

**RIT CROATIA PROGRAM OUTLINE FOR ACADEMIC YEAR 2021/2022**

**PROGRAM TITLE:** **WEB AND MOBILE COMPUTING - ZAGREB**

**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

**EFFECTIVE FOR:** Students enrolled in AY 2021/22

## 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.

- 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.
- 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.
- 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.

- A suspended student cannot enroll in any credit or non-credit course at the university while on suspension. This also includes co-ops.
- A suspended student may not be admitted to another program while suspended.
- 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

WMC Graduation requirements

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

- A Cumulative Grade Point Average (GPA) of 2.00 based on the US credits system
- Satisfactory completion of the Capstone Course
- Completion of 126 US credits for the US degree and 240 ECTS for the Croatian degree
- Satisfactory completion and grade for the required co-ops in duration of 800 working hours
- 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 (all students enrolled as of 2016 receive a Bachelor of Science (B.S.) degree in Web and Mobile Computing). 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. LIST OF OTHER STUDY PROGRAMS FROM WHICH THE ECTS POINTS COULD BE EARNED

Hospitality and Tourism Management

International Business

## 7. PROGRAM LEARNING OUTCOMES

### Discipline Specific Learning Outcomes

WMC1	Identify and analyze a problem and define the computing requirements appropriate to its solution
WMC2	Communicate effectively with a range of audiences about technical information
WMC3	Identify and implement basic principles and methods of computer information systems to different areas of application
WMC4	Identify and analyze user needs and take them into account in the selection, integration and evaluation of computer-based systems
WMC5	Evaluate user-friendly software components with user-centered design methods
WMC6	Design, implement, and evaluate a computer-based solution to meet a given set of computing requirements.
WMC7	Formulate informed judgements determined by legal, ethical, societal and security principles involved in computing practices
WMC8	Function effectively on teams to establish goals, plan tasks, meet deadlines, manage risk, and produce deliverables
WMC9	Analyse, create and deploy complex software solution

## General Education Learning Outcomes

COMM1	Use standard American English in common college-level written forms and in presentations.
COMM2	Interpret information and ideas accessed through reading
CRTHINK1	Use relevant evidence gathered through accepted scholarly methods and properly acknowledge sources of information
CRTHINK2	Analyze and construct arguments considering their premises, assumptions, contexts, and conclusions, and anticipate counterarguments, in order to reach sound conclusions based on logical analysis of evidence.
Artistic	Interpret and evaluate artistic expression considering the cultural context in which it was created
Ethical	Identify contemporary ethical questions and relevant positions
Global	Examine connections among the world's populations
Math	Interpret, apply and evaluate mathematical or statistical information
Natural Science	Apply methods of scientific inquiry and problem solving to contemporary issues and scientific questions
Scientific Principles	Apply basic principles and concepts of one of the natural sciences
Social	Analyze similarities and differences in human social experiences and evaluate the consequences

## 8. LIST OF COURSES

### FALL SEMESTER

Course No. Course Name Credits ECTS

#### YEAR 1

ISTE-120	Computational Problem Solving in the Information Domain I	4	6
ISTE-140	Web & Mobile I	3	6
NMDE-111	New Media Design Digital Survey I	3	6
MATH-131	Discrete Mathematics	4	5
PHIL-101	Introduction to Philosophy	3	5
YOPS-10	RIT 365: RIT Connections	0	0

#### YEAR 2

NSSA-290	Networking Essentials for Developers	3	5
ISTE-222	Computational Problem Solving in the Information Domain III	3	6
ISTE-260	Designing the User Experience	3	5
UWRT-150	FYW: Writing Seminar	3	5

#### CHOOSE 1 LANGUAGE COURSE BELOW:

MLSP-201	Beginning Spanish 1	4	5
MLFR-201	Beginning French 1	4	5
MLIT-201	Beginning Italian 1	4	5
MLRU-201	Beginning Russian 1	4	5
MLGR-201	Beginning German 1	4	5

#### YEAR 3

ISTE-341	Server Programming	3	6
ISTE-422	Application Development Practices	3	6
PSYC-101	Introduction to Psychology	3	5
ENGL-210	Literature, Culture and Media	3	5

#### CHOOSE 1 OF THE FOLLOWING OPTIONS:

##### OPTION 1: LANGUAGE IMMERSION (MUST)

MLSP-301	Intermediate Spanish 1	3	4
MLFR-301	Intermediate French 1	3	4
MLIT-301	Intermediate Italian 1	3	4
MLRU-301	Intermediate Russian 1	3	4
MLGR-301	Intermediate German 1	3	4

OR

##### OPTION 2: ONLY IF NOT COMPLETING A LANGUAGE IMMERSION

FREE	FREE ELECTIVE (CHOOSE ANY COURSE)	3	5
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#### YEAR 4

ISTE-454	Concentration Mobile 1: Mobile Applications Development I	3	6
ISTE-500	Senior Development Project I	3	6
ENVS-151	Scientific Inquiries in Environmental Science	4	5
PSYC-223	Cognitive Psychology	3	5
ANTH-328	Heritage and Tourism	3	5

OR

FREE	Free Elective (choose any course)	3	5
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### SPRING SEMESTER

Course No. Course Name Credits ECTS

ISTE-121	Computational Problem Solving in the Information Domain II	4	6
ISTE-240	Web & Mobile II	3	6
ISTE-230	Introduction to Database and Data Modeling	3	6
MATH-161	Applied Calculus	4	5
UWRT-100	Critical Reading and Writing	3	5

SWEN-383	Software Design Principles and Patterns	3	6
ISTE-252	Foundations of Mobile Design	3	5
ISTE-330	Database Connectivity and Access	3	6
ISTE-340	Client Programming	3	6
ISTE-099	Second Year Seminar	0	0

#### CHOOSE 1 LANGUAGE COURSE BELOW:

MLSP-202	Beginning Spanish 2	4	5
MLFR-202	Beginning French 2	4	5
MLIT-202	Beginning Italian 2	4	5
MLRU-202	Beginning Russian 2	4	5
MLGR-202	Beginning German 2	4	5

	Co-op 1	0	12
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ENVS-150	Ecology of the Dalmatian Coast	4	5
PHIL-401	Great Thinkers	3	5
ISTE-442	Concentration Web 1: Secure Web Application Development	3	6
ISTE-444	Concentration Web 2: Web Server Development and Administration	3	6

#### CHOOSE 1 OF THE FOLLOWING OPTIONS:

##### OPTION 1: LANGUAGE IMMERSION (MUST)

MLSP-302	Intermediate Spanish 2	3	4
MLFR-302	Intermediate French 2	3	4
MLIT-302	Intermediate Italian 2	3	4
MLRU-302	Intermediate Russian 2	3	4
MLGR-302	Intermediate German 2	3	4

OR

##### OPTION 2: PSYCHOLOGY IMMERSION (MUST)

PSYC-225	Social Psychology	3	5
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	Co-op 2	0	12
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ISTE-456	Concentration Mobile 2: Mobile Applications Development II	3	6
ISTE-501	Senior Development Project II	3	6
PHIL-401	Great Thinkers	3	5
PSYC-221	Abnormal Psychology	3	5
FREE	Free Elective (choose any course)	3	5

# **YEAR 1 – COURSE DESCRIPTIONS**

## Computational Problem Solving in the Information Domain I

### 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 when 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 method

## Grading

Homework Assignments	20%
Labs	20%
Practical Exam 1	5%
Practical Exam 2	10%
Practical Exam 3	15%
Practical Exam 4	15%
Comprehensive Theory Exam	15%
<b>Total</b>	<b>100%</b>

## Class format:

Class hours 4 Lab hours 2

## Course materials and textbooks:

“Big Java: Compatible with Java 5, 6 and 7” by Cay S. Horstmann

## Web & Mobile I

### Course Description

This class provides an introduction to key Internet, web, and multimedia technologies, as well as familiarity with the Unix/Linux computer platform. Topics covered include computer-mediated communication, basic Internet applications such as SSH, SFTP, and the web, basic digital image techniques, and web page development and publishing.

### Course Objectives

This course provides a basic introduction to Internet technologies and web development as well as a foundation for a variety of downstream IT core courses.

### Specific Objectives

Upon course completion, students will have a working knowledge of:

- Key individuals and events in the development of the Internet and the World Wide Web
- Internet search techniques
- Internet protocols and tools, including SSH and SFTP
- Basic Unix file and directory management tasks
- Digital content types, including file formats, resolution, color models, and compression
- Imaging software to create graphic elements and composite images
- HTML and CSS web page development
- How to identify and implement basic graphic design principles including contrast, alignment, proximity, repetition, and effective use of color and type
- Cross-browser addressing issues

### Learning Outcomes

By the end of this course, students will be able to:

- Build a multi-page web site with embedded graphics and media
- Apply appropriate design principles to a site structure and its functionality
- Create/modify graphics for web site inclusion
- Work remotely on the web server using the Unix/Linux-based operating environment
- Apply web page design and layout design techniques adaptable to different screen sizes and resolutions and a variety of devices
- Install and publish websites on a web server

### Grading:

Project 1	10%
Project 2	15%

Project 3	15%
Quizzes	10%
Homework	10%
Midterm Exam	10%
Midterm Practical	10%
Final Exam	10%
Final Practical	10%
<b>Total</b>	<b>100%</b>

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

**Course materials and textbooks:**

The following text is optional, but suggested for reference:

- Web Development & Design Foundations with HTML5, 8th edition by Felke-Morris, © 2016 Pearson, Inc. ISBN-13: 978-0134322759

## New Media Design Digital Survey I

### Course Description

This project-based course is an investigation of the computer as an illustrative, imaging, and graphical generation tool. It develops foundational design skills in raster and vector image creation, editing, compositing, layout and visual design for online production. Emphasis will be on the application of visual design organization methods and principles for electronic media. Students will create and edit images, graphics, layouts, and typography to form effective design solutions for online delivery.

### Course objectives

- Introduce the fundamental creative principles for generating digital content and designs that communicates concise and impactful visual messages
- Understand the technical principles and tools of digital graphics
- Introduce principles and methods of visual organization, design and graphic analysis
- Develop skills that allow the student to decide the best options to generate and output content for digitally based imagery and design
- Develop visual solutions using observational drawing, sketching, image manipulations well as photographic techniques and imagination
- Develop solutions that reflect semiotic concerns of effective communication including aesthetic considerations, appropriate concept development and pragmatic concerns
- Understand the ethics and copyright issues of digital graphics.

