RIT CROATIA PROGRAM OUTLINE

PROGRAM TITLE: INFORMATION TECHNOLOGY

TYPE OF PROGRAM: Undergraduate professional program

DURATION OF PROGRAM: 4 years / 8 semesters

TOTAL NUMBER OF ECTS: 240

SCIENTIFIC AREA: Technical Sciences

SCIENTIFIC FIELD: Computing
1. **ENROLLMENT CRITERIA**

Admission requirements: Upon completion of a high-school program students are admitted on the basis of results from the State Matura exams (state high-school exit exam) or results from the entrance exam for the undergraduate program.

Application process:

1. Candidates may apply to RIT Croatia using the Central Application System ("Postani student") and taking the State Matura Exams (state high-school exit exam):
   - Mathematics: B level
   - English language: B level

2. Candidates may apply to RIT Croatia through the entrance exam admission process consisting of written exams in Mathematics and English language. The entrance exam admission process is intended for the following candidates:
   - Candidates who have completed high school education prior to AY 2009/2010
   - Candidates who have completed vocational or art school programs, obtaining a basic or secondary professional high-school degree through in-school final assessments (completion of a final assignment)
   - Candidates who have completed their secondary education outside Croatia, not applying through the Central Application System.

2. **CRITERIA FOR ENROLLMENT IN THE NEXT SEMESTER/YEAR LEVEL**

A student must maintain a cumulative GPA of 2.00 or above at RIT Croatia in order to remain in good academic standing. Any student whose Term Grade Point Average falls below 2.00 (and is above 1.00) or whose overall Cumulative Grade Point Average falls below 2.00 will be placed on probation (i.e. is eligible to enroll in classes, though specific conditions of enrollment or restrictions will be applied).

Any student whose overall Cumulative Grade Point Average falls below 2.00 will be placed on academic warning.

Suspension refers to the academic action taken when a student is not permitted to enroll in courses at the university for a determined period of time.

a. Any degree-seeking undergraduate student whose Term Grade Point Average falls below a 2.00 (C average) and for whom suspension is not applicable will be placed on probation.
b. Any student who is on probation and who is not removed from probation in the two succeeding terms (including summer session) in which credit is attempted will be suspended from RIT Croatia for a period of one calendar year.

c. Any student whose Term Grade Point Average falls below 1.00 will be suspended from RIT Croatia. Students will be able to return the following academic year, in the same term they were suspended.

d. A suspended student cannot enroll in any credit or non-credit course at the university while on suspension. This also includes co-ops.

e. A suspended student may not be admitted to another program while suspended.

f. In special circumstances, a suspended student may apply in writing to the Associate Dean for Academic Affairs for a suspension waiver. This waiver request will be evaluated by the Associate Dean and the academic advisers before submission of the request to the Dean. This waiver must be approved by the Dean of the College.

The waiver carries specific responsibilities on the student’s part. These may include registering in specific courses, achieving a semester GPA of at least 2.5, not withdrawing from any courses in which we will ask the student to enroll, taking a maximum term load of 12 credits, attending bi-weekly meetings with his or her faculty adviser. These responsibilities are stated in a contract the student will be required to sign. Should the student fail to abide by the conditions of the contract, or should the academic performance warrant suspension again, he or she would then be suspended with no opportunity to appeal.

3. TRANSFER PROCEDURE

Credit transfer procedure and transfer procedures generally speaking are defined by The Rulebook on Admission Requirements and Transfer Procedures from other HE institutions to RIT Croatia.

4. GRADUATION REQUIREMENT

IT Graduation requirements

All of the following are required for graduation from a student’s program:

- A Cumulative Grade Point Average (GPA) of 2.00
- Satisfactory completion of the capstone course
- Completion of 126 credits for the B.S. degree (240 ECTS for the Croatian four-year degree)
- Satisfactory completion and grade for the required co-ops in duration of 800 working hours
- A completed Application for Graduation returned to Student Services
- A completed “Statistički list” form returned to Student Services
- No outstanding library dues
- Full payment or satisfactory adjustment of all financial obligations

**Graduation with Honors**

Honors posted to the academic record will be based upon the student’s Cumulative Grade Point Average upon completion of the degree requirements. The numerical criteria for graduation with honors are as follows:

- **Summa cum laude** – 3.80 Cumulative GPA
- **Magna cum laude** – 3.60 Cumulative GPA
- **Cum laude** – 3.40 Cumulative GPA

**5. DEGREES UPON COMPLETION OF THE STUDIES**

RIT Croatia is the only educational institution in Croatia granting two degrees: an American degree from RIT and a Croatian degree from RIT Croatia.

Upon successful completion of the four-year program in Information Technology students receive a Bachelor of Science (B.S.) degree in Information Technology from RIT. Studies at RIT Croatia are also accredited by the Croatian Ministry of Science, Education and Sports and meet the requirements of the Bologna Agreement. As a result, all students completing the four-year IT program will receive the degree title of stručni prvostupnik/prvostupnica (baccalaureus/ baccalaurea) inženjer/inženjerka informacijskih tehnologija.

In order to receive a Croatian degree from RIT Croatia students must have either a high school diploma issued by a Croatian high school or a high school diploma recognized by the Ministry of Science, Education and Sports of the Republic of Croatia.
6. PROGRAM OUTCOMES

IST grads thrive in what has been dubbed the Information Age – an age where technology impacts every part of our lives and rapidly expanding amounts of information are transferred at ever-increasing speeds. However, IST grads do more than simply thrive in this new age; they drive it.

We’re constantly thinking about the next social media platforms, electronic medical systems, ePublishing platforms, impactful apps and so much more.

The one bond that all of these technologies share is access to information. How do we store it, manipulate it, move it, transform it, or display it? How do we make it work for us?

And it’s not just how we deliver information today—it’s how we will deliver information tomorrow. The IST degrees all include foundational skills that prepare you for long-term success, by giving you experience with state-of-the-art technologies that will have employers seeking you out, and the support to make a difference.

Information is all around us and IST graduates are involved in every aspect of it. Name a tech buzzword and you’ll find our graduates involved in it: cloud computing, virtualization, big data, NoSQL, geospatial technologies.

But - and this is important - while IST graduates enjoy working with technology, they see it as a means to an end. Our graduates are about leveraging technology to deliver more information to more people in more ways. It’s not just the technology—it’s the combination of technology, information, and people.

The Five Pillars of IT

In order to “make things work” for people in today’s (and tomorrow’s) sophisticated computing environments, IT Professionals need core competencies in five essential areas:

- Programming and application development
- Web and mobile development
- Database management systems and applications
- Networking and system administration
- User-centered design and deployment, and human-computer interaction.

The fifth pillar focuses on the human element. This is the defining competency of the IT professional; what distinguishes us from, for example, a computer scientist. To be successful users’ advocates, we must see the world through their eyes. We must “be one” with our
users, and learn about the tasks they perform and the skills they possess. From this, we can then select, integrate and deploy technology that enhances their lives. This requires skills in information gathering, user-centered design, and deployment. It also attracts the student who cares more about how people use computers than about how computers work under the hood. Creativity, technology, and communication skills—these are the core competencies of IT.

Many students in our BS in IT program focus on one or two technical aspects that prepare them for careers in a variety of market niches like enterprise systems, web applications, or database management to name a very few of the many possibilities. Other students choose a broader path to prepare for “general practitioner” or “Jack of all trades” jobs that are prevalent in virtually every enterprise and organization. In short, the IT program at RIT offers the opportunity to specialize, but does not require that you do so. Whatever you want IT to be, IT will be.

Program Goals

- Graduates of the BS/IT program will be employable as IT professionals, able to secure positions primarily in (but not limited to) business and industry.
- Graduates of the BS/IT program will have appropriate foundational skills so that they may be lifelong learners in the IT field.
- Graduates of the BS/IT program will be prepared to work as team members and to rise to positions of leadership as necessary.
- Graduates of the BS/IT program will be prepared for further academic study and will be able to make contributions to the growing discipline of Information Technology.
### YEAR 1

#### FALL 1

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**YEAR 4**

**FALL 4**

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Critical Reading and Writing

Course Description, Course Objectives and Learning Outcomes

This course is designed to help students improve their critical thinking, reading, and writing skills. Through oral and written presentations, lectures and discussion students will analyze, interpret and evaluate materials from various disciplines. They will discover different methods used by authors in their process of writing. By exploring different genres students learn how writers employ the basic features and strategies of a genre to reflect different rhetorical purposes. Through writing assignments students will develop strategies for creative writing, generating ideas, and revising.

Through Peer Response Groups students will learn to critique their own and others’ works in order to become a more independent and competent reader and writer. They will practice appropriate means of documenting their work.

Students will master syntax, grammar, punctuation, and spelling feature in an applied way: they will have to immediately apply various structures in conversation or written/oral exercises.

The instructor will also organize at least once in a semester writing labs, where students will be correcting each other thus learning from each other’s mistakes.

Grading

The following categories will determine your grade:

- Paper #1 - Remembering an Event 20 points
- Paper #2 - Writing a Profile 20 points
- Paper #3 - Explaining a Concept 20 points
- Paper #4 - Finding Common Ground 20 points
- Peer Response Groups 10 points
- Class Absences and Class Participation 10 points
- TOTAL 100 points

Class format: Class hours 3 Lab hours 0

Course materials and textbooks:


Course Description:
This course in an introduction to the topics of discrete mathematics, including number systems, sets and logic, relations, combinatorial methods, graph theory, regular sets, vectors, and matrices

Goals of the Course:
- To provide students with knowledge of the mathematical concepts needed for understanding and analyzing programming.
- To discuss the many applications of mathematics to computer science and computer information systems.
- To stress the applications of theorem results in Information Technology

Learning outcomes and associated assessment methods of those outcomes
- Students will learn the mathematical concepts needed to understand and analyze programs:
  - Use notation of set theory and logic and elementary proof techniques, write proof by induction
  - Use language of set theory to analyze relations, functions, graphs, and inverse functions
  - Use Boolean algebra to analyze disjunctive and conjunctive normal forms and Karnaugh maps
  - Use binary, octal and hexadecimal number representations
- Students will learn about applications of mathematics to computer science and computer information systems.
- Students will understand the applications of theorem results in Information Technology.

Program or general education goals supported by this course
- to develop students’ understanding of the mathematical framework that supports engineering, science, and applied mathematics
- to develop a capacity for critical and analytical thinking.
- to develop an appropriate level of mathematical literacy and competency.

Grading

<table>
<thead>
<tr>
<th>Test</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Test</td>
<td>15</td>
</tr>
<tr>
<td>Second Test</td>
<td>15</td>
</tr>
<tr>
<td>Midterm</td>
<td>30</td>
</tr>
<tr>
<td>Final Test</td>
<td>35</td>
</tr>
<tr>
<td>Attendance</td>
<td>5</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>
The A-F letter grade is computed according to the standard 100% system:
A = 91-100;   B = 80-89;   C = 70-79;   D = 60-69;   F = 0-59.

Class format: Class hours  4  Lab hours 0

Course materials and textbooks:

**Course Description**

This is the first course in the introductory programming sequence required for all Information Technology students. Topics include elementary data types, arithmetic and logical operations, control structures and error handling, methods, inheritance, reusability, input/output and an object-oriented programming design and implementation. Emphasis is placed on the development of problem-solving skills. Moderately large programming assignments are required.

**Course Objectives**

**General:** This course will provide students with the foundational skills necessary to do object-oriented programming. Emphasis is placed on program design methodologies and problem solving using commonly available development tools.

**Specific:** Upon course completion, a student should be able to implement moderately large programming projects and should:

- Demonstrate the ability to configure a computer to create, compile, and run programs.
- Demonstrate the ability to write statements using different data types and operators that perform necessary operations based on the program’s requirements.
- Be able to analyze errors that occur when programs run and make changes based on this feedback.
- Be able to use sequence, selection and loop statements to control the execution of a program.
- Demonstrate the ability to create methods with or without return values that perform various operations, and invoke them.
- Be able to use utility Application Programmer Interface (API) classes such as Math and String, and use their methods to solve various problems.
- Demonstrate the ability to create a class by defining both attributes that describe the state of the class and methods that enforce Object Oriented Programming (OOP) encapsulation principles.
- Be able to define arrays, and determine to create and use arrays.
- Demonstrate the ability to work with multiple classes and multiple instantiations of a class.
- Write object-oriented programs with multiple class files and create objects used between class files.
- Write event-driven programs using distinct listener class file objects and/or same class file listener objects.
- Write object-oriented programs using class inheritance
- Write interface and abstract class files and use them in object-oriented programs
- Write object-oriented programs to read and write data using the java.io package
- Write classes with catch and throw exception class objects
- Write programs that pass and receive objects via an object methods

### Grading

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homework Assignments</td>
<td>20%</td>
</tr>
<tr>
<td>Labs</td>
<td>10%</td>
</tr>
<tr>
<td>Exams, which consists of:</td>
<td>5% 10% 15% 10% 15% 15% 10%</td>
</tr>
<tr>
<td>Practical 1</td>
<td>5%</td>
</tr>
<tr>
<td>Practical 2</td>
<td>10%</td>
</tr>
<tr>
<td>Practical 3</td>
<td>15%</td>
</tr>
<tr>
<td>Practical 4</td>
<td>15%</td>
</tr>
<tr>
<td>Comprehensive</td>
<td>15%</td>
</tr>
<tr>
<td>Daily Quizzes</td>
<td>10%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

**Class format:** Class hours 4  Lab hours 0

**Course materials and textbooks**

Foundations of Modern Information Processing

Course description

Computer-based information processing is a foundation of contemporary society. This course provides an overview of modern information processing technologies, applications, practices and trends. An emphasis is placed on how these technologies shape information environments and how participants in these environments are able to access, process, and use data and information. Computing at scale is a pervasive course theme. Topics include computing system fundamentals, models for organizing data and information, data exploration and knowledge discovery, Internet and the Web, social computing, information security and privacy, and current trends and futures.

Grading

Exam 1 15 points
Exam 2 15 points
Final Exam 20 points
Mobile apps presentations 15 points
Envisioning scenarios 20 points
Big data presentations 15 points
TOTAL 100 points

Class format: Class hours 3  Lab hours 0

Course materials and textbooks: None
Critical Thinking

Course Description
An introduction to philosophical analysis, especially as it may be applied in contexts other than professional philosophy, but also including normative issues such as ethics and aesthetics.

