One of the following (Population-specific):  
PSYC 250. Introduction to Abnormal Psychology  
PSYC 335. Abnormal Psychology  
SOWK 386. Youth Empowerment Strategies  
SOWK 387. Working with Teenagers  

Required Capstone Course  
CS 461. Internetworking  

Practicum/Internship (Optional)  
HTH 458. Program Planning and Evaluation  
HTH 389. Practicum/Internship  

19-22

Telecommunications  
Dr. Mohamed Aboutabl, Adviser  
Phone: (540) 568-7589  
E-mail: aboutams@jmu.edu  
Web site: http://www.jmu.edu/cisat/minors/telecomm.html  
The cross disciplinary minor in telecommunications is designed to augment the student’s major program with a package of courses that will prepare the graduate to obtain a position as a telecommunication/network professional and fill a societal need in one of the fastest growing areas of technology. The program is developed as a minor principally for three major programs: computer science, integrated science and technology (for students not in the telecommunications concentration), and computer information systems. However, the program is open to any undergraduate with an interest in telecommunications and some computer background. The telecommunications minor will instill knowledge of: 

- Telecommunication terminologies, standards, policies and procedures. 
- Basics of data transmission, digital signal processes and signaling hierarchies. 
- Architectures, communications protocols and components of LANs, WANs and internetworks. 
- The TCP/IP and ATM protocol suites. 
- Switching, routing and traffic management in internetworked environments. 
- Voice, video and data transmission over IP and ATM. 
- Application development for the Internet. 
- Distributed object systems programming and management. 

Students are encouraged to check prerequisites. At most four courses can be used to satisfy both the telecommunications minor and a student’s major requirements.

Required Courses Credit Hours  
CIS/CS 320. Telecommunications and Information Processing 3  
CS/ISAT 460. TCP/IP Networks 3  
CS 461. Internetworking 3  
Choose one of the following:  
3-4  
CIS 221. Principles of Programming  
CS 139. Algorithm Development  
ISAT 252. Programming and Problem Solving  
Choose one of the following:  
3  
CS/ISAT 464. Telecom in Public Interest  
SMAD 356. Telecommunications Policy and Regulation  
Choose one of the following:  
3  
CS/ISAT 462. Network Applications Development  
CS/ISAT 463. Network Analysis and Design  
CS 458. Cyber Defense  
ISAT 465. Wireless Networking, Security and Forensics 18-19

Urban and Regional Studies  
Dr. Henry Way, Coordinator  
Phone: (540) 568-8186  
E-mail: wayha@jmu.edu  
Web site: http://www.jmu.edu/cisat/minors/urs.html  
The minor in urban and regional studies prepares students for careers or graduate training in government. While satisfying the B.A. or B.S. requirements of their chosen major, students may complement that major with a 24 credit hour minor in urban and regional studies drawn from the following courses.

Required Courses Credit Hours  
ECON 475. Regional Economics 3  
GEOG 376. Urban Geography 3  
POSC 360. Urban Politics 3  
SOCI 265. Sociology of the Community 3  
Choose from the following: 1  
12  
ECON 326. Public Finance  
ECON 340. Economics of Natural Resources  
FIN 210. Principles of Real Estate  
GEOG 315. Field Studies  
GEOG/GEOI 310A-D. Environmental Impact (2-3 credits)  
GEOG 340. Soil and Land Use  
POSC 302. State and Local Government  
POSC 495. Internship in Political Science (4 credits)  
SDS 352. Birth, Death, Sex: Exploring Demography  
SDS 361. Bureaucracy and Society

1 Must be in a discipline other than the student’s major.

Women’s and Gender Studies  
Dr. Jessica Davidson, Co-coordinator  
Phone: (540) 568-2697  
E-mail: davidsjb@jmu.edu  
Dr. Mary Thompson, Co-coordinator  
Phone: (540) 568-3758  
E-mail: thompsonm@jmu.edu  
Web site: http://www.jmu.edu/womenstudies/  
The women’s studies minor is an 18 credit hour cross disciplinary program that explores the scholarship related to gender and equity issues affecting women. This minor includes one required course, WMST 200. The remainder of the program incorporates many academic fields.

Required Course Credit Hours  
WMST 200. Introduction to Women’s and Gender Studies 3  
Choose five of the following: 15  
ANTH 370. Topics in the Anthropology of Gender  
ENG 327. The Gothic  
ENG/WMST 368. Women’s Literature  
ENG 369. Feminist Literary Theory  
ENG/WMST 370. Queer Literature  
ENG/WMST 466. Studies in Women’s Literature  
HIST 320. Women in United States History  
HIST 321. European Women’s History  
HIST 327. Technology in America 1  
HIST 448. Gender in Colonial Latin America  
HIST 449. Women and Fascism  
HIST 466. The Family, 1400-1800  
ISAT/WMST 485. Gender Issues in Science  
JUST/WMST 341. Gender and Justice  
PHIL/WMST 350. The Philosophy of Feminism  
PSYC 310. The Psychology of Women and Gender  
REL 315. Women and Religion  
SCOM/WMST 348. Communication and Gender  
SDS 337. Sociology of Gender  
SDS 339. Sociology of Women

http://www.jmu.edu/catalog/11