



**Manchester Academy for  
Healthcare Scientist Education**

# **MSc Genomic Sciences**

MAHSE STP Open Day - 8<sup>th</sup> January 2019

Genomic Counselling Pathway lead: Dr Rhona MacLeod

Genomics Pathway Lead: Dr Siddharth Banka

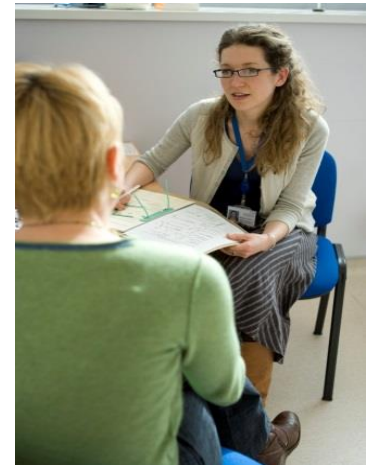
Cancer Genomics Pathway Lead: Dr Richard Byers

Programme Director: Dr Emma Jenkinson

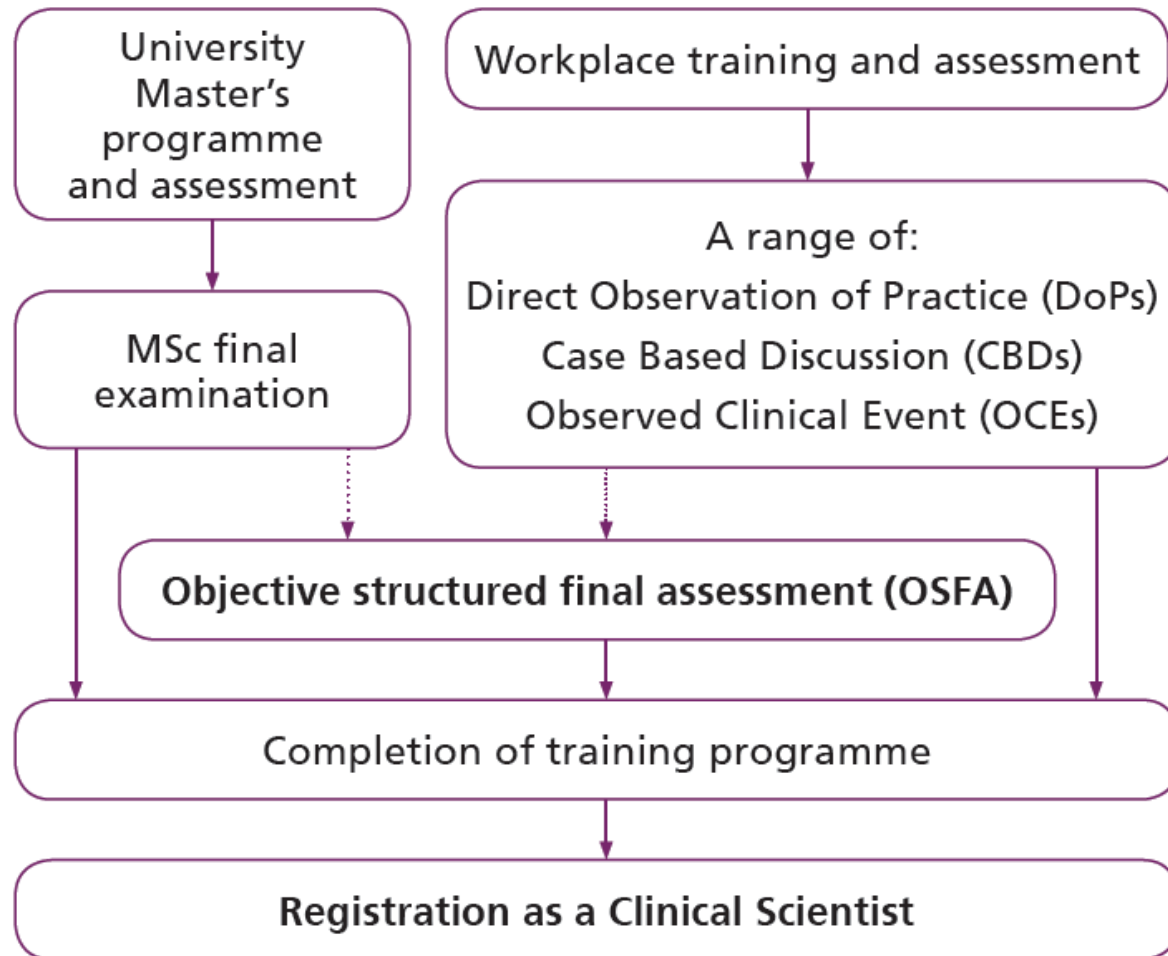


# MSc Genomic Sciences

- Genomic Science STP programme – 3 pathways  
Genomics, Genomic Counselling and Cancer Genomics  
(~ 15 trainees per pathway annually)
- 3 year programme – academic teaching and work based learning
  - 120 credits taught
  - 60 credits research project