Course objectives
- To sharpen critical thinking skills by examining standards of good reasoning.
- To provide an introduction to formal and informal methods of argument evaluation.
- To develop the ability to reconstruct arguments.
- To learn specialized techniques of analysis and evaluation suitable for specific topics, including normative issues such as ethics and aesthetics.
- To improve students’ ability to construct strong arguments on a variety of topics, including normative issues such as ethics and aesthetics.
- To show the connection between argument analysis and issues of a general philosophical nature.

Learning outcomes
Upon completion of this course, the student will be able to:

- Recognize, analyze, and evaluate arguments with both descriptive and normative (ethical) content.
- Recognize and avoid common logical fallacies.
- Construct cogent arguments on specific topics.

Program or general education goals supported by this course:

- Develop critical skills characteristic of philosophic analysis, including the ability to assess, critically yet fairly, arguments from multiple perspectives.
- Analyze value-oriented issues and questions.
- Express themselves effectively in common college-level written forms using standard American English.
- Revise and improve written and visual content.
- Express themselves effectively in presentations, either in spoken standard American English or sign language (American Sign Language or English-based Signing).
- Comprehend information accessed through reading and discussion.
- Review, assess, and draw conclusions about hypotheses and theories.
- Analyze arguments, in relation to their premises, assumptions, contexts, and conclusions.
- Construct logical and reasonable arguments that include anticipation of counter-arguments.
- Use relevant evidence gathered through accepted scholarly methods and properly acknowledge sources of information
- Analyze similarities and differences in human experiences and consequent perspectives
- Examine connections among the world’s populations
- Identify contemporary ethical questions and relevant stakeholder positions
- Explain basic principles and concepts of one of the natural sciences
- Apply methods of scientific inquiry and problem solving to contemporary issues
- Comprehend and evaluate mathematical and statistical information
- Perform college-level mathematical operations on quantitative data
- Describe the potential and the limitations of technology
- Use appropriate technology to achieve desired outcomes
- Demonstrate creative/innovative approaches to course-based assignments or projects
- Interpret and evaluate artistic expression considering the cultural context in which it was created

Grading

Three in class analytical essays 3 x 10 = 30 pts
Exercises (mostly in-class) 5 x 4 = 20 pts
Discussion papers 5 x 2 = 10 pts
Two Quizzes 2 x 15 = 30 pts
Class participation 10 pts
TOTAL 100 points

Class format: Class hours 3  Lab hours 0

Course materials and textbooks: Materials for each class will be posted on My Courses (under Content). The following are sample texts, from which excerpts might be assigned:

- Bickenbach and Davies, Good Reasons for Better Arguments (Broadview).
- Fogelin and Sinnott-Armstrong, Understanding Arguments (Harcourt).
- Thomas McKay, Reasons, Explanations, and Decisions (Wadsworth)
- Kahane and Cavender, Logic and Contemporary Rhetoric (Wadsworth).
- Munson, Conway, and Black, The Elements of Reasoning, (Wadsworth).
- Hugh Curtler, Ethical Argument: Critical Thinking in Ethics (Oxford)
- Chafee, Thinking Critically (Wadsworth)

Articles by various philosophers (see Class schedule)
(1) Additional online sources:
Stanford Encyclopedia of Philosophy
The Perseus Project

Classical Texts on the Internet (= www.classics.mit.edu)
http://www.rit.edu/cla/philosophy/ExternalLinks.html
RIT Databases (especially JStor)
YEAR ONE

Course description
YearOne Seminar is a course for first-year students designed to provide an introduction to college life and to support you as you adjust to your life at RIT Croatia. YearOne meets once per week for 12 weeks during the Fall semester. It includes lecturing, classroom discussions, and many guest speakers from the Zagreb, Dubrovnik, and Rochester campuses and will introduce you to many RIT resources.

Goals of the course:
- Vital resources: Introduce you to vital resources and services within the RIT community in order to navigate your way around in college life and to make most of your college experience.
- Academic preparedness: Familiarize with college level academic expectations and resources to assist you in being academically successful.
- Inclusiveness: We address the issue of inclusiveness: Respecting and appreciating the complex and diverse perspectives within the RIT community. Increase your sense of belonging by providing opportunities for you to connect to one another and to the greater RIT community.
- Self-discovery: Explore and articulate your individual aspirations and values.
- Increase your awareness of your decision-making, of your daily choices, and resources that may help you.
- Engagement: You are expected to participate in campus events to integrate into the campus community (e.g. in Community Service Day, but also in party events like Fall BBQ or Holiday Auction).

Grading
Email assignment 10 points
Career Exploration Assignment 15 points
Interview Assignment 15 points
Quiz and Student Handbook 25 points
End-of-Course In-Class Writing Assignment 15 points
Attendance 12 points
Class participation 8 points
TOTAL 100 points

Class format: Class hours 3 Lab hours 0

Course materials and textbooks: NO
Foundations of Sociology

Course Description
An introduction to the way sociologists interpret social reality, including the elementary terms, foundational ideas, major insights, and research discoveries in the discipline. Included are topics such as statuses and roles, socialization, cultural variation, deviance, social stratification, social institutions, and social change. Fulfills a liberal arts core social/behavioral science requirement. Counts as a prerequisite for the sociology/anthropology concentration and minor, the international studies and urban communities studies majors, and as a prerequisite for the required cultures in globalization.

Course Objectives
This course will introduce the student to the basic concepts in sociology, and to fundamental sociological approaches and methods. Sociology is interested in understanding social stability and social change. Social change, with all its conflicts and problems, has been the driving force in sociology. The course will examine the topic of social inequality, giving special attention to social stratification, racial-ethnic relations, and gender relations. It will cover the major institutions of society – family, the educational, religious, the political systems, the economy, and health care and medicine. We will explore the theme of social change through examination of collective behavior.

Learning Outcomes
Upon completion of this course, the student will be able to:

- Describe fundamental sociological perspectives such as functional theory, conflict theory and symbolic interactionism and the feminist perspective;
- Compare micro-level analysis and state which level of analysis is utilized by each of the major theoretical perspectives;
- Identify debate issues and examine these issues in written debate notes;
- Organize and conduct small group debates;
- Select sociological themes or concepts and demonstrate these themes by employing research methods in your fields of interest;
- Discuss, write and critically analyze one cultural event attended during the quarter in a reaction paper.

Grading
Two quizzes (2 x 25)  50 pts
Project Assignment  20 pts
Discussion papers (5 x 4)  20 pts
Class participation  10 pts
**TOTAL**  100 points
Class format: Class hours 3  Lab hours 0

Course materials and textbooks:


Materials for each class will be posted on My Courses (under Content) a week in advance.

Additional readings:

- Cuntz, Stephanie: The way we really are, Basic Books, 1998.
- Bloom, A. The Closing of the American Mind, Simon and Shuster, 1987
- Handout materials (K. Boehnke, D. Bergs-Winkels, J. Tanner, R. Cockeril, F. Nietzsche,
- RIT Research Databases

Documentary and feature films (video Presentations)
Course Description
This class provides an introduction to key Internet, web, and multimedia technologies, as well as familiarity with the Macintosh computer platform. Topics covered include computer-mediated communication, basic Internet applications such as telnet, FTP, and the WWW, basic digital image techniques, and web page development and publishing.

Course Objectives
General Course Goals
This course provides a basic introduction to Internet technologies and web development. The Internet technology topics (UNIX, FTP, Telnet, email, protocols, etc.) provide a foundation for a variety of IT core courses. The web development and imaging topics provide an introduction to the multimedia and web development topic area within the department, and are a prerequisite for concentration-level courses in the computer-mediated experience area of the curriculum.

Specific Objectives
By the end of the quarter, students will have a working knowledge of:

- Key figures and events in the development of the Internet and the World Wide Web
- How to use Internet search engines to search for and retrieve information relevant to assignments and projects
- Internet protocols and tools, including SSH, SFTP, electronic mail, and conferencing
- How to perform basic file and directory management tasks in Unix environments
- The components of digital images, sound, and video, including file formats, resolution, color models, and compression methods
- How to use imaging programs (e.g., Photoshop) to create graphic elements for web pages, including logos and composite images
- How to create web pages using valid HTML and CSS
- How to identify and implement basic principles of graphic design, including contrast, alignment, proximity, repetition, and effective use of color and type
- How to use server technologies (e.g., Server-side Includes) for cross-browser issues
- Utilize the Macintosh operating environment and applications for web development tasks.
By the end of the quarter, students will be able to:

- Build a multi-page web site, including graphics and media
- Apply appropriate design principles to the design of a site
- Create or modify graphics for inclusion in a web site
- Mount their website on a designated server
- Work with a Macintosh operating environment comfortably

**Grading:**

- Web Project 1: 10 points
- Web Project 2: 15 points
- Web Project 3: 20 points
- Attendance, Participation, Homework: 15 points
- Midterm Exam: 10 points
- Midterm Practical: 10 points
- Final Exam: 10 points
- Final Practical: 10 points + Pass/Fail
- **TOTAL: 100 points

**Class format:** Class hours 3 Lab hours 0

**Course materials and textbooks:**

The following text is optional, but suggested for reference:


Watch the online video courses at linda.com provided by RIT Library: [http://library.rit.edu](http://library.rit.edu)

Below are some important links that you will use frequently throughout the quarter:

- HTML Validator: [http://validator.w3.org/](http://validator.w3.org/)
- CSS Validator: [http://jigsaw.w3.org/css-validator/](http://jigsaw.w3.org/css-validator/)
- Web Development Tutorials: [http://www.w3schools.com](http://www.w3schools.com)
Ethics in Computing

Course Description

This course introduces students to some of the major ethical problems, methods and insights in relation to computing and computer-based problems. We will deal with controversies and alternative points of view: privacy vs. access to information, privacy vs. law enforcement, freedom of speech vs. control of content on the Net, pros and cons of technological enhancements of humans and so on. Our discussions in class will include political, economic, social, and philosophical issues. The main purpose of class discussions is exploring the arguments on all sides and to be able to explain why someone rejects what one rejects before taking a position. This will enable students to figure out the consequences of various proposals, generate arguments for each side, and evaluate them. Thinking in principles, rather than case by case, or at least to recognize similar principles in different cases, even if they choose to take different positions on them, is strongly encouraged and recommended.

The course aims to provide an introduction to analytical and creative thinking in general rather than a survey of ethics, its methods, doctrines and leading ideas. Instead of trying to give an all-embracing account of all possible forms ethical problems in connection with computing we shall focus on several characteristic examples illustrating how some crucial problems can be formulated and how to grapple with the issues in contrast to ordinary, religious and scientific consciousness.

In addition, the course will provide a preliminary orientation about the notion of philosophical argument, its various forms and the ways arguments should be analyzed.

Course Objectives

The main objectives of this course are:

- to become skillful in understanding the core problems, to be able to distinguish between essential and apparent issues, to differentiate between what is important and what just seems important in regard to ethical issues connected with computer technology;

- to become familiar with major ethical issues and the methods of handling them;

- to be able to adopt "argumentative attitude" as an elevated form of human curiosity and resistance to any kind of dogmatism.

Ethics as a branch of philosophy is to be studied not for the sake of any definite answers to its questions, but rather for the sake of the questions themselves; because these questions enlarge our conception of what is possible, enrich our intellectual imagination and diminish the dogmatic assurance which closes the mind against speculation.
Grading

Research project and presentation 35 pts.
3 Quizzes, each 5 pts. 15 pts.
3 Discussion papers 10 pts.
Class participation 30 pts.
Class activity 10 pts
Total: 100 pts.

Class format: Class hours 3 Lab hours 0

Course materials and textbooks:

The collection of reading materials available on line in My courses – all registered students should have access to the texts;
Additional online sources:
  1. Stanford Encyclopedia of Philosophy
  2. RIT Databases Films
Course Description

This is the second course in the introductory programming sequence required for all students majoring in Information Technology. Topics include GUI interface development, file I/O, traditional programming data structures, programming utilities and reusability, introductory project design and management concepts and other concepts as time permits. Emphasis is placed on the development of problem-solving skills. Large programming assignments are required.

Course objectives

General: The purpose of this course is to provide students with an introduction to the advanced concepts and skills needed to support the programming requirements of upstream courses in the IST curriculum. Specifically, this course is intended to encourage students to continue to develop their problem solving skills, to begin building a “logical toolkit” of algorithms and data structures, and to understand the benefits of reusability. Students should also grasp the basics of program analysis, design and project management skills. Contribution to Measurable Program Outcome(s):

- Program effectively within the student’s specialty area
- Apply a development life cycle to a problem
- Design and develop a software prototype
- Participate effectively as a team member and/or leader
- Practice user-centered design, development, and deployment
- Make effective oral presentations

Specific: At the end of this course, a student should be able to implement moderately large programming projects both individually and in a team. Specifically, a student should:

- Demonstrate the ability to create graphical user interfaces based on a problem description.
- Demonstrate the creation and use of reusable objects.
- Demonstrate the use of the language-supplied data structure classes within a program.
- Be able to create, read and write character-based files, showing knowledge of the way data is represented.
Be able to create, read and write byte-based files, showing knowledge of the way data is represented.

Determine when it is appropriate to use threads and demonstrate how to create a multi-threaded program.

Demonstrate how to communicate between two machines using the network programming classes.

Be able to design and implement a fairly large project as part of a team.

**Grading**  The grading scale used along with the grading criteria is as follows:

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homework</td>
<td>25%</td>
</tr>
<tr>
<td>Lab work</td>
<td>10%</td>
</tr>
<tr>
<td>In-Class Practical #1</td>
<td>10%</td>
</tr>
<tr>
<td>In-Class Practical #2</td>
<td>15%</td>
</tr>
<tr>
<td>Mini-Project **</td>
<td>10%</td>
</tr>
<tr>
<td>Project *</td>
<td>30%</td>
</tr>
</tbody>
</table>

**Class format:**  Class hours  4  Lab hours 0

**Course materials and textbooks:**

Course Description
A course stressing applications of calculus concepts to solving problems in business and Allied Health. Topics include the limit concept, differentiation, partial differentiation, and integration.

Goals of the Course
To have students learn the basic definitions, concepts, rules, vocabulary, and mathematical notation of calculus.
To provide students with the necessary manipulative skills required for solving problems in calculus.
To provide an opportunity for students to obtain a background in mathematics necessary to a study of business, economics and medical sciences.

Intended learning outcomes and associated assessment methods of those outcomes
- Define concepts of calculus.
- Solve calculus problems.
- Apply calculus to problems in business, economics and the medical sciences.

