b>	<b>3</b>	<b>12</b>

### **Unit 1: Python Introduction (4 hours)**

We will cover an introduction to programming in Python. Learn what coding is, why Python is important, and how Jupyter Notebooks work.

**Unit 2: Python Basics (4 hours)**

We will learn about variables, basic data types such as integers, strings, floats, lists, dictionaries, tuples and their properties.

**Unit 3: Python Intermediate (4 hours)**

We will learn logical operations, if-else statements, while and for loops, and functions.

**SCHEDULE & FEES**

**Tuition:** \$299

**Textbook:** none

**Schedule:** Please visit [www.thisismetis.com](http://www.thisismetis.com) for current schedules.