### Learning outcomes

- Demonstrate content creation methods using image and graphical manipulation
- Demonstrate effective design solutions using complex imagery, layout and typographical elements
- Evaluate the use and effectiveness of imaging, visual design solutions and aesthetic qualities
- Understand and display creative and conceptualization skills through research and documentation
- Demonstrate visual solutions and content creation for editorial design problems
- Apply visual design elements, principles, imagery and layouts to interactive creative problems
- Generate effective visual graphics for user interface elements and icons.

**Grading:**

Project 1	15%
Project 2	15%
Project 3	15%
In-Class Exam	15%
Practical Exams	10%
Lab Assignments	20%
Homework	10%
<b>Total</b>	<b>100%</b>

**Class format:** Class hours 2 Lab hours 3

**Course materials and textbooks:**

- Brian Wood, Adobe Illustrator Classroom in a Book (2021 release)
- Conrad Chavez, Andrew Faulkner, Adobe Photoshop Classroom in a Book (2021 release)
- Mark Geller, "Introduction to Photography: A Visual Guide to the Essential Skills of Photography and Lightroom", 2015;
- Robert Bringhurst, "The Elements of Typographic Style", 2004;

## Discrete Mathematics

### Course Description:

This course is 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

First Test	30%
Second Test	30%
Final test	30%
Att. & Part.	10%
<b>Total</b>	<b>100%</b>

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:**

- S. Lipschutz and M. Lipson, Discrete Mathematics, Schaums's Outlines, Third Edition, ISBN 978-0-07-161586-0.
- W. D. Wallis, A beginner's Guide to Discrete Mathematics, Birkhäuser, ISBN 0-81764-269-2.
- J. Molluzzo and F. Buckley, A First Course in Discrete Mathematics, Waveland Press, Inc., ISBN 0-88133-940-7.

## Introduction to Philosophy

### Course Description

This course introduces students to some of the major problems, methods and insights of philosophy with readings from both classical and contemporary sources (Plato, Descartes, Thomas Aquinas, Dostoevsky, et al.) and detailed discussions. The focus of Introduction to Philosophy is primarily not on finding definite answers on hard questions, but rather on formulating the questions and understanding the method of answering them; 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.

### Course Objectives

The course aims to introduce analytical and creative thinking in general rather than a survey of philosophical disciplines, their methods, doctrines and leading ideas. Instead of trying to give an all-embracing account of different forms philosophy has assumed throughout its long history we shall focus on several characteristic examples illustrating how classical and modern thinkers formulate their questions and how they grapple with their 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.

### Learning outcomes:

The main expected outcomes of this course are:

- to become skillful in reading and interpreting philosophical texts (rightly considered as belonging to the category of the most complex intellectual products);
- to become familiar with major philosophical problems and the methods of handling them;
- to be able to adopt "philosophical attitude" as an elevated form of human curiosity and resistance to any kind of dogmatism.

### Grading

- |  |        |
|--|--------|
| ● 2 Exams  | 35 pts |
| ● Research Project   | 35 pts |
| ● Class participation (active participation in class discussions and writing comments on class material) | 30 pts |

### Class format



## Course materials and textbooks:

Reading philosophical texts is very different from reading a novel or a newspaper article. Quickness and quantity in reading do not value in philosophy as much as proper understanding of the problems, good insight into the questions and an awareness of different interpretive possibilities. Thus, it is always better to read less material thoroughly than to cover more readings superficially. Careful reading takes time and requires concentration.

The course material consists of the following elements:

- The collection of reading materials available on line in Mycourses. The collection includes the following texts:
  - Descartes, *Meditations* (selection)
  - D. Chalmers, *The Matrix as Metaphysics*
  - Paul, “Hymn of love”
  - Plato, *Symposium* (selection)
  - J. Lear, *Freud* (selection)
  - Anselm, *Proslogion* (selection)
  - Th. Aquinas, *Summa theologiae* (selection)
  - R. Dawkins, *The God Delusion* (selection)
  - Th. Nagel, *What does it all mean?* (selection)
  - B. Libet, “Do we have free will?”
- Additional online sources:
  - RIT Databases (Wallace Library)
  - Stanford Encyclopedia of Philosophy
  - Classical Texts on the Internet ([www.classics.mit.edu](http://www.classics.mit.edu))
- Films.

## Course Description

RIT 365 students participate in experiential learning opportunities designed to launch them into their career at RIT, support them in making multiple and varied connections across the university, and immerse them in processes of competency development. The core of this course is the Plan-Do-Reflect Cycle, comprised of strategizing for an impending action, engaging in the action or activity, and thoughtfully considering the implications of the action in which they engaged. Students will receive feedback and develop a personal plan for future action in order to develop foundational self-awareness and recognize broad-based professional competencies.

## Learning Outcomes:

- Students are engaged with the RIT community by participating in the following:
  - The Experiential Learning Process (Plan-Do-Reflect) during campus experiences;
  - Dialogue related to Super Speaker events.
- Students have a positive impact on the community by:
  - Engaging in reflective dialogue;
  - Contributing their knowledge and experiences to the group experience.
- Students have a connection to an RIT community member (faculty, staff or alumni) by:
  - Attending and contributing to dialogue related to Super Speaker events;
  - Engaging in reflective dialogue at least once during the semester in coaching appointments.
- Students develop foundational self-awareness through the following activities:
  - Meeting with their RIT 365 facilitator to reflect on their first-year experiences;
  - Documenting skills and competencies gained in their first year in an online portfolio.
- Students are able to use intentional strategies (tools) to enhance their personal growth through:
  - Determine potential tools to aid in personal development, and plan for current and future decisions;
  - Planning to gain skills and competencies in addition to those, they document in an online portfolio, identifying tools necessary to gain those skills and competencies.
- Students will develop a plan to build broad-based professional competencies (including communication, critical thinking and collaboration) by:
  - Identify competencies they intend to build, and create a plan for competency development;

**Grading:** This is a pass/fail course. Students will receive a passing grade by:

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- Attending class and participating
- Attending a Super Speaker event
- Writing a Six Word Story
- Completing 4 Individual Experience Assignments
- Attending a 365 Coaching session

**Class format:** Class hours 1, lab hours 0

**Course materials/resources:**

SIS: <https://www.rit.edu/infocenter/>

MyCourses: <https://mycourses.rit.edu/>

Wallace Library: <https://library.rit.edu/>

Study Tool Kit: <https://www.rit.edu/studentaffairs/asc/quick-links/study-tool-kit>

## Computational Problem Solving in the Information Domain II

### 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 up-stream 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 [SEP]
- 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 [SEP]

#### 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. [SEP]
- Be able to design and implement a fairly large project as part of a team. [SEP]

## Grading

Homework assignments	25%
Lab assignments	10%
Practical Exam 1	10%
Practical Exam 2	15%
Practical Exam 3	15%
Final Theory Exam	5%
Final Project	20%
<b>Total</b>	<b>100%</b>

**Class format:** Class hours 4 Lab hours 2

## Course materials and textbooks:

“Big Java: Compatible with Java 5, 6 and 7” by Cay S. Horstmann

## Web & Mobile II

### Course Description

This course builds on the basics of web page development that are presented in *Web & Mobile 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.

**Prerequisites:** ISTE-120 and ISTE-140 or equivalent course.

### Course Objectives

Among others, following topics will be covered in this course:

- Web and Mobile Design, CSS Positioning and Responsive Design
- Information Architecture and the DOM
- CSS Frameworks
- JavaScript, JavaScript Libraries, Client-Side Form Validation
- Introduction to PHP, Server-Side Form Validation
- AJAX with JavaScript and PHP
- Database Connectivity, MySQL, phpMyAdmin

### Learning Outcomes

By the end of this course, the student should be able to:

- Demonstrate proficiency in web site design, planning and documentation as part of a team.
- Use information design, graphics, and markup languages to create medium scale web sites.
- Use client side programming such as JavaScript and the document object model to create dynamic and interactive web pages.
- Use server side programming and databases to improve site performance, modularization, and separation of logic from data.
- Use the HTTP protocol to properly submit, validate and process user input data.

### Grading

Assignments (Homework & In-Class)	20%
Individual Projects	40%
Group Projects	25%
Final Practical	15 %
<b>TOTAL:</b>	<b>100 %</b>

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

## **Course Materials and Textbooks**

This course does not require any textbooks. All required readings will be from digital media and will be linked or posted on myCourses.

## Intro to Database and Data Modeling

### 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.

### General course goals

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.

Homework	40% (equal weighting)
Midterm Exam	15%
Midterm Practical	15%
Final Exam	15%
Final Practical	15%
<b>Total</b>	<b>100%</b>

**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:

- Kroenke, David M. and Auer, David J., *Database Concepts* (7<sup>th</sup> Edition)  
Pearson Prentice-Hall, Upper Saddle River, NJ, 2014.  
ISBN-13: 978-0133544626
- Fehily, Chris, *SQL Visual QuickStart Guide* (3<sup>rd</sup> Edition),  
Peachpit Press, Berkeley CA, 2008.  
ISBN-13: 978-0321553577



## Applied Calculus

### 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.

### Course objectives

- 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.

### Learning outcomes

- Define concepts of calculus. Solve calculus problems.
- Apply calculus to problems in business, economics and the medical sciences.

