



GIVE YOUR CAREER A NEW DIRECTION

MASTER OF SCIENCE IN DATA SCIENCE

Give Your Career A New Direction



BIRCHWOOD UNIVERSITY



“In a fast changing environment of worldwide access to higher education, a Birchwood University degree continues to offer a guarantee of quality, value and intellectual rigour.”

Dr. Ramesh Sinanan
President
Birchwood University

ABOUT US

Birchwood University is one of the world's leading universities, internationally recognised for its high academic standards.

This reputation is based on the outstanding teaching and research pedagogy. All of the Programs offered through the Birchwood University are developed by our industry partners, who are also responsible for preparing study materials and assessing the Programs (the academic direction). Wherever they are based, our students are examined to the same high standard with a multidisciplinary approach & high-quality teaching, collaboration with partners help us identify solutions to the biggest challenges of our time.

Our programs are taught by faculty who not only have the required academic qualifications but bring a tremendous amount of industry experience to the classroom. Most of our faculty continues to work professionally in their fields of instruction.

At Birchwood University, we also understand the specialized needs of students and the approaches that will best support their success. Therefore, we provide all our faculty with ongoing training in course design and instruction, technical support, and other resources to ensure that you benefit from Birchwood University education. Our university is filled with faculty and staff with decades of experience in both online and on-campus education. We are firm in our conviction that our university programs have much to offer in helping you achieve your educational and professional goals



50X

50x is the minimum growth over the span of last 10 years i.e 2012 to 2022.

1.5 Million

Data savy managers will be needed in next 5 years to drive decisions.

\$108,000

Mean salary for positions in data science field across the globe.

90%

Fortune 500 companies have Data Science initiatives under way.

130+

Faculty Representing 30+ Countries

25:1

Student-faculty ratio Offering more personalized pedagogy

1000+

Continuous learners have registered in MOOCS & Degree Courses



STUDY ONLINE IN **EIGHT STEPS**



Register online



Choose a course in "Online Campus"



Get Access To Study materials



Continuous support with study scripts in self-study



Participate in online Live Classes



Exam preparation by knowledge tests and exams directly online



Complete Thesis/Capstone



Graduate with Birchwood

MASTER IN **DATA SCIENCE**

INTRODUCTION

Data Science has grown to be a domain of scientific study due to the deluge of data generated and acquired through various means. Data-driven scientific discovery has contributed a lot to scientific investigation. Important contributions of data acquisition, visualization and analytics with tools from Machine Learning is seen in domains like Business Intelligence, Financial services, Climate Modeling, Weather forecasting, Medical, Chemo, Bio, Onco informatics etc., and the list goes on. It is felt that there is a need to produce manpower trained in this stream of scientific study and therefore a course is proposed. For a Data Science graduate to be of use to the society and specific Industry or organization, he/she should be trained and equipped to develop solutions and applications using computing platform(s) of choice.

Therefore, it is felt that a program for training young individuals in the area of Data Science should take care of their readiness to meet this requirement.

With this degree, you will gain the right skills to achieve top-level career positions and a great understanding of the social impacts, risks, and business opportunities that AI presents, making you highly attractive to future employers in different fields like computer science, automotive, mechanical engineering, healthcare, or even the arts.

The course structure and syllabus provides good foundations and working knowledge in Statistics, Computer Science, Machine Learning, Data Visualization, Big data Analytics, Distributed Systems and Programming languages R, Python and platforms like Hadoop, SPARK etc.



WHY TO CHOOSE MASTER OF SCIENCE IN DATA SCIENCE

The Master in Data Science opens doors for your career in data-driven businesses. After your graduation, you are typically responsible for all aspects of transforming data into value, from designing the technical infrastructure to building advanced machine and deep learning models, as well as improving data quality and evaluating the performance of the predictions.

It can also be your responsibility to help companies and teams achieve their goals in becoming a predictive enterprise. In this case, you are responsible to identify potential use cases, perform the initial project planning and define the relevant measures and metrics to define success.

PROGRAM HIGHLIGHTS

18 Months Full-Time Program



Practical Project-Based Learning



Developed in Consultation with
Industry Experts



World-Class Curriculum Developed
by Academicians and Industry
Experts



Career Guidance



The Cohort Experience Build your
professional network and establish
connections across industries.



100% Online Programs No campus
visit required



24*7 Access to World class
advanced learning management
system



Who Is This Program For?

- Students wanting to study from home and build a career.
- Students or Working professionals looking to upgrade their skill sets.
- Aspirants looking for a world-class learning experience with a global pedagogy.
- Students aspiring for a future-proof and hands-on degree.
- Students looking to gain global exposure and learn in-demand skill sets.
- Students looking to become an internationally recognised & job-ready professional.

Program Outcomes

This program will fine-tune your skill sets, develop your management expertise and kickstart a successful career. Successful graduates will get career assistance from our robust career support team.

