



A Guide for IT Professionals Specializing in Digital Transformation

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About this Resource

Today's rapidly evolving and complex technological advancements mean that advanced degrees in technology are and continue to become incredibly valuable – especially as industries attempt to leverage the opportunities that new technologies reveal.

With this in mind, **Marymount University now offers a Digital Transformation track within the graduate Information Technology program.** This resource is designed to inform you of the value of Marymount's Master of Science in Information Technology degree along with why you should consider pursuing the Digital Transformation track if you're dedicated to establishing yourself as a valuable, innovative technology professional.

Defining Information Technology

Information technology, as a discipline, refers to the development, implementation, maintenance, and utilization of computer software, systems, and networks for the processing and distribution of data. Since information technology is closely related to the storing, retrieving, and manipulation of data, it's important to understand how a traditional industry like information technology relates to and complements an emerging and thriving discipline – that of **digital transformation**.

What is Digital Transformation?

So, what is digital transformation? Digital transformation is the novel and innovative use of digital technology to solve traditional problems. <u>Enterprisersproject.com defines digital transformation as</u> <u>follows</u>: "digital transformation as the integration of digital technology into all areas of a business resulting in fundamental changes to how businesses operate and how they deliver value to customers." Practically speaking, <u>digital transformation is often more about</u> "shedding outdated processes and legacy technology than it is about adopting new tech ... if businesses want to evolve with the rapid pace of digital change today, they must work to increase efficiency with technology wherever possible."

So, why does digital transformation matter for businesses and government? Digital transformation matters for a variety of reasons, but the most important reason lies in the reality that businesses and government agencies must evolve digitally as technology continues to advance and improve. An IT professional's role is to implement many pieces of new technology in an organization: to do so, they must consider people, process, and cost. IT operations must support the business mission, and there are many factors that affect the implementation and approach, including the need for change and its management.



Choosing to Study Information Technology

Technology continues to evolve in our political, environmental, economic, and societal climate. With that in mind, it's crucial that you choose a graduate IT program that's designed to prepare you for real, measurable success — a graduate program that's dedicated to weaving inquiry-based learning, hands-on assignments, faculty research, and one-on-one professional development into the curriculum.

With so many advanced information technology programs available today, it's important to ask yourself a variety of questions about the program in order to ensure that you're choosing the one that will give you the best possible education for your degree goals.

What experience and credentials do the faculty have?

Faculty should be a combination of full-time faculty and part-time faculty working in the field. Full-time faculty will be available, not just to teach, but to advise you on the best options in the program to meet your individual needs and to help you find opportunities in the field. Part-time faculty will bring real-world experience into the classroom and can help guide students as they pursue their career goals.

What kind of options are there for me to augment my coursework?

IT programs that provide electives allow you to hone your individual talents and meet your needs. Further, IT programs that offer specializations or specific degree track options are incredibly valuable in that they allow you to further augment your coursework. Employers greatly value applicants who can extend their broad knowledge base by providing skills in a specific area.

What type of job opportunities can I expect upon graduation?

The best IT programs will prepare you for the workplace, whether in the public or private sector. There are so many tech-related jobs around the country, and your connections with faculty, current students, and alumni should be able to help you identify internships and job opportunities. The IT program you choose should also help you in areas like networking, professional development, interview practice sessions, and resume preparation.

How diverse are the faculty and students?

Programs vary in the diversity of ethnicity, gender, and technical expertise among their students and faculty. Minorities and females are currently underrepresented in the information technology workforce, so explore the makeup of existing programs and any initiatives they are taking to promote diversity.



Exploring Marymount University's Master of Science in Information Technology

Marymount University's <u>Master of Science in Information Technology</u> in the <u>School of Business and</u> <u>Technology</u> prepares individuals for leadership roles in the competitive and complex IT industry. Marymount's program provides knowledge and skills across the entire range of topics in the industry – systems engineering, decision-making for IT, ethics and law, computer networking, database technologies, IT governance and strategy, Web development, and cybersecurity.

Marymount's Information Technology graduate program is coordinated through <u>The Cyber Center</u> in the Ballston Facility. The Cyber Center seeks to establish partnerships, support information technology research, boost professional development, and encourage the sharing of resources with other colleges, businesses, government agencies, and nonprofit organizations.

Learn from Expert IT Faculty in the DC Area

Technology plays a significant role in our daily lives and drives much of the business and government activities all over the world, not to mention in the Washington metropolitan area. Marymount University's location near Washington D.C. is particularly advantageous for Information Technology students, as many government-related IT matters become the source of discussion and study for students enrolled in the program. For example, the government's recent artificial intelligence strategy document.

Marymount's full-time IT faculty members – **all of whom hold doctorates** – are hands-on practitioners and scholars. They conduct research, participate in professional activities including congressional committees, and are continually engaged in professional development opportunities. These full-time faculty members currently conducting research in the following subjects:

- Mobile Apps
- Data Management
- Open Source Software
- Artificial Intelligence
- Global Ethics
- Technology for Health Care
- Cybersecurity

Part-time faculty members support the program, bringing their real-world experience from organizations such as:

- Aerospace Corporation
- Department of Labor
- Department of the Navy
- Federal Bureau of Investigation
- ManTech
- Noblis, Inc.

Information Technology Curriculum

Marymount's Information Technology graduate program is 36 credit hours, totaling eight core courses and four elective courses – the <u>four elective courses go towards one of the six IT degree tracks</u>. All graduate IT students complete their program by conducting an applied research project (<u>IT 680 IT</u> <u>Master's Project</u>) in which they apply their skills to a real-world IT problem.