### Grading

First Exam	21%
Second Exam	21%
Third Exam	21%
Final Exam	21%
Class Participation	16%
<b>Total</b>	<b>100%</b>

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 2 Lab hours 2

### Course materials and textbooks:

- Ronald J. Harshbarger and James J. Reynolds; Mathematical Application for the Management, Life, and Social Sciences; Eighth Edition; Houghton Mifflin Company; 2007; ISBN 0-618-65421-6 eBook ISBN-10: 0-618-75563-2
- Ronald J. Harshbarger and James J. Reynolds; Student Solutions Manual; Eighth Edition; Houghton Mifflin Company; 2007; ISBN 0-618-67692-9
- Tan, Applied Calculus For the Managerial, Life, and Social Sciences, Brooks/Cole, Pacific Grove, CA

## Critical Reading & Writing

### Course Description

Critical Reading & Writing is a one-semester, three-credit course designed to help students improve their critical reading and writing skills. Students will learn how to think critically and how to articulate, support, defend, and refute an argument. Furthermore, students will gain insight into the writing process, from choosing the right words, forming effective sentences, and organizing paragraphs, to planning, drafting, and revising their work. Special attention will be given to sentence grammar, clarity, and punctuation. By exploring different genres, students will learn how writers employ basic features and strategies of a genre to reflect different rhetorical purposes. All of this will help students develop their literacy practices that will be further strengthened in their First-Year Writing Seminar. The course also emphasizes the principles of intellectual property and academic honesty. Finally, peer review activities will help students learn how to critique their own and the work of others in order to become more independent and competent readers and writers.

### Course objectives

- develop critical thinking
- develop argumentation
- develop critical reading skills
- develop writing skills

### Learning outcomes

Students will

- be able to articulate, support, defend, and refute an argument,
- be able to critically assess different sources of information,
- be able to plan, draft, and revise their written work,
- be able to apply grammar and punctuation rules appropriately and effectively,
- be able to write clearly at sentence and text level and to avoid redundancy,
- be able to write texts from a range of genres and for different audiences,
- understand the importance of academic honesty,
- be able to paraphrase the ideas of other writers and cite carefully selected sources in order to avoid plagiarism,
- receive feedback from their peers and give feedback to their peers.

## Grading

Reading Assignment I	5%
Quiz	10%
Punctuation Test	10%
Paper I Draft	10%
Paper I Peer Review	5%
Paper I Final	10%
Reading Assignment II	5%
Writing Assignment I	5%
Reading Assignment III	5%
Writing Assignment II	5%
Paper II Draft	10%
Paper II Peer Review	5%
Paper II Final	10%
Class Attendance and Participation	5%
<b>Total:</b>	<b>100%</b>

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

## Course materials and textbooks:

### Required texts and resources:

- Hacker, D., & Sommers, N. (2015). *A writer's reference* (8th ed.). Boston, MA: Bedford/St. Martin's.
- Lunsford, A. A. (2010). *The St. Martin's handbook*. Boston, MA: Bedford/St. Martin's.

### Suggested texts and resources:

- Anker, S. (2010). *Real writing with readings*. Boston, MA: Bedford/St. Martin's.
- Casagrande, J. (2014). *The best punctuation book, period*. Berkley, CA: Ten Speed Press.
- Scarry, S., & Scarry, J. (2011). *The writer's workplace with readings. Building college writing skills*. Boston, MA: Wadsworth.
- VanderMey, R., Meyer, V., Van Rys, J., & Sebranek, P. (2012). *The college writer: A guide to thinking, writing, and researching*. Boston, MA: Wadsworth.

# **YEAR 2 – COURSE DESCRIPTIONS**

## Computational Problem Solving in the Information Domain III

### Course Description

The third course in the programming sequence expanding the student's knowledge base of higher-level programming concepts including data structures, algorithm development and analysis, Big-O notation, directed graphs, priority queues, performance, and a greater understanding of how complex software can more easily be designed. Programming assignments are required.

### Course Objectives

The purpose of this course is to advance the student's understanding of the use of data structures in designing a system and other programming related concepts. This includes algorithm development, proper application of data structures, software performance and a greater understanding of advanced programming algorithms are fundamental for developing more efficient software in less time.

### Learning Outcomes

After successfully completing this course, students will understand and be able to use different data structures and analyze the complexities of applied algorithms, in accordance with the following learning outcomes:

- Identifying different forms of data records in the computer and knowing how to use them depending on the purpose and need
- Assessing aspects and ways of memory management and ways of storing different data structures
- Analyzing programming algorithms in computer programs in the context of their execution time and efficiency and evaluating their complexity (Big-O)
- Distinguishing, comparing and applying different more advanced data structures in problem solving
- Developing different algorithms over data structures with emphasis on sorting and search algorithms
- Developing computer programs in which appropriate data structures and algorithms are derived

### Course Outline

- Intro to Data Structures and Algorithmic Complexities
- Number Systems and Storing Data in Computers
- Memory Management
- Java and OOP Review
- Algorithm Analysis
- Scaling applications and Timing for analysis
- Performance and Efficiency
- Timing and Big-O notation

- Advanced Data Structures: Arrays, Linked Lists (Singly, Doubly, Circularly), Array Lists, Dynamic Array, Positional Lists, Stack, Queues and Deques, Trees, Maps and Hash Tables, Search Trees, Priority Queues, Graphs, Producer / Consumer (optional)
- Sorting, searching, and other algorithms

## Grading

Exercises (homework and labs)	60%
Midterm exams (theory and practical)	20%
Final exams (theory and practical)	20%
<b>Total</b>	<b>100%</b>

## Class format:

Class hours 3, Lab hours 0

## Course materials and textbooks:

None required.

## 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

Requirements Analysis	Diffusion of Innovations
Research Methodologies	Design life cycles
Usability Goals	Cognitive Psychology
Personas	User Profiles
Task Analysis and decomposition	Heuristic Evaluations
Universal/Global/Accessibility/Assistive Technologies	Mobile/Pervasive
GUI design	Usability Testing

### Learning outcomes

<b>Upon Successful completion of this course the student will be able to:</b>	<b>Assessment Method</b>
Analyze the usability of consumer products and determine barriers that interfere with product use	Written assignments, class exercises
Distinguish among the types of methods for gathering information for requirements.	Written Assignments, Exam and project
Analyze and interpret the data collected to develop appropriate requirements to be used in product design.	Projects and design document
Develop and use personas and task scenarios to formulate and write usability goals	In-class exercises, and projects
Iteratively design and prototype an interactive system.	In-class exercises, and projects
Perform and document a heuristic evaluation.	In class exercises and Written assignment.
Work effectively in small teams.	In Class Exercises and Group projects.
Communicate effectively – written, oral, listening, non-verbal cues. Assessed through written assignments and presentations.	In-class exercises, written assignments, and projects.

## Grading

Individual Project (assessed at 3 intervals during the semester)	40%
Final report documentation and presentation (presented and submitted during the Final Exam Period)	10%
Individual and Class Assignments (about 10 total)	40%
Video Assignment (1 assignment)	10%
<b>Total</b>	<b>100%</b>

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

## Course materials and textbooks:

- Norman, Donald. *The Design of Everyday Things*. NY: Currency and Doubleday, 2002. ISBN 0-385-26774-6 (May be available online)
- Saul Greenbert, Sheelagh Carpendale, Nicolai Marquardt, Bill Buxton. *Sketching the User Experiences: The workbook*. Morgan Kaufmann Publishers, 2011. ISBN 0-123-81959-8
- Jeff Johnson. *Designing with the mind in Mind*. Morgan Kaufmann Publishers, 2ed. 2011. ISBN:0-124-07914-8

All other reading assignments will be available free at Books 24 x 7 through Wallace Library.



## Networking 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:

Midterm Exam	25%
Final Exam	25%
Quizzes (5 each)	20%
Homework #1	15%
Homework #2	15%
<b>Total</b>	<b>100%</b>

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

## Course materials and textbooks:

- Networking Essentials (3rd Edition) - Jeffrey S. Beasley, PiyasatNilkaew

## Writing Seminar

### Course Description

This class is an intensive introduction to researched writing. Students will develop proficiency in analytical writing, critical reading and critical thinking, by writing within a variety of contexts and with a variety of purposes. Students will develop writing strategies and research skills that they will draw on throughout their academic careers. There will be particular attention to the writing process including an emphasis on teacher- student conferencing, self-assessment, class discussion, peer review, formal and informal writing, research and revision.

### Course objectives

- to have students learn appropriate writing process strategies: pre-writing, composing and revising, editing, and consideration of audience and purpose
- to teach students to employ critical and creative thinking skills for self-assessment and reflection on the writing process
- to provide students with the appropriate grammatical and mechanical structures to support the development of their writing and to successfully express meaning
- to have students read advanced college-level texts for the purposes of discussion and composition
- to teach students to collaborate with peers and learn how to supply effective feedback
- to provide students with the skill for using a range of technologies to address different audiences

### Learning outcomes

Students will:

- understand the importance of academic honesty,
- proficiently use APA for citing and referencing,
- be able to paraphrase the ideas of other writers and cite carefully selected sources in order to avoid plagiarism,
- be able to find information and choose the right sources,
- be able to write a research paper,
- receive feedback from their peers and give feedback to their peers,
- be able to present their research.

**Grading**

Topic Presentation	5
Credibility Quiz	10
Working Bibliography	5
Short Draft	5
Peer Review 1	5
Integration Quiz	10
Annotated Bibliography	15
Long Draft	10
Peer Review 1	5
Paper Presentation	5
Final Paper	20
Participation	5
<b>Total</b>	<b>100</b>

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

**Course materials and textbooks:**

- American Psychological Association. (2020). *Publication manual of the American Psychological Association* (7<sup>th</sup> ed.).
- Hacker, D., & Sommers, N. (2015). *A writer's reference* (8<sup>th</sup> ed.). Bedford/St. Martin's.
- Scarry, S., & Scarry, J. (2011). *The writer's workplace with readings. Building college writing skills*. Wadsworth.
- Winkler, A. C., & McCuen-Metherell, J. R. (2008). *Writing the research paper. A handbook*. Wadsworth.