## STP TRAINEE PATHWAY



# Programme Structure

|                                       |  |                                       |  |
|---------------------------------------|--|---------------------------------------|--|
| Year 1                                | Introduction to Healthcare Science, Professional Practice and Clinical Leadership [30 credits] |                                       | Introduction to Genomics and Clinical Practice<br><br>[30 credits] |
|                                       | [including 10 divisional credits]  |                                       |  |
|                                       | Generic  |                                       | Divisional   |
| Year 2<br>Specialist Practice<br>[60] | Specialist Module<br><br>[15 credits]  | Specialist Module<br><br>[15 credits] | Research Project Part 1<br><br>[30 credits]                        |
|                                       | [5 generic RM credits]   | [5 generic RM credits]                |  |
|                                       | Generic  | Specialism                            |  |
| Year 3<br>Specialist Practice<br>[60] | Specialist Module<br><br>[15 credits]  | Specialist Module<br><br>[15 credits] | Research Project Part 2<br><br>[30 credits]                        |
|                                       | Specialism   |                                       |  |

## Genomics

|  |   |   |  |                          |                          |
|--|---|---|--|--------------------------|--------------------------|
| Year 1<br>Core<br>Modules<br>[60]        | <b>Introduction to Healthcare Science, Professional Practice and Clinical Leadership: 64560</b><br>[30 credits] |   | <b>Introduction to Genomics and Clinical Practice. 65460</b><br>[30 credits] |                          |                          |
|  | Professional Prac<br>[20 credits - compulsory]  | Bioinformatics<br>[10cr - compulsory]       | Genetics<br>[10cr – compul]  | Optional<br>[10 credits] | Optional<br>[10 credits] |
|  | Including 10 divisional credits   |   |  |                          |                          |
|  | Generic [20 credits]  |   | Divisional [40 credits]  |                          |                          |
| Year 2<br>Specialist<br>Practice<br>[60] | <b>Prenatal Genomics</b><br>[15]  | <b>Paediatric Genomics</b><br>[15]          | <b>Research Project Part 1</b><br>[30]                                       |                          |                          |
|  | incl. 5 generic RM credits  | incl. 5 generic RM credits                  |  |                          |                          |
|  | Generic [10]  | Specialism [50]                             |  |                          |                          |
| Year 3<br>Specialist<br>Practice<br>[60] | <b>Adult Genetic and Genomic Disorders</b><br>[15]  | <b>Genomics of Sporadic Cancers</b><br>[15] | <b>Research Project Part 2</b><br>[30]                                       |                          |                          |
|  | Specialism [60]   |   |  |                          |                          |

## Genomic Counselling

|  |   |  |  |  |                                 |
|--|---|--|--|--|---------------------------------|
| Year 1<br>Core<br>Modules<br>[60]        | <b>Introduction to Healthcare Science,<br/>Professional Practice and Clinical<br/>Leadership: 64560</b><br>[30 credits] |  | <b>Introduction to Genomics and Clinical<br/>Practice: 65460</b><br>[30 credits] |  |                                 |
|  | <b>Professional Prac</b><br>[20 credits - compulsory]   | <b>Bioinformatics</b><br>[10cr - compulsory]                                     | <b>Genetics</b><br>[10cr – compul]   | <b>Genomic<br/>Counselling</b><br>[10c - compul] | <b>Optional</b><br>[10 credits] |
|  | Including 10 divisional credits   |  |  |  |                                 |
|  | Generic [20 credits]  |  | Divisional [40 credits]  |  |                                 |
| Year 2<br>Specialist<br>Practice<br>[60] | <b>Counselling and<br/>communication skills<br/>for Genetic<br/>Counsellors</b><br>[15]                                 | <b>Applied Genetics and<br/>Genomics</b><br>[15]                                 | <b>Research Project Part 1</b><br>[30]   |  |                                 |
|  | incl. 5 generic RM credits  | incl. 5 generic RM credits   |  |  |                                 |
|  | Generic [10]  | Specialism [50]  |  |  |                                 |
| Year 3<br>Specialist<br>Practice<br>[60] | <b>Advanced Genomic<br/>Counselling and<br/>Ethical Practice</b><br>[15]  | <b>Genomics and<br/>Bioinformatics in<br/>Advanced Clinical<br/>Care</b><br>[15] | <b>Research Project Part 2</b><br>[30]   |  |                                 |
|  | Specialism [60]   |  |  |  |                                 |