MASTER IN DATA SCIENCE

Data is becoming the most important asset of enterprises and plays a pivotal role in tackling the challenges of tomorrow. From the optimisation of existing production lines to the creation of new business models, data-driven decisions are at the center of businesses. Innovation springs from bright minds - our international Master Program puts you into the driver seat of your future career in Data Science. Graduates from our courses go to become technical gurus, team-leaders of successful data-science teams or value-driven masterminds who turn data into action.



Degree

Master of Science in Data Science



Career Tracks

Data Science Specialist || Data Engineer ||
Technical Project Lead || Business Analyst



Study model

100% online including a virtual campus with
digital course material



Study start and duration

Please refer to our website, Duration: 18 months



Fees

\$11,700.00 (scholarships available)



CURRICULUM (36 CREDITS FULL-TIME)

A program that fits your desires:

The Data Science Master program gives you the possibility to achieve your Master's degree after just one year.

Upon completion of the program, students will:

- Apply the necessary skills to communicate effectively, thoughtfully, and compassionately within the global analytics field.
- Apply, synthesize, analyze, and integrate the knowledge of Data Science, Python, Machine Learning, Artificial intelligence to arrive at innovative solutions to organizational problems.
- Demonstrate the skills to work in multicultural organizations within a globalized society.
- Demonstrate the ability to develop, analyze and communicate empirical scholarly work
- Develop the Industry competencies in Data Science.

DATA SCIENCE ROADMAP

TITLE	CREDITS
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Python Programming	4 Credits
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Data Base Management System	4 Credits
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R Programming	4 Credits
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Exploratory Data Analysis	4 Credits
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Machine Learning	4 Credits
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Machine Learning Model Deployment	4 Credits
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Artificial Intelligence	4 Credits
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Data Visualization using Tableau/Power Bi	4 Credits
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Capstone Project	4 Credits
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DETAILED CURRICULUM

Python Programming

INTRODUCTION

Basic elements of python, Control Structures, Strings and Inputs.

FUNCTIONS, SCOPING AND ABSTRACTION

Functions and scoping, Specifications, Recursion, Global variables, Modules, Files, System Functions and Parameters

STRUCTURED TYPES, MUTABILITY AND HIGHER-ORDER FUNCTIONS

Tuples, Lists and Dictionaries, Lists and Mutability, Functions as Objects.

TESTING, DEBUGGING, EXCEPTIONS AND ASSERTIONS

Types of testing, Black-box and Glass-box, Debugging, Handling Exceptions, Assertions

CLASSES AND OBJECT-ORIENTED PROGRAMMING

Abstract Data Types and Classes, Inheritance, Encapsulation and Information Hiding

ADVANCED TOPICS

Plotting using PyLab, Network Programming – Sockets, Graphics and GUI Programming, Drawing using Turtle, Tkinter and Python, Other GUIs, Database Access.

HARDWARE INTERFACING

Introduction, Arduino IOP, Programming PYNQ-Z1's onboard peripherals - LEDs, switches and buttons, Peripheral

Example, Controlling a single LED, Controlling all the LEDs, switches and buttons

Data Base Management System

INTRODUCTION TO DATABASE MANAGEMENT SYSTEM

Data base System Applications, Data Abstraction,ER Model, Relational Model, Data base Languages, Transaction Management, Database Architecture, Storage Manager, the Query Processor, Data base design and ER diagrams, Introduction to the Relational Model, Database Schema, Keys, Schema Diagrams

OVERVIEW OF THE SQL QUERY LANGUAGE

Basic Structure of SQL Queries, Set Operations, Aggregate Functions , GROUPBY, HAVING, Nested Sub queries, Views, Triggers.

NORMALIZATION

Introduction, Non loss decomposition and functional dependencies, First, Second, and third normal forms, dependency preservation, Boyee/Codd normal form. Higher Normal Forms - Introduction, Multi-valued dependencies and Fourth normal form, Join dependencies and Fifth normal form.

TRANSACTION CONCEPT

Transaction State- Implementation of Atomicity and Durability – Concurrent – Executions – Serializability - Recoverability – Implementation of Isolation – Testing for serializability- Lock –Based Protocols – Timestamp Based Protocols- Validation- Based Protocols – Multiple Granularity, Recovery with Concurrent Transactions, Failure with loss of nonvolatile storage- Advance Recovery systems- Remote Backup systems.

FILE ORGANIZATION

File organization – various kinds of indexes. Query Processing – Measures of query cost - Selection operation –Projection operation, - Join operation – set operation and aggregate operation – Relational Query Optimization – Transacting SQL queries – Estimating the cost – Equivalence Rules.

