MSc Biomedical Engineering Module Dashboard - 2023/2024

MSc Biomedical Engineering Module Dashboard – 2			Committee
General Stream Modules	ECTS	Code	Semester
Biomaterials	5	ME5M20	1
Biomechanics	5	ME5M19	1
Case Study/Design/Innovation	10 5	ME7B18 ME7B24	2
Experimental & Research Methods in Biomedical Engineering  Research Project	40	ME7B24 ME7B08	1 & 2
Total Mandatory	65	IVIE7BUS	1 & 2
Select modules amounting to 25 ECTS from the following 5/10 ECTS modules:	05		
Active Implanted Devices and Systems****	10	MEP55BM8	2
Advanced Medical Imaging	5	ME5BIO7	2
Basic Medical Sciences*	5	ME7B04	1
Finite Element Analysis**	5	MEP55B10	1
Form and Function of Nervous System*** & ****	5	PG7901	1
Medical Device Design Fundamentals***	5	MEP56BM9	1
Medical Device Design Innovation Project	10	MEP56BM1	1 & 2
Tissue Engineering	5	ME5BIO3	2
Total ECTS	90	WESSIOS	
Medical Device Stream Modules	ECTS	Code	Semester
Biomaterials	5	ME5M20	1
Biomechanics	5	ME5M19	1
Case Study/Design/Innovation	10	ME7B18	2
Experimental & Research Methods in Biomedical Engineering	5	ME7B24	1
Medical Device Design Fundamentals	5	MEP56BM9	1
Medical Device Design Innovation Project	10	MEP56BM1	1 & 2
Research Project	40	ME7B08	1 & 2
Total Mandatory	80	WIE7B00	102
Select modules amounting to 10 ECTS from the following 5/10 ECTS modules:			
Active Implanted Devices and Systems****	10	MEP55BM8	2
Advanced Medical Imaging	5	ME5BIO7	2
Basic Medical Sciences*	5	ME7B04	1
Finite Element Analysis**	5	MEP55B10	1
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Tissue Engineering	5	MESBIUS	2
Tissue Engineering Total ECTS	5 <b>90</b>	ME5BIO3	2
Total ECTS		Code	Semester
	90		
Total ECTS Neural Engineering Stream Modules	90 ECTS	Code	Semester
Total ECTS  Neural Engineering Stream Modules  Active Implanted Devices and Systems	90 ECTS 10	Code MEP55BM8	Semester 2
Total ECTS  Neural Engineering Stream Modules  Active Implanted Devices and Systems  Case Study/Design/Innovation	90 ECTS 10 10	Code MEP55BM8 ME7B18	Semester 2 2
Total ECTS  Neural Engineering Stream Modules  Active Implanted Devices and Systems  Case Study/Design/Innovation  Experimental & Research Methods in Biomedical Engineering	90 ECTS 10 10 5	Code MEP55BM8 ME7B18 ME7B24	Semester 2 2 1
Total ECTS  Neural Engineering Stream Modules  Active Implanted Devices and Systems  Case Study/Design/Innovation  Experimental & Research Methods in Biomedical Engineering  Form and Function of Nervous System (FNF)	90 ECTS 10 10 5	Code MEP55BM8 ME7B18 ME7B24 PG7901	Semester 2 2 1
Total ECTS  Neural Engineering Stream Modules  Active Implanted Devices and Systems  Case Study/Design/Innovation  Experimental & Research Methods in Biomedical Engineering  Form and Function of Nervous System (FNF)  Neural Engineering	90 ECTS 10 10 5 5	Code MEP55BM8 ME7B18 ME7B24 PG7901 PG7914	Semester 2 2 1 1 1 1 1
Total ECTS  Neural Engineering Stream Modules  Active Implanted Devices and Systems  Case Study/Design/Innovation  Experimental & Research Methods in Biomedical Engineering  Form and Function of Nervous System (FNF)  Neural Engineering  Neural Signal Analysis	90 ECTS 10 10 5 5 5	Code MEP55BM8 ME7B18 ME7B24 PG7901 PG7914 MEP55B21	Semester 2 2 1 1 1 1 1 1 1