Program or general education goals supported by this course
- To develop students’ understanding of the mathematical framework in which engineering, science, and mathematics program function.
- To acquaint students with mathematical notation and understanding of physical and natural laws.
- To develop a capacity for critical and analytical thinking.
- To develop an appropriate level of mathematical literacy and competency.

Grading
First Test       30 points
Midterm        30 points
Final test        30 points
Attendance    10 points
TOTAL       100 points

The A-F letter grade is computed according to the standard 100% system:
A = 90-100; B = 80-89; C = 70-79; D = 60-69; F = 0-59.

Class format: Class hours  2  Lab hours 2

Course materials and textbooks:
- Tan, Applied Calculus For the Managerial, Life, and Social Sciences, Brooks/Cole,
YEAR 2

Data base and data modelling

Course Description

A presentation of the fundamental concepts and theories used in organizing and structuring data. Coverage includes the data modeling process, basic relational model, normalization theory, relational algebra, and mapping a data model into a database schema. Structured Query Language is used to illustrate the translation of a data model to physical data organization. Modeling and programming assignments will be required.

Course objectives

General: Provide students with the foundation skill set required to organize and to structure data for subsequent computer processing. The skill set includes the ability to interpret Entity-Relationship data models, to translate an Entity-Relationship data model into a theoretical data model, to apply normalization theory.

Grading

Your final grade will be based on the work you submit, your demonstration of knowledge on exams, and your participation in the course.

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homework</td>
<td>40% (equal weighting)</td>
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<tr>
<td>Midterm Exam</td>
<td>15%</td>
</tr>
<tr>
<td>Midterm Practical</td>
<td>15%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>15%</td>
</tr>
<tr>
<td>Final Practical</td>
<td>15%</td>
</tr>
<tr>
<td>Practice Exercises</td>
<td>5%</td>
</tr>
</tbody>
</table>

Your final letter grade will be assigned in accordance with RIT Croatia standards for the revised grading system:

- A \( \geq 93 \)
- A- \( \geq 90 \) and \(< 93 \)
- B+ \( \geq 87 \) and \(< 90 \)
- B \( \geq 83 \) and \(< 87 \)
- B- \( \geq 80 \) and \(< 83 \)
- C+ \( \geq 77 \) and \(< 80 \)
- C \( \geq 73 \) and \(< 77 \)
- C- \( \geq 70 \) and \(< 73 \)
- D \( \geq 60 \) and \(< 70 \)
- F \(< 60 \)
Class format: Class hours 3 Lab hours 0

Course materials and textbooks:

There are no required textbooks for the course.

If you feel that a textbook would be a helpful resource for you, the following texts are suggestions for this course:

Course Description

This course builds on the basics of web page development that are presented in Web I and extends that knowledge to focus on theories, issues, and technologies related to the design and development of web sites. An overview of web design concepts, including usability, accessibility, information architecture, and graphic design in the context of the web will be covered. Introduction to web site technologies, including HTTP, web client and server programming, and dynamic page generation from a database also will be explored. Development exercises are required. (Prerequisite: ISTE-120 & ISTE-140, Co-requisite: ISTE-260).

Learning outcomes

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Assessment Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>At the end of the course, the student will be able to:</td>
<td></td>
</tr>
<tr>
<td>Student will demonstrate proficiency in web site design, planning and documentation as part of a team.</td>
<td>Team written design document.</td>
</tr>
<tr>
<td>Students will use information design, graphics, and markup languages to create medium scale web sites.</td>
<td>In-class exercises, individual and group projects, and practical exams.</td>
</tr>
<tr>
<td>Students will use client side programming such as JavaScript and the document object model to create dynamic and interactive web pages.</td>
<td>In-class exercises, individual and group projects, and practical exams.</td>
</tr>
<tr>
<td>Students will use server side programming and databases to improve site performance, modularization, and separation of logic from data.</td>
<td>In-class exercises, individual and group projects, and practical exams.</td>
</tr>
<tr>
<td>Students will use the HTTP protocol to properly submit, validate and process user input data</td>
<td>Assessed through in-class exercises, practical exams, and projects.</td>
</tr>
</tbody>
</table>
Grading

<table>
<thead>
<tr>
<th>Grade item</th>
<th>Percent of overall grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attendance</td>
<td>10%</td>
</tr>
<tr>
<td>Homework/In Class Exercises</td>
<td>15%</td>
</tr>
<tr>
<td>Individual Projects (midterm and final version)</td>
<td>30%</td>
</tr>
<tr>
<td>Group Projects</td>
<td>30%</td>
</tr>
<tr>
<td>Final Practical Exam</td>
<td>15%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

Letter grades correspond to the following percentages and Grade Points:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Quality Points Earned</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>4.000 Grade Points</td>
<td>94.00—100.00</td>
</tr>
<tr>
<td>A-</td>
<td>3.667 Grade Points</td>
<td>90.00—93.99</td>
</tr>
<tr>
<td>B+</td>
<td>3.333 Grade Points</td>
<td>87.00—89.99</td>
</tr>
<tr>
<td>B</td>
<td>3.000 Grade Points</td>
<td>83.00—86.99</td>
</tr>
<tr>
<td>B-</td>
<td>2.667 Grade Points</td>
<td>80.00—82.99</td>
</tr>
<tr>
<td>C+</td>
<td>2.333 Grade Points</td>
<td>77.00—79.99</td>
</tr>
<tr>
<td>C</td>
<td>2.000 Grade Points</td>
<td>73.00—76.99</td>
</tr>
<tr>
<td>C-</td>
<td>1.667 Grade Points</td>
<td>70.00—72.99</td>
</tr>
<tr>
<td>D</td>
<td>1.000 Grade Points</td>
<td>60.00—69.99</td>
</tr>
<tr>
<td>F</td>
<td>0.0 Grade Points</td>
<td>0.00—59.99</td>
</tr>
</tbody>
</table>

**Class format:**  Class hours 3  Lab hours 0
Course materials and textbooks:

- Digital papers are posted in MyCourses, and listed as publications with a date in the Course outline.
Designing the User Experience

Course description
The user experience is an important design element in the development of interactive systems. This course presents the foundations of user-centered design principles within the context of human-computer interaction (HCI). Students will explore and practice HCI methods that span the development lifecycle from requirements analysis and creating the product/service vision through system prototyping and usability testing. Leading edge interface technologies are examined. Group-based exercises and design projects are required.

Course objectives/Learning outcomes

<table>
<thead>
<tr>
<th>Course Learning Outcome</th>
<th>Assessment Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analyze the usability of consumer products and determine barriers that interfere with product use</td>
<td>Written assignment</td>
</tr>
<tr>
<td>Distinguish among the types of methods for gathering information for requirements.</td>
<td>Exam and project</td>
</tr>
<tr>
<td>Analyze and interpret the data collected to develop appropriate requirements to be used in product design.</td>
<td>Projects and design document</td>
</tr>
<tr>
<td>Develop and use personas and task scenarios to formulate and write usability goals</td>
<td>In-class exercises, and projects</td>
</tr>
<tr>
<td>Iteratively design and prototype an interactive system.</td>
<td>In-class exercises, and projects</td>
</tr>
<tr>
<td>Perform and document a heuristic evaluation.</td>
<td>Written assignment.</td>
</tr>
<tr>
<td>Work effectively in small teams.</td>
<td>Group projects.</td>
</tr>
<tr>
<td>Communicate effectively – written, oral, listening, non-verbal cues. Assessed through written assignments and presentations.</td>
<td>In-class exercises, written assignments, and projects.</td>
</tr>
</tbody>
</table>

Grading

Team Project                  50 points
Assignments (4)               20 points
Online discussions            30 points
TOTAL                          100 points

Class format: Class hours 3  Lab hours 0
Course materials and textbooks:


- ACM papers are posted in MyCourses, and listed as publications with a date in the Course outline.

** Texts available online, available free at Books 24 x 7 through Wallace Library.
STAT-145 Introduction to Statistics I This course will study the statistical methods of presenting and analyzing data. Topics covered include descriptive statistics and displays, random sampling, the normal distribution, confidence intervals, and hypothesis testing. The statistical software MINITAB is used to reinforce these principles and to introduce the use of technology in statistical analysis. This is a general introductory statistics course and is intended for a broad range of programs. Note: This course may not be taken for credit if credit is to be earned in STAT-205. (MATH-101 College Algebra or equivalent) Class 3, Credit 3 (F, S, Su)

Goals of the Course:
- To have students learn the basic definitions, concepts, rules, vocabulary, and mathematical notation of Data Analysis.
- To provide students with the necessary manipulative skills required for solving problems.
- To provide an opportunity for students to obtain a background in mathematics necessary to a study of business, economics and medical sciences

Learning outcomes
- Demonstrate a working knowledge of definitions, concepts, rules, vocabulary, and notation of statistics.
- Perform basic statistical calculations
- Describe data sets with statistical measures and displays
- Formulate simple hypothesis tests and state conclusions

Program or general education goals supported by this course
- To develop students’ understanding of the applications of probability and statistics that supports engineering, science, mathematics and other areas.
- To acquaint students with probability and statistics notation and the basic theory of probability and statistics.
- To develop a capacity for critical and analytical thinking.
- To develop an appropriate level of mathematical and statistical literacy and competency.

Grading

<table>
<thead>
<tr>
<th>First Test</th>
<th>30 points</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.2 Midterm</td>
<td>30 points</td>
</tr>
<tr>
<td>9.3. Final test</td>
<td>30 points</td>
</tr>
<tr>
<td>9.4. Attendance</td>
<td>10 points</td>
</tr>
</tbody>
</table>

**TOTAL** 100 points

The A-F letter grade is computed according to the standard 100% system:
A = 90-100;   B = 80-89;   C = 70-79;   D = 60-69;   F = 0-59.
Class format:  Class hours  3  Lab hours 0

Course materials and textbooks:

- Peck, Olsen and Devore, Introduction to Statistics and Data Analysis, Brooks/Cole, Pacific Grove, CA.
Beginning German I

Course Description
This is the first course in a two-course sequence. The sequence provides students without prior exposure to the language with a sound basis for learning German as it is used today in its spoken and written forms. The goal of the sequence is proficiency in communication skills with an emphasis on oral proficiency. The sequence also acquaints students with contemporary culture and life in the German-speaking countries. Students must take a placement exam if this is their first RIT class in German and they have some prior study of German. Class 4, Credit 4 (F)

Course Objectives
The primary aim of this course is to provide students with a sound basis for learning to communicate effectively and accurately in German as it is spoken and written today. Practice is given in all four basic skills - listening, speaking, reading, and writing – with many opportunities for student-student interaction and self-expression in realistic situations.

A second important aim of the course is to introduce students to contemporary life and culture in German speaking countries. The dialogues, readings, and cultural notes have been written to depict what life is like there today.

Learning Outcomes

By the end of the course, students should be able to use with confidence the basic structures of the language, to have mastered an active vocabulary of approximately 1,200 German words and to recognize many more words in speech and writing. They should have mastered the basic features of the sound system and be able to communicate orally and in writing on everyday topics. Students should also have gained an appreciation for varied aspects of culture in German speaking countries.

Grading

The following categories will determine your grade:

1. Homework and/or Other Written Assignments 10 points
2. Quizzes (3 quizzes) (3 x 15) 45 points
3. Final Exam Grammar and Vocabulary 20 points
4. Oral Exam (3 x 5) 15 points
5. Class Absences and Class Participation 10 points

TOTAL 100 points

Class format: Class hours 4 Lab hours 0
Course materials and textbooks:

- DEUTSCH HEUTE, Premium Website
- DEUTSCH HEUTE, Student Activities Manual
- http://dict.tu-chemnitz.de/ (Beolingus-Your Online Dictionary)
**Course Description**

This is the first course in a two-course sequence. The sequence provides students without prior exposure to the language with a sound basis for learning Italian as it is used today in its spoken and written forms. The goal of the sequence is proficiency in communication skills with an emphasis on oral proficiency. The sequence also acquaints students with contemporary culture and life in the Italian-speaking countries. Students must take placement exam if this is their first RIT class in Italian and they have some prior study of Italian. Class 4, Credit 4 (F)

**Course Objectives**

The primary aim of this course is to provide students with a sound basis for learning to communicate effectively and accurately in Italian as it is spoken and written today. Practice is given in all four basic skills - listening, speaking, reading, and writing – with many opportunities for student-student interaction and self-expression in realistic situations.

A second important aim of the course is to introduce students to contemporary life and culture in Italy and Italian speaking countries. The dialogues, readings, and cultural notes have been written to depict what life is like there today.

**Learning Outcomes**

By the end of the course, students should be able to use with confidence the basic structures of the language, to have mastered an active vocabulary of approximately 1,200 Italian words and to recognize many more words in speech and writing. They should have mastered the basic features of the sound system and be able to communicate orally and in writing on everyday topics. Students should also have gained an appreciation for varied aspects of culture in Italian speaking countries.

**Grading**

The following categories will determine your grade:

- Homework and/or Other Written Assignments 10 points
- Quizzes (3 quizzes) (3 x 15) 45 points
- Final Exam Grammar and Vocabulary 20 points
- Oral Exam (3 x 5) 15 points
- Class Absences and Class Participation 10 points
- **TOTAL 100 points**

**Class format:** Class hours 4  Lab hours 0
Course materials and textbooks:


Additional course material:

- Progetto italiano 1 – S. Magnelli, T. Marin – Edilingua
- Italian Grammar in Practice - Susanna Nocchi - Alma Edizioni Firenze
- Ecco! Grammatica italiana - Claudio Manella - Progetto Lingua Firenze
- Grammatica essenziale della lingua italiana – Marco Mezzadri - Guerra edizioni Perugia
- Cantachetipassa, imparare l’italiano con le canzoni, Ciro Massimo Naddeo e Giuliana Trama,
- ALMA Edizioni, 2000
- Cinema italiano, imparare l’italiano con i film, ALMA Edizioni, Firenze, a cura di Ciro Massimo Naddeo e Alessandro De Giuli, Edizione Redux
Course description
This course introduces the Spanish language and the culture of Hispanic countries to beginners, and provides a basic foundation in all skills in Spanish (speaking, listening, reading, writing, culture) through intensive practice in a variety of media. Language work progresses from autobiographical information, through the present tense, to preliminary work in the past tenses. Students must take placement exam if this is their first RIT class in Spanish and they have some prior study of Spanish. Class 4, Credit 4 (F)

Course Objectives
The primary aim of this course is to provide students with a sound basis for learning to communicate effectively and accurately in Spanish as it is spoken and written today. Practice is given in all four basic skills - listening, speaking, reading, and writing – with many opportunities for student-student interaction and self-expression in realistic situations.

