

Name:

ID:

Catalog Year:

For students accepted into the Honors College for Fall 2020 or later, Honors requirements are as follows:

- Maintain an overall university GPA of 3.2 or higher;
- Complete a minimum of 24 Honors credits with a grade of **B** or higher, comprised of:
 - at least 21 credits of coursework¹
 - at least 3 APEX credits, completed under UMD faculty supervision, culminating in a public presentation of this work in an appropriate venue (e.g. Honors Convocation poster session, conference presentation, exhibition, thesis defense).

| Honors Course ^{1,4} | # Credits | Semester Completed ⁴ | Grade Earned |
|---|-----------|---------------------------------|--------------|
| Honors Elective ³ | 3 | | |
| Honors Elective ³ | 3 | | |
| Honors Elective ³ | 3 | | |
| Honors Elective ³ | 3 | | |
| Honors Elective ³ | 3 | | |
| CIS 381H | 3 | | |
| HON 301 or Honors Elective ³ | 3 | | |
| APEX: HON 490² -or- DSC 498H & DSC 499H | 3 or 5 | | |

24

Please Note:

¹ No more than six credits may be completed by Honors Contract (courses numbered 200 or higher).

² HON 490 can be used for either a technical elective or free elective in the major.

³ **Honors Electives:** See course listings in COIN or visit www.umassd.edu/honors/courses/.

* Options vary by semester and are most often chosen from this list (in consultation with your advisor):

* ENL 101H, ENL 102H, ENL 266H

* Honors offerings within University Studies 3A, 3B, 4A, 4B, & 4C

* MTH 153H, MTH 154H

* BIO 121H, BIO 122H, PHY 113H, PHY 114H, PHY 213H

* With prior approval, up to three Graduate level courses (numbered 500+)

⁴ **Credit Progression:**

* Students **must** enroll in at least 3 Honors credits during their first semester in the Honors College.

* Thereafter, it is strongly recommended that students complete *at least* 3 credits per semester, or 6 credits per year, to ensure successful completion of all 24 credits within their degree timeline.

* Students must be aware of the need to plan their Honors studies in advance and they should take full advantage of the academic advising offered by the Honors College.

* It is recommended that students taking HON 301 do so in the Junior year and then begin the APEX by Fall of Senior year.



Data Science Major Curriculum Requirements Catalog Year 2020-21 to present

FRESHMAN YEAR

| First Semester | | | | <u>R</u> <u>L</u> <u>C</u> | | | Second Semester | | | | <u>R</u> <u>L</u> <u>C</u> | | |
|----------------|-----|--|---|----------------------------|---|-----|-----------------|---|---|---|----------------------------|-----------|--|
| ENL | 101 | Critical Writing & Reading I | 3 | 0 | 3 | ENL | 102 | Critical Writing & Reading II | 3 | 0 | 3 | | |
| CIS | 180 | Object-Oriented Programming I | 3 | 2 | 4 | CIS | 181 | Object-Oriented Programming II | 3 | 2 | 4 | | |
| DSC | 101 | Intro to Data Science ¹ | 3 | 0 | 3 | | | University Studies ³ | 3 | 0 | 3 | | |
| MTH | 153 | Calc for Appl Science Engineering I ² | 4 | 0 | 4 | MTH | 154 | Calc for Appl Science Engineering II ² | 4 | 0 | 4 | | |
| | | University Studies ³ | 3 | 0 | 3 | | | | | | | | |
| 17 | | | | | | | | | | | | 14 | |