R Programming

GETTING STARTED WITH R AND R STUDIO

Introduction History of R and S, R Graphical User Interfaces, Installing R and R Studio (Windows), The First Look at the Functions in R:- functions for reading and writing data. Saving the R Script File

BASIC DATA TYPES IN R

Numeric, Character and Logical Data Types, class () and type of () function to examine the characteristics of a given variable. Function to test the variables and coerce a variable into a specific type, Simple Mathematical Operations.

PROGRAMMING WITH R

Control structures and functions:- Sample programs, loop functions and the debugging tools in R, Introduction to functions, Examples of functions

VARIOUS DATA STRUCTURES IN R

Vectors, Arrays and Matrices:- matrix operations: addition, subtraction, and multiplication, transpose and inverse matrix functions. Lists, Data frames and Factors. Performing math and simulations.

DESCRIPTIVE STATISTICS USING R

Measurement of Central Tendency – Mean, Median and Mode (Using R) Measurement of Variation - Range, IQR and Standard Deviation (Using R) Descriptive Statistics Using psych Package

DATA VISUALIZATION

Visualization Before Analysis, Dirty Data: remove null values from a dataset. Visualizing a Single Variable: dot chart and bar plot, histogram and density plot, Examining Multiple Variables: dot chart and bar plot, Box and Whisker Plot, Hexbinplot for Large Data sets.

PROBABILITY DISTRIBUTIONS

R Functions for Normal Distribution - rnorm, pnorm, qnorm and dnorm R Functions for Binomial Distribution - rbinom, pbinom, qbinom and dbinom R Functions for Poisson Distribution - rpois, ppois, qpois and dpois .

Exploratory Data Analysis

INTRODUCTION TO STATISTICS

Statistical method for decision making –Brief introduction to Statistics · Introduction to Statistics · Basics of Probability · Discrete Probability Distribution Continuous · Probability Distribution · Normal Distribution · Poisson's Distribution · Bayes' Theorem · Central Limit Theorem

HYPOTHESIS TESTING

Concepts of Hypothesis Testing: Null and Alternate Hypothesis · Making a Decision and Critical Value Method · p-Value Method and Types of Errors One -Sample T -Test, Two Sample T -Test · Z -Test, ANOVA, Chi - Square, A/B Testing · Pearson Co -Relation, Co - Variance, Chebyshev - Inequality Formula

VISUALIZATION TOOLS

Introduction to Matplotlib, Basic Plotting with Matplotlib, Line Plots, Area Plots, Histograms, Bar Charts, Pie Charts, Box Plots, Scatter Plots, Bubble Plots, Seaborn and Regression Plots.

Machine Learning

Supervised Learning - Regression

Introduction to Machine Learning, Introduction to Regression, Linear Regression- A Brief Introduction, Metrics of Model performance, How to Divide the Data For Training & Testing. Training & Testing Of Model, Using R^2 to Check the Accuracy of Model, Using the adjusted R^2 to compare model with different number of independent variables, Feature selection, Forward and backward selection, Parameter tuning and Model evaluation, Data transformations and Normalization, Log transformation of dependent and independent variables, Dealing with categorical independent variables, One hot encoding vs dummy variable, Introduction to Logistic Regression, The sigmoid function and odds ratio, The concept of logit, The failure of OLS in estimating parameters for a logistic regression, Introduction to the concept of Maximum likelihood estimation, Advantages of the maximum likelihood approach, Case study on Linear & Logistic Regression.

Supervised Learning - Classification

Introduction To Classification, Types of Classification, Binary classification vs Multi class classification, Introduction To Decision trees – Decision trees - nodes and splits. Working of the Decision tree algorithm. Importance of Entropy and Gini index. Manually calculating entropy using Gini formula and working out how to split decision nodes How To Evaluate Decision Tree models. Accuracy metrics – precision, recall and confusion matrix, Interpretation for accuracy metric. Building a a robust decision tree model. k-fold cross validation. CART - Extending decision trees to regressing problems. Advantages of using CART. The Bayes theorem. Prior probability. The Gaussian NAÏVE'S BAYES Classifier. What are Assumptions of the Naive Bayes Classifier. Evaluating the model - Precision, Recall, Accuracy metrics and k-fold cross validation ROC Curve and AUC Extending Bayesian Classification.

Unsupervised Learning

Dimensionality reduction and clustering. Clustering algorithms. The different approaches to clustering – Hierarchical and K means clustering. Hierarchical clustering - The concept of agglomerative and divisive clustering. Agglomerative Clustering – Working of the basic algorithms. Distance matrix - Interpreting dendrograms. Choosing the threshold to determine the optimum number of clusters. Case Study on Agglomerative clustering The K-means algorithm. Measures of distance – Euclidean, Manhattan and Minowski distance. The concept of within cluster sums of squares. Using the elbow plot to select optimum number of cluster's. Case study on k-means clustering.