A second important aim of the course is to introduce students to contemporary life and culture in Spain and Spanish speaking countries. The dialogues, readings, and cultural notes have been written to depict what life is like there today.

Learning Outcomes
By the end of the course, students should be able to use with confidence the basic structures of the language, to have mastered an active vocabulary of approximately 1,200 Spanish words and to recognize many more words in speech and writing. They should have mastered the basic features of the sound system and be able to communicate orally and in writing on everyday topics. Students should also have gained an appreciation for varied aspects of culture in Spanish speaking countries.

Grading
The following categories will determine your grade:

Homework and/or Other Written Assignments 10 points
Quizzes (3 quizzes) (3 x 15) 45 points
Final Exam Grammar and Vocabulary 20 points
Oral Exam (3 x 5) 15 points
Class Absences and Class Participation 10 points

TOTAL 100 points

Class format: Class hours 4 Lab hours 0
Course materials and textbooks:

- PLAZAS, Lugar de encuentros, Robert Hershberger, Susan Navey-Davis, Guiomar Borrás Álvarez, Fourth edition, HEINLE CENGAGE Learning

Additional books:

- Keith Chambers; Beginner's Spanish Grammar; teach Yourself Books (or any other grammar of the Spanish language)
Beginning French I

Course description

This is the first course in a two-course sequence. The sequence provides students without prior exposure to the language with a sound basis for learning French as it is used today in its spoken and written forms. The goal of the sequence is proficiency in communication skills with an emphasis on oral proficiency. The sequence also acquaints students with contemporary culture and life in French-speaking countries. Students must take placement exam if this is their first RIT class in French and they have some prior study of French. Class 4, Credit 4 (F)

Course objectives

The primary aim of this course is to provide students with a sound basis for learning to communicate effectively and accurately in French as it is spoken and written today. Practice is given in all four basic skills - listening, speaking, reading, and writing – with many opportunities for student-student interaction and self-expression in realistic situations.

A second important aim of the course is to introduce students to contemporary life and culture in French speaking countries. The dialogues, readings, and cultural notes have been written to depict what life is like in French speaking countries today.

Learning Outcomes

By the end of the course, students should be able to use with confidence the basic structures of the language, to have mastered an active vocabulary of approximately 1,200 French words and to recognize many more words in speech and writing. They should have mastered the basic features of the sound system and be able to communicate orally and in writing on everyday topics. Students should also have gained an appreciation for varied aspects of culture in French speaking countries.

Grading

The following categories will determine your grade:

1. Homework and/or Other Written Assignments 10 points
2. Quizzes (3 quizzes) (3 x 15) 45 points
3. Final Exam Grammar and Vocabulary 20 points
4. Oral Exam (3 x 5) 15 points
5. Class Absences and Class Participation 10 points

TOTAL 100 points

Class format: Class hours 4 Lab hours 0
Course materials and textbooks:

Main textbook:

Additional books:
1. Café crème 1 - cahier d’exercices
2. Café crème 1 - cassette vidéo
3. Café crème 1 - cassette audio
6. French dictionary
Course description

SWEN-383 Software Design Principles & Patterns Quality software designs and architectures reflect software engineering principles that represent best contemporary practice. This course focuses on explicating these fundamental principles, examining a set of design and architecture patterns that embody the principles, and applying patterns appropriate to a design problem in a given context. Not open to those taking SWEN-262. (ISTE-330, ISTE-340, coreq: ISTE-341) Class 3, Credit 3 (F)

Course objectives

- Describe the principles that undergird quality software design.
- Describe, compare and contrast common design and architecture patterns as embodiments of design principles.
- Design and construct software systems that apply selected patterns appropriate to the systems functional and quality objectives.
- Analyze proposed and existing design quality with respect to the key principles and the patterns employed.

Grading

<table>
<thead>
<tr>
<th>Item</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual Work</td>
<td></td>
</tr>
<tr>
<td>Exam #1 (UML, design concepts, basic patterns)</td>
<td>10%</td>
</tr>
<tr>
<td>Exam #2 (version control; additional patterns; refactoring)</td>
<td>10%</td>
</tr>
<tr>
<td>Final Exam (questions &amp; design problem)</td>
<td>20%</td>
</tr>
<tr>
<td>Class activities</td>
<td>10%</td>
</tr>
<tr>
<td>Class participation</td>
<td>15%</td>
</tr>
<tr>
<td>Individually Adjusted Team Work</td>
<td></td>
</tr>
<tr>
<td>Project #1 initial design</td>
<td>5%</td>
</tr>
<tr>
<td>Project #1 presentation, final design, implementation</td>
<td>10%</td>
</tr>
<tr>
<td>Project #2 amended and refactored design</td>
<td>5%</td>
</tr>
<tr>
<td>Project #2 presentation, final design, implementation</td>
<td>10%</td>
</tr>
<tr>
<td>Final activity (may be individual)</td>
<td>5%</td>
</tr>
</tbody>
</table>

Class format: Class hours 3 Lab hours 0

Course materials and textbooks:


2. Getting Started with UML. http://refcardz.dzone.com/refcardz/getting-started-uml (A 6-page PDF summary of all of the constructs in the UML. We will only be using class diagrams, object diagrams, and sequence diagrams, and within these only a subset of the available notation. You have to sign up for a free account to download the PDF.)
3. Gang of Four Design Patterns Reference (from http://www.blackwasp.co.uk/GangOfFour.aspx) "Gang of Four" or "GOF" is techno-speak for the seminal book on patterns, Design Patterns: Elements of Reusable Object-Oriented Software by Erich Gamma, Richard Helm, Ralph Johnson, and John Vlissides (Gamma, Helm, Johnson and Vlissides being the Gang of Four).

4. Design Patterns. http://refcardz.dzone.com/refcardz/design-patterns (A 7-page PDF summary of (most of) the patterns we will cover in this course. You have to sign up for a free account to download the PDF).

5. Getting Started with Subversion. http://refcardz.dzone.com/refcardz/getting-started-subversion (A 6-page PDF tutorial and cheat sheet on the Subversion version control system we will use in team projects. You have to sign up for a free account to download the PDF).

6. Websites, journal articles, conference proceedings, white papers, etc. as selected by the instructor(s) and provided as links in the official online syllabus.
Client Programming

Course Description

The goal of this course is to explore the issues involved in the design and implementation of client-side programming – both web and desktop application based. Topics include standards, browser and Document Object Model manipulation issues, design and deployment of both Web-based and desktop-based clients targeting multiple browsers, operating systems, and platforms. Use of specific Application Programming Interfaces and libraries where appropriate. The course will focus in the design, development, and implementation of usable, effective clients and client interfaces, both desktop and mobile, using multiple technologies.

This course will explore the analysis, design, development, and implementation of client-side programming in the context of Internet technologies, mobile devices, Web-based client systems and desktop applications. Students will learn to design and build usable and effective interactive systems, clients, and interfaces. Key features addressed will include browser and platform compatibility, object reusability, bandwidth and communications issues, development environments, privacy and security, and related technologies and APIs. Programming is required.

Grading

The individual assignments will be worth a total of 50% of your final grade (#1—20%, #2—15%, #3—15%). The first will be JavaScript, the second jQuery, and the last is C#.

The mid-term practical shall be worth 25% of your grade. The practical itself will be based upon the in-class exercises, what we build in class together, and the readings. The practical will be held during the xth (8th) week.

The final examination (last 25%) will cover the second half of the course only and will be held during the classes published final time during week 16.

Class format: Class hours 3 Lab hours 0

Course materials and textbooks: The following required texts will be available at the bookstore, or via online booksellers such as amazon.com and bn.com:

- JavaScript Essential Training via Wallace Library (online)

In addition to the text(s), online readings might be assigned in class.
Network Essentials for Developers

Course Description

This is a course in the basics of network communication for software developers. Topics will include the OSI 7-layer model and its realization in the TCP/IP protocol stack. Students will also learn about naming and name resolution as it is used in the internet, plus the basics of routing and switching. The focus in all of this will be on an analysis of how name resolution, routing and switching operate from the developer's perspective. The specifics of how the socket transport layer appears to the programmer and operates will be a key topic. Finally, an overview of authentication mechanisms and number of examples of the security vulnerabilities of existing communication protocols will be provided to instruct students on the inherent risks of communication via the internet. (Pre-requisite: one year of programming in a high level language)

Course Objectives

This course will provide students with the network knowledge needed to develop and design software applications. At the end of the course, students should be conversant in:

- Network Communications
  - TCP/IP and OSI models
    - Why do we have them?
    - What are they used for?
    - What are the security implications?
  - Physical and Data link communications
    - How do I get data from point A to point B?
    - How do I know it is from this device?
    - How do I send it to everyone or a specific person?
  - Network and Transport Layers
    - What is an IP address?
    - What is DHCP and DNS? Why do we use it? How does it impact my coding?
    - How do we use it?
    - What is private versus public IP addresses?
    - What about firewalls and communications?
    - What are port numbers and sockets? How do I create code that allows for communication that is secure or direct?
- Communications
  - How do I know how the data is being processed or communicating?
- What affect does routing over multiple network topologies have on communications?
- How does on demand (client) versus server (passive listening) work when sending and receiving data?

**Grading**
Grading will be based on the quality of submitted work as follows:

<table>
<thead>
<tr>
<th>Submission</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Midterm Exam</td>
<td>25</td>
</tr>
<tr>
<td>Final Exam</td>
<td>25</td>
</tr>
<tr>
<td>Quizzes (5 each)</td>
<td>20</td>
</tr>
<tr>
<td>Homework #1</td>
<td>15</td>
</tr>
<tr>
<td>Homework #2</td>
<td>15</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

**Class format:** Class hours 3  Lab hours 0

**Course materials and textbooks:**
- Networking Essentials (3rd Edition) - Jeffrey S. Beasley, Piyasat Nilkaew
Course Description
An elementary introduction to the topics of regression and analysis of variance. The statistical software package Minitab will be used to reinforce these techniques. The focus of this course is on business applications. This is a general introductory statistics course and is intended for a broad range of programs.

Goals of the Course:
To have students learn the basic definitions, concepts, rules, vocabulary, and mathematical notation of Data Analysis.
To provide students with the necessary manipulative skills required for solving problems.
To provide an opportunity for students to obtain a background in mathematics necessary to a study of business, economics and medical sciences

Learning Outcomes
- Demonstrate a working knowledge of definitions, concepts, rules, vocabulary, and notation of statistics.
- Perform basic statistical calculations
- Describe data sets with statistical measures and displays
- Formulate simple hypothesis tests and state conclusions

Program or general education goals supported by this course
- To develop students' understanding of the applications of probability and statistics that supports engineering, science, mathematics and other areas.
- To acquaint students with probability and statistics notation and the basic theory of probability and statistics.
- To develop a capacity for critical and analytical thinking.
- To develop an appropriate level of mathematical and statistical literacy and competency.

Grading

<table>
<thead>
<tr>
<th>Component</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Test</td>
<td>30</td>
</tr>
<tr>
<td>Midterm</td>
<td>30</td>
</tr>
<tr>
<td>Final Test</td>
<td>30</td>
</tr>
<tr>
<td>Attendance</td>
<td>10</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

The A-F letter grade is computed according to the standard 100% system:

- A = 90-100
- B = 80-89
- C = 70-79
- D = 60-69
- F = 0-59

Class format: Class hours 3 Lab hours 0
Course materials and textbooks:

- Peck, Olsen and Devore, *Introduction to Statistics and Data Analysis*, Duxbury.
Course Description

This is the second course in a two-course sequence. The sequence provides students without prior exposure to the language with a sound basis for learning German as it is used today in its spoken and written forms. The goal of the sequence is proficiency in communication skills with an emphasis on oral proficiency. The sequence also acquaints students with contemporary culture and life in the German-speaking countries. (MLGR-201 Beginning German I or equivalent; students must take the placement exam if this is their first RIT German class, and they have some prior study of German) Class 4, Credit 4 (S)

Course Objectives

The primary aim of this course is to provide students with a sound basis for learning to communicate effectively and accurately in German as it is spoken and written today. Practice is given in all four basic skills - listening, speaking, reading, and writing – with many opportunities for student-student interaction and self-expression in realistic situations.

A second important aim of the course is to introduce students to contemporary life and culture in German speaking countries. The dialogues, readings, and cultural notes have been written to depict what life is like in German speaking countries today.

Learning Outcomes

By the end of the course, students should be able to use with confidence the basic structures of the language, to have mastered an active vocabulary of approximately 1,200 German words and to recognize many more words in speech and writing. They should have mastered the basic features of the sound system and be able to communicate orally and in writing on everyday topics. Students should also have gained an appreciation for varied aspects of culture in German speaking countries.

Grading

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homework and/or Other Written Assignments</td>
<td>10</td>
</tr>
<tr>
<td>Quizzes (3 quizzes) (3 x 15)</td>
<td>45</td>
</tr>
<tr>
<td>Final Exam Grammar and Vocabulary</td>
<td>20</td>
</tr>
<tr>
<td>Oral Exam (3 x 5)</td>
<td>15</td>
</tr>
<tr>
<td>Class Absences and Class Participation</td>
<td>10</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Class format: Class hours 4 Lab hours 0
Course materials and textbooks:

- DEUTSCH HEUTE, INTRODUCTORY GERMAN, Tenth Edition,
- Moeller, Adolph, Hoecherl-Alden, Berger, Heinle, Cengage Learning
- DEUTSCH HEUTE, Premium Website
- DEUTSCH HEUTE, Student Activities Manual

Additional books

- German College Dictionary, Harper-Collins, Second Edition (or any other dictionary of the German language)
- Grammar of the German language
- http://dict.tu-chemnitz.de/ (Beolingus-Your Online Dictionary)
Course Description

This is the second course in a two-course sequence. The sequence provides students without prior exposure to the language with a sound basis for learning Italian as it is used today in its spoken and written forms. The goal of the sequence is proficiency in communication skills with an emphasis on oral proficiency. The sequence also acquaints students with contemporary culture and life in the Italian-speaking countries. (MLIT-201 Beginning Italian I or equivalent; students must take the placement exam if this is their first RIT Italian class, and they have some prior study of Italian) Class 4, Credit 4 (S)

Course Objectives

The primary aim of this course is to provide students with a sound basis for learning to communicate effectively and accurately in Italian as it is spoken and written today. Practice is given in all four basic skills - listening, speaking, reading, and writing – with many opportunities for student-student interaction and self-expression in realistic situations.