## Beginning Spanish I

### 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 20)	60 points
Oral In-class Examination (2 x 5)	10 points
Final Oral Exam	10 points
Class Absences and Class Participation	10 points
<b>Total</b>	<b>100 points</b>

**Class format:** Class hours 2 Lab hours 2

**Course materials and textbooks:**

- PLAZAS, Lugar de encuentros, Robert Hershberger, Susan Navey-Davis, Guiomar Borrás Álvarez, Fifth edition, CENGAGE Learning.
- PLAZAS, Lugar de encuentros, Student Activities Manual, fifth edition
- MindTap for Plazas, fifth edition, Cengage

**Additional books:**

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

## 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:

Homework and/or Other Written Assignments	10 points
Quizzes (3 quizzes) (3 x 20)	60 points
Oral In-class Examination (2 x 5)	10 points
Final Oral Exam	10 points
Class Absences and Class Participation	10 points
<b>Total</b>	<b>100 points</b>

**Class format:** Class hours 2 Lab hours 2

**Course materials and textbooks:**

- DEUTSCH HEUTE, INTRODUCTORY GERMAN, Tenth Edition, Moeller, Adolph, Hoecherl-Alden, Berger, Huth, Heinle, Cengage Learning
- DEUTSCH HEUTE, Premium Website
- DEUTSCH HEUTE, Student Activities Manual
- <http://dict.tu-chemnitz.de/> (Beolingus-Your Online Dictionary)



## Beginning Italian 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 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 20)	60 points
Oral In-class Examination (2 x 5)	10 points
Final Oral Exam	10 points
Class Absences and Class Participation	10 points
<b>Total</b>	<b>100 points</b>

**Class format:** Class hours 2 Lab hours 2

**Course materials and textbooks:**

- Oggi in Italia, a first course in Italian, by Merlonghi, Merlonghi, Tursi and O'Connor – Houghton Mifflin Company, 9th Edition, HEINLE CENGAGE Learning, 2012
- Oggi in Italia, Student Activities Manual, 9th edition, HeinleCengage Learning, 2012
- Oggi in Italia, Instructor's Resource Manual, 7th edition, HeinleCengage Learning, 2012

**Additional course material:**

- Sentieri – Julia M. Cozzarelli – Vista Higher Learning, 2020.
- Progettoitaliano 1 – S. Magnelli, T. Marin – Edilingua
- Italian Grammar in Practice - Susanna Nocchi - Alma Edizioni Firenze
- Ecco! Grammaticaitaliana - Claudio Manella - Progetto Lingua Firenze
- Grammaticaessenzialedella lingua italiana – Marco Mezzadri - Guerra edizioni Perugia
- Cantachetipassa, impararel'italiano con le canzoni, Ciro Massimo Naddeo e GiulianaTrama,
- ALMA Edizioni, 2000
- Cinema italiano, imparal'italiano con i film, ALMA Edizioni, Firenze, a cura di Ciro Massimo Naddeo e Alessandro De Giuli, EdizioneRedux

## Beginning Russian 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 Russian 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 Russian-speaking countries. Students must take a placement exam if this is their first RIT class in Russian and they have some prior study of Russian. 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 Russian 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 Russian 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 Russian 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 Russian speaking countries.

### Grading

The following categories will determine your grade:

Homework and/or Other Written Assignments	10 points
Quizzes (3 quizzes) (3 x 20)	60 points
Oral In-class Examination (2 x 5)	10 points
Final Oral Exam	10 points
Class Absences and Class Participation	10 points
<b>Total</b>	<b>100 points</b>

**Class format:** Class hours 2 Lab hours 2

**Course materials and textbooks:**

- „Golosa“ – A Basic Course in Russian by Richard Robin et al., fifth edition, Pearson
- „Golosa“ –Student Activity Book
- „Golosa“ - CDs

<http://www.gwu.edu/~slavic/golosa/golosa.htm>

## Beginning French I

### Course description

This course introduces the French language and the culture of French speaking countries to beginners, and provides a basic foundation in all skills in French (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 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 France and French 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 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:

Homework and/or Other Written Assignments	10 points
Quizzes (3 quizzes) (3 x 20)	60 points
Oral In-class Examination (2 x 5)	10 points
Final Oral Exam	10 points
Class Absences and Class Participation	10 points
<b>Total</b>	<b>100 points</b>

**Class format:** Class hours 2 Lab hours 2

**Course materials and textbooks:**

- Horizons, 6th edition by Manley, Smith, McMinn, and Prévost
- Horizons, Workbook/Lab Manual—available online via QUIA
- Text Audio CDs & Resources available through the Heinle Learning Center (iLrn)

**Additional course material:**

- Les 500 Exercices de phonétique A1/A2 – Hachette, 2009
- Nouvelle grammaire du français: Cours de Civilisation Française de la Sorbonne – Y. Dellatour, D. Jennepin, M. Léon-Dufour, B. Teyssier, Hachette, 2004

## Foundations of Mobile Design

### Course Description

This course is an introduction to designing, prototyping, and creating applications and Web Apps for mobile devices. These devices include a unique set of hardware and communications capabilities, incorporate novel interfaces, are location aware, and provide persistent connectivity. Topics covered include user interaction patterns, connectivity, interface design, software design patterns, and application architectures. Programming projects are required.

Prerequisite: ISTE-240.

### Course objectives

As the percentage of people utilizing mobile devices in everyday life and to access Internet rapidly increases, specific design and implementation considerations need to be taken into account when developing applications and Web Apps for mobile devices. In this course, students will study various approaches and development environments for designing, prototyping, implementing, deploying and testing mobile device software. Advantages and disadvantages of each approach and environment will be discussed followed by hands-on student experience through projects, in-class and homework exercises. Particular attention will be paid to mobile interaction patterns and user interface design as well as to employment of APIs and cross-platform development tools.

### Learning outcomes

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

- Differentiate between the design and capabilities of mobile application, web apps and desktop applications
- Utilize available development environments to design, code, test and deploy hybrid mobile applications
- Create effective mobile interfaces utilizing accepted interface conventions
- Create mobile applications utilizing multiple types of digital media
- Create mobile applications that consume web services, and post application data to a data store

### Grading

Final Project Proposal	10%
Final Project Design Prototype	10%
Final Project Implementation	15%
Mid Semester Exam	15%
End of Semester Exam	25%
Homework Exercises (Small Apps)	25%
<b>Total</b>	<b>100%</b>

**Class format:**

Class 3 hours, Lab 0 hours

**Course materials and textbooks:**

None required.



## Database Connectivity and Access

### 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-120, ISTE-121, ISTE-230.

### 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.

### Learning outcomes

At the end of the successfully completed course students should 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 JDBC or ODBC, 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, ODBC, JDBC, etc.; evaluated by in-class discussions, homework exercises, written reports, and/or course examinations.

### Grading

Exercises	15%
Midterm Exams	35%
Final Exam	15%
Project	30%
In Class Participation	5%
<b>Total</b>	<b>100%</b>

### Class format:

# RIT | Croatia

Class 3 hours, Lab 0 hours

**Course materials and textbooks:**

None required.

## 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.

**Prerequisites:** ISTE-240 Web & Mobile II AND, ISTE-121 Computational Problem Solving in the Information Domain II OR equivalent courses

### Grading

Attendance	5%
Assignment I - Interactive Form Elements with	15%
Assignment II - Using jQuery To Consume a Web Service	15%
Assignment III - Consuming a Web Service in C#	15%
Midterm Exam	25%
Final Exam	25%
<b>Total</b>	<b>100%</b>

**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 The Definitive Guide, 6th Ed. Flanagan, O'Reilly & Associates, ISBN: 0596805527
- JavaScript Essential Training via Wallace Library (online)

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

## Software Design Principles and Patterns

### Course Description

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. Restricted to IST majors only.

**Prerequisites:** ISTE-240 or equivalent course. Co-requisite: ISTE-340 or equivalent course.

### Course Objectives

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. The course will cover several broad areas of software engineering. Among them:

- Software engineering design principles
- Software design patterns
- Implementation challenges

### Learning Outcomes

By the end of this course, the student should be able to:

- Select and apply appropriate design patterns. Assessed by projects, exams.
- Analyze designs in terms of contemporary design principles. Assessed by homework, exams.
- Develop software within the context of architectural styles. Assessed by projects.
- Improve existing systems by refactoring in the context of patterns. Assessed by projects, exams.

### Grading

Exam 1	15%
Exam 2	15%
Final Exam	20%
Activities	10%
Team Project - Phase 1	20%
Team Project - Phase 2	20%
<b>Total</b>	<b>100%</b>

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

## Course Materials and Textbooks

- Software Architecture Design Patterns in Java by Partha Kuchana. Auerbach Publications. © 2004
- Getting Started with UML. <http://refcardz.dzone.com/refcardz/getting-started-uml>
- Gang of Four Design Patterns Reference (from <http://www.blackwasp.co.uk/GangOfFour.aspx>)
- Design Patterns. <http://refcardz.dzone.com/refcardz/design-patterns>
- Getting Started with Subversion. <http://refcardz.dzone.com/refcardz/getting-started-subversion>

## 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 20)	60 points
Oral In-class Examination (2 x 5)	10 points
Final Oral Exam	10 points
Class Absences and Class Participation	10 points
<b>Total</b>	<b>100 points</b>

**Class format:** Class hours 2 Lab hours 2

**Course materials and textbooks:**

# RIT | Croatia

- PLAZAS, Lugar de encuentros, Robert Hershberger, Susan Navey-Davis, Guiomar Borrás Álvarez, Fifth edition, CENGAGE Learning.
- PLAZAS, Lugar de encuentros, Student Activities Manual, fifth edition
- MindTap for Plazas, fifth edition, Cengage

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

## Beginning German 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 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

Homework and/or Other Written Assignments	10 points
Quizzes (3 quizzes) (3 x 20)	60 points
Oral In-class Examination (2 x 5)	10 points
Final Oral Exam	10 points
Class Absences and Class Participation	10 points
<b>Total</b>	<b>100 points</b>

**Class format:** Class hours 2 Lab hours 2

**Course materials and textbooks:**



# RIT | Croatia

- 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)

## Beginning Italian 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 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 20)	60 points
Oral In-class Examination (2 x 5)	10 points
Final Oral Exam	10 points
Class Absences and Class Participation	10 points
<b>Total</b>	<b>100 points</b>

**Class format:** Class hours 2 Lab hours 2

## **Course materials and textbooks:**

- Oggi in Italia, a first course in Italian, by Merlonghi, Merlonghi, Tursi and O'Connor – Houghton Mifflin Company, 9th Edition, HEINLE CENGAGE Learning, 2012
- Oggi in Italia, Student Activities Manual, 9th edition, HeinleCengage Learning, 2012
- Oggi in Italia, Instructor's Resource Manual, 7th edition, HeinleCengage Learning, 2012

## **Additional course material:**

- Progettoitaliano 1 – S. Magnelli, T. Marin – Edilingua
- Italian Grammar in Practice - Susanna Nocchi - Alma Edizioni Firenze
- Ecco! Grammaticaitaliana - Claudio Manella - Progetto Lingua Firenze
- Grammaticaessenzialedella lingua italiana – Marco Mezzadri - Guerra edizioni Perugia
- Cantachetipassa, impararel'italiano con le canzoni, Ciro Massimo Naddeo e GiulianaTrama, ALMA Edizioni, 2000
- Cinema italiano, imparal'italiano con i film, ALMA Edizioni, Firenze, a cura di Ciro Massimo Naddeo e Alessandro De Giuli, EdizioneRedux

## Beginning Russian 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 Russian 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 Russian-speaking countries. (MLRU-201 Beginning Russian I or equivalent; students must take the placement exam if this is their first RIT Russian class, and they have some prior study of Russian)  
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 Russian 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 Russian speaking countries. The dialogues, readings, and cultural notes have been written to depict what life is like in Russian 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 Russian 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 Russia.