Total ECTS  Neural Engineering Stream Modules  Active Implanted Devices and Systems  Case Study/Design/Innovation  Experimental & Research Methods in Biomedical Engineering  Form and Function of Nervous System (FNF)  Neural Engineering  Neural Signal Analysis  Research Project	90 ECTS 10 10 5 5 5 10 40	Code MEP55BM8 ME7B18 ME7B24 PG7901 PG7914 MEP55B21	Semester 2 2 1 1 1 1 1 1 1
Total ECTS  Neural Engineering Stream Modules  Active Implanted Devices and Systems  Case Study/Design/Innovation  Experimental & Research Methods in Biomedical Engineering  Form and Function of Nervous System (FNF)  Neural Engineering  Neural Signal Analysis  Research Project  Total Mandatory	90 ECTS 10 10 5 5 5 10 40	Code MEP55BM8 ME7B18 ME7B24 PG7901 PG7914 MEP55B21	Semester 2 2 1 1 1 1 1 1 1
Total ECTS  Neural Engineering Stream Modules  Active Implanted Devices and Systems  Case Study/Design/Innovation  Experimental & Research Methods in Biomedical Engineering  Form and Function of Nervous System (FNF)  Neural Engineering  Neural Signal Analysis  Research Project  Total Mandatory  Select 1 of the following 5 credit modules:	90 ECTS 10 10 5 5 5 10 40 85	Code MEP55BM8 ME7B18 ME7B24 PG7901 PG7914 MEP55B21 ME7B08	Semester  2  2  1  1  1  1  1  2  2  2  2  2  2
Total ECTS  Neural Engineering Stream Modules  Active Implanted Devices and Systems  Case Study/Design/Innovation  Experimental & Research Methods in Biomedical Engineering  Form and Function of Nervous System (FNF)  Neural Engineering  Neural Signal Analysis  Research Project  Total Mandatory  Select 1 of the following 5 credit modules:  Data science in Neuroimaging	90 ECTS 10 10 5 5 5 10 40 85	Code MEP55BM8 ME7B18 ME7B24 PG7901 PG7914 MEP55B21 ME7B08	Semester  2  1  1  1  1  1 2  2  2  2  2  2  2
Total ECTS  Neural Engineering Stream Modules  Active Implanted Devices and Systems  Case Study/Design/Innovation  Experimental & Research Methods in Biomedical Engineering  Form and Function of Nervous System (FNF)  Neural Engineering  Neural Signal Analysis  Research Project  Total Mandatory  Select 1 of the following 5 credit modules:  Data science in Neuroimaging  Introduction to Autonomous Mobile Robotics	90 ECTS 10 10 5 5 5 10 40 85	Code MEP55BM8 ME7B18 ME7B24 PG7901 PG7914 MEP55B21 ME7B08	Semester  2  1  1  1  1  1 2  2  2  2  2  2  2
Total ECTS  Neural Engineering Stream Modules  Active Implanted Devices and Systems  Case Study/Design/Innovation  Experimental & Research Methods in Biomedical Engineering  Form and Function of Nervous System (FNF)  Neural Engineering  Neural Signal Analysis  Research Project  Total Mandatory  Select 1 of the following 5 credit modules:  Data science in Neuroimaging  Introduction to Autonomous Mobile Robotics  Total ECTS	90 ECTS 10 10 5 5 5 10 40 85 5 5	Code MEP55BM8 ME7B18 ME7B24 PG7901 PG7914 MEP55B21 ME7B08  PR7917 MEP55B12	Semester  2  1  1  1  1  1  2  2  2  2  2  2  2
Total ECTS  Neural Engineering Stream Modules  Active Implanted Devices and Systems  Case Study/Design/Innovation  Experimental & Research Methods in Biomedical Engineering  Form and Function of Nervous System (FNF)  Neural Engineering  Neural Signal Analysis  Research Project  Total Mandatory  Select 1 of the following 5 credit modules:  Data science in Neuroimaging  Introduction to Autonomous Mobile Robotics  Total ECTS  Tissue Engineering Stream Modules	90 ECTS 10 10 5 5 5 10 40 85 5 5 90 ECTS	Code MEP55BM8 ME7B18 ME7B24 PG7901 PG7914 MEP55B21 ME7B08  PR7917 MEP55B12  Code	Semester  2  1  1  1  1  1  2  2  5emester