Comparison of k means and agglomerative approaches to clustering. Noise in the data and dimensional reduction. Capturing Variance - The concept of a principal components. Assumptions in using PCA. The working of the PCA algorithm. Eigen vectors and orthogonality of principal components. What is complexity curve? Advantages of using PCA. Build a model using Principal components and comparing with normal model. What is the difference? Putting it all together. The relationship between unsupervised and supervised learning. Case study on Dimensionality reduction followed by a supervised learning model. Case study on Clustering followed by classification model.

Machine Learning Model Deployment

ENSEMBLE TECHNIQUES

Bagging, Boosting & Boosting Examples.

MACHINE LEARNING MODEL DEPLOYMENT USING FLASK

Introduction to Model Deployment of Flask in Python. How to deploy Applications in Flask, types of Model deployment.

Artificial Intelligence

TIME SERIES FORECASTING

Regression vs Time Series, Examples of Time Series data, Trend, Seasonality, Noise and Stationarity, Time Series Operations, Detrending, Successive Differences, Moving Average and Smoothing, Exponentially weighted forecasting model, Lagging, Correlation and Auto-correlation, Holt Winters Methods, Single Exponential smoothing, Holt's linear trend method, Holt's Winter seasonal method, ARIMA and SARIMA.

INTRODUCTION TO NATURAL LANGUAGE PROCESSING

Feature Engineering on Text Data Lesson, Natural Language Understanding Techniques, Natural Language, Generation, Natural Language Processing Libraries, Natural Language Processing with Machine Learning.

INTRODUCTION TO NEURAL NETWORKS AND DEEP LEARNING

Shallow Neural Networks, Deep Neural Networks, Forward Propagation and Backpropagation. How to Build and Train Deep Neural networks, and apply it to Computer Vision. Introduction to Perceptron & Neural Networks Activation and Loss functions, Gradient Descent, Hyper Parameter Tuning, Tensor Flow & Keras for Neural Networks. Introduction to Sequential data, RNNs and its mechanisms, Vanishing & Exploding gradients in RNNs, LSTMs - Long short-term memory, GRUs - Gated recurrent unit, LSTMs Applications, Time series analysis, LSTMs with attention mechanism, Neural Machine Translation, Advanced Language Models; Transformers, BERT, XLNet.

TEXT MINING AND SENTIMENTAL ANALYSIS

Text cleaning, regular expressions, Stemming, Lemmatization, Word cloud, Principal Component Analysis, Bigrams & Trigrams, Web scrapping, Text summarization, Lex Rank algorithm, Latent Dirichlet Allocation (LDA) Technique, Word2vec Architecture (Skip Grams vs CBOW), Text classification, Document vectors, Text classification using Doc2vec.

REINFORCEMENT LEARNING

Introduction to Reinforcement Learning, Reinforcement Learning Framework and Elements, Multi-Arm Bandit Markov Decision Process, Q-value and Advantage Based Algorithms.

COMPUTER VISION

Introduction to Convolutional Neural Networks, Convolution, Pooling, Padding & its mechanisms, Forward Propagation & Backpropagation for CNNs, CNN architectures like AlexNet, VGGNet, InceptionNet & ResNet, Transfer Learning, Advanced Computer Vision, Object Detection, YOLO, R-CNN, SSD, Semantic Segmentation, U-Net, Face Recognition using Siamese Networks, Instance Segmentation.

Data Visualization using Tableau/Power BI

DATA VISUALIZATION USING TABLEAU

Introduction to Visualization, Rules of Visualization, Data Types, Sources, Connections, Loading, Reshaping, Data Aggregation, Working with Continuous and Discrete Data, Using Filters, Using Calculated Fields and parameters Creating Tables and Charts, Building Dash Boards and storyboards, Sharing Your Work, and Publishing for wider audience.

DATA VISUALIZATION USING POWER BI

Introduction to Microsoft Power BI, The key features of Power BI workflow, Desktop application, BI service, File data sources, Sourcing data from the web (OData and Azure), Building a dashboard, Data visualization, Publishing to the cloud, DAX data computation, Row context, Filter context, Analytics pane, Creating columns and measures, Data drill down and drill up, Creating tables, Binned tables, data modeling and relationships, Power BI components such as Power View, Map, Query, and Pivot.

DATA VISUALIZATION USING GOOGLE DATA STUDIO

Introduction to Visualization, Google Data Studio, How Does Data Studio Work? Data Types, Sources, Connections, Loading, Reshaping, Data Aggregation, Working with Continuous and Discrete Data, Report Edit Mode in Data Studio. Using Filters in Data Studio Using Calculated Fields and parameters Creating Tables and Charts Building Dash Boards and story boards, Building Dash Boards and Story Boards in Data Studio.