A second important aim of the course is to introduce students to contemporary life and culture in Italian speaking countries. The dialogues, readings, and cultural notes have been written to depict what life is like in Italy today.

Learning Outcomes

By the end of the course, students should be able to use with confidence the basic structures of the language, to have mastered an active vocabulary of approximately 1,200 Italian words and to recognize many more words in speech and writing. They should have mastered the basic features of the sound system and be able to communicate orally and in writing on everyday topics. Students should also have gained an appreciation for varied aspects of culture in Italian speaking countries.

Grading

Homework and/or Other Written Assignments  10 points
Quizzes ( 3 quizzes)  (3 x 15)                     45 points
Final Exam Grammar and Vocabulary                  20 points
Oral Exam ( 3 x 5)                                  15 points
Class Absences and Class Participation              10 points
TOTAL                                               100 points

Class format:  Class hours  4  Lab hours 0
Course materials and textbooks:


Additional course material:

- Progetto italiano 1 – S. Magnelli, T. Marin – Edilingua
- Italian Grammar in Practice - Susanna Nocchi - Alma Edizioni Firenze
- Ecco! Grammatica italiana - Claudio Manella - Progetto Lingua Firenze
- Grammatica essenziale della lingua italiana – Marco Mezzadri - Guerra edizioni Perugia
- Cantachetipassa, imparare l’italiano con le canzoni, Ciro Massimo Naddeo e Giuliana Trama,
- ALMA Edizioni, 2000
- Cinema italiano, imparare l’italiano con i film, ALMA Edizioni, Firenze, a cura di Ciro Massimo Naddeo e Alessandro De Giuli, Edizione Redux
Beginning Spanish II

Course description
This course continues the basic grammatical structures, vocabulary and situations of first-year Spanish. Beginning Spanish 2 continues work in the past tenses and includes work on the subjunctive mood, plus the future and conditional tenses. Students work on paragraph-length speech and writing, and move toward readiness for conversation and composition. (MLSP-201 Beginning Spanish I or equivalent proficiency) Class 4, Credit 4 (S)

Course Objectives
The primary aim of this course is to provide students with a sound basis for learning to communicate effectively and accurately in Spanish as it is spoken and written today. Practice is given in all four basic skills - listening, speaking, reading, and writing – with many opportunities for student-student interaction and self-expression in realistic situations.

A second important aim of the course is to introduce students to contemporary life and culture in Spanish speaking countries. The dialogues, readings, and cultural notes have been written to depict what life is like in Spanish speaking countries today.

Learning Outcomes
By the end of the course, students should be able to use with confidence the basic structures of the language, to have mastered an active vocabulary of approximately 1,200 Spanish words and to recognize many more words in speech and writing. They should have mastered the basic features of the sound system and be able to communicate orally and in writing on everyday topics. Students should also have gained an appreciation for varied aspects of culture in Spanish speaking countries.

Grading
Homework and/or Other Written Assignments 10 points
Quizzes (3 quizzes) (3 x 15) 45 points
Final Exam Grammar and Vocabulary 20 points
Oral Exam (3 x 5) 15 points
Class Absences and Class Participation 10 points
TOTAL 100 points

Class format: Class hours 4  Lab hours 0

Course materials and textbooks: PLAZAS, Lugar de encuentros, Robert Hershberger, Susan Navey-Davis, Guiomar Borrás Álvarez, Fourth edition, HEINLE CENGAGE Learning

Additional books: Keith Chambers; Beginner's Spanish Grammar; teach Yourself Books (or any other grammar of the Spanish language)
Beginning French II

Course description
This is the second course in a two-course sequence. The sequence provides students without prior exposure to the language with a sound basis for learning French as it is used today in its spoken and written forms. The goal of the sequence is proficiency in communication skills with an emphasis on oral proficiency. The sequence also acquaints students with contemporary culture and life in French-speaking countries. (MLFR-201 Beginning French I or equivalent proficiency; students must take the placement exam if this is their first RIT French class, and they have some prior study of French). Class 4, Credit 4 (S)

Course Objectives
The primary aim of this course is to provide students with a sound basis for learning to communicate effectively and accurately in French as it is spoken and written today. Practice is given in all four basic skills - listening, speaking, reading, and writing – with many opportunities for student-student interaction and self-expression in realistic situations.

A second important aim of the course is to introduce students to contemporary life and culture in French speaking countries. The dialogues, readings, and cultural notes have been written to depict what life is like in French speaking countries today.

Learning Outcomes
By the end of the course, students should be able to use with confidence the basic structures of the language, to have mastered an active vocabulary of approximately 1,200 French words and to recognize many more words in speech and writing. They should have mastered the basic features of the sound system and be able to communicate orally and in writing on everyday topics. Students should also have gained an appreciation for varied aspects of culture in French speaking countries.

Grading
Homework and/or Other Written Assignments 10 points
Quizzes ( 3 quizzes) (3 x 15) 45 points
Final Exam Grammar and Vocabulary 20 points
Oral Exam ( 3 x 5) 15 points
Class Absences and Class Participation 10 points
TOTAL 100 points

Class format: Class hours 4 Lab hours 0
Course materials and textbooks:

Main textbook:

Additional books:
- Café crème 1 - cahier d’exercices
- Café crème 1 - cassette vidéo
- Café crème 1 - cassette audio
- French dictionary
Course Description

This course provides in-depth work in server-side programming. Students will develop dynamic, data centric web pages and systems, and server-side information services that will be available to clients implemented in a variety of software technologies. Topics include XML parsing, generation, and consumption; web configuration and security; design patterns; web service structures, and application security. Programming projects are required. (corequisite: ISTE-330; prerequisite: ISTE-340, SWEN-383).

Course Objectives

This course is part of the BS/IT degree program. Specifically, this course covers development and delivery of services in a multi-tier architecture.

Specific objectives (learning outcomes)

At the end of this course, the successful student will be able to:

a. Describe and use web protocols
b. Analyze server language strengths and weaknesses
c. Build a medium-scale dynamic Web sites, applications and systems
d. Use server-side technologies to consume disparate information systems
e. User server-side technologies to create information systems that can be consumed by different clients and servers
f. Use server-side languages to retrieve and update data from files, file structures, and databases.

Grading
<table>
<thead>
<tr>
<th>Component</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Projects</td>
<td>60%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>20%</td>
</tr>
<tr>
<td>Attendance</td>
<td>10%</td>
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<tr>
<td>Exercises</td>
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Letter grades correspond to the following percentages and Grade Points:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Quality Points Earned</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>A</td>
<td>4.000 Grade Points</td>
<td>94.00—100.00</td>
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<tr>
<td>A-</td>
<td>3.667 Grade Points</td>
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<td>B+</td>
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<td>C+</td>
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<td>C-</td>
<td>1.667 Grade Points</td>
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<tr>
<td>D</td>
<td>1.000 Grade Points</td>
<td>60.00—69.99</td>
</tr>
<tr>
<td>F</td>
<td>0.0 Grade Points</td>
<td>0.00—59.99</td>
</tr>
</tbody>
</table>

**Class format:** Class hours 3 Lab hours 0

**Course materials and textbooks:** None required.
Course Description

In this course, students will build applications that interact with databases. Through programming exercises, students will work with multiple databases and programmatically invoke the advanced database processing operations that are integral to contemporary computing applications. Topics include the database drivers, the data layer, connectivity operations, security and integrity, and controlling database access.

Prerequisites: (ISTE-230).

Offered: Fall.

Course Objectives

This course is part of the BS/IT core course offerings that provide fundamental IT skills. Specifically, this course covers foundation database connectivity content for multi-tier architectures.

Specific objectives (learning outcomes)

At the end of this course, the successful student will be able to:

- Apply basic object-oriented programming (OOP) techniques in the development of database-driven applications; evaluated by course lab exercises and/or practicums.
- Implement fully functional database interfaces utilizing various data access APIs such as ODBC, JDBC, etc. for single server, multi-server and/or multi-client networks; evaluated by course lab exercises and/or practicums.
- Connect to, and issue queries against, different DBMSs; evaluated by course lab exercises and/or practicums.
- Discuss and implement various standard data access techniques designed to improve DBMS connectivity and access performance; evaluated by in-class discussions, course lab exercises, written reports, practicums, and/or course examinations.
- Compare and contrast similarities and differences between various popular data access APIs, such as DAO, RDO, ADO, ODBC, JDBC, etc.; evaluated by in-class discussions, homework exercises, written reports and/or course examinations.
Grading

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight</th>
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<tbody>
<tr>
<td>Practice Exercises</td>
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</tr>
<tr>
<td>Exam #1</td>
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<tr>
<td>Exam #2</td>
<td>25</td>
</tr>
<tr>
<td>Project</td>
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<tr>
<td>Class Participation</td>
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Weighting

<table>
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<tr>
<td>&gt;= 70.0% &amp; &lt; 80.0%</td>
<td>C</td>
</tr>
<tr>
<td>&gt;= 60.0% &amp; &lt; 70.0%</td>
<td>D</td>
</tr>
<tr>
<td>&lt; 60.0%</td>
<td>F</td>
</tr>
</tbody>
</table>

Class format: Class hours 3 Lab hours 0

Course materials and textbooks: None required.
Course Description

This course covers the purpose, scope, capabilities, and processes used in data warehousing technologies for the management and analysis of data. Students will be introduced to the theory of data warehousing, dimensional data modeling, the extract/transform/load process, warehouse implementation, and summary-data management. The basics of data mining and importance of data security will also be discussed. Hands-on exercises include implementing a small-scale data warehouse.

Course Objectives

3. Describe the function and purposes of data warehouses.
4. Compare the differences between the standard and emerging data warehousing approaches.
5. Explain and apply fundamental data warehousing theory – including architecture, multi-dimensional databases, relational databases, fact vs. dimension tables, and schema design.
6. Design a data warehouse using dimensional data modeling theory and practices.
7. Discuss the data cleansing process, its importance in data warehousing, and utilize standard data extraction/ transformation/load (ETL) processes.
8. Apply traditional warehousing implementation and data analysis techniques through the creation of a data warehouse from a scenario provided by the course instructor(s).
9. Explain the purpose of data mining in a data warehouse environment and compare the directed vs. undirected learning approaches.
10. Discuss the importance of data security and the impact of data/identity theft on corporations and individuals.

Grading

Grades in this course will be based on the following components and activities. The components are weighted as shown.

<table>
<thead>
<tr>
<th>Percent</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>Practice Exercises</td>
</tr>
<tr>
<td>20</td>
<td>Paper/Reports</td>
</tr>
<tr>
<td>20</td>
<td>Midterm Exam</td>
</tr>
<tr>
<td>20</td>
<td>Labs</td>
</tr>
<tr>
<td>20</td>
<td>Final Project/Exam</td>
</tr>
</tbody>
</table>
Your professor(s) reserve the right to change these components and weights as necessary.

Final averages will be assigned a letter grade according to the following ranges:

<table>
<thead>
<tr>
<th>Grade Range</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
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<td>&gt;= 80.0% &amp; &lt; 90.0%</td>
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<td>&gt;= 70.0% &amp; &lt; 80.0%</td>
<td>C</td>
</tr>
<tr>
<td>&gt;= 60.0% &amp; &lt; 70.0%</td>
<td>D</td>
</tr>
<tr>
<td>&lt; 60.0%</td>
<td>F</td>
</tr>
</tbody>
</table>

If you feel that your final grade has been calculated incorrectly, contact your lecture professor as soon as possible. You have one (1) quarter to request that your grade be reviewed. After that, grades will not be changed.

**Class format:**  Class hours 3  Lab hours 0

**Course materials and textbooks:**

- Other reference material as selected by the course instructor(s).
Scientific Inquires in Environmental Science

Course Description

This course is part of a two-semester sequence that when combined presents an integrated approach to the interrelated, interdisciplinary principles of environmental science through case studies, site visits, and field work. Through assigned readings, classroom discussion and case studies dealing with global environmental issues as well as the environmental issues related to the Dalmatian coast, students will learn how to critically analyze environmental problems from a multidisciplinary perspective and to propose solutions. (COS-ENVS-150) Class 3, Lab 2, Credit 4 (F)

Course Objectives

This course will introduce students to interdisciplinary environmental problems with a focus on the underlying scientific principles surrounding the issues.

Students will learn problem solving techniques that integrate concepts and tools across disciplines and learn to conceptualize environmental problems from multiple perspectives.

Learning Outcomes

- Identify, explain, and assess different viewpoints, pressures, and conflicts associated with environmental issues
- Develop analytical capabilities through field exercises
- Critically evaluate materials presented in class and during labs
- Defend claims and solutions using evidence gathered from primary literature
- Identify how human actions impact the concept of sustainability and ways to minimize these impacts
- Demonstrate ability to work on a group assignment
- Improve communication skills

Grading

Exams, papers, group projects, class discussion, oral presentation

Class format: Class hours 2  Lab hours 2

Course materials and textbooks:

- Griffin, J.M. Global Climate Change: the science, economics and politics. The Bush School, College Station, TX
Intermediate French I

Course Description

This is the first course of a two-course sequence at the intermediate level. The sequence provides students with the tools necessary to increase their ability to function in French. Communicative activities, contemporary texts, vocabulary study, and grammar are used to expand all communication skills, especially oral proficiency. This sequence continues to address issues of contemporary French life and culture as well as the cultures of the Francophone world. (MLFR-202 Beginning French II or equivalent proficiency; students must take the placement exam if this is their first RIT French class, and they have some prior study of French) Class 3, Credit 3 (F)

Course Objectives

This course is designed to help students improve their vocabulary and better use their knowledge of the French language. The primary goal of the course is to enable them to feel free to discuss various subjects/topics and express their own opinions freely, in French.

Each lesson will cover one area (or one problem) of everyday life. Students will have to make a comparison between different realities: French, their own view of it and their perspective of that situation in their own country. They will learn how to converse in French and exchange their ideas freely. Students will master at least one grammar feature in each lesson in an applied way: they will have to immediately apply various grammatical structures in conversation or written/oral exercises.

In order to give students more opportunity to practice speaking, each of them will also participate in at least one (team-) project during the quarter and will have to make a presentation in French on a chosen topic.