Total ECTS  Neural Engineering Stream Modules  Active Implanted Devices and Systems  Case Study/Design/Innovation  Experimental & Research Methods in Biomedical Engineering  Form and Function of Nervous System (FNF)  Neural Engineering  Neural Signal Analysis  Research Project  Total Mandatory  Select 1 of the following 5 credit modules:  Data science in Neuroimaging  Introduction to Autonomous Mobile Robotics  Total ECTS  Tissue Engineering Stream Modules  Biomaterials	90 ECTS 10 10 5 5 5 10 40 85 5 5 90 ECTS	Code MEP55BM8 ME7B18 ME7B24 PG7901 PG7914 MEP55B21 ME7B08  PR7917 MEP55B12  Code ME5M20	Semester  2  1  1  1  1  1  2  2  Semester
Total ECTS  Neural Engineering Stream Modules  Active Implanted Devices and Systems  Case Study/Design/Innovation  Experimental & Research Methods in Biomedical Engineering  Form and Function of Nervous System (FNF)  Neural Engineering  Neural Signal Analysis  Research Project  Total Mandatory  Select 1 of the following 5 credit modules:  Data science in Neuroimaging  Introduction to Autonomous Mobile Robotics  Total ECTS  Tissue Engineering Stream Modules  Biomaterials  Case Study/Design/Innovation	90 ECTS 10 10 5 5 5 10 40 85 5 90 ECTS 5	Code MEP55BM8 ME7B18 ME7B24 PG7901 PG7914 MEP55B21 ME7B08  PR7917 MEP55B12  Code ME5M20 ME7B18	Semester  2  1  1  1  1  1  2  2  5emester  1  2
Total ECTS  Neural Engineering Stream Modules  Active Implanted Devices and Systems  Case Study/Design/Innovation  Experimental & Research Methods in Biomedical Engineering  Form and Function of Nervous System (FNF)  Neural Engineering  Neural Signal Analysis  Research Project  Total Mandatory  Select 1 of the following 5 credit modules:  Data science in Neuroimaging  Introduction to Autonomous Mobile Robotics  Total ECTS  Tissue Engineering Stream Modules  Biomaterials  Case Study/Design/Innovation  Current Topics in Cell and Tissue Engineering	90 ECTS 10 10 5 5 5 10 40 85 5 5 90 ECTS 5	Code MEP55BM8 ME7B18 ME7B24 PG7901 PG7914 MEP55B21 ME7B08  PR7917 MEP55B12  Code ME5M20 ME7B18 ME7B09	Semester  2  1  1  1  1  1  2  2  5emester  1  2  1  1
Total ECTS  Neural Engineering Stream Modules  Active Implanted Devices and Systems  Case Study/Design/Innovation  Experimental & Research Methods in Biomedical Engineering  Form and Function of Nervous System (FNF)  Neural Engineering  Neural Signal Analysis  Research Project  Total Mandatory  Select 1 of the following 5 credit modules:  Data science in Neuroimaging  Introduction to Autonomous Mobile Robotics  Total ECTS  Tissue Engineering Stream Modules  Biomaterials  Case Study/Design/Innovation  Current Topics in Cell and Tissue Engineering  Experimental & Research Methods in Biomedical Engineering	90 ECTS 10 10 5 5 5 10 40 85 5 5 90 ECTS 5 10	Code MEP55BM8 ME7B18 ME7B24 PG7901 PG7914 MEP55B21 ME7B08  PR7917 MEP55B12  Code ME5M20 ME7B18 ME7B09 ME7B24	Semester  2  1  1  1  1  1  2  2  1  1  1  1  1
