Transfusion Medicine, MSTM

Program Director: Susan T. Johnson, MSTM, MT(ASCP)SBB^{CM}

Transfusion Medicine website (https://www.marquette.edu/grad/programs-transfusion-medicine.php)

Degree Offered

Master of Science in Transfusion Medicine, students are admitted under Plan B (non-thesis option) but Plan A (thesis option) may be requested

Program Description

The transfusion medicine program is a collaboration between Marquette University and Versiti Blood Center of Wisconsin. The first 18 credits must be completed at Versiti within two and a half years of starting the program. Additional credits are completed exclusively at Marquette University.

Students must be enrolled in the Specialist in Blood Banking (SBB) program at Versiti Blood Center of Wisconsin (https://www.versiti.org/education/ specialist-in-blood-banking-program/), Versiti's independent course of study, in order to be eligible to apply for the master of science in transfusion medicine program at Marquette University. No exceptions are made to this requirement. Students have the option to enroll at Marquette while in the SBB program if it does not interfere with course work at Versiti.

Visit the department website (https://www.marquette.edu/grad/programs-transfusion-medicine.php) for more detailed program information.

Master of Science in Transfusion Medicine

Specializations: Business Administration, Education, Science

For Plan B (non-thesis option - default), students must complete 39, 40 or 40.5 total graduate-level credit hours depending on specialization. Students must complete 18 credit hours in transfusion medicine (TRME) courses, credit hours in specialization courses (19.5 credit hours in business administration, 18 credit hours in education, or 18 or 19 credit hours in science), plus 3 capstone essay credit hours. Students must also participate in the department colloquium for no credit. When the 18 TRME credits are completed at the Versiti Blood Center, the student is required to take a national examination.

Students may request Plan A (thesis option) after admission and, if selected, should secure co-direction on their thesis from a member of their specialization faculty.

Core Courses

TRME students are required to take the following courses (18 credits), participate in the department colloquium (no credit), complete a capstone (3 credits), for a total of 21 TRME credits. Students must also fulfill the requirements for one of the three specializations of business administration, education or science.

Code	Title	Hours
TRME 6101	Introduction to Transfusion Medicine	1
TRME 6201	Immunohematology 1	2
TRME 6202	Immunohematology 2	2
TRME 6220	Essentials of Blood Collection and Testing	3
TRME 6301	Management and Education in Transfusion Medicine	3
TRME 6401	Anemias and Related Topics	2
TRME 6402	Hemostasis and Transplantation	2
TRME 6501	Pathophysiology in Transfusion Medicine	2
TRME 6998	Transfusion Medicine Project	1
TRME 6952	Colloquium in Transfusion Medicine	0
TRME 6997	Transfusion Medicine Capstone	3
Total Credit Hours:		21

otal Credit Hours:

Specialization Requirements

Business Administration

Students must select an area of study from the following: accounting and finance, general business, management information systems, marketing, operations and supply chain management and organizational management. All TRME business administration students must take 19.5 specialization credit hours. The number of required and elective courses vary depending on the area of study selected (see each course list for detail). Students must meet all prerequisite requirements for the master of business administration classes. Those students who have academic backgrounds sufficient to waive any of the required courses are allowed to complete additional elective course work.

Code	Title	Hours
Required Business Administration C	ourses for All Areas of Study	
MBA 6040	Business Essentials - Accounting	1.5
MBA 6050	Business Essentials - Economics	1.5
MBA 6060	Business Essentials - Finance	1.5
MBA 6070	Business Essentials - Information Systems	1.5
MBA 6080	Business Essentials - Marketing	1.5
MBA 6090	Business Essentials - Operations and Supply Chain Management	1.5
MBA 6120	Concepts for Ethical Business Practice	1.5
or MBA 6130	Corporate Social Responsibility	

The required business administration courses ensure a fundamental understanding of the basics of accounting, human resources and organizational issues in the work place. In addition, the environmental influences courses place a strong emphasis on Marquette's traditional focus on societal concerns and the social responsibilities of today's working professional.