One of the most important objectives of the course is also to teach students how to write better in French, and prepare them to use this language in their professional careers in the future. For this purpose students will have to write a short essay (a paragraph) every week. The theme of the paragraph can also be the theme of the in-class discussion. The instructor will also organize (when necessary, at least once in a semester writing labs, where students will be correcting each other thus learning from each other’s mistakes.)
Grading

- Homework and/or Other Written Assignments (10 points)
- Grammar and Vocabulary Quizzes (3 x 10 points = 30 points)
- 2 Debates (2x5 = 10 points)
- Course Project (5 points)
- Final Oral Examination (10 points)
- Final Exam (Grammar/Vocabulary Test + Essay) (15 + 10 points = 25 points)
- Class Absences and Class Participation (10 points)

Class format:  Class hours  3  Lab hours 0

Course materials and textbooks:

- Bravo, 5th ed.; J. A. Muyskens, L.H.Harlow, M.Vialet, J-F. Brière; Thomson & Heinle 2005

A selection from different textbooks will also be used for this course and students will be given the material to study each time they meet with their instructor.

Students will download required chapters of the textbook from Mycourses.

They can also buy the textbook on www.amazon.com

Additional books

- Bravo, 5th ed. – workbook and lab manual
- CARTE DE VISITE, Français des relations professionnelles – cassettes vidéo; J. Delcos, B. Leclercq, M. Suvanto; Didier, 2000
- French dictionary
Intermediate German I

Course Description

This is the first course of a two-course sequence at the intermediate level. The sequence provides students with the tools to increase their ability to function in German. Communicative activities, contemporary texts, and the study of vocabulary and grammar are used to expand all communication skills, especially oral proficiency. This sequence continues to address issues of contemporary German life and culture. (MLGR-202 Beginning German II or equivalent proficiency; students must take the placement exam if this is their first RIT German class, and they have some prior study of German) Class 3, Credit 3 (F)

Course Objectives

This course is designed to help students improve their vocabulary and better use their knowledge of the German language. The primary goal of the course is to enable them to feel free to discuss various subjects/topics and express their own opinions freely, in German.

Each lesson will cover one area (or one problem) of everyday life. Students will have to make a comparison between different realities: German, their own view of it and their perspective of that situation in their own country. They will learn how to converse in German and exchange their ideas freely. Students will master at least one grammar feature in each lesson in an applied way: they will have to immediately apply various grammatical structures in conversation or written/oral exercises.

One of the most important objectives of the course is also to teach students how to write better in German, and prepare them to use this language in their professional careers in the future. For this purpose students will have to write a short essay (a paragraph) every week. The theme of the paragraph can also be the theme of the in-class discussion. The instructor will also organize (when necessary, at least once in a semester) writing labs, where students will be correcting each other thus learning from each other’s mistakes.

Grading

- Homework and/or Other Written Assignments (10 points)
- Grammar and Vocabulary Quizzes (3 x 10 points = 30 points)
- 2 Debates (2x5 = 10 points)
- Course Project (5 points)
- Final Oral Examination (10 points)
- Final Exam (Grammar/Vocabulary Test + Essay) (15 + 10 points = 25 points)
- Class Absences and Class Participation (10 points)
**Class format:** Class hours 3 Lab hours 0

**Course materials and textbooks:**

- KALEIDOSKOP, Eighth Edition, Premium Website

**Additional books:**

- An English-German/German-English dictionary is strongly recommended
  - [http://dict.tu-chemnitz.de/](http://dict.tu-chemnitz.de/)
  - [http://wordreference.com/](http://wordreference.com/)
Course Description

This is the first course of a two-course sequence at the intermediate level. The sequence provides students with the tools to increase their ability to function in Italian. Communicative activities, contemporary texts, and the study of vocabulary and grammar are used to expand all communication skills, especially oral proficiency. This sequence continues to address issues of contemporary Italian life and culture. (MLIT-202 Beginning Italian II or equivalent proficiency; students must take the placement exam if this is their first RIT Italian class, and they have some prior study of Italian) Class 3, Credit 3 (F)

Course Objectives

This course is designed to help students improve their vocabulary and better use their knowledge of the Italian language. The primary goal of the course is to enable them to feel free to discuss various subjects/topics and express their own opinions freely, in Italian.

Each lesson will cover one area (or one problem) of everyday life. Students will have to make a comparison between different realities: Italian, their own view of it and their perspective of that situation in their own country. They will learn how to converse in Italian and exchange their ideas freely. Students will master at least one grammar feature in each lesson in an applied way: they will have to immediately apply various grammatical structures in conversation or written/oral exercises.

One of the most important objectives of the course is also to teach students how to write better in Italian, and prepare them to use this language in their professional careers in the future. For this purpose students will have to write a short essay (a paragraph) every week. The theme of the paragraph can also be the theme of the in-class discussion.

Grading

- Homework and/or Other Written Assignments (10 points)
- Grammar and Vocabulary Quizzes (3 x 10 points = 30 points)
- 2 Debates (2x5 = 10 points)
- Course Project (5 points)
- Final Oral Examination (10 points)
- Final Exam (Grammar/Vocabulary Test + Essay) (15 + 10 points = 25 points)
- Class Absences and Class Participation (10 points)

Class format: Class hours 3 Lab hours 0
Course materials and textbooks:

- Bar Italia, by Annamaria Di Francesco e Ciro Massimo Naddeo
- Crescendo, Workbook/Lab Manual and Audio CDs

Additional Course Material:

- Giocare con la letteratura, by Carlo Guastalla, Alma Edizioni, Firenze
- Ponti, italiano terzo millenio, 3rd edition, by Elissa Tognozzi e Giuseppe Cavatorta, Heinle Cengage Learning, 2013
- Pro e contro 1/2, conversare e argomentare in italiano, Pazit Barki e Pierangela Diadori, livello intermedio, libro dello studente, Bonacci editore, seconda edizione, Roma, 1999
- Pro e contro, conversare e argomentare in italiano, Pazit Barki e Pierangela Diadori, livello intermedio, guida per l’insegnante, Bonacci editore, seconda edizione, Roma, 1999
Intermediate Spanish I

Course Description

This is the first course in the Intermediate Spanish sequence (second year). Intermediate Spanish I is a course in Conversation, along with grammar review and culture study. Emphasis is on tourist survival situation dialogues, various forms of conversation, grammar review, and both formal and informal culture (the arts and daily behavior). The basic skills learned in the first year courses are now put into practice. (MLSP-202 Beginning Spanish II or equivalent proficiency; students must take the placement exam if this is their first RIT Spanish class, and they have some prior study of Spanish) Class 3, Credit 3 (F)

Course Objectives

This course is designed to help students improve their vocabulary and better use their knowledge of the Spanish language. The primary goal of the course is to enable them to feel free to discuss various subjects/topics and express their own opinions freely, in Spanish.

Each lesson will cover one area (or one problem) of everyday life. Students will have to make a comparison between different realities: Spanish, their own view of it and their perspective of that situation in their own country. They will learn how to converse in Spanish and exchange their ideas freely. Students will master at least one grammar feature in each lesson in an applied way: they will have to immediately apply various grammatical structures in conversation or written/oral exercises.

In order to give students more opportunity to practice speaking, each of them will also participate in at least one (team-) project during the quarter and will have to make a presentation in Spanish on a chosen topic.

One of the most important objectives of the course is also to teach students how to write better in Spanish, and prepare them to use this language in their professional careers in the future. For this purpose students will have to write a short essay (a paragraph) every week. The theme of the paragraph can also be the theme of the in-class discussion. The instructor will also organize (when necessary, at least once in a semester) writing labs, where students will be correcting each other thus learning from each other’s mistakes.
Grading

- Homework and/or Other Written Assignments (10 points)
- Grammar and Vocabulary Quizzes (3 x 10 points = 30 points)
- 2 Debates (2x5 = 10 points)
- Course Project (5 points)
- Final Oral Examination (10 points)
- Final Exam (Grammar/Vocabulary Test + Essay) (15 + 10 points = 25 points)
- Class Absences and Class Participation (10 points)

Class format: Class hours 3  Lab hours 0

Course materials and textbooks:

- Imagina (2007), Español sin barreras, Curso intermedio de la lengua española, Blanco-Tocaimaza-Hatch, Vista Higher Learning, Boston, Massachusetts
- Imagina, Student Activities Manual and Audio CDs

Additional books

- Keith Chambers, Beginner’s Spanish Grammar, Teach Yourself Books (or any other grammar of the Spanish language)
- José Siles Artés: Historias para conversar – Nivel Medio; SGEL S.A. 2001
- ¿Adónde? Conocer España y los países hispanohablantes, S.C. Ramírez, Elli, 2005

An English-Spanish/Spanish-English dictionary is strongly recommended
**Social and Cultural Theory**

**Course Description**
This course explores influential classical and contemporary theories regarding society and culture. Students will assess the utility of different theories in addressing key enduring questions regarding human behavior, the organization of society, the nature of culture, the relationship between the individual and society, social control and social conflict, social groups and social hierarchy, the operation of power, cultural and social change, and the interplay between the global and the local. Theories will be marshaled to shed light on contemporary social and cultural phenomena and problems such as crime, violence, exploitation, modernity, and globalization. Cross-listed with SOCI-301. (Any one of the following: ANTH-101 Discovery of Sociology and Anthropology, SOCI-101 Discovery of Sociology and Anthropology, ANTH-102 Cultural Anthropology, ANTH -103 Archaeology and the Human Past, **SOCI-102 Foundations of Sociology**, SOCI-103 Urban Experience, INGS-101 Global Studies, or permission of instructor.) Class 3, Credit 3 (varies)

**Course Objectives**
1. That students reflect on the major questions concerning human societies and cultures raised and addressed by sociology and anthropology;
2. That students reflect on influential theories in sociology and anthropology;
3. That students apply influential sociological and anthropological theories to major contemporary social issues
4. That students will know the common roots, mutual influences, and key points of departure between sociological and anthropological theories.

**Learning Outcomes**
Upon completion of this course, the student will be able to:

1. Compare and contrast key influential theories in sociology and anthropology
2. Assess key theories with respect to their ability to shed light on contemporary social phenomena and problems
3. Explain the common theoretical roots of sociology and anthropology.

**Program outcomes supported by this course:**
Upon completion of this course, the student will be able to:

1. Analyze the interplay between society and the individual
2. Analyze regional and cultural diversity in the organization of human societies
3. Analyze the roots and mechanisms for the perpetuation of social inequalities
4. Identify the interplay between global and local social and cultural processes
5. Assess classical and contemporary theories about society and culture
General education outcomes supported by this course:
Upon completion of this course, the students will be able to:

1. Express themselves effectively in common college-level written forms using standard American English
2. Express themselves effectively in presentations, either in spoken standard American English or sign language (American Sign Language or English-based Signing)
3. Comprehend information accessed through reading and discussion
4. Analyze similarities and differences in human experiences and consequent perspectives
5. Examine connections among the world’s populations
6. Identify contemporary ethical questions and relevant stakeholder positions
7. Analyze arguments, in relation to their premises, assumptions, contexts, and conclusions
8. Construct logical and reasonable arguments that include anticipation of counter-arguments
9. Use relevant evidence gathered through accepted scholarly methods and properly acknowledge sources of information

Grading
First Exam (in week 8) 35 pts
Second Exam (in week 15) 20 pts
In Class Discussions 15 x 2 30 pts
Class participation 15 pts
TOTAL 100 points

Class format: Class hours 3  Lab hours 0

Course materials and textbooks:
Excerpts from the following:
1. Tucker, Robert C., ed., The Marx/Engels Reader;
3. Weber, Max, Economy and Society: An Outline of Interpretive Sociology;
7. Mills, C. Wright, The Power Elite
8. Durkheim, Émile, The Division of Labor in Society
9. Durkheim, Émile, Suicide
10. Durkheim, Émile, The Elementary Forms of Religious Life
12. Foucault, Michel, and Paul Rabinow, eds., The Foucault Reader
13. Boas, Franz, Race, Language, and Culture
14. Malinowski, Bronislaw, Magic, Science, and Religion and Other Essays
15. Appadurai, Arjun, "Disjuncture and Difference in the Global Cultural Economy"
16. Geertz, Clifford, The Interpretation of Cultures
17. Lemert, Charles, and Ann Branaman, eds., The Goffman Reader
18. Wolf, Eric R., Europe and the People without History
19. Clifford, James, The Predicament of Culture
21. Giddens, Anthony, Capitalism and Modern Social Theory
22. Said, Edward M., Orientalism
23. Fanon, Franz, Black Skin, White Masks
25. Ortner, Sherry, "Theory in Anthropology since the Sixties"
26. Sacks, Karen Brodkin, "Toward a Unified Theory of Class, Race, and Gender"
27. Marcuse, Herbert, One-Dimensional Man
28. Jameson, Fredric, "Postmodernism, or the Cultural Logic of Late Capitalism"
29. Harvey, David, The Condition of Postmodernity
30. Mead, George H., Mind, Self and Society
31. McQuarrie, Donald, Readings in Contemporary Sociological Theory
32. Kivisto, Peter, Illuminating Social Life: Classical and Contemporary Theory Revisited
34. Merton, Robert, Social Theory and Social Structure
35. Vogel, Lise, Marxism and Socialist-Feminist Theory: A Decade of Debate
36. Berger, Peter and Thomas Luckmann, The Social Construction of Reality
37. Simmel, Georg, The Metropolis and Mental Life
40. Allen, Kenneth, A Primer in Social and Sociological Theory
41. Appelrouth, Scott and Edles, Laura, Classical and Contemporary Sociological Theory: A Text and Readings
42. Coser, Lewis, Masters of Sociological Thought

Documentary and feature films (video Presentations)
Data Exploration and Knowledge Discovery

Course Description

Rapidly expanding volumes of data from all areas of society are becoming available in digital form. High value information and knowledge is embedded in many of these data volumes. Unlocking this information can provide many benefits, and may also raise ethical questions in certain circumstances. This course provides students with a gentle, hands-on introduction to how interactive data exploration and data mining software can be used for data-driven knowledge discovery. Students will use statistical, visual, and data/text mining software systems to explore data collections from several different domains such as business, environmental management, healthcare, finance, and transportation. (STAT-145 or equivalent).

