

# BECOME A BIOLOGICAL DATA SCIENTIST

## MSc TECHNOLOGIES AND ANALYTICS IN PRECISION MEDICINE

STUDY PRECISION MEDICINE, COMPUTATIONAL BIOLOGY, GENETICS & GENOMICS, DATA ANALYTICS, CONNECT HEALTH, LEARN TO CODE AND MORE

RCSI.COM



RCSI UNIVERSITY OF MEDICINE AND HEALTH SCIENCES



**RCSI**  
UNIVERSITY  
OF MEDICINE  
AND HEALTH  
SCIENCES



MSc IN TECHNOLOGIES AND ANALYTICS IN PRECISION MEDICINE

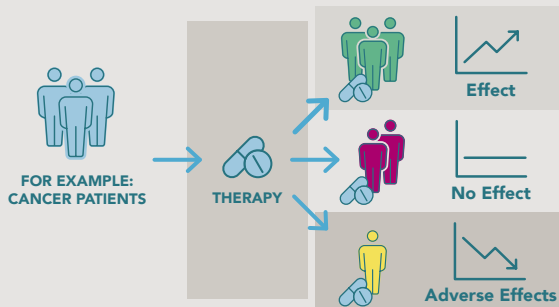
### INTRODUCTION

Do you want to become a biological data scientist? And be involved in the cutting-edge field of Precision Medicine. This exciting new discipline involves optimising therapeutic benefits by personalising treatment for patients through genetic profiling and in parallel enhancing diagnosis across various disease types. As the life sciences sector embraces Precision Medicine, there is significant demand for certain specialised skills to enable and support future career pathways. To address this demand, RCSI has designed a new state-of-the-art Masters (MSc) programme in Technologies and Analytics in Precision Medicine.

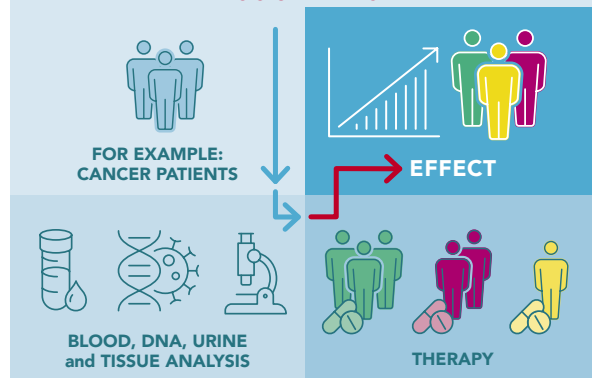
The programme has a core focus on Precision Medicine and Data analytics and how to analyse healthcare data.

### PRECISION MEDICINE OVERVIEW

Current "One-size-fits all approach"



### PRECISION MEDICINE



RCSI LEADING THE WORLD TO BETTER HEALTH

## WHAT MAKES THIS MASTERS DIFFERENT?



Develop advanced knowledge in the areas of **Genetics/Genomics & Precision medicine**



Learn how to code and use programming language including R and Python to **analyse Big Data** generated from a **healthcare setting**



Understand how cutting edge **Connected Health** technologies and data are improving health care



Develop core skills in **Innovation & Leadership**

## YOUR FUTURE CAREER

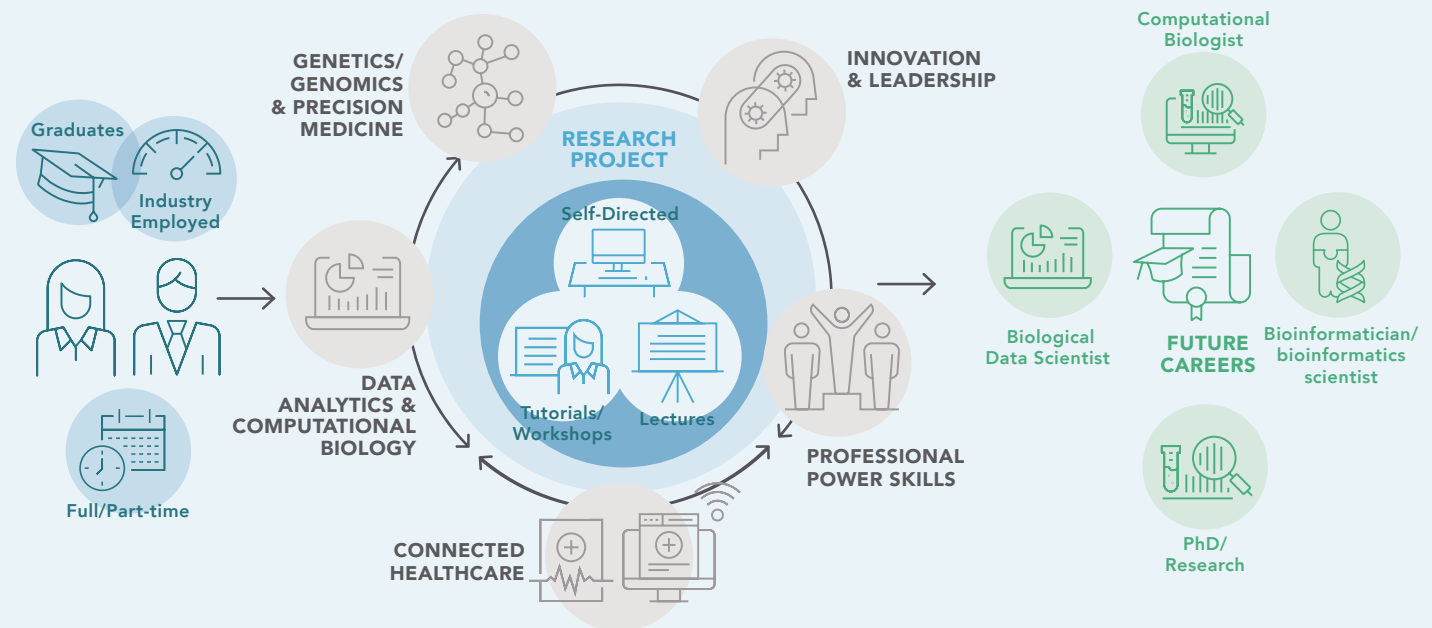
We believe this Masters will equip students to become leaders in the health and bio-pharmaceutical industries of the future. Graduates of this programme will be in a position to apply for numerous roles across the bio-pharmaceutical industry as well as healthcare sectors including:

- > Biological Data Scientist
- > Computational Biologists
- > Bioinformatician / Bioinformatics scientist

In addition, this course will further enhance the student's academic profile and therefore make them highly competitive for PhD applications across both national and international research/universities.

## MSc in Technologies & Analytics in Precision Medicine

Study 5 key areas including Precision medicine, Genetics, Data analytics, Connected Health, Innovation. Students complete an industry lead or academic research project to combine all the areas they have learnt to date.





### Dr Ben Ryan

Deputy Head of School,  
Programme Innovation, School  
of Pharmacy and Biomolecular  
Sciences.

"This exciting post graduate  
programme has been developed  
in view of the growing demands of

the changing healthcare landscape, which has seen a  
major shift as it fuses digital technology with traditional  
science, leading to an increased focus on disease  
prevention, tailored therapies and Connected Health.  
The programme sits within RCSI's School of Pharmacy  
and Biomolecular Sciences, has been supported by the  
Higher Education Authority under the Human Capital  
Initiative."

### Dr Sudipto Das

Programme Director,  
School of Pharmacy and  
Biomolecular Sciences.

"This is a flexible programme that  
will benefit life science graduates in  
the area of biological, chemical,  
mathematical or statistical sciences  
or indeed the health sciences. Or perhaps you are  
working in a relevant industry and looking to upskill  
to further enhance your career. What makes this  
Masters unique is that RCSI have teamed up with a  
strong consortium of clinic experts and enterprise  
partners to provide their expertise and support in the  
development and delivery of the MSc to meet these  
critical skills gaps and future needs."



To offer maximum flexibility for our students, this Masters is  
offered on a **one year full-time** or **2-year part-time basis**.  
Students are required to gain **90 ECTS** credits based on  
taught modules and a research project. RCSI also offers  
entry Core Modules routes such as Postgraduate Diploma  
and Certificate.

#### CORE BLOCKS

Block 1: Genetics, Genomics & Precision Medicine

Block 2: Data Analytics & Computational Biology

Block 3: Connected Healthcare

Block 4: Innovation and Leadership

Block 5: Industry or Academic Research Project

#### ENTERPRISE COLLABORATION

Our industry partners including Congenica Ltd,  
Novartis Ireland, Aerogen, S3 Connected Health,  
Inflection Biosciences, Phion Therapeutics  
and Almac help deliver this world class Masters  
programme to ensure students get the most relevant  
experience and exposure.

#### THE IRISH TIMES ARTICLE:

Scan this QR code to check out a recent  
article in The Irish Times about this exciting  
Masters.



#### ANNUAL FEES:

One year full-time: €9,000/ Two year part-time: €6,000 p.y

#### NON-EU FEES:

One year full-time: €25,000 (€7,000 competitive scholarship  
available for self-funded students)/ Two year part-time:  
€12,500 per year.



Rialtas na hÉireann  
Government of Ireland

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Grant agreement: 17796884 'Enabling Future Pharma'*

IF YOU WOULD LIKE MORE INFORMATION, PLEASE VISIT:

[www.rcsi.com/mtapm](http://www.rcsi.com/mtapm)

OR CONTACT US ON [mtapm@rcsi.ie](mailto:mtapm@rcsi.ie)

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