ACCOUNTING AND FINANCE

Code	Title	Hours
Required Courses		
MBA 6040	Business Essentials - Accounting	1.5
MBA 6050	Business Essentials - Economics	1.5
MBA 6060	Business Essentials - Finance	1.5
MBA 6070	Business Essentials - Information Systems	1.5
MBA 6080	Business Essentials - Marketing	1.5
MBA 6090	Business Essentials - Operations and Supply Chain Management	1.5
MBA 6120	Concepts for Ethical Business Practice	1.5
or MBA 6130	Corporate Social Responsibility	
ACCO 6200	Managerial Accounting for Decision Making	3
FINA 6200	Advanced Financial Management	3
Elective Courses		3
ACCO 6180	Financial Statement Analysis	
FINA 5931	Topics in Finance	
FINA 6081	Investment Banking	
FINA 6111	Investments	
FINA 6130	Bank Management	
FINA 6140	International Financial Management	
FINA 6163	Real Estate Finance and Investments	
FINA 6165	Fixed Income Markets and Securities	
FINA 6170	Sustainable Finance	
FINA 6931	Topics in Finance	
FINA 6953	Seminar in Finance	
FINA 6140 FINA 6163 FINA 6165 FINA 6170 FINA 6931	International Financial Management Real Estate Finance and Investments Fixed Income Markets and Securities Sustainable Finance Topics in Finance	

Total Credit Hours:

GENERAL BUSINESS

Code	Title	Hours
Required Courses		
MBA 6040	Business Essentials - Accounting	1.5
MBA 6050	Business Essentials - Economics	1.5
MBA 6060	Business Essentials - Finance	1.5
MBA 6070	Business Essentials - Information Systems	1.5
MBA 6080	Business Essentials - Marketing	1.5
MBA 6090	Business Essentials - Operations and Supply Chain Management	1.5

19.5

Total Credit Hours:		19.5
MBA 6160	Leadership Coaching and Development	
MBA 6150	Leading Innovation and Creativity	
MBA 6140	Leading People and Change	
For 3 of the 6 elective c	credit hours, students may choose two 1.5-credit courses from:	
OSCM 6200	Operations and Supply Chain Management	
MARK 6200	Marketing for Management Decision Making	
INSY 6200	Digital Innovation Strategies	
FINA 6200	Advanced Financial Management	
ACCO 6200	Managerial Accounting for Decision Making	
Elective Courses		6
or FINA 6200	Advanced Financial Management	
ACCO 6200	Managerial Accounting for Decision Making	3
or MBA 6130	Corporate Social Responsibility	
MBA 6120	Concepts for Ethical Business Practice	1.5

MANAGEMENT INFORMATION SYSTEMS

Code	Title	Hours
Required Courses		
MBA 6040	Business Essentials - Accounting	1.5
MBA 6050	Business Essentials - Economics	1.5
MBA 6060	Business Essentials - Finance	1.5
MBA 6070	Business Essentials - Information Systems	1.5
MBA 6080	Business Essentials - Marketing	1.5
MBA 6090	Business Essentials - Operations and Supply Chain Management	1.5
MBA 6120	Concepts for Ethical Business Practice	1.5
or MBA 6130	Corporate Social Responsibility	
INSY 6200	Digital Innovation Strategies	3
or INSY 5931	Topics in Information Systems	
Elective Courses		6
INSY 6153	Project Management	
INSY 6156	Privacy and Security	
INSY 6157	Global Information Systems Outsourcing	
INSY 6158	Systems Analysis and Design	
INSY 6931	Topics in Information Systems	
INSY 6995	Independent Study in Information Systems	
Total Credit Hours:		19.5

Marketing

Code	Title	Hours
Required Courses		
MBA 6040	Business Essentials - Accounting	1.5
MBA 6050	Business Essentials - Economics	1.5
MBA 6060	Business Essentials - Finance	1.5
MBA 6070	Business Essentials - Information Systems	1.5
MBA 6080	Business Essentials - Marketing	1.5
MBA 6090	Business Essentials - Operations and Supply Chain Management	1.5
MBA 6120	Concepts for Ethical Business Practice	1.5
or MBA 6130	Corporate Social Responsibility	
MARK 6200	Marketing for Management Decision Making	3
Elective Courses		6
MARK 6110	Consumer Behavior	

MARK 6120	Integrated Marketing Communications
MARK 6125	Digital Marketing
MARK 6130	Customer Relationship Management
MARK 6136	Sales Management
MARK 6140	Global Marketing Strategy
MARK 6160	Marketing Research
MARK 6165	Marketing Analytics
MARK 6170	Marketing Ethics, Markets and Social Responsibility
MARK 6175	Marketing and Social Entrepreneurship
MARK 6185	Brand Management
MARK 6931	Topics in Marketing
MARK 6995	Independent Study in Marketing

