

DIGITAL MEDIA DESIGN, BSE

The Digital Media Design (DMD) program is an interdisciplinary major in the School of Engineering and Applied Science at Penn. As a full-fledged Bachelors in Engineering and Science (BSE) degree, it combines major coursework in computer graphics within the Computer & Information Science Department, Communication theory courses from the Annenberg School and Fine Arts courses from Penn's School of Design. The program was designed for students who have an interest in computer graphics, animation, games, and the design of virtual reality environments and interactive technologies. The Digital Media Design Program was established in response to what we perceived as a growing rift within the computer graphics and animation industry.

For more information: <https://www.seas.upenn.edu/prospective-students/undergrad/majors/digital-media-design/>

Digital Media Design (DMD) Major Requirements

37 course units are required.

Code	Title	Course Units
Engineering		
CIS 110	Introduction to Computer Programming	1
CIS 120	Programming Languages and Techniques I	1
CIS 121	Programming Languages and Techniques II	1
CIS 240	Introduction to Computer Systems	1
CIS 262	Automata, Computability, and Complexity	1
CIS 320	Introduction to Algorithms	1
CIS 460	Interactive Computer Graphics	1
Two of the following:		2
CIS 461	Advanced Computer Graphics	1
or CIS 462	Computer Animation	
or CIS 455	Internet and Web Systems	
CIS 467	Scientific Computing	1
CIS 497	DMD Senior Project	1
CIS 200 level or above		2
CIS Elective		1
Math & Natural Science		
MATH 104	Calculus, Part I	1
MATH 114	Calculus, Part II	1
MATH 240	Calculus, Part III	1
or MATH 312	Linear Algebra	
or MATH 313	Computational Linear Algebra	
or MATH 314	Advanced Linear Algebra	
CIS 160	Mathematical Foundations of Computer Science	1
CIS 261	Discrete Probability, Stochastic Processes, and Statistical Inference	1
or ESE 301	Engineering Probability	
or ENM 321	Engineering Statistics	
or STAT 430	Probability	
MEAM 110 & MEAM 147	Introduction to Mechanics and Introduction to Mechanics Lab	1.5

or PHYS 150 Principles of Physics I: Mechanics and Wave Motion
or PHYS 170 Honors Physics I: Mechanics and Wave Motion

Select from the following list: 1.5

BIOL 101 Introduction to Biology A
BIOL 121 Introduction to Biology - The Molecular & BIOL 124 Biology of Life and Introductory Organismal Biology Lab

CHEM 101 General Chemistry I & CHEM 053 and General Chemistry Laboratory I

ESE 112 Engineering Electromagnetics

PHYS 151 Principles of Physics II: Electromagnetism and Radiation

PHYS 171 Honors Physics II: Electromagnetism and Radiation

Math or Natural Science Elective 1

DMD Electives

Advisor Approval Required

FNAR 123 Drawing I 1
or FNAR 124 Drawing Investigations
or FNAR 280 Figure Drawing I

DSGN 235 3-D Computer Modeling 1
or DSGN 236 Digital Figure Modeling

Select 4 DMD Electives ¹ 4

General Electives ²

Select 5 Social Science or Humanities courses 5

Select 2 Social Science or Humanities or Technology in Business & Society courses 2

Free Elective

Select 1 free electives ³ 1

Total Course Units 37

¹ Select courses from offerings in the following categories: COMM, FNAR, CIMS, DSGN, THAR, MKTG, ARTH, IPD, MUSC, EDUC. Courses from other categories require advisor approval.

² Must include a Writing Seminar (a list of approved Writing Seminars can be found in the SEAS Undergraduate Handbook (<https://ugrad.seas.upenn.edu/student-handbook/courses-requirements/writing-courses/>))

³ Approval is required.

The degree and major requirements displayed are intended as a guide for students entering in the Fall of 2020 and later. Students should consult with their academic program regarding final certifications and requirements for graduation.