Below are a sample of core courses that Information Technology students at Marymount will take while enrolled in the IT program:

IT 510 Requirements Analysis:

Includes planning, requirements definition, modeling, estimating, analysis and design, coding, integration, testing, quality assurance, and maintenance. The course focuses on object-oriented techniques and students get practical experience with the Unified Modeling Language and DevOps to produce high-quality software.

IT 520 Enterprise Infrastructure and Networks

Covers the technology and management of the various components of today's enterprise IT infrastructure, including hardware, software, and networks. The course examines network architectures, network protocols, network management, IT support models, cloud computing, and operating systems. It also considers data communication and messaging in a global context.

IT 530 Computer Security:

Provides an overview of the computer security risks facing enterprises today and covers the many options available for mitigation of these risks. Computer security is taught in the context of the increasingly global and distributed environment of today's enterprise.

IT 550 Ethics, Law, and Policy in the Information Age

Introduces students to the ethical, legal, and policy issues raised by designing and using IT. Issues that are researched and debated in the course include subjects such as information privacy, effective energy use, the digital divide, customer profiling, copyright violation, globalization, and outsourcing.

IT 610 Governance and Strategy

Includes the processes, including best practices, that govern decision making around investment decisions, staffing levels, outsourcing decisions, client relationships, project management, and other important IT operational areas. Internet governance is also discussed.



Information Technology's 6 Degree Tracks

To meet career needs, Marymount University gives IT students the option of selecting a specific track as part of their degree studies. Each degree track is designed to allow IT students to sharpen their knowledge in one particular area of study. By giving students the chance to specialize in a specific techrelated discipline, students graduate from the program with marketable, practical skills and enter the workforce with a competitive edge. Choosing a degree track as part of the IT coursework is a strategic way for IT graduates to set themselves apart from other professionals currently working in the field.

- <u>Cybersecurity</u>
- Data Science *NEW
- Digital Transformation *NEW
- <u>Health Care Informatics</u>
- Project Management and Technology Leadership
- Software Engineering

Diversity of the IT Program

As an institution, Marymount University was ranked as one of the most diverse academic institutions in the South. Our total student population represents **42 states and 68 countries**, statistics that are particularly surprising given the University's relatively small size. Regarding the gender distribution of the total student population in Fall 2018, **67 percent of students were women and 33 percent of students were men.**



Within Marymount's IT program, we recognize that minorities and females are underrepresented in STEM-related fields, and the field of technology is no different. As a department within a Catholic university, we are proud to be home to a diverse community of both full-time and part-time faculty members, current students, and alumni – all who come from varying backgrounds and faiths.

Dual Degree Programs

Dual degrees present excellent opportunities for IT students to differentiate themselves in their professional community with two relevant degrees. By pursuing the degrees concurrently, students can merge common subjects and earn both degrees with fewer credits than taking them separately.

- <u>Master of Business Administration/Master of Science in Information Technology</u>
- Master of Science in Health Care Management/Master of Science in Information Technology
- Master of Science in Cybersecurity/Master of Science in Information Technology

Deep Dive: Digital Transformation

Digital Transformation, the use of technology to transform business processes and end-to-end user experiences, is a major focus of government and industry today. A digital transformation specialist aims to fully leverage the possibilities and opportunities of new technologies and their impact. There are a variety of new technologies including mobile, cloud, blockchain, and artificial intelligence waiting to be incorporated into business practice and to enhance government services.

Marymount's Digital Transformation degree track provides knowledge in all facets of IT, from the technology itself, to privacy and security issues, to the management and governance of the technology. This **combination of technology and management is unique to our program**, with its focus on the real-world application of technology today.

Government and commercial companies are all trying to implement appropriate technology. Digital technologies and the ways we use them in our daily lives (personal, work, society) have changed the face of business and government and will continue to do. To best prepare graduates to meet the needs of evolving businesses, government, and technology, students take the following courses as a part of the digital transformation track:



Digital Transformation Jobs, Salary, and Career Outlook

While educational level continues to play a role when it comes to compensation, individuals who hold a master's degree in a tech-related field earn several thousand more per year than those who hold only a bachelor's degree. According to ZipRecruiter, the majority of experts working in digital transformation have salaries ranging between \$85,500 (25th percentile) to \$180,500 (75th percentile) across the United States.

Digital transformation is the focus of many government agencies and private sector companies, who are constantly looking for the right talent. Having digital transformation knowledge will enable IT professionals to apply for higher level jobs in forward-facing organizations. Consider these job titles for professionals who have a background in digital transformation:

- Digital Transformation Manager
- Innovation Manager
- Digital Transformation Consultant
- Digital Transformation Executive
- Business Transformation Consultant
- Head of Digital Transformation
- Director of Digital Transformation

- Digital Transformation Lead
- Digital Transformation Architect
- Digital Transformation Project Manager
- Digital Transformation Subject Matter Expert
- Digital Advisor
- Digital Architect



Next Steps

As a future leader in the field of information technology, it's crucial that you strategically choose a respected graduate program. That's why we'd like to invite you to request more information or to attend one of our upcoming in-person or virtual events — to discover how the Marymount difference ties into your purpose.

Or, if you're ready to boost your IT career, you can start your online application today. In the meantime, we hope this resource has been helpful to you, and we can't wait to help you advance your career in the complex and exciting field of information technology. Start your journey with us today!



Information Technology Program

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