### Grading

Homework and/or Other Written Assignments	10 points
Quizzes (3 quizzes) (3 x 20)	60 points
Oral In-class Examination (2 x 5)	10 points
Final Oral Exam	10 points
Class Absences and Class Participation	10 points
<b>Total</b>	<b>100 points</b>

**Class format:** Class hours 2 Lab hours 2

**Course materials and textbooks:**

# RIT | Croatia

- „Golosa“ – A Basic Course in Russian by Richard Robin et al., fifth edition, Pearson
- „Golosa“ –Student Activity Book
- „Golosa“ - CDs

<http://www.gwu.edu/~slavic/golosa/golosa.htm>

## 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) 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 20)	60 points
Oral In-class Examination (2 x 5)	10 points
Final Oral Exam	10 points
Class Absences and Class Participation	10 points
<b>Total</b>	<b>100 points</b>

**Class format:** Class hours 2 Lab hours 2

### Course materials and textbooks:

- Horizons, 6th edition by Manley, Smith, McMinn, and Prévost
- Horizons, Workbook/Lab Manual—available online via QUIA
- Text Audio CDs & Resources available through the Heinle Learning Center (iLrn)

**Additional course material:**

- Les 500 Exercices de phonétique A1/A2 – Hachette, 2009
- Nouvelle grammaire du français: Cours de Civilisation Française de la Sorbonne – Y. Dellatour, D. Jennepin, M. Léon-Dufour, B. Teyssier, Hachette, 2004

## Second Year Seminar

### Course Description:

This course helps students prepare for co-operative employment (“co-op”) by developing job search approaches and material. Students will explore current and emerging aspects of IST fields to help focus their skill development strategies. Students are introduced to the Office of Career Services and Co-op Education, and learn about their professional and ethical responsibilities for their co-op and subsequent professional experiences. Students will work collaboratively to build résumés, cover letters, and prepare for interviewing.

### Course Outcomes – You will get the following:

- Your required co-op orientation
- A chance to hear from industry veterans and recruiters
- A thoroughly reviewed resume
- Knowledge of how to use various job search strategies through Handshake and other online search resources, e.g., Indeed and LinkedIn
- An understanding of co-op policies, student responsibilities, and the co-op evaluation process
- An exploration of advanced course concentrations and various opportunities to help you get the job you want

### Course Expectations:

There will be 8 class sessions. Please turn off cell phones and be prepared to contribute to class discussions by reading the class syllabus in advance. Bring your questions and take advantage of getting the most from our guest speakers – they bring a wealth of information to help you succeed in your co-op experience.

### Classroom Attendance:

We will allow only one excused absence. We will have makeup opportunities throughout the semester. It is the student’s responsibility to reach out to the instructor for any absences.

### Grading:

Resume, First Draft	50 points
Resume, Final Draft	100 points
Micro Pitch/Presentation	Required
Attendance	Required
<b><i>To Pass: Must earn at least 100 points, attend at least 7 classes, and present your Micro Pitch</i></b>	



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**Class format:** Class hours 1 Lab hours 0

# **YEAR 3 – COURSE DESCRIPTIONS**

## Server Programming

### 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.

**Prerequisites:** ISTE-340 and (ISTE-230 or CSCI-320) and (SWEN-383 or SWEN-262) or equivalent courses.

**Course Objectives:** Among others, following topics will be covered in this course:

- For creating web pages and systems:
  - Server-side programming
  - Database creation, access, and manipulation review
  - Libraries, building and using
  - XML parsing, generation and consumption
  - Configuration and security
  - GET, POST, PUT, DELETE processing
  - Patterns and architecture
  - Command line scripting
- For serving up data:
  - Basic RESTful service structure and construction
  - Mid-Tier
  - Proxies
  - Business Layer Implementation
  - Service Layer Implementation
  - OOP PHP
  - Application security

**Learning Outcomes:** By the end of this course, the student should be able to:

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

## Grading

Participation	40%
Labs	40%
Projects	5%
Exams	15%
<b>Total</b>	<b>100%</b>

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

## Course Materials and Textbooks

This course does not require any textbooks. All required readings will be from digital media and will be linked or posted on myCourses.

## Application Development Practices

### 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.

**Prerequisites:** Completion of one of the following programming courses is required: ISTE-121 or ISTE-200 or CSCI-142 or CSCI-140 or IGME-106 or CSCI-242 or equivalent course.

### Course Objectives

Among others, following topics will be covered in this course:

- Development Methodologies, Diagramming Development
- Version Control
- Build Utilities, Testing
- Error Handling, Logging; Bug Tracking, Profiling
- Generic Code, Data-driven Code
- Reverse Engineering
- Efficient Code
- Application Deployment, Help Systems, Documentation

### Learning Outcomes

By the end of this course, the student should be able to:

- Compare and contrast development methodologies.
- Describe and use techniques for error handling.
- Use appropriate tools to improve software development, performance, and deployment.
- Explain the concerns when designing software for maintenance.
- Develop documentation and functions to assist both developers and users.

### Grading

In-Class Exercises	25%
Project Milestones	50%
Exams/Quizzes	20%
Attendance/Participation	5%
<b>Total</b>	<b>100%</b>

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

## **Course Materials and Textbooks**

This course does not require any textbooks. All required readings will be from digital media and will be linked or posted on myCourses.

## Introduction to Psychology

### Course Description

Introduction to the scope and methodology of psychology. Provides a survey of basic concepts, theories, and research methods. Topics include: thinking critically with psychological science; neuroscience and behavior; sensation and perception; learning; memory; thinking, language, and intelligence; personality; psychological disorders and therapy; and social psychology.

### Goals of the Course

- Introduce students to the field of psychology, its basic concepts, theories, research methods, and contributions to the understanding of human behavior.
- Teach students to think as scientists and learn to apply introductory principles, concepts, and terms to everyday life.
- Develop critical thinking and problem solving skills as they relate to the application of psychology and its principles.
- Provide a foundation that will enable students to understand, and benefit from, advanced courses in psychology.

### Course Learning Outcomes and Associated Assessment Methods

- Understand core concepts and controversies from each of the 10 topic areas (exams, research report, in-class activities, discussions)
- Understand relationships between individuals, the environment, cognition, and behavior (exams, research report, in-class activities, discussions)
- Be familiar with the major critical debates in psychology and the evidence used by the different sides of each debate (exams, research report, in-class activities, discussions).
- Demonstrate the ability to think critically about theories and research in Psychology (research report, discussions).
- Demonstrate effective written communication skills (research report).

### Gradeing

Exams (3x)	85 bodova
Final exam	30 bodova
Written analysis of scientific work	20 bodova
<b>Total</b>	<b>135 bodova</b>

### Text & Additional Resources:

I will place a selection of readings from various sources on MyCourses and direct you to possible resources available through the Wallace Library at RIT.

## Literature, Culture and Media

### Course Description

Students will study literary and cultural texts selected from traditional English and American 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.

### Goals of the course

- 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

### Learning outcomes

On successful completion of the course the students will be able to:

- analyze texts and themes in literature, film, and other literary/visual forms through discussion, written assignments, reading responses, journals, or exams
- skillfully apply their analytical skills through reading, discussion, and writing
- critically evaluate literary texts, cultural artifacts, and critical/analytical essays on these subjects
- correlate literary and cultural artifacts and their social and cultural contexts
- connect literary genres and the underlying reasons for their development
- successfully use the skills, principles, and terminology of literary interpretation
- apply research skills and integrate key findings into coherent literary analyses and research papers

### Graded Assignments

Attendance/Class Absences and Class Participation	10%
Quizzes (3)	60%
Research paper	30%
<b>Total</b>	<b>100%</b>



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

**Course materials and textbooks:**

- William Shakespeare: The Tempest
- H.D. Thoreau: "Resistance to Civil Government"
- R.W. Emerson: "Self-Reliance"
- Native American Trickster Tales: Felix White Sr.'s Introduction to Wakjankaga
- From The Winnebago Trickster Cycle

Readings will be available in myCourses or RIT online library.