Learning Outcomes

<table>
<thead>
<tr>
<th>Course Learning Outcomes</th>
<th>Assessment Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.1 Students will be able to frame questions for subsequent analytical problem solving.</td>
<td>Assignment</td>
</tr>
<tr>
<td>7.2 Students will be able to identify and discuss potential ethical concerns of stakeholders.</td>
<td>Case study, group presentation</td>
</tr>
<tr>
<td>7.3 Students will be able to explain the key ideas underlying data analytics and mining, and simulation.</td>
<td>Exam</td>
</tr>
<tr>
<td>7.4. Students will be able to apply analytical tools to data collections</td>
<td>Project</td>
</tr>
<tr>
<td>7.5. Students will be able to interpret the results of applying analytical methods</td>
<td>Case study, project, exam</td>
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Grading

<table>
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<tr>
<th>Grade item</th>
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<tbody>
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**Class format:** Class hours 3 Lab hours 0

**Course materials and textbooks:**

Information Requirements Modelling

Course Description

Students will survey and apply contemporary techniques used in analyzing and modeling information requirements. Requirements will be elicited in a variety of domains and abstracted at conceptual, logical, and physical levels of detail. Process, data, and state modeling will be applied in projects that follow a systems development lifecycle. Object-oriented modeling will be explored and contrasted with data and process oriented modeling. Individual and team modeling assignments will be required. (ITSE-230)

Course Objectives

Provide students with the skills required to elicit, analyze, and structure end-user information requirements. The skill set includes the ability to apply process, data, and state modeling in various domains. Students will also explore the relationship between data-oriented and object-oriented system modeling.

Grading

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**Class format:** Class hours 3 Lab hours 0

**Course materials and textbooks:**


**Software:** ERwin
Course Description

Students will be introduced to issues in client/server database implementation and administration. Students will configure, test, and establish client-server communication and server-server communication with single and multiple database servers. Topics such as schema implementation, storage allocation and management, user creation and access security, backup and recovery, and performance measurement and enhancement will be presented in lecture and experienced in a laboratory environment. Students will configure and demonstrate successful communication between a database file server and multiple clients. (ISTE-330)

Course Objectives

<table>
<thead>
<tr>
<th>Course Learning Outcome</th>
<th>Assessment Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students will be able to:</td>
<td></td>
</tr>
<tr>
<td>Administer and manage a database implementation</td>
<td>Lab exercises</td>
</tr>
<tr>
<td>Implement a database system at an enterprise-level DBMS</td>
<td>Lab exercises</td>
</tr>
<tr>
<td>Use a database to support application and connectivity</td>
<td>Lab exercises</td>
</tr>
<tr>
<td>Explain the importance of security practices</td>
<td>Quizzes</td>
</tr>
<tr>
<td>Explain the need for backup and recovery processes</td>
<td>Quizzes and lab exercises</td>
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**Class format:** Class hours 3  Lab hours 0

**Course materials and textbooks:**
- Oracle Database 11g DBA Handbook by Kevin Loney and Bob Bryla (optional)

**Supporting Materials:** Websites and publications from vendors such as: Oracle, IBM, Microsoft, etc., journal articles, conference proceedings, white papers, etc as selected by the instructor(s).
Literary and Cultural Studies

Course Description

ENGL-210 Literary and Cultural Studies Students will study literary and cultural texts selected from traditional literature to contemporary media and culture (including mythology, poetry, plays, novels, film, graphic novels, television, and digital literature). Students will analyze these texts from a variety of perspectives and become familiar with the history of debates about literature and/or culture as arenas of human experience. Individual sections will vary in their foci.

Course Objectives and Learning Outcomes

- to develop analytical skills through reading, discussion, and writing
- to develop critical thinking skills through close reading of literary texts, cultural artifacts, and critical/analytical essays on these subjects
- to introduce the skills, principles, and terminology of literary interpretation
- to gain an appreciation for the art and politics of literary and cultural representations
- to develop an awareness of the correlation between literary and cultural artifacts, and their social and cultural contexts
- to gain a broad understanding of genres in literary, oral, aural, and visual media as well as how these genres can interact with one another
- to become familiar with scholarly and popular debates over literary canons, critical analysis, and cultural studies

Grading

Paper: 50 pts.
Quiz 1: 10 pts.
Quiz 2: 10 pts.
Quiz 3: 10 pts.
Quiz 4: 10 pts.
Quiz 5: 10 pts.

Total Points: 100

Class format: Class hours 3  Lab hours 0

Course materials and textbooks:

- The Great Gatsby, F. Scott Fitzgerald*
- Ethan Frome, Edith Wharton*
- Heart of Darkness, Joseph Conrad*
- Frankenstein, Mary Shelley*
- Candide, Voltaire

Note: These books are available in free epub/mobi and pdf format on feedbooks.com.
Intermediate French II

Course Description

This is the second course of a two-course sequence at the intermediate level. The sequence provides students with the tools necessary to increase their ability to function in French. Communicative activities, contemporary texts, vocabulary study, and grammar are used to expand all communication skills, especially oral proficiency. This sequence continues to address issues of contemporary French life and culture as well as the cultures of the Francophone world. (MLFR-301 Intermediate French I or equivalent proficiency; students must take the placement exam if this is their first RIT French class, and they have some prior study of French). Class 3, Credit 3 (S)

Course Objectives

This course is designed to help students improve their vocabulary and better use their knowledge of the French language. The primary goal of the course is to enable them to feel free to discuss various subjects/topics and express their own opinions freely, in French.

Each lesson will cover one area (or one problem) of everyday life. Students will have to make a comparison between different realities: French, their own view of it and their perspective of that situation in their own country. They will learn how to converse in French and exchange their ideas freely. Students will master at least one grammar feature in each lesson in an applied way: they will have to immediately apply various grammatical structures in conversation or written/oral exercises.

In order to give students more opportunity to practice speaking, each of them will also participate in at least one (team-) project during the quarter and will have to make a presentation in French on a chosen topic.

One of the most important objectives of the course is also to teach students how to write better in French, and prepare them to use this language in their professional careers in the future. For this purpose students will have to write a short essay (a paragraph) every week. The theme of the paragraph can also be the theme of the in-class discussion. The instructor will also organize (when necessary, at least once in a semester writing labs, where students will be correcting each other thus learning from each other’s mistakes.
Grading

- Homework and/or Other Written Assignments (10 points)
- Grammar and Vocabulary Quizzes (3 x 10 points = 30 points)
- 3 x Debates (3x5 = 15 points)
- Final Oral Examination (10 points)
- Final Exam (Grammar/Vocabulary Test + Essay) (15 + 10 points = 25 points)
- Class Absences and Class Participation (10 points)

Class format:  Class hours  3  Lab hours 0

Course materials and textbooks:

- Bravo, 5th ed.; J. A. Muyskens, L.H.Harlow, M.Vialet, J-F. Brière; Thomson &Heinle 2005
- A selection from different textbooks will also be used for this course and students will be given the material to study each time they meet with their instructor.
- Students will download required chapters of the textbook from Mycourses.
- The textbook could also be purchased on www.amazon.com

Additional books:

- Bravo, 5th ed. – workbook and lab manual
- CARTE DE VISITE, Français des relations professionnelles –cassettes vidéo; J. Delcos, B. Leclercq, M. Suvanto; Didier, 2000
- French dictionary
Course description

This is the second course of a two-course sequence at the intermediate level. The sequence provides students with the tools to increase their ability to function in German. Communicative activities, contemporary texts, the study of vocabulary and grammar are used to expand all communication skills, especially oral proficiency. This sequence continues to address issues of contemporary German life and culture. (MLGR-301 Intermediate German I or equivalent proficiency; students must take the placement exam if this is their first RIT German class, and they have some prior study of German) Class 3, Credit 3 (S)

Course objectives

This course is designed to help students improve their vocabulary and better use their knowledge of the German language. The primary goal of the course is to enable them to feel free to discuss various subjects/topics and express their own opinions freely, in German.

Each lesson will cover one area (or one problem) of everyday life. Students will have to make a comparison between different realities: German, their own view of it and their perspective of that situation in their own country. They will learn how to converse in German and exchange their ideas freely. Students will master at least one grammar feature in each lesson in an applied way: they will have to immediately apply various grammatical structures in conversation or written/oral exercises.

One of the most important objectives of the course is also to teach students how to write better in German, and prepare them to use this language in their professional careers in the future. For this purpose students will have to write a short essay (a paragraph) every week. The theme of the paragraph can also be the theme of the in-class discussion. The instructor will also organize (when necessary, at least once in a semester) writing labs, where students will be correcting each other thus learning from each other’s mistakes.

Grading

- Homework and/or Other Written Assignments (10 points)
- Grammar and Vocabulary Quizzes (3 x 10 points = 30 points)
- 2 Debates (2x5 = 10 points)
- Course Project (5 points)
- Final Oral Examination (10 points)
- Final Exam (Grammar/Vocabulary Test + Essay) (15 + 10 points = 25 points)
- Class Absences and Class Participation (10 points)

Class format: Class hours 3  Lab hours 0
Course materials and textbooks:

- KALEIDOSKOP, Eighth Edition, Premium Website

Additional Course Material

- An English-German/German-English dictionary is strongly recommended
- http://dict.tu-chemnitz.de/
- http://wordreference.com/
Intermediate Italian II

Course Description

This is the second course of a two-course sequence at the intermediate level. The sequence provides students with the tools to increase their ability to function in Italian. Communicative activities, contemporary texts, and the study of vocabulary and grammar are used to expand all communication skills, especially oral proficiency. This sequence continues to address issues of contemporary Italian life and culture. (MLIT-301 Intermediate Italian I or equivalent proficiency; students must take the placement exam if this is their first RIT Italian class, and they have some prior study of Italian) Class 3, Credit 3 (S)

Course Objectives

This course is designed to help students improve their vocabulary and better use their knowledge of the Italian language. The primary goal of the course is to enable them to feel free to discuss various subjects/topics and express their own opinions freely, in Italian. Each lesson will cover one area (or one problem) of everyday life. Students will have to make a comparison between different realities: Italian, their own view of it and their perspective of that situation in their own country. They will learn how to converse in Italian and exchange their ideas freely. Students will master at least one grammar feature in each lesson in an applied way: they will have to immediately apply various grammatical structures in conversation or written/oral exercises.

In order to give students more opportunity to practice speaking, each of them will also participate in at least one (team-) project during the quarter and will have to make a presentation in Italian on a chosen topic.

One of the most important objectives of the course is also to teach students how to write better in Italian, and prepare them to use this language in their professional careers in the future. For this purpose students will have to write a short essay (a paragraph) every week. The theme of the paragraph can also be the theme of the in-class discussion. The instructor will also organize (when necessary, at least once in a semester writing labs, where students will be correcting each other thus learning from each other’s mistakes.
Grading

- Homework and/or Other Written Assignments (10 points)
- Grammar and Vocabulary Quizzes (3 x 10 points = 30 points)
- 2 Debates (2x5 = 10 points)
- Course Project (5 points)
- Final Oral Examination (10 points)
- Final Exam (Grammar/Vocabulary Test + Essay) (15 + 10 points = 25 points)
- Class Absences and Class Participation (10 points)

Class format: Class hours 3 Lab hours 0

Course materials and textbooks:

- Crescendo, Workbook/Lab Manual and Audio CDs
- Ponti, italiano terzo millenio, 3rd edition, by Elissa Tognozzi e Giuseppe Cavatorta, Heinle Cengage Learning, 2013

Additional books:

- Giocare con la letteratura, by Carlo Guastalla, Alma Edizioni, Firenze
- Pro e contro 1/2, conversare e argomentare in italiano, Pazit Barki e Pierangela Diadori, livello intermedio, libro dello studente, Bonacci editore, seconda edizione, Roma, 1999
- Pro e contro, conversare e argomentare in italiano, Pazit Barki e Pierangela Diadori, livello intermedio, guida per l’insegnante, Bonacci editore, seconda edizione, Roma, 1999
Course Description

This is the second course in the Intermediate Spanish sequence (second year). Intermediate Spanish II is a composition course, emphasizing grammar re-view, composition, business-letter writing, Spanish for the Professions, and culture, while also including work in speaking and listening. The basic skills learned in the first year courses are now put into practice. In addition to the language work, there is significant work on cultural topics of Spanish-speaking countries at the intermediate level. (MLSP-301 Intermediate Spanish I or equivalent proficiency; students must take the placement exam if this is their first RIT Spanish class, and they have some prior study of Spanish) Class 3, Credit 3 (S)

Course Objectives

This course is designed to help students improve their vocabulary and better use their knowledge of the Spanish language. The primary goal of the course is to enable them to feel free to discuss various subjects/topics and express their own opinions freely, in Spanish.

Each lesson will cover one area (or one problem) of everyday life. Students will have to make a comparison between different realities: Spanish, their own view of it and their perspective of that situation in their own country. They will learn how to converse in Spanish and exchange their ideas freely. Students will master at least one grammar feature in each lesson in an applied way: they will have to immediately apply various grammatical structures in conversation or written/oral exercises.

In order to give students more opportunity to practice speaking, each of them will also participate in at least one (team-) project during the quarter and will have to make a presentation in Spanish on a chosen topic.

One of the most important objectives of the course is also to teach students how to write better in Spanish, and prepare them to use this language in their professional careers in the future. For this purpose students will have to write a short essay (a paragraph) every week. The theme of the paragraph can also be the theme of the in-class discussion. The instructor will also organize (when necessary, at least once in a semester) writing labs, where students will be correcting each other thus learning from each other’s mistakes.
Grading

- Homework and/or Other Written Assignments (10 points)
- Grammar and Vocabulary Quizzes (3 x 10 points = 30 points)
- 2 Debates (2x5 = 10 points)
- Course Project (5 points)
- Final Oral Examination (10 points)
- Final Exam (Grammar/Vocabulary Test + Essay) (15 + 10 points = 25 points)
- Class Absences and Class Participation (10 points)

Class format: Class hours  3  Lab hours 0

Course materials and textbooks:

- Imagina (2007), Español sin barreras, Curso intermedio de la lengua española, Blanco-Tocaimaza-Hatch, Vista Higher Learning, Boston, Massachusetts
- Imagina, Student Activities Manual and Audio CDs

Additional books:

- Keith Chambers, Beginner’s Spanish Grammar, Teach Yourself Books (or any other grammar of the Spanish language)
- José Siles Artés: Historias para conversar – Nivel Medio; SGEL S.A. 2001
- ¿Adónde? Conocer España y los países hispanohablantes,S.C. Ramírez, Elli, 2005

An English-Spanish/Spanish-English dictionary is strongly recommended
The Global Economy and the Grassroots

Course Description
Economic globalization has given birth to global, grassroots social movements. This course examines how global economic integration is brought about through multilateral institutions, multinational corporations, outsourcing, trade agreements, international lending, and neoliberal reforms. We consider impacts (cultural, economic, and health) of these trends on employees, farmers, small businesses, consumers, and the environment in the developed and developing worlds (with special emphasis on Latin America). We examine beliefs, alternative visions, and strategies of grassroots movements responding to these challenges.

