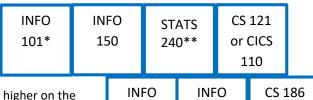# Informatics Degree Requirements Course Planning Form (students entering Spr '21 to Fall '23)

Informatics Core Requirements

All INFO majors must complete the core requirements, regardless of concentration

INFO 101*	INFO 150	STATS 240**	CS 121 or CICS 110
INFO 203 F	INFO 248 S	CS 186 or CICS 160	
CICS 305 **JYW**	CS 326 IE	CS 325	

*INFO 101 may also be satisfied by a score of 4 or higher on the AP CSP exam

**STAT 240 Alternates: CS 240, OIM 240, PSYCH 240, SOCIOL 212 or RES-ECON 212

JYW Alternates: Any major's certified JYW course can be substituted for 305. JYW must be satisfied at UMass Amherst. Double majors with INFO as their secondary major must take the JYW for their primary major.

Choose a Concentration

Data Science Concentration

Pick One from these Three Options:
1. STAT501 Methods of Applied Stats
2. STAT515 Statistics I
3. OIM350: Business Intelligence and Analytics

Also Complete:
CS 345: Practical Applications of Data Management
AND
INFO 348: Predictive Analytics with Python

Health and Life Sciences Concentration

Pick Three from these Four Options:
1. INFO 324 Intro to Clinical Health Informatics
2. BIO 379H: Genomics and Bioinformatics OR BIOL 597GE Evolutionary Genomics & Bioinformatics (Req Bio 152)
3. PUBHLTH 490Z: Statistical Modeling for Health Data Science OR PUBHLTH 460: Telling Stories with Data
4. CS 328: Mobile health sensing and analytics

AND Complete one of the following ethics classes: PHIL 160: Intro to Ethics; PHIL 164: Medical Ethics, CS 508: Ethical Considerations in CS (req CICS 305); PUBHLTH 497: Research Ethics; HISTORY 264 History of HealthCare & Medicine in the U.S.

Electives – Choose 6. *Proposed electives must be approved by the program via* https://tinyurl.com/InfoElective

All electives count for both concentrations; electives well suited to Health and Life Sciences noted with HLS

Elective Options (at least 4 must be taken at UMass Amherst; See advisor for seats in underlined courses.)

BIOL 379H: Genomics and Bioinformatics (HLS)
BIOL 383H: Gene and Genome Analysis (HLS)
BIOL 497D; BIOL 497G (HLS)
BIOL 597GE Evolutionary Genomics & Bioinformatics (HLS)
BIOSTATS 683; BIOSTATS 690T; BIOSTATS 690TO (HLS)
COM 408: Survey of Digital Behavioral Data
COM 540: Internet Governance & Information Policy
COMPSCI 328: Mobile health sensing and analytics (HLS)
COMPSCI 365: Digital Forensics (requires CS 230)
COMPSCI 383: Artificial Intelligence (requires STAT 515)
COMPSCI 490STA: Scalable Web Systems
COMPSCI 508: Ethical Considerations in CS (req CICS 305)
COMPSCI 571: Data Visualization and Exploration
ECON 309: Game Theory
ECON 452: Econometrics

ENGLISH 379, 380, 381, 382: Prof. Writing courses
ENGLISH 391C: Web Design (email instructor to join waiting list)
ENGLISH 491DS: Seminar- Data Science for the Humanities
INFO 324: Intro to Clinical Health Informatics (HLS)
INFO 348: Predictive Analytics with Python
INFO 490C: Intro to social and cultural analytics
MARKET 413: Social Media and Marketing Analytics
MARKET 455: Internet Marketing
MI-ENG 397DH: Fundamentals of Data Visualization
NRC 585: Intro to Geographic Information Systems
OIM 350: Business Intelligence and Analytics
OIM 454: Advanced Business Analytics
PUBHLTH460; PUBHLTH 490KR; PUBHLTH 490Z; PUBHLTH497 (HLS all)
SOC 313: Survey Design and Analysis (HLS)
STAT 501; STAT 515; STAT 516; STAT 525; STAT 526

Additional Requirements:
✦ An overall GPA of 2.0 is required for major courses;
✦ No class counted for the major may be taken pass/fail;
✦ No one course can be used to satisfy multiple INFO major requirements;
✦ Informatics majors must complete a total of 60 science credits;
✦ Informatics majors **may** be CS minors but **may NOT** double major in CS
✦ Two of (INFO 248. CS 345. DS Elective. STATS 240) must be taken at UMass Amherst.