Capstone Project

The Data Science Capstone project provides an opportunity for students to carry out a defined piece of independent research or design. These skills include the capacity to define a research or design question, show how it relates to existing knowledge and carry out the research or design in a systematic manner. Students will be expected to choose a research/development project that demonstrates their prior learning in the data science domain (MDS). The results will be presented in a final project presentation and report. It is not expected that the project outcomes from this unit will represent a significant contribution to new knowledge. The unit aims to provide students with the opportunity to carry out a defined piece of independent investigative research or design work in a setting and manner that fosters the development of data science skills in research or design.



WHERE CAN IT TAKE YOU?

CAREER PATHS

Data Analytics

Business Analyst

Data Analytics Manager

Data Architect

Data Administrator

Business Intelligence Manager

Business logistics

Finance

Health, Wellness, & Biomedicine

Bioinformatics

Natural sciences



CAREER PERSPECTIVES

Set your personal focus

During your studies, you can choose from several Career Tracks including:

Data Science Specialist

This course gives you an in-depth overview of various manufacturing methods, rapid prototyping and tooling, 3D printing as well as cyber-physical systems. The latter bridges the gap between physical production plants and data-driven control and optimisation techniques. The course also gives a thorough introduction to the Internet of Things (IoT) focusing on design aspects, communication technologies and data storage and processing aspects unique to IoT.

Technical Project Lead

Leading data science teams require not only skills in deep learning and other cutting edge techniques, but also detailed know how to plan and manage projects. This specialisation equips you with necessary knowledge on how to plan data science projects, identify and prioritise work-packages and engage with all stakeholders of the project.

Data Engineer

Accessing and processing data is the foundation upon which advanced machine and deep learning models are built. This specialisation focuses on technological deep-dives around building data processing architectures at scale, designing micro-service and database topologies as well as building cloud services.

Business Analyst

Many companies have a rich data heritage which is an ideal starting ground for data science projects. This specialisation bridges the gap between Business Intelligence and Data Science and discusses data warehouses, ETL processes and various data models such as the OLAP cube.



The best choice for your career

OUR **LEARNING MANAGEMENT SYSTEM**

Our learning platform is powered by Moodle. This platform replaces the traditional classroom and provides the student with the tools to engage in the learning process in an enjoyable, easy to use and efficient environment. The platform has been standardized to familiarize the student with the learning process and avoid confusion. Some of the elements contained in the platform are:



COURSE SYLLABUS

Outlines the path to the class.



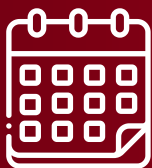
ONLINE LIBRARY

The resources in the Online Library have been carefully selected because of their high academic quality and as such are more reliable than those found freely on the web.



FORUMS

This asynchronous tool allows the class participants to create threads of information that will be available throughout the class.



CALENDAR

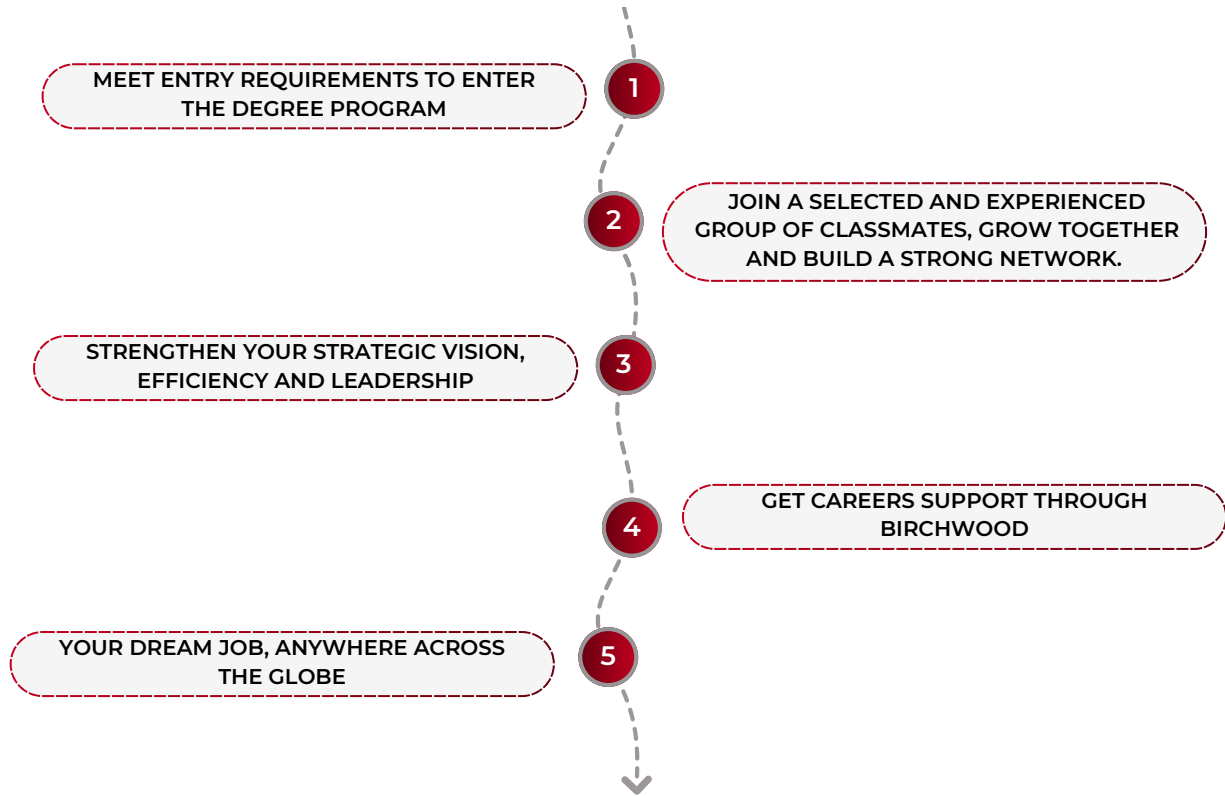
Reminds the students how the class has advanced and reminds them of tasks, quizzes, and exams ahead.