Total ECTS  Neural Engineering Stream Modules  Active Implanted Devices and Systems  Case Study/Design/Innovation  Experimental & Research Methods in Biomedical Engineering  Form and Function of Nervous System (FNF)  Neural Engineering  Neural Signal Analysis  Research Project  Total Mandatory  Select 1 of the following 5 credit modules:  Data science in Neuroimaging  Introduction to Autonomous Mobile Robotics  Total ECTS  Tissue Engineering Stream Modules  Biomaterials  Case Study/Design/Innovation  Current Topics in Cell and Tissue Engineering  Experimental & Research Methods in Biomedical Engineering  Laboratory Techniques in Cell & Tissue Engineering	90 ECTS 10 10 5 5 5 10 40 85 5 5 90 ECTS 5 10 10 5 5	Code MEP55BM8 ME7B18 ME7B24 PG7901 PG7914 MEP55B21 ME7B08  PR7917 MEP55B12  Code ME5M20 ME7B18 ME7B09 ME7B24 ME7B16	Semester  2  1  1  1  1  1  2  2  2  1  1  1  1
Total ECTS  Neural Engineering Stream Modules  Active Implanted Devices and Systems  Case Study/Design/Innovation  Experimental & Research Methods in Biomedical Engineering  Form and Function of Nervous System (FNF)  Neural Engineering  Neural Signal Analysis  Research Project  Total Mandatory  Select 1 of the following 5 credit modules:  Data science in Neuroimaging  Introduction to Autonomous Mobile Robotics  Total ECTS  Tissue Engineering Stream Modules  Biomaterials  Case Study/Design/Innovation  Current Topics in Cell and Tissue Engineering  Experimental & Research Methods in Biomedical Engineering  Laboratory Techniques in Cell & Tissue Engineering  Research Project	90 ECTS 10 10 5 5 5 10 40 85 5 5 90 ECTS 5 10 10 10 5	Code MEP55BM8 ME7B18 ME7B24 PG7901 PG7914 MEP55B21 ME7B08  PR7917 MEP55B12  Code ME5M20 ME7B18 ME7B09 ME7B24 ME7B16 ME7B08	Semester  2  1  1  1  1  1  2  2  2  2  5emester  1  2  1  1  2  1  1
Total ECTS  Neural Engineering Stream Modules  Active Implanted Devices and Systems  Case Study/Design/Innovation  Experimental & Research Methods in Biomedical Engineering  Form and Function of Nervous System (FNF)  Neural Engineering  Neural Signal Analysis  Research Project  Total Mandatory  Select 1 of the following 5 credit modules:  Data science in Neuroimaging  Introduction to Autonomous Mobile Robotics  Total ECTS  Tissue Engineering Stream Modules  Biomaterials  Case Study/Design/Innovation  Current Topics in Cell and Tissue Engineering  Experimental & Research Methods in Biomedical Engineering  Research Project  Tissue Engineering	90 ECTS 10 10 5 5 5 10 40 85 5 5 90 ECTS 5 10 10 5 5 5 5 5 5 90 ECTS	Code MEP55BM8 ME7B18 ME7B24 PG7901 PG7914 MEP55B21 ME7B08  PR7917 MEP55B12  Code ME5M20 ME7B18 ME7B09 ME7B24 ME7B16 ME7B08	Semester  2  1  1  1  1  1  2  2  2  2  5emester  1  2  1  1  2  1  1
Total ECTS  Neural Engineering Stream Modules  Active Implanted Devices and Systems  Case Study/Design/Innovation  Experimental & Research Methods in Biomedical Engineering  Form and Function of Nervous System (FNF)  Neural Engineering  Neural Signal Analysis  Research Project  Total Mandatory  Select 1 of the following 5 credit modules:  Data science in Neuroimaging  Introduction to Autonomous Mobile Robotics  Total ECTS  Tissue Engineering Stream Modules  Biomaterials  Case Study/Design/Innovation  Current Topics in Cell and Tissue Engineering  Experimental & Research Methods in Biomedical Engineering  Laboratory Techniques in Cell & Tissue Engineering  Research Project  Tissue Engineering  Total Mandatory	90 ECTS 10 10 5 5 5 10 40 85 5 5 90 ECTS 5 10 10 5 5 5 5 5 5 90 ECTS	Code MEP55BM8 ME7B18 ME7B24 PG7901 PG7914 MEP55B21 ME7B08  PR7917 MEP55B12  Code ME5M20 ME7B18 ME7B09 ME7B24 ME7B16 ME7B08	Semester  2  1  1  1  1  1  2  2  2  2  5emester  1  2  1  1  2  1  1