## Cancer Genomics pathway

|  |  |  |  |   |
|--|--|--|--|---|
| Year 1<br>Core<br>Modules<br>[60]        | Introduction to Healthcare Science,<br>Professional Practice and Clinical<br>Leadership: BIOL64560<br>[30 credits] |  | Introduction to Genomics and Clinical<br>Practice: BIOL65460<br>[30 credits] |   |
|  | Professional Prac<br>[20 credits - compulsory]   | Bioinformatics<br>[10cr - compulsory]    | Human Genetics<br>[10cr – <u>compul</u> ]                                    | Molecular Pathology<br>[20credits – compulsory] |
|  | Including 10 divisional credits  |  |  |   |
|  | Generic [20 credits]   |  | Divisional [40 credits]  |   |
| Year 2<br>Specialist<br>Practice<br>[60] | Haematological<br>Malignancies 1<br><br>BIOL6xxxx<br>[15]  | Solid Tumours 1<br><br>BIOL6xxxx<br>[15] | Research Project Part 1<br><br>[30]  |   |
|  | incl. 5 generic RM credits   | incl. 5 generic RM credits               |  |   |
|  | Generic [10]   | Specialism [50]                          |  |   |
| Year 3<br>Specialist<br>Practice<br>[60] | Haematological<br>Malignancies 2<br><br>BIOL6xxxx<br>[15]  | Solid Tumours 2<br><br>BIOL6xxxx<br>[15] | Research Project Part 2<br><br>[30]  |   |
|  | Specialism [60]  |  |  |   |

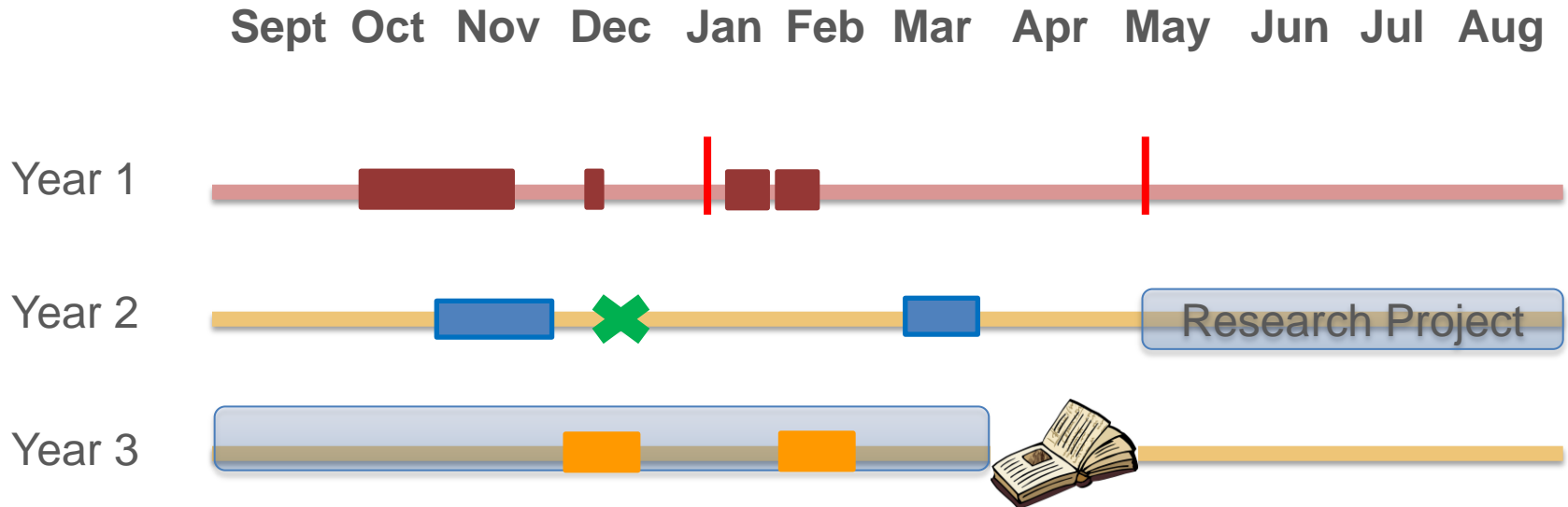
# Innovative teaching


- Involvement of patients
- Case based learning
- ‘Scaffold’ approach to learning – online self-assessment and quizzes and assignments
- Webinars to support block teaching and facilitate peer to peer group experience
- Innovative assessments e.g. OSCE exam