19.5

Total Credit Hours:

OPERATIONS AND SUPPLY CHAIN MANAGEMENT

Code	Title	Hours
Required Courses		
MBA 6040	Business Essentials - Accounting	1.5
MBA 6050	Business Essentials - Economics	1.5
MBA 6060	Business Essentials - Finance	1.5
MBA 6070	Business Essentials - Information Systems	1.5
MBA 6080	Business Essentials - Marketing	1.5
MBA 6090	Business Essentials - Operations and Supply Chain Management	1.5
MBA 6120	Concepts for Ethical Business Practice	1.5
or MBA 6130	Corporate Social Responsibility	
OSCM 6200	Operations and Supply Chain Management	3
OSCM 6931	Topics in Operations and Supply Chain Management	3
OSCM 6995	Independent Study in Operations and Supply Chain Management	3
Total Credit Hours:		19.5

Organizational Management

Code	Title	Hours
Required Courses		
MBA 6040	Business Essentials - Accounting	1.5
MBA 6050	Business Essentials - Economics	1.5
MBA 6060	Business Essentials - Finance	1.5
MBA 6070	Business Essentials - Information Systems	1.5
MBA 6080	Business Essentials - Marketing	1.5
MBA 6090	Business Essentials - Operations and Supply Chain Management	1.5
MBA 6120	Concepts for Ethical Business Practice	1.5
or MBA 6130	Corporate Social Responsibility	
HURE 5140	International Human Resources Management	3
or MANA 6140	International Management	
Elective Courses		6
HURE 5003	Employment Law	
HURE 5010	Strategic Compensation and Rewards	
HURE 5080	Talent Development	
HURE 6170	Managing Human Capital	
HURE 6535	Diversity and Inclusion	
HURE 6931	Topics in Human Resource Management	
LEDR 6051	Contemporary Leadership: Theory, Research and Application	
LEDR 6101	Strategic Communication	

Total Credit Hours:		19.5
MANA 6995	Independent Study in Management	
MANA 6931	Topics in Management	
MANA 6140	International Management	
MANA 6125	Negotiations	
MANA 6115	Change Leadership in Self and Organizations	
MANA 6110	Managing Behavior in Organizations	
LEDR 6995	Independent Study in Leadership Studies	
LEDR 6931	Topics in Leadership Studies	
LEDR 6215	Change Leadership	
LEDR 6125	Negotiations	
LEDR 6115	Character Driven Leadership	

Total Credit Hours:

Education

Students in this specialization are required to take three core courses and three electives. Those students who have academic backgrounds sufficient to waive any of the required courses are allowed to complete additional elective course work.

Code	Title	Hours
Required Courses		9
COUN 6050	Research Methods in Counseling	
or EDPL 6000	Introduction to Educational Inquiry	
EDPL 6445	Learning and Curriculum Theories	
EDPL 6860	Instructional Leadership	
Elective Courses		9
COPS 8310	Intermediate Research and Statistics	
COPS 8320	Measurement and Evaluation (COPS 8310 is a prerequisite for COPS 8320)	
EDPL 6140	Social Justice Advocacy in Student Affairs	
EDPL 6200	Student Development in Higher Education	
EDPL 6210	Environmental Theory Assessment in Higher Education	
EDPL 6260	Organizational Theory and Administration in Higher Education	
EDPL 6450	Theories of Learning Applied to Instruction	
EDPL 6800	American Law and the Educational Organization	
EDPL 6870	Curriculum Leadership	
Total Credit Hours:		18

Total Credit Hours:

Science

Students in this specialization are required to take three core courses and 9-10 credits of electives. Those students who have academic backgrounds sufficient to waive any of the required courses are allowed to complete additional elective course work.