<https://library.rit.edu/>

## 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 15)	45 points
Debates	7 points
Course Project/Presentation	8 points
Final Oral Examination	10 points
Final Writing Exam (Essay)	10 points
Class Absences and Class Participation	10 points
<b>Total</b>	<b>100 points</b>

**Class format:** Class hours 2 Lab hours 1

**Course materials and textbooks:**

- Mundo 21, Fourth Edition, by Samaniego, Rojas, Rodriquez, De Alarcon, Heinle Cengage Learning
- Premium website for Mundo 21

**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

## Intermediate Italian 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 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 15)	45 points
Debates	7 points
Course Project/Presentation	8 points
Final Oral Examination	10 points
Final Writing Exam (Essay)	10 points
Class Absences and Class Participation	10 points
<b>Total</b>	<b>100 points</b>

**Class format:** Class hours 2 Lab hours 1

## **Course materials and textbooks:**

- Bar Italia, by Annamaria Di Francesco e Ciro Massimo Naddeo
- Crescendo, An Intermediate Italian Program, second edition, by Francesca Italiano e Irene Marchegiani, Thomson and Heinle, 2nd edition, 2007
- Crescendo, Workbook/Lab Manual and Audio CDs

## **Additional Course Material:**

- Giocare con la letteratura, by Carlo Guastalla, Alma Edizioni, Firenze
- Ponti, italianoterzomillennio, 3rd editon, by Elissa Tognozzi e Giuseppe Cavatorta, Heinle Cengage Learning, 2013
- Ponti, italianoterzomillennio, 2nd editon, Student Activities Manual, by Elissa Tognozzi e Giuseppe Cavatorta, Heinle Cengage Learning, 2013
- Pro e contro 1/2, conversare e argomenatare in italiano, PazitBarki e PierangelaDiadori, livellointermedio, librodellostudente, Bonaccieditore, secondaedizione, Roma, 1999
- Pro e contro, conversare e argomenatare in italiano, PazitBarki e PierangelaDiadori, livellointermedio, guida per l'insegnante, Bonaccieditore, secondaedizione, Roma, 1999

## 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 15)	45 points
Debates	7 points
Course Project/Presentation	8 points
Final Oral Examination	10 points
Final Writing Exam (Essay)	10 points
Class Absences and Class Participation	10 points
<b>Total</b>	<b>100 points</b>

**Class format:** Class hours 2 Lab hours 1

**Course materials and textbooks:**

- KALEIDOSKOP Kultur, Literatur und Grammatik, Eighth Edition, Moeller, Mabee, Berger, Adolph
- KALEIDOSKOP, Student Activities Manual, Eighth Edition, Moeller, Mabee, Berger, Adolph
- KALEIDOSKOP, Eighth Edition, Premium Website

**Additional books:**

- Funk, H. Kuhn, C., Demme, S. (2006). Studio d A2 Deutsch als Fremdsprache, Cornelsen Verlag, Berlin.
- Funk, H., Kuhn, C., Demme, S., Winzer, B. (2009). Studio d B1 Deutsch als Fremdsprache, Cornelsen Verlag Berlin

An English-German/German-English dictionary is strongly recommended

<http://dict.tu-chemnitz.de/>

<http://wordreference.com/>

## Intermediate Russian 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 Russian. 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 Russian life and culture. (MLRU-202 Beginning Russian II or equivalent proficiency) Class 3, Credit 3 (F)

### Course objectives

This course is designed to help students improve their vocabulary and better use their knowledge of the Russian 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 Russian.

Each lesson will cover one area (or one problem) of everyday life. Students will have to make a comparison between different realities: Russian, their own view of it and their perspective of that situation in their own country. They will learn how to converse in Russian 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 semester and will have to make a presentation in Russian on a chosen topic.

One of the most important objectives of the course is also to teach students how to write better in Russian, 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 15)	45 points
Debates	7 points
Course Project/Presentation	8 points
Final Oral Examination	10 points
Final Writing Exam (Essay)	10 points
Class Absences and Class Participation	10 points
<b>Total</b>	<b>100 points</b>

**Class format:** Class hours 2 Lab hours 1



**Course materials and textbooks:**

- „Golosa“–Pearson New International Edition by Richard Robin et al., Fifth edition
- „Golosa“–Student Activity Book
- „Golosa“– CDs

## 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 to increase their ability to function in French. 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 French life and culture. (MLFR-202 Beginning French II or equivalent proficiency) 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 semester 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 15)	45 points
Debates	7 points
Course Project/Presentation	8 points
Final Oral Examination	10 points
Final Writing Exam (Essay)	10 points
Class Absences and Class Participation	10 points
<b>Total</b>	<b>100 points</b>

**Class format:** Class hours 2 Lab hours 1

## **Course materials and textbooks:**

- Bravo!. Eight edition, Muyskens, Harlow, Vialet, Brière
- Bravo!, Student Activities Manual, , Muyskens, Harlow, Vialet, Brière

## **Additional books**

- Les 500 Exercices de phonétique A1/A2 – Hachette, 2009
- Les 500 Exercices de grammaire A2-Hachette, 2006
- Nouvelle grammaire du français: Cours de Civilisation Française de la Sorbonne – Y. Dellatour, D. Jennepin, M. Léon-Dufour, B. Teyssier, Hachette, 2004
- Grammaire essentielle du français niveaux A1 A2 - Glaudivine, Lannier Muriel, Loiseau Yves, Didier, 2015
- Edito 1 (méthode de français et cahier d'activités) – Marie-Pierre Bayloq Sassoubre, Stéphanie Brémaud, Stefano Campopiano, Clara Cheilan, Erwan Dambrine, Cécile Pinson, Didier, 2016
- Génération A2 (méthode de français) – P.Dauda, L.Giachino, C. Baracco, Didier, 2016

## Secure Web Application Development

### Course Description

When building larger-scale web applications, there are a myriad of concerns that range from technology, framework, and architecture selection to runtime performance optimization. This course focuses on the development of integrated web applications that consume information served from one or many sources. Trends in web application development are identified and assessed. Programming projects are required.

**Prerequisites:** ISTE-341 or equivalent courses

### Course Objectives

Among others, following topics will be covered in this course:

- Principles of Client-Server distributed code in a web environment (protocols, languages, architectures)
- Client-side rendering environments (HTML5, SVG, proprietary technologies)
- Server-side development environments (PHP, Perl, content management system, application architectures)
- Dynamic generation of client-side code at the server
- Communication between client and server (GET and POST, AJAX, JSON)
- Each student will choose an advanced topic and present it

### Learning Outcomes

By the end of this course, the student should be able to:

- Write applications which are browser and platform independent. Assessed by individual projects.
- Integrate client-server technologies by dynamically generating client-side code at the server that has the ability to manipulate the DOM on the client. Assessed by individual projects.
- Write programs and GUIs using technologies such as SVG, JavaScript, PHP, SQL and other scripting environments to gain competence with current and future practices. Assessed by individual projects.
- Research new technologies and techniques. Assessed by in-class presentations.

### Grading

In-Class Participation	5%
Assignment 1: Exam on Web Application Security	20%
Assignment 2: Self-Guided Study	25%
Assignment 3: Multi-User Interactive Turn-Based Game	50%
<b>Total</b>	<b>100%</b>

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

## **Course Materials and Textbooks**

- How to Break Web Software by Mike Andrews & James A. Whittaker. Addison-Wesley Professional, 2006. ISBN: 0321369440 (required)
- SVG Unleashed by Chris Lilley and Andrew Watt. Sams, 2002. ISBN: 0672324296 (recommended)
- SVG Programming by Kurt Cagle. Apress, 2002. ISBN: 1590590198 (recommended)

In addition to the books, online readings might be assigned in class.

## Web Server Development and Administration

### Course Description

Web developers often need to go beyond building Web pages and client-server programming to plan, install, configure, develop, and maintain the Web servers that host their sites. They need to understand issues of scalability, performance, and security as they apply to deploying a Web presence.

### Course objectives and learning outcomes

This course provides a practical hands-on approach to development, configuration, and administration of Web server platforms. Topics include issues of and approaches to scalability, multiple server systems, security, and auditing, as well as the many configuration options, modules, and server alternatives available. By the end of the course, each student will be expected to:

- Understand the security and auditing aspects of web server programming
- Demonstrate the ability to install and analyze scalability and performance issues
- Install, configure, develop and maintain web servers

### Grading

Attendance and Class Participation	10%
Tests	40% (20+20)
Group project	30%
Homework	20%
<b>Total</b>	<b>100%</b>

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

### Course materials and textbooks:

The following are sample texts, from which excerpts might be assigned:

- Linux Apache Web Server Administration (Linux Library)
  - Run Your Own Web Server Using Linux & Apache
- Additional material distributed in class and/or via MyCourses

## Ecology of the Dalmatian Coast

### Course Description

This course is an introduction to population, community and ecosystem ecology, stressing the dynamic interrelationships of plant and animal communities of the Dalmatian Coast. The course includes such ecological concepts as energy flow and trophic levels in natural communities, population and community dynamics, biogeography and ecosystem ecology. Field trips to local ecosystems are included. Class 2, Lab 2, Credit 4 (S)

### Goals of the course

- to explain and synthesize ecological concepts at the individual, population, community, and ecosystem level
- to learn about experimental design and local ecosystems
- to critically read scientific articles
- revise and improve written content

### 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

Attendance	15%
Research Paper	15%
Presentation	10%
Discussion paper	20%
Quiz 1	5%
Quiz 2	5%
Final Exam	30%
<b>Total</b>	<b>100%</b>

**Class format:** Class hours 2 Lab hours 2

# RIT | Croatia

**Course materials and textbooks:**

Brennan, S. and Withgott, J. *Environment: The Science Behind the Stories*.  
Pearson/Benjamin Cummings. San Francisco, CA.

Papers selected from the primary literature (updated annually)



## Foundations of Moral Philosophy

### Course Description

This course is a survey of foundational, and normative, approaches to ethics, understood as a systematic study into morality, and the moral questions regarding motivation. Topics will include virtue ethics, deontology, consequentialism, contractualism, evolutionary foundations of morality, and other approaches. Normative questions are questions about good and goodness, evil and badness, right and rightness, wrong and wrongness. Foundational approach to ethics deals with meta-ethical questions about the nature of morality and the sources of moral systems, their justifications etc. Ethics is a paradigmatic action-guiding discipline, i.e. it is about not only learning what something, i.e. an moral phenomenon, is, but also how to apply normative theories, make ethical decisions, justify ethical positions etc.

Rather than a course in the history of ethics, this course serves as an introduction to the practice of ethical deliberations and discussions.

### Course objectives

The focus of Foundations of Moral Philosophy is primarily not on finding dogmatic and definite answers on hard questions, but rather on a deep understanding of moral issues and dilemmas, formulating proper questions and understanding the method of answering them. The process of finding an answer enriches our intellectual imagination by evaluation of different possible options and diminishes the dogmatic assurance which closes the mind against speculation and critical approach to reality

### Learning outcomes

The main outcomes of this course are:

- to become skillful in understanding and interpreting various ethical positions;
- to become familiar with major philosophical ethical approaches and the methods of handling them in everyday life;
- to be able to adopt "philosophical attitude" as an elevated form of human curiosity and resistance to any kind of dogmatism.
- to evaluate and question one's own beliefs and values.