# Timelines (Genomics)





 1<sup>st</sup> Year face to face teaching (both pathways)

 2<sup>nd</sup> Year face to face teaching

 3<sup>rd</sup> Year face to face teaching  
*Genomics of Sporadic Cancer to be taught in Liverpool*

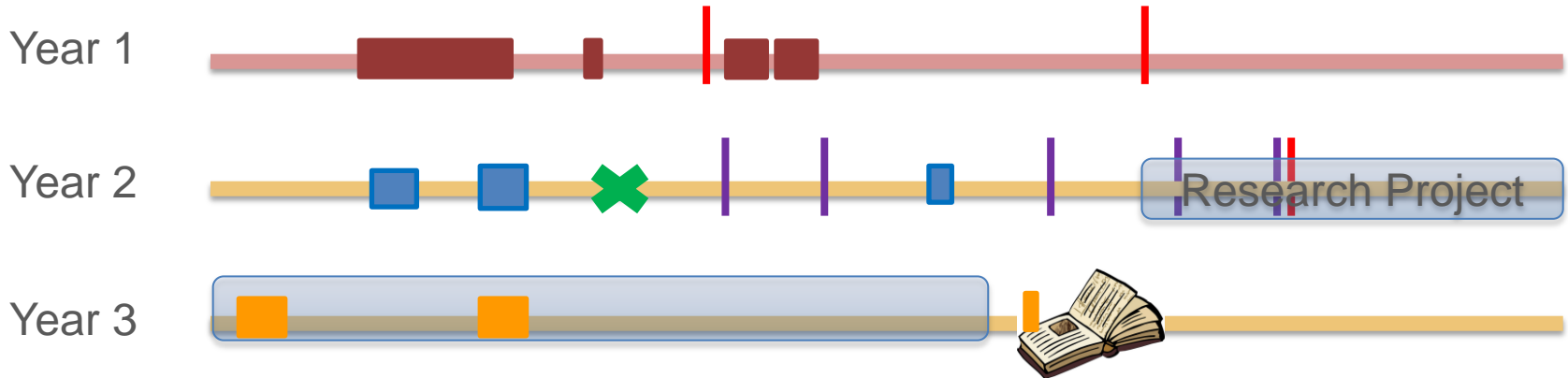
 Exams in Manchester


 Research Project proposal submission

 Dissertation submission

# Timelines (Genomic Counselling)

Sept Oct Nov Dec Jan Feb Mar Apr May Jun Jul Aug





 1<sup>st</sup> Year face to face teaching (both pathways)