Code	Title	Hours
Required Courses		
BIOL 5201	Genomics and Bioinformatics	3
BIOL 5806	Immunobiology	3
CHEM 5530	Biochemistry 1: Macromolecular Structure and Function	3
Elective Courses		9-10
BIOL 5102	Experimental Molecular Biology	
BIOL 5404	Molecular Evolution	
BIOL 5410	Conservation Biology	
BIOL 5532	Biochemistry 2: Bioenergetics and Metabolism	
BIOL 8004	Advanced Experimental Design	
BIOL 8005	Scientific Writing	
BIOL 8007	Biometry	
BIOL 8101	Protein Structure and Function	

BIOL 8110ProteostasisBIOL 8201EpigeneticsBIOL 8302Protein Trafficking and Organelle Identity in Eukaryotic CellsBIOL 8603Cell and Molecular Biology of Early DevelopmentBIOL 8701Advanced Physiology and Organ SystemsBIOL 8802Microbiomes in Health and the EnvironmentBIOL 8803Microbial Diversity and EcologyBIOL 8931Topics in BiologyBIOL 8953Seminar in Biochemistry and GeneticsBIOL 8956Seminar in Cell and Developmental BiologyBIOL 8957Seminar in MicrobiologyBIOL 8959Seminar in MicrobiologyCHEM 5130Characterization of Organic CompoundsCHEM 6201Physical Methods of AnalysisCHEM 6204Analytical SeparationsCOUN 6050Research Methods in Counseling		
BIOL 8302Protein Trafficking and Organelle Identity in Eukaryotic CellsBIOL 8603Cell and Molecular Biology of Early DevelopmentBIOL 8701Advanced Physiology and Organ SystemsBIOL 8802Microbiomes in Health and the EnvironmentBIOL 8803Microbial Diversity and EcologyBIOL 8931Topics in BiologyBIOL 8953Seminar in Biochemistry and GeneticsBIOL 8956Seminar in Cell and Developmental BiologyBIOL 8957Seminar in PhysiologyBIOL 8959Seminar in MicrobiologyCHEM 5130Characterization of Organic CompoundsCHEM 6201Physical Methods of AnalysisCHEM 6204Analytical Separations	BIOL 8110	Proteostasis
BIOL 8603Cell and Molecular Biology of Early DevelopmentBIOL 8701Advanced Physiology and Organ SystemsBIOL 8802Microbiomes in Health and the EnvironmentBIOL 8803Microbial Diversity and EcologyBIOL 8931Topics in BiologyBIOL 8953Seminar in Biochemistry and GeneticsBIOL 8956Seminar in Cell and Developmental BiologyBIOL 8957Seminar in PhysiologyBIOL 8959Seminar in MicrobiologyCHEM 5130Characterization of Organic CompoundsCHEM 6101Modern Concepts of Organic ChemistryCHEM 6201Physical Methods of AnalysisCHEM 6204Analytical Separations	BIOL 8201	Epigenetics
BIOL 8701Advanced Physiology and Organ SystemsBIOL 8802Microbiomes in Health and the EnvironmentBIOL 8803Microbial Diversity and EcologyBIOL 8931Topics in BiologyBIOL 8953Seminar in Biochemistry and GeneticsBIOL 8956Seminar in Cell and Developmental BiologyBIOL 8957Seminar in PhysiologyBIOL 8959Seminar in MicrobiologyCHEM 5130Characterization of Organic CompoundsCHEM 6101Modern Concepts of Organic ChemistryCHEM 6201Physical Methods of AnalysisCHEM 6204Analytical Separations	BIOL 8302	Protein Trafficking and Organelle Identity in Eukaryotic Cells
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BIOL 8803Microbial Diversity and EcologyBIOL 8931Topics in BiologyBIOL 8953Seminar in Biochemistry and GeneticsBIOL 8956Seminar in Cell and Developmental BiologyBIOL 8957Seminar in PhysiologyBIOL 8959Seminar in MicrobiologyCHEM 5130Characterization of Organic CompoundsCHEM 6101Modern Concepts of Organic ChemistryCHEM 6201Physical Methods of AnalysisCHEM 6204Analytical Separations	BIOL 8701	Advanced Physiology and Organ Systems
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CHEM 5130Characterization of Organic CompoundsCHEM 6101Modern Concepts of Organic ChemistryCHEM 6201Physical Methods of AnalysisCHEM 6204Analytical Separations	BIOL 8957	Seminar in Physiology
CHEM 6101Modern Concepts of Organic ChemistryCHEM 6201Physical Methods of AnalysisCHEM 6204Analytical Separations	BIOL 8959	Seminar in Microbiology
CHEM 6201 Physical Methods of Analysis CHEM 6204 Analytical Separations	CHEM 5130	Characterization of Organic Compounds
CHEM 6204 Analytical Separations	CHEM 6101	Modern Concepts of Organic Chemistry
	CHEM 6201	Physical Methods of Analysis
COUN 6050 Research Methods in Counseling	CHEM 6204	Analytical Separations
	COUN 6050	Research Methods in Counseling