DOCUMENT ZONE

Throughout the course the student will have places to load assignments in a clear and convenient way.

YOUR LEARNING JOURNEY



Birchwood's Masters in Data Science focuses on emerging and innovative contexts, embedded Analytical Data and Strategic Knowledge to prepare you with the skills and experience you need to succeed in the business world through Data. You'll emerge from the program as an experienced professional, having overcome the challenges of solving actual organizational issues with real-time data-sets on multiple occasions.

This Masters in Data Science course equips you to work in many sectors from health, retail, marketing, events and more. You can tailor the course to your interests and career goals. Nurture your entrepreneurial spirit whilst developing your soft skills, including communication, teamwork and problem-solving.

There are many opportunities to enrich your studies with practical experience, both on Online and Offline. Leverage our industry partnerships to secure sought-after work placements. Overall, this is a degree that's built for the needs of business today and in the future.

UPON COMPLETION OF THE **PROGRAM, STUDENTS WILL:**

Apply the necessary skills to communicate effectively, thoughtfully, and compassionately within the global Analytics field.

Apply, synthesize, analyze, and integrate the knowledge of Data Science, Python, Machine Learning, Artificial intelligence to arrive at innovative solutions to organizational problems.

Demonstrate the skills to work in multicultural organizations within a globalized society.

Demonstrate the ability to develop, analyze and communicate empirical scholarly work.

Develop the competencies in Data Science.

The best choice for your career

WHY BIRCHWOOD UNIVERSITY?

01 Employability

Globally accepted by over 25,000 organisations in 130 countries

02 Maximum flexibility

Mobile learning
No fixed examination phases & online exams
Multiple Career Track
Flexible time models - study start anytime possible

03 Effective learning

Practical content
Individual and group coaching

04 Highest quality

Quality Framework
Monitoring and Review
AAA Initiativ

01 Employability

There are many reasons to pursue a data science degree from Birchwood University but perhaps the most compelling is the incredible job growth that is currently happening in the field. As a data science and statistics major you'll be taking an essential first step on a career path that boasts:

- 650% job growth since 2012 (source: LinkedIn).
- An estimated 11.5 million new jobs by 2026 (source: U.S. Bureau of Labor Statistics).
- An average annual salary of \$120,931 with the job title of data scientist (source: Glassdoor), and an average salary of over \$84,000 per year across 14 specific data analysis and data science careers linked to PennWest California's statistics and data science degree program (source: Pennsylvania's State System of Higher Education).

Employment Statistics in Data Science Careers

Graduates of Birchwood's data science degree program have the advantage of starting a career path in which there are more open jobs than qualified candidates to fill them. As the Harvard Business Review states, "the shortage of data scientists is becoming a serious constraint in some sectors."

What's more, because Birchwood's Master's degree in data science prepare students to pursue the credential of Certified Data Science Professional, Birchwood University's data science majors stand out from their peers in job applications.

- As a data science and statistics major the job opportunities available to you include:
- A predicted 2.7 million open jobs in data analysis, data science and related careers in 2020 (source: IBM).
- 39% growth in employer demand for demand for both data scientists and data engineers by 2020 (source IBM).
- An average earning potential of \$8,736 more per year than any other bachelor's degree jobs (source: IBM).

A degree in data science from Birchwood university will put you in a prime position to fill the employment gaps in the field, if you're interested in starting on the career path of what the Harvard Business review calls the "sexiest job of the 21st century", a data science degree from PennWest California is a great choice.



