# Spatial Data Science & Technology (SDS)

## Major Requirements

48 credits

The SDS major requires a minimum of 48 credits, drawing on courses in Geography and Computer Information Science. The major requires 4 compulsory courses (16 credits) that will provide foundational skills, concepts, and critical thinking abilities. An additional 8 elective courses (32 credits) are required. Upon declaring the SDST major, students will meet with the Geography Undergraduate Coordinator/Advisor to tailor a series of elective courses best suited to individual student needs and employment aspirations.

* At least 36 credits used for the major must be taken for a letter grade.
* A grade of C- or better AND a GPA of 2.25 or better is required in courses used for the major.
* At least 24 credits must be upper-division (300 or 400-level)

*Email the Undergraduate Advisor, Dr. Leslie McLees, at* [*geogadvr@uoregon.edu*](mailto:geogadvr@uoregon.edu) *with any questions. You can make an advising appointment* at <https://geography.uoregon.edu/undergrad/advising/>. For more information on the program and opportunities, and to see the complete list of courses that fulfill the categories below, visit [*https://geography.uoregon.edu/undergrad/*](https://geography.uoregon.edu/undergrad/).

### Core Courses (16 credits)

*These courses will provide foundational skills, concepts, and critical thinking abilities. Some of the introductory courses, such as GEOG 481, are pre-requisites for more advanced courses. Students are not required to complete these before moving to elective courses (except where pre-requisites are required).*

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| **Course #** | **Title** | **Term** |
| GEOG 181 | Our Digital Earth |  |
| GEOG 281 | The World and Big Data |  |
| GEOG 481 | GIScience I |  |
| CIS 122 | Intro to Programming and Problem solving |  |

### Elective courses (32 credits)

Rather than adopting a series of specializations, the electives component will remain flexible. Students should meet with the Undergraduate Advisor upon declaring the SDST major to work out a series of courses that best fit student needs and employment aspirations. The full list of elective courses can be found on the back of this page and on the SDST website on the Geography website: geography.uoregon.edu/sdst

Professional objective(s) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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|  | **Course #** | | **Title** | | **Term** |
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| **2** |  |  |  |  |  |
| **3** |  |  |  |  |  |
| **4** |  |  |  |  |  |
| **5** |  |  |  |  |  |
| **6** |  |  |  |  |  |
| **7** |  |  |  |  |  |
| **8** |  |  |  |  |  |

### List of elective courses

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| **Course #** |  | **Title** |
| GEOG 403 |  | Research Practicum |
| GEOG 482 |  | GIScience II |
| GEOG 485 |  | Remote Sensing |
| GEOG 486 |  | Remote Sensing II |
| GEOG 490 |  | Special Topics in GIScience\* |
| GEOG 491 |  | Advanced GIS & Python |
| GEOG 493 |  | Advanced Cartography |
| GEOG 494 |  | Spatial Analysis |
| GEOG 495 |  | Geographic Data Analysis |
| GEOG 497 |  | Qualitative Methods |
| GEOG 498 |  | Geospatial Project Design |
| CIS 210 |  | Computer Science I |
| CIS 211 |  | Computer Science II |
| GEOG |  | 300 or 400 level course not listed above\*\* |
| CIS |  | 400 level course not listed above\*\* |
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\* Special Topics includes courses that will be offered less frequently, but will also qualify for credit when offered under the course number GEOG 490. This may include courses such as: Web Mapping, Drones and Mapping, Machine Learning, or Environment and Society Mapping. As long as the title of the course changes, GEOG 490 can be repeated.

\*\* GEOG courses below 481 are NOT automatically counted for this major. In some cases, we may allow them if they are a field you wish to specialize in. In addition, while some CIS electives may count for this major, not all are appropriate. You MUST consult the SDS advisor to see if courses not on this list can count as an SDS elective.

Notes (next steps, gen-ed progress, potential courses and/or schedule, courses needed): \_\_\_\_\_\_\_\_\_\_\_\_

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