Total ECTS  Neural Engineering Stream Modules  Active Implanted Devices and Systems  Case Study/Design/Innovation  Experimental & Research Methods in Biomedical Engineering  Form and Function of Nervous System (FNF)  Neural Engineering  Neural Signal Analysis  Research Project  Total Mandatory  Select 1 of the following 5 credit modules:  Data science in Neuroimaging  Introduction to Autonomous Mobile Robotics  Total ECTS  Tissue Engineering Stream Modules  Biomaterials  Case Study/Design/Innovation  Current Topics in Cell and Tissue Engineering  Experimental & Research Methods in Biomedical Engineering  Laboratory Techniques in Cell & Tissue Engineering  Research Project  Tissue Engineering  Total Mandatory  Select 2 of the following 5 ECTS modules:	90 ECTS 10 10 5 5 10 40 85 5 90 ECTS 5 10 10 5 5 90 ECTS 5 40 5 8 8 9 9 10 10 10 10 10 10 10 10 10 10	Code MEP55BM8 ME7B18 ME7B24 PG7901 PG7914 MEP55B21 ME7B08  PR7917 MEP55B12  Code ME5M20 ME7B18 ME7B09 ME7B24 ME7B08 ME7B16 ME7B08	Semester  2  1  1  1  1  1  2  2  2  3  Semester  1  2  1  1  1  2  1  2  1  2  2  2  2
Total ECTS  Neural Engineering Stream Modules  Active Implanted Devices and Systems  Case Study/Design/Innovation  Experimental & Research Methods in Biomedical Engineering  Form and Function of Nervous System (FNF)  Neural Engineering  Neural Signal Analysis  Research Project  Total Mandatory  Select 1 of the following 5 credit modules:  Data science in Neuroimaging  Introduction to Autonomous Mobile Robotics  Total ECTS  Tissue Engineering Stream Modules  Biomaterials  Case Study/Design/Innovation  Current Topics in Cell and Tissue Engineering  Experimental & Research Methods in Biomedical Engineering  Laboratory Techniques in Cell & Tissue Engineering  Research Project  Tissue Engineering  Total Mandatory  Select 2 of the following 5 ECTS modules:  Advanced Medical Imaging	90 ECTS 10 10 5 5 10 40 85 5 90 ECTS 5 10 10 5 5 90 ECTS 5 40 5 5 5 90 ECTS 5 10 10 10 10 10 10 10 10 10 10	Code MEP55BM8 ME7B18 ME7B24 PG7901 PG7914 MEP55B21 ME7B08  PR7917 MEP55B12  Code ME5M20 ME7B18 ME7B09 ME7B24 ME7B08 ME7B16 ME7B08 ME5BIO3	Semester  2  1  1  1  1  1  1  2  2  2  2  3  Semester  1  1  1  2  1  2  1  2  2  2  2  2  2
Total ECTS  Neural Engineering Stream Modules  Active Implanted Devices and Systems  Case Study/Design/Innovation  Experimental & Research Methods in Biomedical Engineering  Form and Function of Nervous System (FNF)  Neural Engineering  Neural Signal Analysis  Research Project  Total Mandatory  Select 1 of the following 5 credit modules:  Data science in Neuroimaging  Introduction to Autonomous Mobile Robotics  Total ECTS  Tissue Engineering Stream Modules  Biomaterials  Case Study/Design/Innovation  Current Topics in Cell and Tissue Engineering  Experimental & Research Methods in Biomedical Engineering  Laboratory Techniques in Cell & Tissue Engineering  Research Project  Tissue Engineering  Total Mandatory  Select 2 of the following 5 ECTS modules:  Advanced Medical Imaging  Basic Medical Sciences*	90 ECTS 10 10 5 5 10 40 85 5 90 ECTS 5 10 10 5 5 90 ECTS 5 40 5 5 5 90 ECTS 5 5 10 10 10 10 10 10 10 10 10 10	Code MEP55BM8 ME7B18 ME7B24 PG7901 PG7914 MEP55B21 ME7B08  PR7917 MEP55B12  Code ME5M20 ME7B18 ME7B09 ME7B24 ME7B08 ME5BIO3	Semester  2  1  1  1  1  1  1  2  2  2  3  Semester  1  1  1  2  1  2  1  2  1  2  1  1  1
Total ECTS  Neural Engineering Stream Modules  Active Implanted Devices and Systems  Case Study/Design/Innovation  Experimental & Research Methods in Biomedical Engineering  Form and Function of Nervous System (FNF)  Neural Engineering  Neural Signal Analysis  Research Project  Total Mandatory  Select 1 of the following 5 credit modules:  Data science in Neuroimaging  Introduction to Autonomous Mobile Robotics  Total ECTS  Tissue Engineering Stream Modules  Biomaterials  Case Study/Design/Innovation  Current Topics in Cell and Tissue Engineering  Experimental & Research Methods in Biomedical Engineering  Laboratory Techniques in Cell & Tissue Engineering  Research Project  Tissue Engineering  Total Mandatory  Select 2 of the following 5 ECTS modules:  Advanced Medical Imaging  Basic Medical Sciences*  Biomechanics	90 ECTS 10 10 5 5 10 40 85 5 90 ECTS 5 10 10 5 5 90 ECTS 5 40 5 5 5 5 90 ECTS 5 5 10 10 10 10 10 10 10 10 10 10	Code MEP55BM8 ME7B18 ME7B24 PG7901 PG7914 MEP55B21 ME7B08  PR7917 MEP55B12  Code ME5M20 ME7B18 ME7B09 ME7B24 ME7B08 ME5BIO3  ME5BIO3	Semester   2
Total ECTS  Neural Engineering Stream Modules  Active Implanted Devices and Systems  Case Study/Design/Innovation  Experimental & Research Methods in Biomedical Engineering  Form and Function of Nervous System (FNF)  Neural Engineering  Neural Signal Analysis  Research Project  Total Mandatory  Select 1 of the following 5 credit modules:  Data science in Neuroimaging  Introduction to Autonomous Mobile Robotics  Total ECTS  Tissue Engineering Stream Modules  Biomaterials  Case Study/Design/Innovation  Current Topics in Cell and Tissue Engineering  Experimental & Research Methods in Biomedical Engineering  Laboratory Techniques in Cell & Tissue Engineering  Research Project  Tissue Engineering  Total Mandatory  Select 2 of the following 5 ECTS modules:  Advanced Medical Imaging  Basic Medical Sciences*  Biomechanics  Finite Element Analysis**	90 ECTS 10 10 5 5 10 40 85 5 90 ECTS 5 10 10 5 5 5 5 5 5 5 5 5 5 5 5 5	Code MEP55BM8 ME7B18 ME7B24 PG7901 PG7914 MEP55B21 ME7B08  PR7917 MEP55B12  Code ME5M20 ME7B18 ME7B09 ME7B24 ME7B08 ME5BIO3  ME5BIO7 ME5BIO7 ME7B04 ME5M19 MEP55B10	Semester   2

<sup>\*</sup>Mandatory for students with no prior Biology/Biomedical Background

<sup>\*\*</sup>Must have approval from module co-ordinator to take module (can be discussed week one of term)

<sup>\*\*\*</sup>General Stream – must choose between MEP56BM9 & PG7901 – cannot be taken together due to timetable clashes

<sup>\*\*\*\*</sup>Subject to meeting pre-requisite criteria as set out in the module descriptor & recommended to take together (MEP55BM8 & PG7901)