Total Credit Hours:

University Policies

- Academic Censure Graduate School (https://bulletin.marquette.edu/policies/academic-censure/graduate/)
- Academic Integrity (https://bulletin.marquette.edu/policies/academic-integrity/)
- · Academic Misconduct (https://bulletin.marquette.edu/policies/academic-misconduct-policy/)
- Academic Program Definitions (https://bulletin.marquette.edu/policies/academic-programs-defined/)
- Accelerated Degree Programs (https://bulletin.marquette.edu/policies/accelerated-degree-programs/)
- Attendance Graduate School (https://bulletin.marquette.edu/policies/attendance/graduate/)
- Awarding Diplomas and Certificates (https://bulletin.marquette.edu/policies/awarding-diplomas-certificates/)
- Background Checks, Drug Testing (https://bulletin.marquette.edu/policies/background-checks-drug-testing/)
- Class Rank (https://bulletin.marquette.edu/policies/class-rank/)
- · Commencement (https://bulletin.marquette.edu/policies/commencement/)
- Conferral of Degrees and Certificates (https://bulletin.marquette.edu/policies/conferral-degrees-certificates/)
- · Course Levels (https://bulletin.marquette.edu/policies/course-levels/)
- · Credit Hour (https://bulletin.marquette.edu/policies/credit/)
- Credit Load Graduate School (https://bulletin.marquette.edu/policies/credit-load/graduate/)
- · Faculty Grading (https://bulletin.marquette.edu/policies/faculty-grading/)
- Family Education Rights and Privacy Act-FERPA (https://bulletin.marquette.edu/policies/ferpa/)
- · Grade Appeals (https://bulletin.marquette.edu/policies/grade-appeals/)
- Grading System Graduate School and Graduate School of Management (https://bulletin.marquette.edu/policies/grading-system/graduatemanagement/)
- Graduation Graduate School (https://bulletin.marquette.edu/policies/graduation/graduate/)
- Immunization and Tuberculosis Screening Requirements (https://bulletin.marquette.edu/policies/immunization-and-tuberculosis-screening/)
- Last Date of Attendance/Activity (https://bulletin.marquette.edu/policies/last-dateof-attendance-activity/)
- Military Call to Active Duty or Training (https://bulletin.marquette.edu/policies/militarycall-active-duty-training/)
- · Registration Graduate School (https://bulletin.marquette.edu/policies/registration/graduate/)
- Repeated Courses Graduate School (https://bulletin.marquette.edu/policies/repeated-courses/graduate/)
- Student Data Use and Privacy (https://bulletin.marquette.edu/policies/student-data-use-privacy/)
- Transcripts-Official (https://bulletin.marquette.edu/policies/transcripts-official/)
- Transfer Course Credit Graduate School (https://bulletin.marquette.edu/policies/transfer-course-credit-policy/graduate/)
- Withdrawal Graduate School (https://bulletin.marquette.edu/policies/withdrawals/graduate/)

Graduate School Policies

- Academic Performance (https://bulletin.marquette.edu/graduate/policies/academic-performance/)
- Academic Programs Overview (https://bulletin.marquette.edu/graduate/policies/academic-programs-overview/)
- Advising (https://bulletin.marquette.edu/graduate/policies/advising/)
- Assistantships and Fellowships (https://bulletin.marquette.edu/graduate/policies/assistantships-andfellowships/)
- Certificate Concurrent Enrollment (https://bulletin.marquette.edu/graduate/policies/certificate-concurrent-enrollment/)
- Conduct (https://bulletin.marquette.edu/graduate/policies/conduct/)
- Confidentiality of Proprietary Information (https://bulletin.marquette.edu/graduate/policies/confidentiality-proprietary-information/)
- Continuous Enrollment (https://bulletin.marquette.edu/graduate/policies/continuous-enrollment/)
- Courses and Prerequisites (https://bulletin.marquette.edu/graduate/policies/courses-prerequisites/)
- Cross-listed Courses (https://bulletin.marquette.edu/graduate/policies/cross-listed-courses/)
- Deadlines (https://bulletin.marquette.edu/graduate/policies/deadlines/)
- Graduate Credit (https://bulletin.marquette.edu/graduate/policies/graduate-credit/)
- Graduate School Policies (https://bulletin.marquette.edu/graduate/policies/)
- Independent Study (https://bulletin.marquette.edu/graduate/policies/independent-study/)
- Intellectual Property (https://bulletin.marquette.edu/graduate/policies/intellectual-property/)
- Research Involving Humans, Animals, Radioisotopes or Recombinant DNA/Transgenic Organisms (https://bulletin.marquette.edu/graduate/policies/ research-involving-humans-animals-radioisotopes-recombinant-dnatransgenic-organisms/)
- Temporary Withdrawal from Graduate Program (https://bulletin.marquette.edu/graduate/policies/temporary-withdrawal-graduate-program/)
- Time Limitations (https://bulletin.marquette.edu/graduate/policies/time-limitations/)
- Working with Minors (https://bulletin.marquette.edu/graduate/policies/working-minors/)