Course Objectives
1. Examine key vectors of economic globalization
2. Examine impacts (economic, environmental, social, and health) in different locales (with special emphasis on Latin America)
3. Examine grassroots responses to perceived negative impacts, including the formation of social movements with alternative visions (alter-globalization)

Learning Outcomes
Upon successful completion of this course, the students will be able to accomplish the following:
1. Describe key vectors of economic globalization
2. Describe various impacts of institutions and patterns in the global economy
3. Describe and appraise the activities of grassroots movements responding to these challenges

The instructor will assess student success in achieving these outcomes via an appropriate selection of class discussions, written assignments, research projects, and exams.

Program outcomes supported by this course:
For the Sociology and Anthropology program
1. Analyze regional and cultural diversity in the organization of human societies
2. Identify the roots of and mechanisms for the perpetuation of social inequalities
3. Examine the interplay between global and local social and cultural processes

For the International Studies program
1. Provide historical, ethnographic, and theoretical perspectives on globalization.
2. Develop knowledge of ethical principles in theory and practice that incorporate respect for persons, human rights, and cultural value systems.
3. Equip students with the ability to identify and analyze the impacts of global and international processes on world regions, populations, and societal systems.
General education outcomes supported by this course:
Upon completion of this course, the students will be able to:

1. Comprehend information accessed through reading and discussion
2. Analyze arguments, in relation to their premises, assumptions, contexts, and conclusions
3. Analyze similarities and differences in human experiences and consequent perspectives
4. Examine connections among the world’s populations
5. Identify contemporary ethical questions and relevant stakeholder positions

Grading

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<tr>
<td>First exam (in week 8)</td>
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<tr>
<td>Second Exam (in week 15)</td>
<td>20 pts</td>
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<tr>
<td>In Class Discussions 15 x 2</td>
<td>30 pts</td>
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<tr>
<td>Class participation</td>
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<td><strong>TOTAL</strong></td>
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Class format:  Class hours  3  Lab hours 0

Course materials and textbooks:

Below are sample texts from which appropriate chapters will be selected:

1. Wallach, Lori, and Patrick Woodall, Whose Trade Organization?
2. Hira, Ron, and Anil Hira, Outsourcing America
3. Lappý, Frances Moore and Anna Lappý, Hope's Edge
4. Pleyers, Geoffrey, and Alain Touraine, Alter-Globalization
7. Moberg, Mark, and Sarah Lyon, Fair Trade and Social Justice: Global Ethnographies
8. Thomas, Janet, The Battle in Seattle: The Story behind and beyond the WTO Demonstrations
9. Iglesias Prieto, Norma, Beautiful Flowers of the Maquiladora
10. Marcos, Subcomandante Insurgente, Our Word is Our Weapon: Selected Writings
11. Barlow, Maude and Tony and Clarke, Global Showdown
12. Ross, Andrew, ed., No Sweat

The main texts will be supplemented by other readings, more recent journal articles, and by films.
Documentary and feature films (video Presentations)
Course Description

The user experience is an important design element in the development of interactive systems. This course presents the foundations of user-centered design principles within the context of human-computer interaction (HCI). Students will explore and practice HCI methods that span the development lifecycle from requirements analysis and creating the product/service vision through system prototyping and usability testing. Leading edge interface technologies are examined. Group-based exercises and design projects are required.

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<td>80.00—82.99</td>
</tr>
<tr>
<td>C+</td>
<td>2.333 Grade Points</td>
<td>77.00—79.99</td>
</tr>
<tr>
<td>Grade</td>
<td>Grade Points</td>
<td>Range</td>
</tr>
<tr>
<td>-------</td>
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<tr>
<td>C</td>
<td>2.000</td>
<td>73.00—76.99</td>
</tr>
<tr>
<td>C-</td>
<td>1.667</td>
<td>70.00—72.99</td>
</tr>
<tr>
<td>D</td>
<td>1.000</td>
<td>60.00—69.99</td>
</tr>
<tr>
<td>F</td>
<td>0.0</td>
<td>0.00—59.99</td>
</tr>
</tbody>
</table>

**Class format:** Class hours 3 Lab

**Course materials and textbooks:**


ACM papers are posted in MyCourses, and listed as publications with a date in the Course outline.

** Texts available online, available free at Books 24 x 7 through Wallace Library.
Application Development

Course Description

In this course, students will gain experience with the processes, practices, and tools professional developers use to deliver robust and maintainable applications. Students will apply these practices and tools to build smaller-scale production-quality applications and systems. Topics include development life cycles, version control, test bed development and use, build utilities, error handling, deployment tools, and documentation.

Course Objectives

1. Development Methodologies and Models
2. Software Development Life Cycles
3. Working Together: Teams & Meetings
4. Version Control and Tools
5. Test Development, Methodologies and Tools
6. Build Utilities
7. Error Handling & Bug Tracking
8. Logging
9. Abstraction
10. Reverse Engineering & Refactoring
11. Behavior Driven Development
12. Events & State Machines
13. Application Deployment
14. Efficient Coding
15. Application Distribution
16. Help Systems
Grading

Your grade for this class will be based on practice exercises, homework assignments, a midterm exam, a midterm practical, a final exam, and a final practical. The weighting given to each of these components is shown in the following table:

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Team Project</td>
<td>35%</td>
</tr>
<tr>
<td>Exercises</td>
<td>15%</td>
</tr>
<tr>
<td>Exam #1</td>
<td>15%</td>
</tr>
<tr>
<td>Exam #2</td>
<td>15%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>20%</td>
</tr>
</tbody>
</table>

Your final letter grade will be assigned based on your final numeric grade as follows:

<table>
<thead>
<tr>
<th>Letter</th>
<th>Numeric Grade (G)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>93 ≤ G</td>
</tr>
<tr>
<td>A-</td>
<td>90 ≤ G &lt; 93</td>
</tr>
<tr>
<td>B+</td>
<td>87 ≤ G &lt; 90</td>
</tr>
<tr>
<td>B</td>
<td>83 ≤ G &lt; 87</td>
</tr>
<tr>
<td>B-</td>
<td>80 ≤ G &lt; 83</td>
</tr>
<tr>
<td>C+</td>
<td>77 ≤ G &lt; 80</td>
</tr>
<tr>
<td>C</td>
<td>73 ≤ G &lt; 77</td>
</tr>
<tr>
<td>C-</td>
<td>70 ≤ G &lt; 73</td>
</tr>
<tr>
<td>D</td>
<td>60 ≤ G &lt; 70</td>
</tr>
<tr>
<td>F</td>
<td>G &lt; 60</td>
</tr>
</tbody>
</table>

Class format: Class hours 3  Lab hours 0

Course materials and textbooks:

There is no required text for this course.
Cultures and Globalization

Course Description
This course explores critical issues of globalizing culture. How are ideas, attitudes, and values exchanged or transmitted across conventional borders? How has the production, articulation, and dissemination of cultural forms (images, languages, practices, beliefs) been shaped by global capitalism, media industries, communication technologies, migration, and tourist travels? How are cultural imaginaries forged, exchanged, and circulated among a global consumer public? How has the internationalizing of news, computer technologies, video-sharing websites, blogging sites, and other permutations of instant messaging served to accelerate cultural globalization? Students will be introduced to anthropological perspectives on cultural globalization, the transmission of culture globally, and the subsequent effects on social worlds, peoples, communities, and nations.

Course Objectives
After completing this course successfully, the students should be able to:

1. Demonstrate knowledge of the key perspectives, concepts, and terminologies of cultural globalization.
2. Identify appropriate application of analytical tools and fundamental models and methods of analysis for assessing global change and local consequences.
3. Demonstrate foundational knowledge of qualitative research skills, including ethnographic and/or sociological research methods, for the analysis of concrete social or political situations in a global context.
4. Demonstrate knowledge of the relative rights of peoples, cultures, and societies in a global context.
5. Correlate the dynamic relationships between the mandates of globalization, political interests, local traditions, and cultural transformations.

Learning Outcomes
Upon successful completion of this course, the students will be able to accomplish the following:

1. Analyze the interrelation between culture and globalization.
2. Identify anthropological approaches for assessing the making of global cultural imaginaries.
3. Comprehend the various routes whereby cultural practices and identities are globally circulated.
4. Analyze the mechanisms and principles of mediating culture in a global context.
5. Identify the political, economic, and social factors involved in the creation of global consumer cultures.
6. Evaluate and analyze the relation between globalization and national distinction through specific case studies of culture as a translocal commodity.
7. Assess transglobal cultural flows and the various appropriations of cultural forms.
8. Comprehend the role of the state in channeling, managing, and directing transnational cultural movements.
9. Identify the modes of global cultural production (signs, symbols, values, ideologies).
10. Evaluate the emergence of transglobal culture industries.
11. Evaluate the changing attitudes and competing demands for cultural commodities and ideologies on a global stage.
13. Identify, synthesize, and apply key theoretical perspectives (critical theory, cultural studies, discourse and power) to the analysis of cultural global issues.

Program outcomes supported by this course:

**International and Global Studies**

1. Provide historical, ethnographic, and theoretical perspectives on globalization.
2. Provide practical and effective communication and intercultural skills for a globalizing world.
3. Develop grounding in the methods for the empirical and scientific analyses of international and global processes.
4. Develop knowledge of ethical principles in theory and practice that incorporate respect for persons, human rights, and cultural value systems.
5. Equip students with the ability to identify and analyze the impacts of global and international processes on world regions, populations, and societal systems.

**Anthropology and Sociology**

1. To equip students with the ability to analyze the mutual interplay between society and the individual.
2. To enable students to analyze regional and cultural diversity in the organization of human societies.
3. To enable students to analyze the roots and mechanisms for the perpetuation of social inequalities.
4. To provide students with knowledge of the mutual interplay between global and local social and cultural processes.
5. To enable students to assess classical and contemporary theories about society and culture.
6. To enable students to assess and use appropriately qualitative and quantitative methods in the study of social and cultural phenomena.
7. To provide students with knowledge of how the perspectives, theories, methods, and accumulated knowledge within sociology, anthropology, or urban studies may be utilized to address contemporary social problems.

**General education outcomes supported by this course:**

Upon completion of this course, the students will be able to:

1. Express themselves effectively in common college-level written forms using standard American English.
2. Revise and improve written and visual content.
3. Express themselves effectively in presentations, either in spoken standard American English or sign language (American Sign Language or English-based Signing).
4. Comprehend information accessed through reading and discussion.
5. Analyze arguments, in relation to their premises, assumptions, contexts, and conclusions.
6. Construct logical and reasonable arguments that include anticipation of counter-arguments.
7. Use relevant evidence gathered through accepted scholarly methods and properly acknowledge sources of information.
9. Examine connections among the world's populations.
10. Apply methods of scientific inquiry and problem solving to contemporary issues.
11. Describe the potential and the limitations of technology.
12. Demonstrate creative/innovative approaches to course-based assignments or projects.
13. Interpret and evaluate artistic expression considering the cultural context in which it was created.

**Grading**
- First exam (in week 8) 35 points
- Second Exam (in week 15) 20 points
- In Class Discussions (15 x 2) 30 points
- Class participation 15 points
- TOTAL 100 points

**Class format:** Class hours 3 Lab hours 0

**Course materials and textbooks:**

Below are sample texts from which appropriate chapters will be selected:
- Pieterse, Jan Nederveen (ed) 2009 Globalization and Culture (Rowman and Littlefield).
- Gannon, Martin J. et al. (eds.) 2009 Understanding Global Cultures (Sage Publishers).

The main texts will be supplemented by other readings, more recent journal articles, and by films. Documentary and feature films (video Presentations).
Course Description

Database applications have aspects that need to be considered when designing and developing larger-scale systems. In this course students will explore topics such as concurrent processing, scalability, performance, and security within the context of developing larger-scale data/ base information processing systems. Programming projects are required (ISTE-330 Database Connectivity and Access). Class 3, Credit 3 (F)

Learning Outcomes

At the end of the course, the student will be able to

- Develop applications that maintain data integrity in multi-user database applications
- Describe and implement various locking schemes
- Describe and implement methods for controlling user access
- Develop database applications that interact with other systems
- Analyze and architect effective, user-centric solutions within information-intensive environments
- Develop and deploy n-tier, integrated, user-centric computing systems

Grading

<table>
<thead>
<tr>
<th>Grade item</th>
<th>Percent of overall grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Team Project</td>
<td>30%</td>
</tr>
<tr>
<td>Individual Assignments (2)</td>
<td>20%</td>
</tr>
<tr>
<td>Video</td>
<td>10%</td>
</tr>
<tr>
<td>Peer eval</td>
<td>10%</td>
</tr>
<tr>
<td>Final report documentation and presentation</td>
<td>20%</td>
</tr>
<tr>
<td>Attendance</td>
<td>10%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>
Letter grades correspond to the following percentages and Grade Points

<table>
<thead>
<tr>
<th>Grade</th>
<th>Quality Points Earned</th>
<th>Percentage</th>
</tr>
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<tbody>
<tr>
<td>A</td>
<td>4.000 Grade Points</td>
<td>94.00—100.00</td>
</tr>
<tr>
<td>A-</td>
<td>3.667 Grade Points</td>
<td>90.00—93.99</td>
</tr>
<tr>
<td>B+</td>
<td>3.333 Grade Points</td>
<td>87.00—89.99</td>
</tr>
<tr>
<td>B</td>
<td>3.000 Grade Points</td>
<td>83.00—86.99</td>
</tr>
<tr>
<td>B-</td>
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<td>80.00—82.99</td>
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<td>C+</td>
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<td>C</td>
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<td>73.00—76.99</td>
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<td>D</td>
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</tr>
<tr>
<td>F</td>
<td>0.0 Grade Points</td>
<td>0.00—59.99</td>
</tr>
</tbody>
</table>

**Class format:**  Class hours  3  Lab hours 0

**Course materials and textbooks:** No textbooks required.