### Grading

Class participation (active participation in class discussions and writing comments on class material)	30%
Two quizzes	60%
Final presentation	10%
<b>Total</b>	<b>100%</b>

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

## Course materials and textbooks:

Possible resources (a narrower choice will be made according the availability of the material):

Meta-ethical theories:

- G. Graham, *Theories of Ethics*
- D. Brink, "Autonomy of Ethics"
- H. Sidgwick, *The Methods of Ethics*
- R. Shafer-Landau, *Fundamentals of Ethics*
- G. E. Moore, *Principia Ethica*

Different ethical positions

- Plato, *Republic, Euthyphro, Meno*
- Aristotle, *Nichomachean Ethics*
- D. Hume, *Treatise of Human Nature*
- J. Bentham, *An Introduction to the Principles of Morals and Legislation*
- I. Kant, *Groundwork of the Metaphysics of Morals*
- J. S. Mill, *Utilitarianism*
- F. Nietzsche, *On the Genealogy of Morals*
- J. Rawls, *A Theory of Justice*

Additional online sources:

- Stanford Encyclopedia of Philosophy
- RIT databases (Wallace Library)
- Films

## Positive Psychology

### Course Description

Historically, psychology has been 'negative' in orientation. It has narrowly sought to understand and repair human weaknesses and liabilities. The present course will provide a survey of the emerging field of Positive Psychology and will describe how the scope of psychology has recently been broadened beyond exclusive concern with identifying pathology and treating or preventing disorder. Topics covered will include defining and assessing "the good life"; happiness (subjective well-being, positive emotions); optimal performance; personal fulfillment; resilience; the relationships between life satisfaction and personal factors such as wealth, education, and longevity; cross-cultural perspectives; virtues and strengths; creativity; optimism; hope; self-efficacy; wisdom; humility/compassion/altruism; forgiveness; gratitude; love; intrinsic motivation and flow; social support; spirituality, meaning and purpose in life; and biological factors (i.e., genetics and neurological correlates). The focus will be on contemporary empirical psychology literature, though the course will also draw on literature from historical, philosophical, and economic disciplines.

### Course Objectives

The primary aim of this course is to provide students new knowledge about Positive Psychology as the discipline of thriving and flourishing. Also how to understand the concept of progressive, life-long realization of potential as human beings who can "stretch" and grow.

Secondary objective is to examine the three main questions: (1) "what does it mean to live a pleasant life"? (2) "what does it mean to live an engaged (full) life"?, and (3) "what does it mean to live a meaningful life". Also how to be able to develop a zest for living a virtuous, satisfying, and meaningful life!

### Learning Outcomes

By the end of the course, students should be able to understand the aim and scope of positive psychology. Understand the distinction between positive psychology principles and other theoretical principles of psychology. Acquire insight into their own strengths and virtues and learn strategies to increase their happiness and overall quality of life. Develop an understanding of the dimensions of subjective well-being and the application to their lives. Comprehend research that supports the principles, strategies, and skills of positive psychology.

## Grading

The following categories will determine your grade:

Written Assignments – Active Participation Exercise	40 points
Quizzes (2 quizzes) (2 x 20)	40 points
Active Class Participation	20 points
<b>Total</b>	<b>100 points</b>

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

## Course materials and textbooks:

A selection of readings from various sources on MyCourses including:

- Special issue of the American Psychologist (2000), v. 55 (1).
- Seligman, M. & Peterson, C. (2004) Character strengths and virtues: A handbook and classification. (e-book available through Wallace Library)
- Peterson, C. (2006) A Primer in Positive Psychology - selected readings
- Snyder, C. R. & Lopez, S. (2009). The Oxford Handbook of Positive Psychology, Oxford: Oxford University Press.

## Intermediate Spanish II

### 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 15)	45 points
Debates	7 points
Course Project/Presentation	8 points
Final Oral Examination	10 points
Final Writing Exam (Essay)	10 points
Class Absences and Class Participation	10 points
<b>Total</b>	<b>100 points</b>

**Class format:** Class hours 2 Lab hours 1

## Course materials and textbooks:

- Mundo 21, Fourth Edition, by Samaniego, Rojas, Rodriguez, De Alarcon, Heinle Cengage Learning
- Premium website for Mundo 21

## 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

## 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 15)	45 points
Debates	7 points
Course Project/Presentation	8 points
Final Oral Examination	10 points
Final Writing Exam (Essay)	10 points
Class Absences and Class Participation	10 points
<b>Total</b>	<b>100 points</b>

**Class format:** Class hours 2 Lab hours 1

**Course materials and textbooks:**

- Crescendo, An Intermediate Italian Program, second edition, by Francesca Italiano e Irene Marchegiani, Thomson and Heinle, 2nd edition, 2007
- Crescendo, Workbook/Lab Manual and Audio CDs
- Ponti, italianoterzomillennio, 3rd editon, by Elissa Tognozzi e Giuseppe Cavatorta, Heinle Cengage Learning, 2013
- Ponti, italianoterzomillennio, 2nd editon, Student Activities Manual, 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, PazitBarki e Pierangela Diadori, livellointermedio, libro de llo studente, Bonaccieditore, 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 German 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 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 15)	45 points
Debates	7 points
Course Project/Presentation	8 points
Final Oral Examination	10 points
Final Writing Exam (Essay)	10 points
Class Absences and Class Participation	10 points
<b>Total</b>	<b>100 points</b>

**Class format:** Class hours 2 Lab hours 1

## **Course materials and textbooks:**

- KALEIDOSKOP Kultur, Literatur und Grammatik, Eighth Edition, Moeller, Mabee, Berger, Adolph
- KALEIDOSKOP, Student Activities Manual, Eighth Edition, Moeller, Mabee, Berger, Adolph
- KALEIDOSKOP, Eighth Edition, Premium Website

## **Additional Course Material**

- Funk, H. Kuhn, C., Demme, S. (2006). Studio d A2 Deutsch als Fremdsprache, Cornelsen Verlag, Berlin.
- Funk, H., Kuhn, C., Demme, S., Winzer, B. (2009). Studio d B1 Deutsch als Fremdsprache, Cornelsen Verlag Berlin.

An English-German/German-English dictionary is strongly recommended

<http://dict.tu-chemnitz.de/>

<http://wordreference.com/>

## Intermediate Russian 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 Russian. 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 Russian life and culture. (MLRU-301 Intermediate Russian I or equivalent proficiency) Class 3, Credit 3 (S)

### Course objectives

This course is designed to help students improve their vocabulary and better use their knowledge of the Russian 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 Russian.

Each lesson will cover one area (or one problem) of everyday life. Students will have to make a comparison between different realities: Russian, their own view of it and their perspective of that situation in their own country. They will learn how to converse in Russian 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 Russian on a chosen topic.

One of the most important objectives of the course is also to teach students how to write better in Russian, 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.

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Debates	7 points
Course Project/Presentation	8 points
Final Oral Examination	10 points
Final Writing Exam (Essay)	10 points
Class Absences and Class Participation	10 points
<b>Total</b>	<b>100 points</b>

**Class format:** Class hours 2 Lab hours 1

**Course materials and textbooks:**

- „Golosa“ – Pearson New International Edition by Richard Robin et al., Fifth edition
- „Golosa“ – Student Activity Book
- „Golosa“ – CDs

## 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 to increase their ability to function in French. 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 French life and culture. (MLFR-301 Intermediate French I or equivalent proficiency) 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.

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Final Oral Examination	10 points
Final Writing Exam (Essay)	10 points
Class Absences and Class Participation	10 points
<b>Total</b>	<b>100 points</b>

**Class format:** Class hours 2 Lab hours 1

## **Course materials and textbooks:**

- Bravo!. Eight edition, Muyskens, Harlow, Vialet, Brière
- Bravo!, Student Activities Manual, , Muyskens, Harlow, Vialet, Brière

## **Additional books**

- Les 500 Exercices de phonétique A1/A2 – Hachette, 2009
- Les 500 Exercices de grammaire A2-Hachette, 2006
- Nouvelle grammaire du français: Cours de Civilisation Française de la Sorbonne – Y. Dellatour, D. Jennepin, M. Léon-Dufour, B. Teyssier, Hachette, 2004
- Grammaire essentielle du français niveaux A1 A2 - Glaudivine, Lannier Muriel, Loiseau Yves, Didier, 2015
- Edito 1 (méthode de français et cahier d'activités) – Marie-Pierre Bayloq Sassoubre, Stéphanie Brémaud, Stefano Campopiano, Clara Cheilan, Erwan Dambrine, Cécile Pinson, Didier, 2016
- Génération A2 (méthode de français) – P.Dauda, L.Giachino, C. Baracco, Didier, 2016

# **YEAR 4 – COURSE DESCRIPTIONS**

## Mobile Applications Development I

### Course Description

This course extends the material covered in the Foundations of Mobile Design course and provides students with experience writing native applications for mobile devices such as Smartphones in one of the current major platforms. These devices are exceptionally portable, have unique sets of hardware and communications capabilities, incorporate novel interfaces, are location aware, and provide persistent connectivity. Students are encouraged to make use of these unique characteristics and operating properties to develop innovative applications. Programming projects are required.

### Prerequisites

ISTE-452 Foundations of Mobile Design, ISTE-340 Client Programming, or instructor permission

### Course objectives and learning outcomes

The purpose of this course is to provide students with the experience of creating native applications for mobile phones. Topics covered include user interaction patterns, connectivity, interface design, software design patterns, and application architecture within the context of mobile computing.

### Grading

Mini Project	20%
Weekly Homework	20%
Final Project	40%
Final Exam	20%
<b>Total</b>	<b>100%</b>

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

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



## Senior Development Project I

### Course Description

The first course in a two-course, senior level, system development capstone project. Students form project teams and work with sponsors to define system requirements. Teams then create architectures and designs, and depending on the project, also may begin software development. Requirements elicitation and development practices introduced in prior coursework are reviewed, and additional methods and processes are introduced. Student teams are given considerable latitude in how they organize and conduct project work.

### Course objectives

To learn all phases in project management with special emphasize on:

- Initiation phase
- Definition phase
- Design phase
- Development phase

### Learning outcomes

- Students will learn the basic about delivering a prototype or 'proof of concept';
- Students will be oriented towards defining requirements and design limitations of project;
- Students will be faced with research and development phase as crucial in IT project;
- Students will master team reporting.