TRME 6101 Introduction to Transfusion Medicine (1 credits)

An overview of transfusion medicine from basic science concepts to the regulations and quality systems required, along with research concepts and presentation skills. Principles of basic genetics, immunology and red blood cell biochemistry are investigated and applied to blood group serology. An in-depth look at the regulations and accreditations governing the field of transfusion medicine including FDA, CLIA and AABB. Includes an introduction to quality management systems and how they apply to blood collection, donor laboratory testing and patient laboratory testing. Provides an overview of principles of research and an introduction to preparing for oral and written presentation.

Prerequisite: Cons. of prog. dir. *Level of Study:* Graduate

Last four terms offered: 2022 Fall Term, 2021 Fall Term, 2020 Fall Term, 2019 Fall Term Schedule of Classes (https://bulletin.marquette.edu/class-search/?details&code=TRME%206101)

TRME 6201 Immunohematology 1 (2 credits)

An in-depth study of the human blood groups whose antigens are carbohydrate-based to include the ABO and P blood group systems and Lewis system. Discusses history, genetics and biochemistry of the carbohydrate-based antigens. Explores their relationship to transfusion therapy and disease epidemiology. Reviews principles of hemagglutination and complement system.

Prerequisite: Cons. of prog. dir.

Level of Study: Graduate

Last four terms offered: 2023 Spring Term, 2022 Spring Term, 2021 Spring Term, 2020 Spring Term Schedule of Classes (https://bulletin.marquette.edu/class-search/?details&code=TRME%206201)

TRME 6202 Immunohematology 2 (2 credits)

An in-depth study of the human blood groups whose antigens are protein-based to include, but not limited to: Rh, LW, MNSs, Duffy, Kidd, Kell and Lutheran blood group systems. Discusses history, genetics and biochemistry of the protein-based antigens. Explores their relationship to transfusion therapy and disease epidemiology. Includes practical experience in problem solving patient or donor typing problems and identifying antibodies to blood group antigens.

Prerequisite: Cons. of prog. dir.

Level of Study: Graduate

Last four terms offered: 2022 Fall Term, 2021 Fall Term, 2020 Fall Term, 2019 Fall Term

Schedule of Classes (https://bulletin.marquette.edu/class-search/?details&code=TRME%206202)

TRME 6220 Essentials of Blood Collection and Testing (3 credits)

A comprehensive investigation into the theoretical and practical basis involving the selection and processing of blood donors. Presents a thorough understanding of the physiological aspects of blood storage and transport. Emphasizes infectious disease testing as well as the FDA, AABB and CLIA regulations concerning testing.

Prerequisite: Cons. of prog. dir.

Level of Study: Graduate

Last four terms offered: 2023 Spring Term, 2022 Spring Term, 2021 Spring Term, 2020 Spring Term

Schedule of Classes (https://bulletin.marquette.edu/class-search/?details&code=TRME%206220)

TRME 6301 Management and Education in Transfusion Medicine (3 credits)

A systematic approach in acquiring the fundamentals and principles of planning and implementing an educational program in the clinical setting. Offers practice of presentation skills in a classroom setting and state meeting. Also prepares the transfusion medicine practitioner to manage operational and fiscal affairs in a donor center or transfusion service.

Prerequisite: Cons. of prog. dir.

Level of Study: Graduate

Last four terms offered: 2022 Fall Term, 2021 Fall Term, 2020 Fall Term, 2019 Fall Term

Schedule of Classes (https://bulletin.marquette.edu/class-search/?details&code=TRME%206301)

TRME 6401 Anemias and Related Topics (2 credits)

An advanced study in the pathological mechanisms underlying the production of human disease involving anemias and leukemias. Emphasizes autoimmune hemolytic anemias, drug-dependent immune hemolytic anemias and hemolytic disease of the fetus and newborn. Also discusses parentage testing requirements.