"Have a vision for what you are trying to do. Use data to validate and help you navigate that vision and map it down into small enough pieces where you can begin to execute in a data-informed way. Don't let shallow analysis of data that happens to be cheap/easy/fast to collect, nudge you off-course in your entrepreneurial pursuits."

Andrew Chen,

Partner at Andreessen Horowitz

Ex Head of Rider Growth at Uber



02 Maximum Flexibility

Mobile learning

Online course materials

Significant online learning materials and high-quality study scripts give you detailed insight and summaries of the essential learning content. Before your examination, this online material will ensure you are prepared and have enough knowledge to pass the online exams.

Online-Campus myCampus

Not only can you assess your learning content on our online campus via your laptop or desktop, but you can also download content at any time on mobile devices like smartphones or tablets. Our scripts are available for download as PDFs in addition to our podcasts and e-books, make this possible. Our Podcasts are short 15-minute audio lectures in which your lecturers discuss the main topics of the individual courses.

Video-based online tutorials

A central component of our teaching concept is our online tutorial. These are video-based live events in which a tutor makes a presentation in a virtual classroom. The course content is presented in the same way as if it were a physical classroom and the tutor is available for queries via chat. Furthermore, it is possible to make audio or visual contributions to the discussion. All of these presentations are available to download later for review.

Community Groups

With our online community groups, you can talk and exchange ideas with other fellow students. You can join existing groups or create your own. We also have Facebook groups that can be used for similar exercises.

One to One Doubt Sessions

One of the major challenges for a working student is to manage the working hours with their study schedules to avoid a clash of time between the two. Birchwood strives to solve this issue for the students with their doubt clearing classes. Online doubt solving also ensures that students enjoy studying from the comfort of their homes without traveling to faraway places. They can also schedule these doubt clearing classes in advance to ensure a proper way around their schedule and the available subject expert will be at your service to provide you with the best doubt resolution.

No fixed examination phases

Online exams

Take exams whenever you are ready, weekdays and holidays, any time of day or night. Our online exams give you this flexibility. They meet the same demands and standards of validity and security as a written exam at one of our testing centres. All you need is a PC/laptop with webcam and an internet connection. A supervisor has a live connection to your webcam and computer screen to guarantee a smooth process and protect against fraud.

Numerous specialisations

Not only in terms of time but also as per your need the content would be available. You choose several specialisations from a large number of functional areas, industries and foreign languages.

03 Effective Learning

Practical Content

In your studies, you not only learn theoretical knowledge but also take part in extensive practice components included in the online program. Due to the practicality of these components, you can implement what you have learned directly in your company from day one. In addition, our lecturers have many years of professional experience in the business sectors and teach you using examples and techniques such as case studies, analysing realistic scenarios and discussing current business events.

Targeted coachings for your academic success

Distance learning, job, and private obligations: To master this balancing act successfully, we offer you three different coaching formats: group, individual and career coaching. While you work together with the coach and other students on general topics such as time management, work-life balance, motivation, etc. In our group coaching, you can individually select your key priorities in the individual coaching formats. In our career coaching we take a look at your application documents in two 45-minute sessions and develop your personal career strategy together with you.

03 Highest quality

The quality of our programs, delivered by Birchwood University, is very important to us. For this reason, we not only introduced internal quality assurance procedures but also subject our programs to numerous external accreditations and certificates.