### Grading

Use Case Documentation	25 points
PM Documentation	30 points
System Design Documentation	25 points
Peer Review	10 points
Participation	10 points
<b>Total</b>	<b>100 points</b>

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

### Course materials and textbooks:

- Scott Berkun; Making Things Happen: Mastering Project Management (Theory in Practice), Revised Edition; O'Reilly; 2008; ISBN-10: 0596517718
- Bob Hughes, Roger Ireland, Brian West, Norman Smith, David I. Shepherd; Project Management for IT-Related Projects; Second Edition; BCS, The Chartered Institute for IT;2012; ISBN: 9781780171180

## Scientific Inquiries 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
- Diamond, J. *Collapse: How Societies Choose to Fail or Survive*. Penguin Books, London, UK.

## Cognitive Psychology

### Course Description

This course will introduce core issues, theories, and experimental findings in cognitive psychology. Topics to be covered include perception, attention, memory, imagery, language, learning, reasoning, problem solving, and expertise. The format will include lecture, class activities, and in-class discussion. The goal of the course is for you to develop a deep understanding of cognitive theories, concepts, and their applications.

### Course objectives and learning outcomes

In line with the American Psychological Association's (APA) Introductory Psychology Initiative (2019), in the Cognitive Psychology course, students are expected to:

- Describe the historical development of cognitive psychology.
- Recognize and explain major terms and concepts in cognitive psychology.
- Explain how different methods of cognitive research can be used as tools to understand mental processes.
- Describe the working of basic cognitive functions from an information processing perspective.
- Discuss the classic experimental findings relating to various cognitive processes such as attention and consciousness, perception, memory, imagery, language, thinking, problem solving and creativity, decision-making, and metacognition.
- For the above processes, compare and contrast alternative theories or approaches in terms of their underlying processes and performance predictions.
- Generate and explain examples that demonstrate or test theories or concepts within various cognitive domains.
- Explain the various neuroscience measures (CT scans, PET scans, fMRI's) and how they are used to provide evidence for cognitive theories.
- Apply theories or findings to real world situations and to one's own cognitive processes.

### Grading

<b>Design challenges</b>	<b>25% (30 points)</b>
<b>Group Presentation</b>	<b>15% (10 points)</b>
<b>3 Exams (Week 5, Week 10, Week 15)</b>	<b>60% (75 points)</b> <b>20% (25 points) each</b>
<b>Total</b>	<b>100%</b>

### Class format:

Class hours 3 Lab hours 0

## **Course materials and textbooks**

- Goldstein, E.B. (2011). *Cognitive Psychology* (3rd Edition). New York: Cengage Learning

## Heritage and Tourism

### Course description

Tourism is a global industry and an important part of the human experience. There are many forces within tourism that act upon people's lives, and in particular their environments, economies, cultural heritage, and identity. This course will explore tourism and its many dimensions. Beginning with an examination of kinds of tourism, this course unpacks tourism's ancient trade and pilgrimage routes as well as its class dynamics of post-industrialization. Other aspects of tourism to be explored include strategies and effects of tourism development and production, nationalism and cultural identity, commodification and marketing of culture and the ethics of development, labor and infrastructural changes, social inequalities, ecological impact, sustainable tourism, the experience of tourists, ritual and authenticity, and the relationship between tourists and tourism workers. This course provides opportunities for cross-cultural analysis of tourism sites, for participant observation of the tourist experience, and for evaluation and recommendation of tourism site development in and around Dubrovnik and Croatia.

### Course objectives and Learning outcomes

#### Program Learning Outcomes

**Upon completion of this course, the student should be able to:**

1. Deconstruct tourism as a normal cultural and economic activity.
2. Identify behavioral patterns within tourism settings.
3. Identify key terms and concepts within tourism analyses.
4. Compare/contrast tourism activities across the industry and globe and critically engage with a view to best practices.
5. Analyze the impacts of tourism industry (cause and effect) on local communities.
6. Assess harmonious and mutually benefitting host and guest relationships.
7. Assess awareness of sustainable environmental effects of tourism.
8. Apply global principles to real life tourism site/ project.

#### Communication related outcomes:

1. Express oneself effectively in common college-level written forms using standard American English
2. Revise and improve written products
3. Demonstrate comprehension of information and ideas accessed through reading

#### Critical thinking related outcomes:

1. Use relevant evidence gathered through accepted scholarly methods and

- properly acknowledge sources of information
2. Analyze or construct arguments considering their premises, assumptions, contexts, and conclusions, and anticipating counterarguments
  3. Reach sound conclusions based on logical analysis of evidence
  4. Demonstrate creative and/or innovative approaches to assignments or projects

## Grading

### Grade distribution

• “What to do” presentation (3 @ 5%)	15%
• Short report (3 @ 10%)	30%
• Learning cell assignment (5% + 10%)	15%
• Midterm presentation	15%
• Final presentation	20%
• Attendance	<u>5%</u>
TOTAL	100%

**Class format: In class lectures, class discussions, video presentations**

## Course materials and textbooks:

**Required Text** (Available online at <https://library.rit.edu>)

- McKercher, Bob and Hilary du Cros. (2002) Cultural Tourism: The Partnership Between Tourism and Cultural Heritage Management. New York: The Haworth Press, Inc.
- Material provided by the instructor

## Suggested Texts and Resources

1. Chhabra, Deepak. Sustainable Marketing of Cultural and Heritage Tourism. (2010) London and New York: Routledge.
2. Cultural Heritage and Tourism in the Developing World: A regional perspective. (2009) Edited by Dallen J. Timothy and Gyan P. Nyaupane. London and New York: Routledge.
3. Cultural Tourism. (2013) Edited by Razaq Raj, Kevin Griffin and Nigel Morpeth. Oxfordshire: CABI.
4. Cultural Tourism in a Changing World: Politics, Participation and (Re)presentation. (2006) Edited by Melanie Smith and Mike Robinson. Clevedon, Buffalo and Toronto: Channel View Publications.
5. Heritage and Tourism: Place, encounter, engagement. (2013) Edited by Russell Staiff, Robyn Bushell and Steve Watson. London and New York: Routledge.
6. Reisinger, Yvette and Lindsay W Turner. (2003) Cross-Cultural Behaviour in Tourism: Concepts and Analysis. Oxford: Butterworth-Heinemann.

7. Smith, K. Melanie. Issues in Cultural Tourism Studies. (2003) London and New York: Routledge.
8. The Routledge Handbook of Cultural Tourism. (2013) Edited by Melanie Smith and Greg Richards. London and New York: Routledge.

## Mobile Applications Development II

### Course Description

This course extends the Mobile Application Development I experience to medium-size form factor mobile devices such as slates and tablets. Compared to smartphones, these devices have much larger screen areas, and have the potentials for more processing power, higher capacity memories, additional sensors, and higher capacity batteries. Students are encouraged to make creative use of these increased display and computing resources to develop innovative applications. Programming projects are required.

### Prerequisites

ISTE-252 Foundations of Mobile Design, ISTE-340 Client Programming, or instructor permission

### Course objectives and learning outcomes

The purpose of this course is to provide students with the experience of creating native applications for mobile phones and tablets. Topics covered include user interaction patterns, connectivity, interface design, software design patterns, and application architecture within the context of mobile computing for mobile platform Android.

### Grading

Homeworks	40%
Final Project	40%
Final Exam	20%
<b>Total</b>	<b>100%</b>

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

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



## Senior Development Project II

### Course Description

The second course in a two-course, senior level, system development capstone project. Student teams complete development of their system project and package the software and documentation for deployment. Usability testing practices introduced in prior coursework are reviewed, and additional methods and processes are introduced. Teams present their developed system and discuss lessons learned at the completion of the course. This course is a capstone course for the Web and Mobile Computing program.

### Course objectives

To learn all phases in project management with special emphasize on:

- Implementation phase;
- Follow-up phase.

### Learning outcomes

- Students will be oriented towards construction of the actual project result;
- Students will produce software package;
- Students will master making documentation.

### Grading

Status Reports	25 points
Documentation	15 points
Final Deliverable	30 points
Peer Review	20 points
Participation	10 points
<b>Total</b>	<b>100 points</b>

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

### Course materials and textbooks:

- Scott Berkun; Making Things Happen: Mastering Project Management (Theory in Practice), Revised Edition; O'Reilly; 2008; ISBN-10: 0596517718
- Bob Hughes, Roger Ireland, Brian West, Norman Smith, David I. Shepherd; Project Management for IT-Related Projects; Second Edition; BCS, The Chartered Institute for IT;2012; ISBN: 9781780171180

## Industrial and Organizational Psychology

### Course Description

Industrial and organizational (I/O) psychology is a branch of psychology that is largely directed at applying psychological principles and theories to the workplace. Being concerned with both a good job performance and the wellbeing of the worker, this course deals with personnel (often termed also industrial) and organizational psychology. The topics thus range from career choice, assessment of individual differences in the workplace and performance appraisal at work, to work motivation, job satisfaction, and more organizational topics such as leadership and teamwork. Work organizations in the contemporary world are increasingly multicultural determined so the course will deal also with the cross-cultural perspective to industrial and organizational psychology.

### Course objectives and learning outcomes

- Think critically about theories in I/O psychology and their application in the workplace.
- Gain practical knowledge and experience of different methods and instruments of psychological assessment in the workplace.
- Gain knowledge of different areas of I/O psychology that largely connect to human resource management, including selection process and assessment of (potential) workers, job analysis and job performance evaluation.
- Acquire understanding of different areas of I/O psychology that importantly determine social and relational processes and elements in the organization; these being the employees work motivation, their satisfaction with the work and their occupational health and wellbeing.
- Gain insight and basic understanding into some of the highly relevant processes for contemporary organizations, such as leadership, teamwork and group processes, and organizational climate and culture.
- Critically examine issues around workplace diversity, justice and fairness in a dynamic, globalised and largely multicultural work settings.

### Grading system

Applied 3-stage I/O project (I/O portfolio)	30 points
Exams (3 exams x 20 points)	60 points
Active learning assignment (review of an empirical article)	10 points
<b>Total</b>	<b>100 points</b>

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

**Literature:**

- Levy, P. (2013). Industrial Organizational Psychology (4th edition)
- Landy & Conte (2013). Work in the 21st Century. An Introduction to Industrial and Organizational Psychology (4th edition)

A selection of reading from various sources will be made available by instructor on MyCourses and through the Wallace Library at RIT.