Prepare to be a leader in today’s high-tech world.

THE RIVIER UNIVERSITY ADVANTAGE

Rivier’s Master of Science in Computer Science program prepares you for a successful career in one of the economy’s fastest growing industries. The program combines theory with significant practical experience, giving our graduates an edge in meeting the demands of the high-tech workplace. Our faculty members and alumni are professionals working in computing research laboratories and high-tech industries. Programs are offered in face-to-face, online and hybrid formats.

Rivier partners with Dell and Microsoft to provide up-to-date technology in the Academic Computing Center laboratories and electronic classrooms. Students have access to a high-speed local area network and Windows, Linux, and Unix operating systems. Lab and classroom computers provide programming development environments for C++, Java, Perl, Scheme, and Prolog, among other languages. Students also have access to specialty software packages such as Oracle, OPNET IT Guru, McCabe IQ, Visual Paradigm, ARENA, and OpenGL, in the areas of database management, computer graphics, architecture simulation, software engineering, networking technologies, and intelligent systems.

ABOUT THE PROGRAM

Rivier’s M.S. in Computer Science program is designed to provide students with advanced disciplinary knowledge and skills and with current competitive professional practices. The program is structured to serve prospective students with diverse academic backgrounds and professional experience, and thus offers two tracks of course of study. The highly- or cross-trained student track is designed for students with an undergraduate degree in computer science or related areas, such as mathematics, physical and life sciences, and engineering. The retraining student track is designed for students with a non-technical undergraduate degree and with limited mathematical background. The program allows students to choose a concentration in Software Development, Web and Database Development, Information Technology, or design their own concentration.

The Software Development concentration refers to the design and development of real-life software products that are task or service-oriented and apply mathematical and knowledge-based formalisms to practical, technical solutions. Software applications include: computer graphics, intelligent systems, data mining, knowledge-based systems, and multimedia and web applications. Software systems include: modern device development, compiler techniques, parallel and distributed computing, and advanced operating systems. This concentration covers advanced programming techniques in C++ and Java, software engineering methodology, software quality assurance, and computer security.

The Web and Database Development concentration focuses on concepts, tools, and practices for designing and developing web and database systems and applications. This concentration covers web development techniques and solutions on both the client and server sides, multimedia, web development, computer security, and database programming.

The Information Technology concentration offers specialization in the design and deployment of information technologies infrastructures. This concentration covers a range of topics including overview of information technologies, inter-networking techniques, advanced local and wide area networking technologies, database management systems, and computer security.

The Design Your Own concentration option provides students with the opportunity to select five courses from more than one area.
MAJOR REQUIREMENTS

CORE COURSES
CS 552 - Object-Oriented Design
CS 553 - Networking Technologies
CS 554 - Operating Systems
CS 556 - Computer Architecture
CS 557 - Algorithms
CS 585 - Practical Java Programming
CS 699 - Professional Seminar

COMPUTER SCIENCE ELECTIVES
Select 5 courses from one of the following four areas of concentration:
Information Technology, Software Development, Web and Database Development, or the Design Your Own track.

ACADEMIC ACCREDITATION
New England Association of Schools and Colleges (NEASC)

FACULTY
Richard Greene, Ph.D.
Senior Lecturer of Computer Science
Ph.D., M.S., University of Alabama/Huntsville

Teresa D. Magnus, Ph.D.
Professor of Mathematics
Director of M.A.T. in Mathematics Education
Ph.D., M.S., University of Virginia
B.A., University of Dallas
B.A., University of Dallas

David Pitts, Ph.D.
Assistant Professor of Computer Science
Director of Experimental Computer Science Laboratory
Ph.D., M.S., Georgia Institute of Technology
B.S., Georgia Institute of Technology

Vladimir Riabov, Ph.D.
Professor of Computer Science
Coordinator, Mathematics and Computer Science
Director of Computer Science Programs
Ph.D., Moscow Institute of Physics & Technology, Moscow, Russia
M.S., Southern New Hampshire University
M.S., Moscow Institute of Physics & Technology, Moscow, Russia

Sr. Martha Villeneuve, M.A.
Associate Professor
Director of Academic Computer Center
M.A., Boston College
B.A., Rivier College

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