Prerequisite: Cons. of prog. dir.

Level of Study: Graduate

Last four terms offered: 2023 Spring Term, 2022 Spring Term, 2021 Spring Term, 2020 Spring Term Schedule of Classes (https://bulletin.marquette.edu/class-search/?details&code=TRME%206401)

TRME 6402 Hemostasis and Transplantation (2 credits)

A study of the procedures performed, as well as a complete understanding of disease process as it relates to serological and molecular detection of bleeding and clotting diseases. An in-depth look at the immune system as it relates to transplantation. A formal study of the aspects of histocompatibility, platelet and neutrophil immunology and bleeding and clotting disorders. Also discusses histocompatibility antigens and nomenclature in relation to transfusion and transplantation.

Prerequisite: Cons. of prog. dir.

Level of Study: Graduate

Last four terms offered: 2022 Fall Term, 2021 Fall Term, 2020 Fall Term, 2019 Fall Term Schedule of Classes (https://bulletin.marquette.edu/class-search/?details&code=TRME%206402)

TRME 6501 Pathophysiology in Transfusion Medicine (2 credits)

An advanced study in the pathophysiology of blood transfusion. Reviews indications for blood transfusion including blood component therapy. Also studies adverse events in transfusion medicine. Emphasizes practical aspects of blood management within a transfusion service.

Prerequisite: Cons. of prog. dir.

Level of Study: Graduate

Last four terms offered: 2022 Fall Term, 2021 Fall Term, 2020 Fall Term, 2019 Fall Term

Schedule of Classes (https://bulletin.marquette.edu/class-search/?details&code=TRME%206501)

TRME 6931 Topics in Transfusion Medicine (1-3 credits)

In-depth study of concepts, theories, and laboratory techniques in the broad area of transfusion medicine which are not covered in regular courses. *Prerequisite:* Cons. of prog. dir.

Level of Study: Graduate

Last four terms offered: 2012 Spring Term, 2011 Fall Term, 2008 Summer Term

Schedule of Classes (https://bulletin.marquette.edu/class-search/?details&code=TRME%206931)

TRME 6952 Colloquium in Transfusion Medicine (0 credits)

Scholarly reports on selected topics in transfusion medicine/immunohematology. Attendance required of all full-time graduate students. SNC/UNC grade assessment.

Prerequisite: Cons. of prog. dir.

Level of Study: Graduate

Last four terms offered: 2012 Spring Term, 2011 Fall Term, 2008 Summer Term, 1994 Fall Term Schedule of Classes (https://bulletin.marquette.edu/class-search/?details&code=TRME%206952)

TRME 6995 Independent Study in Transfusion Medicine (1-3 credits)

Faculty-supervised, independent study/research of a specific area or topic in Transfusion Medicine.

Prerequisite: Cons. of prog. dir.

Level of Study: Graduate

Last four terms offered: 2008 Summer Term, 2008 Spring Term, 2007 Fall Term, 2007 Summer Term Schedule of Classes (https://bulletin.marquette.edu/class-search/?details&code=TRME%206995)

TRME 6997 Transfusion Medicine Capstone (3 credits)

Project and concluding paper that integrates the subspecialty course work with transfusion medicine. *Prerequisite:* Cons. of prog. dir.

Level of Study: Graduate

Last four terms offered: 2023 Spring Term, 2022 Fall Term, 2021 Summer Term, 2020 Fall Term Schedule of Classes (https://bulletin.marquette.edu/class-search/?details&code=TRME%206997)

TRME 6998 Transfusion Medicine Project (1 credits)

Project and concluding paper on selected subject that integrates Specialist in Blood Banking course work.

Prerequisite: Cons. of prog. dir. Level of Study: Graduate

Last four terms offered: 2023 Spring Term, 2022 Fall Term, 2021 Fall Term, 2021 Summer Term Schedule of Classes (https://bulletin.marquette.edu/class-search/?details&code=TRME%206998)

TRME 6999 Master's Thesis (1-6 credits)

Master's thesis for M.S.T.M. candidates. S/U grade assessment.

Prerequisite: Cons. of prog. dir.