 2<sup>nd</sup> Year face to face teaching

 3<sup>rd</sup> Year face to face teaching

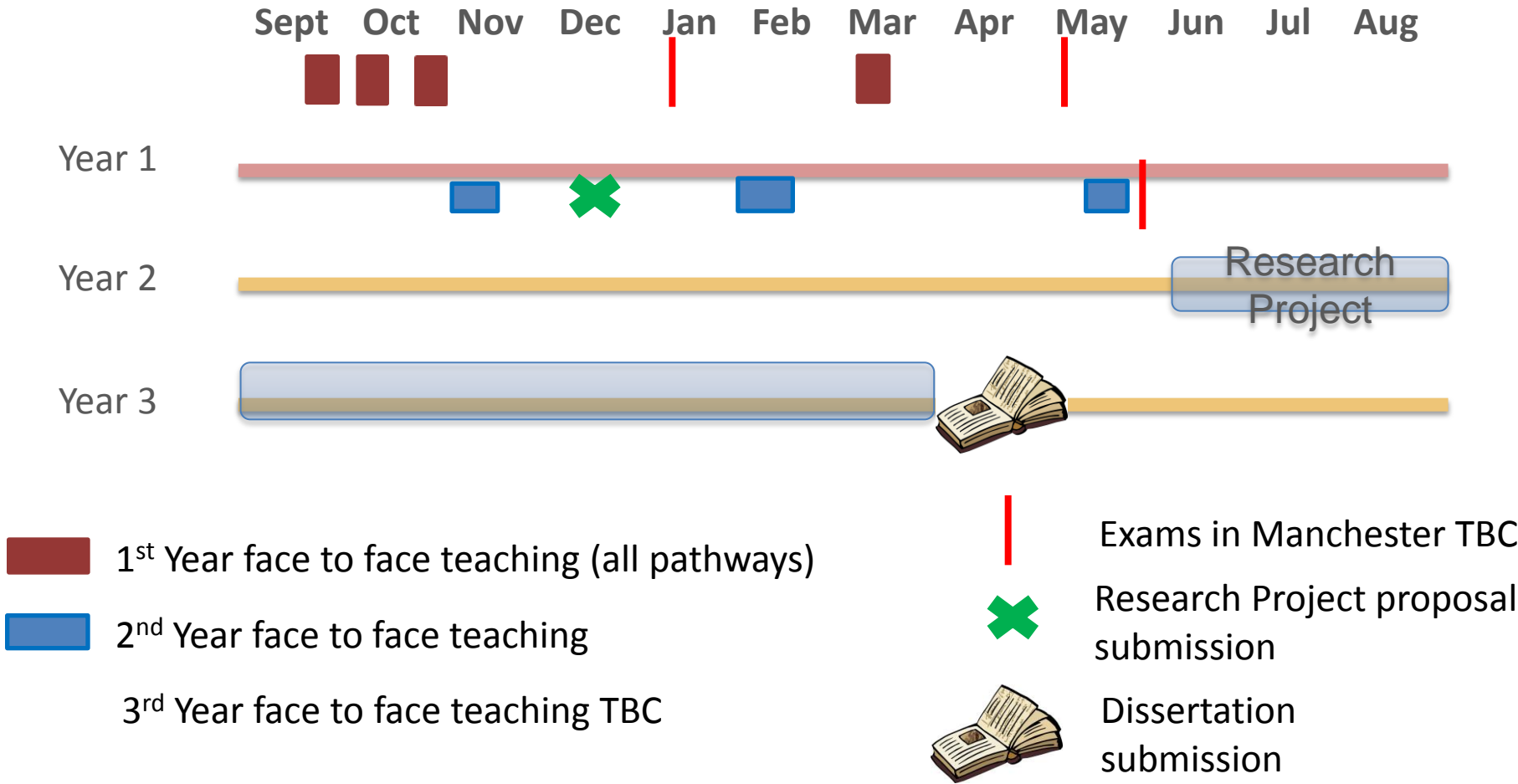
 Lunchtime webinars

 Exams in Manchester

 Research Project proposal submission

 Dissertation submission

# Timelines (Cancer Genomics)



# Curriculum

<https://curriculum.nshcs.org.uk/programmes/stp>

## Cancer Genomics (2018)

Modules

Core modules    Rotation modules    Specialist modules

| Code   | Title   | Credits |            |
|--------|---|---------|------------|
| SCC110 | Introduction to Healthcare Science, Professional Practice and Clinical Leadership | 20      | Compulsory |
| SCC120 | Research Methods  | 10      | Compulsory |
| SCC123 | Research Project  | 60      | Compulsory |
| SCC121 | Elective Module   | 0       | Compulsory |

**How would you improve this service?**  
Complete this short [survey](#) about your use of the Curriculum Library.

### Frequently asked questions

[How is the STP programme structured?](#)

[How will I be assessed?](#)

[Is there a choice of modules that I can complete?](#)

[Visit our website for more STP FAQs](#)

[Cancer Genomics - programme specification](#)

Click into each module for more information on the workplace and academic learning outcomes associated with each module

# Key Contacts

- **Emma Jenkinson:** Programme Director  
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- **Siddharth Banka:** Pathway Lead (Genomics)  
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- **Rhona MacLeod:** Pathway Lead (Genomic Counselling)  
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- **Richard Byers:** Pathway lead (Cancer Genomics)  
[Richard.byers@mft.nhs.uk](mailto:Richard.byers@mft.nhs.uk)
  
- **Catherine Stull:** Administrator  
[genomicscience@manchester.ac.uk](mailto:genomicscience@manchester.ac.uk)

<http://www.bsgm.org.uk/>

<http://www.agnc.org.uk/>

<http://www.acgs.uk.com/>

# The Programme Team

- Programme Director: Emma Jenkinson (maternity leave)
- Pathway Lead Genomics: Siddharth Banka
- Pathway Lead Genomic Counselling: Rhona MacLeod
- Pathway Lead Cancer Genomics: Richard Byers
- Lecturer: Rebecca Lamb
- Programme Administrator: Catherine Stull
- Lay representatives: Nichola Garde and Dave McCormick
- Genetic Counselling team: Tara Clancy, Georgina Hall, Alison Clarke
- Genomics team: Miriam Smith, Una Maye (Liverpool),
- External examiners: Christine Patch (GC) and Graham Taylor (Genomics)

# Any Questions?