SOPHOMORE YEAR

| First Semester | | | | <u>R</u> <u>L</u> <u>C</u> | | | Second Semester | | | | <u>R</u> <u>L</u> <u>C</u> | | |
|----------------|-----|-------------------------------------|---|----------------------------|---|-----|-----------------|--------------------------------------|---|---|----------------------------|-----------|--|
| MTH | 181 | Discrete Structures I | 3 | 0 | 3 | MTH | 221 | Linear Algebra | 3 | 0 | 3 | | |
| MTH | 231 | Elementary Statistics I | 3 | 0 | 3 | MTH | 280 | Intro to Scientific Computing | 3 | 0 | 3 | | |
| DSC | 201 | Data Analysis & Visualization | 3 | 0 | 3 | CIS | 280 | Software Specification & Design | 3 | 2 | 4 | | |
| | | Laboratory Science I ^{4,5} | 3 | 3 | 4 | | | Laboratory Science II ^{5,6} | 3 | 3 | 4 | | |
| | | University Studies ³ | 3 | 0 | 3 | | | | | | | | |
| 16 | | | | | | | | | | | | 14 | |

JUNIOR YEAR

| First Semester | | | | <u>R</u> <u>L</u> <u>C</u> | | | Second Semester | | | | <u>R</u> <u>L</u> <u>C</u> | | |
|----------------|-----|---|---|----------------------------|---|-----|-----------------|----------------------------------|---|---|----------------------------|-----------|--|
| CIS | 360 | Algorithms and Data Structures | 3 | 2 | 4 | MTH | 332 | Mathematical Statistics | 3 | 0 | 3 | | |
| CIS | 381 | Social & Ethical Aspects of CS ⁸ | 3 | 0 | 3 | DSC | 301 | Matrix Methods for Data Analysis | 3 | 0 | 3 | | |
| MTH | 331 | Probability | 3 | 0 | 3 | CIS | 490 | Machine Learning ¹⁰ | 3 | 0 | 3 | | |
| ENL | 266 | Technical Communications | 3 | 0 | 3 | | | University Studies ³ | 3 | 0 | 3 | | |
| | | Science Elective ^{5,7} | 3 | 0 | 3 | | | Free Elective | 3 | 0 | 3 | | |
| 16 | | | | | | | | | | | | 15 | |

SENIOR YEAR

| First Semester | | | | <u>R</u> <u>L</u> <u>C</u> | | | Second Semester | | | | <u>R</u> <u>L</u> <u>C</u> | | |
|----------------|-----|---------------------------------|---|----------------------------|---|-----|-----------------|---------------------------------|---|---|----------------------------|-----------|--|
| DSC | 498 | DSC Senior Capstone I | 3 | 0 | 3 | DSC | 499 | DSC Senior Capstone II | 2 | 0 | 2 | | |
| | | Technical Elective ⁹ | 3 | 0 | 3 | | | University Studies ³ | 3 | 0 | 3 | | |
| | | Free Elective | 3 | 0 | 3 | | | Technical Elective ⁹ | 3 | 0 | 3 | | |
| | | Free Elective | 3 | 0 | 3 | | | Technical Elective ⁹ | 3 | 0 | 3 | | |
| CIS 430 or | | Data Mining & Knowledge Disc. | 3 | 0 | 3 | | | Free Elective | 3 | 0 | 2 | | |
| CIS 452 | | Database Systems | | | | | | | | | | | |
| 15 | | | | | | | | | | | | 13 | |

Total Credits = 120 R = Recitation & Lecture (hours) L = Laboratory (hours) C = Number of Credits

¹This course meets the University Studies Cluster 1E requirement.

²MTH 151 and MTH 152 can substitute for MTH 153 and MTH 154, respectively.

³See University Studies requirements for Clusters 3 and 4.

⁴Must be either PHY 113 or CHM 151/161 or BIO 121/131.

⁵Ideally one of these courses should also meet University Studies Cluster 2A.

⁶Must be a continuation of Laboratory Science I (PHY 114 or CHM 152/162 or BIO 122/132).

⁷Any course in BIO, CHM, MAR, MLS, or PHY.

⁸This course meets the University Studies Cluster 2B requirement.

⁹Must be taken from approved list of courses.

¹⁰Juniors who have taken CIS 360 and MTH331 (or equivalent) are encouraged to take Machine Learning in their Junior year.

Note: Any CIS course that is a prerequisite to another CIS course must be passed with a grade of C or better to satisfy the prerequisite. All MTH courses require a C- or better to meet the requirement.