Level of Study: Graduate

Last four terms offered: 2012 Spring Term, 2011 Fall Term, 2009 Summer Term, 2008 Summer Term Schedule of Classes (https://bulletin.marguette.edu/class-search/?details&code=TRME%206999)

TRME 9970 Graduate Standing Continuation: Less than Half-Time (0 credits)

Fee. SNC/UNC grade assessment. Designated as less than half-time status only, cannot be used in conjunction with other courses, and does not qualify students for financial aid or loan deferment.

Prerequisite: Cons. of prog. dir.

Level of Study: Graduate

Last four terms offered: 2022 Fall Term, 2021 Summer Term, 2016 Spring Term, 2015 Spring Term

Schedule of Classes (https://bulletin.marquette.edu/class-search/?details&code=TRME%209970)

TRME 9991 Professional Project Continuation: Less than Half-Time (0 credits)

Fee. SNC/UNC grade assessment. Allows a student to be considered the equivalent of less than half-time status. Requires that the student is working less than 12 hours per week on their professional project. Any professional project credits required for the degree should be completed before registering for non-credit Professional Project Continuation.

Prerequisite: Cons. of prog. dir.

Level of Study: Graduate

Last four terms offered: 2021 Summer Term, 2012 Spring Term, 2011 Fall Term

Schedule of Classes (https://bulletin.marquette.edu/class-search/?details&code=TRME%209991)

TRME 9992 Professional Project Continuation: Half-Time (0 credits)

Fee. SNC/UNC grade assessment. Allows a student to be considered the equivalent of half-time status. Requires that the student is working more than 12 to less than 20 hours per week on their professional project. Any project credits required for the degree should be completed before registering for non-credit Professional Project Continuation.

Prerequisite: Cons. of prog. dir.

Level of Study: Graduate

Last four terms offered: 2012 Spring Term, 2011 Fall Term Schedule of Classes (https://bulletin.marquette.edu/class-search/?details&code=TRME%209992)

TRME 9993 Professional Project Continuation: Full-Time (0 credits)

Fee. SNC/UNC grade assessment. Allows a student to be considered the equivalent of full-time status. Requires that the student is working 20 hours or more per week on their professional project. Any professional project credits required for the degree should be completed before registering for non-credit Professional Project Continuation.

Prerequisite: Cons. of prog. dir.

Level of Study: Graduate

Last four terms offered: 2012 Spring Term, 2011 Fall Term Schedule of Classes (https://bulletin.marquette.edu/class-search/?details&code=TRME%209993)

TRME 9994 Master's Thesis Continuation: Less than Half-Time (0 credits)

Fee. SNC/UNC grade assessment. Allows a student to be considered the equivalent of less than half-time status. Requires that the student is working less than 12 hours per week on their master's thesis. All six thesis credits required for the degree should be completed before registering for non-credit Master's Thesis Continuation.

Prerequisite: Cons. of prog. dir.

Level of Study: Graduate

Last four terms offered: 2021 Summer Term, 2012 Spring Term, 2011 Fall Term, 2009 Summer Term Schedule of Classes (https://bulletin.marquette.edu/class-search/?details&code=TRME%209994)

TRME 9995 Master's Thesis Continuation: Half-Time (0 credits)

Fee. SNC/UNC grade assessment. Allows a student to be considered the equivalent of half-time status. Requires that the student is working more than 12 to less than 20 hours per week on their master's thesis. All six thesis credits required for the degree should be completed before registering for non-credit Master's Thesis Continuation.

Prerequisite: Cons. of prog. dir.

Level of Study: Graduate

Last four terms offered: 2012 Spring Term, 2011 Fall Term, 2009 Summer Term, 2008 Summer Term Schedule of Classes (https://bulletin.marquette.edu/class-search/?details&code=TRME%209995)

TRME 9996 Master's Thesis Continuation: Full-Time (0 credits)

Fee. SNC/UNC grade assessment. Allows a student to be considered the equivalent of full-time status. Requires that the student is working 20 hours or more per week on their master's thesis. All six thesis credits required for the degree should be completed before registering for non-credit Master's Thesis Continuation.

Prerequisite: Cons. of prog. dir.

Level of Study: Graduate

Last four terms offered: 2012 Spring Term, 2011 Fall Term, 2009 Summer Term, 2008 Summer Term Schedule of Classes (https://bulletin.marquette.edu/class-search/?details&code=TRME%209996)