Quality Framework

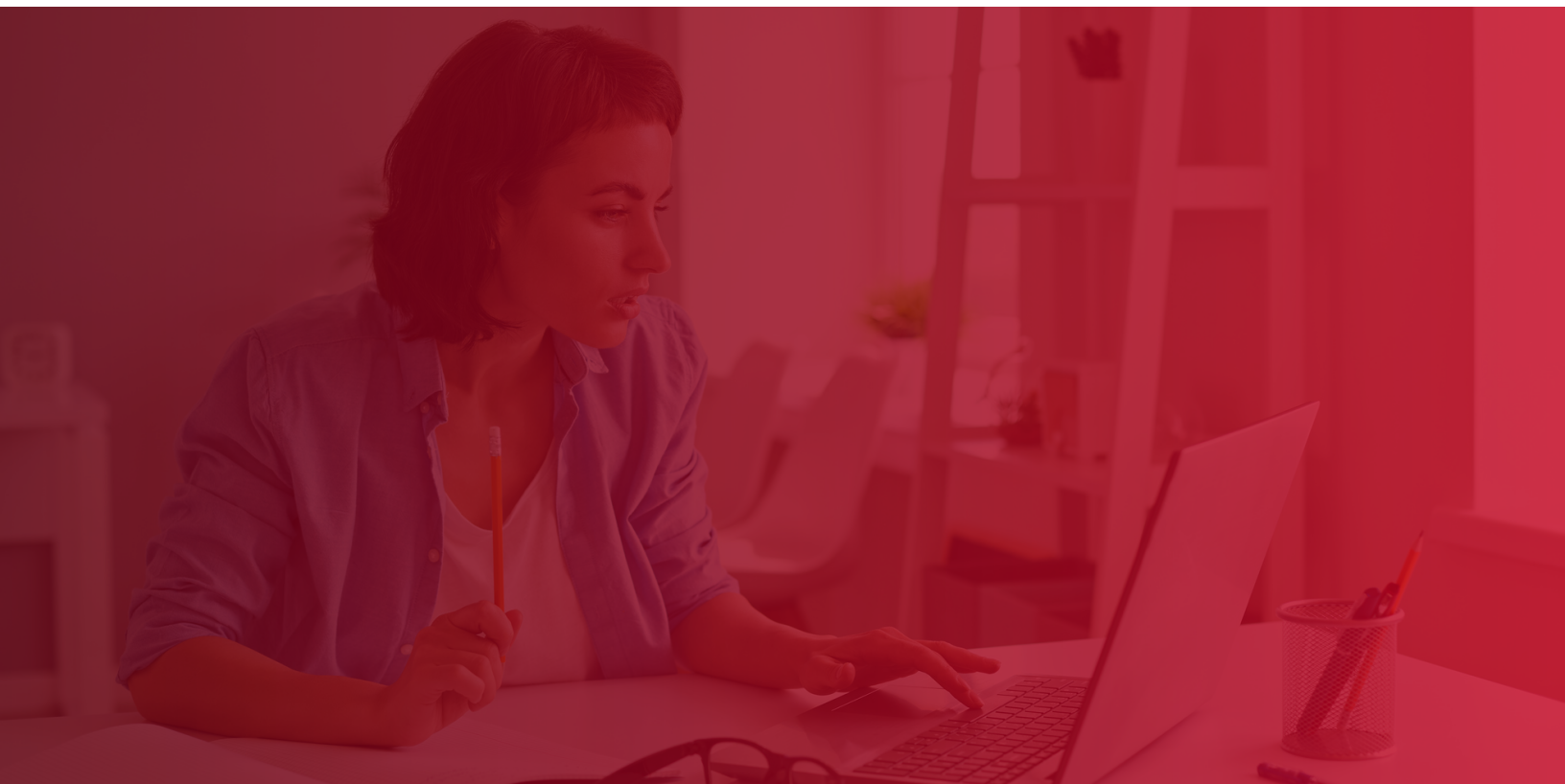
The University's Quality Framework is described in the University Education Strategy, as a robust quality assurance framework that drives innovative course design, working in partnership with students at all stages. This will include engagement with external examiners, annual review of programs, faculty quality assurance processes and periodic strategic reviews of departments/schools.

Monitoring and Review:

We deeply value the excellence of our offerings, which is why we have implemented robust internal quality assurance procedures. These procedures serve as a means to constantly evaluate and enhance our program, guaranteeing that it meets the highest standards. In addition to our internal measures, we subject our program to rigorous external accreditations and certifications.

AAA INITIATIVE

Birchwood is one of the few universities in the world to offer online examinations that can be taken anywhere at any time without prior registration and with live supervision. For this innovation, the university was included in the top-best list of the IT- Innovation.



ENTRY REQUIREMENTS **AND** **HOW TO APPLY?**

General Admission Requirements:

- Applicant must be 18 years or older.
- Submission of a copy of a valid government-issued picture identification.
- Submission of a copy of an updated Resume.
- Any document not in English must be accompanied by a certified translated copy.
- English language (we may require you to have passed a recognised test of proficiency at the appropriate level within the last three years)
- For all programs you will need computer/internet access on some of our programs you may be eligible to apply for accreditation of prior learning (APL)

How do we deal with your application?

Once we have received your application and the appropriate fee:

- You will be emailed an acknowledgement.
- Your application will then be processed and you will be informed of our decision on your eligibility.
- If you do not automatically meet our entrance requirements then we will refer your application to the Admissions Panel for individual consideration.
- The Admissions Panel will consider qualifications that are not published under the Qualifications for Entrance Schedule, incomplete qualifications and substantial relevant work experience.
- If we cannot accept you with your current qualifications and experience then we will advise you on what qualifications you could take in order to meet our entrance requirements in the future.
- If your application is approved, you will be emailed an offer letter and registration instructions .
- Any requests for APL will then be considered and you will be advised of the decision.

English language requirement

If your first language is not English, you may be required to demonstrate that you have the appropriate level required by taking a Test of Proficiency. We list a wide range of qualifications that we accept on our website.



With its focus on leadership and current technology, the Data Science master's program provides me with the right tools to design my personal career strategy so that I can leverage my position on the global job market and enhance my chances for success. I feel confident about my skills and my ability to find a promising job after graduation either in USA or abroad. The Career Service Department has been of great help to me in this respect."

Bryson Hyde
Master's student Data Science





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