

**ISM 6124 (16 weeks)**  
**Systems Analysis and Design**  
**Syllabus Version 1.0**

21 December 2022

DRAFT

## Version history

Version	Description
1.0	First released draft

DRAFT

## ISM 6124: Systems Analysis and Design

*Professor: SCPO H. S. Hyman, PhD*  
*E-mail: hhyman@usf.edu.*  
*Phone: (757) 968-6801 (c)*

*Office: CIS 2006*  
*Hours: Mondays or Tuesdays by*  
*Appointment, or Remote Virtual.*

### Course Objectives:

**Description as stated in Course Catalogue:** This course is designed to familiarize students with basic techniques for conducting and managing Systems Analysis and Design (SAD) activities such as systems analysis and design approaches, implementation methods, current analysis and design issues. This course also teaches the tools needed to analyze existing business problems and design creative and innovative information system solutions.

**(Learning Outcomes)** Upon completion of this course, students should know how to:

- Describe a systems development life cycle.
- Determine requirements of an IS using information gathering techniques.
- Conduct a feasibility analysis for development of an IS to assess:(operational, technical, schedule, economic, legal/contractual, political).
- Create a Use Case Description to describe system functionality.
- Describe system processes using Process Modeling (Data Flow Diagrams).
- Model system data created and/or stored by an IS.
- Manage the modeled data for reporting and analytics.
- Recognize principles of user interface design.
- Describe how to manage implementation and the programming process.
- Generate a migration plan to transition to a new system.

### Course Materials and Assignments:

#### Textbooks:

Required: Posted on Platform for Free

1. Systems Acquisition, Integration, and Implementation for Engineers and IT Professionals, 2<sup>nd</sup> Ed., Hyman, 2015. ISBN: 978-0-9862194-4-3.
2. Thinking in Systems, Donella Meadows.

Optional: Available for Purchase

3. Systems Analysis & Design, 6<sup>th</sup> Ed., Dennis, Wixom, and Roth, 2015. ISBN: 9781118897843.
4. Agile Software Requirements, Leffingwell, 2011, ISBN: 978-0-321-63584-6.

#### Recommended for Personal Development:

5. IT Managers Handbook, Holtsnider and Jaffe
6. Mythical Man Month, Fred Brooks
7. Peopleware, Tom Demarco and Timothy Lister

### Team-Based Assignments:

- System Development and Implementation Plan (delivered in six (6) parts).
- Case Studies (total of 4).
- Team Formation – Teams have been set by random assignment:
  - Teams have either 3 or 4 members. One member has been randomly assigned as lead the team.
  - Each team must choose a name and a motto by the end of week 1. Your team name should be your “brand.” Your team motto should reflect what you wish to accomplish during this semester.
  - The team lead will be responsible for delivering your products and for coordinating team meetings and member tasks.
  - Teams must deliver a weekly report to the instructor. Report contains who attended, time started/ended, tasks assigned to whom for next week, tasks completed from whom from last week.

### Individual Assignments:

- Team Member Rating, 360 feedback.
- Computer software installation and use (Visio, Project, Wireframes)

### Grading:

#### Grading Rubric: Expectations (How your work will be judged):

- This course is designed to enforce the rigor of analysis and design, and the documentation process associated with it, as applied to the application of IS and IT to business. As such, you will be assessed based on quality of your work, thoroughness in your treatment of the subject matter, presentation, and content.
- I have one standard that I use to judge your work: Would Muma College of Business be embarrassed that you took this to your job interview?
- To give you some guidance for what I consider to be acceptable work for university level, I have put together a list of items for your review. Every item on this list has been observed by me in at least one RFP, RFI, RFQ, or other requirements-based document instruction in industry practice.
- By having all submitted documents consistent with a standard format, it is easier to compare similar work between members and teams, as well as for the University and College to report our educational work product to assessment authorities.
- Formatting is important. Your work may be 100% correct, but if presented in the wrong format, or difficult for the reviewer to read, it might receive negative feedback, up to and including, rejection for failure to follow directions.
- **Failure to comply with this list of items may result in a rejection of your submission.**
  - a. Submissions must be typed, using Times New Roman, 12-point font, with double space.
  - b. Every individual written assignment should have a cover page containing your name, assignment title, date and course name. NO OTHER items should be on your cover page.
  - c. Every team-based written assignment shall have only one submission - from the team lead. The cover page must identify the team lead and all team members listed in alphabetical order; it must state your team name and motto, specific assignment and due date. No other items should be on your team cover page.
  - d. Loose pages will not be accepted. Multiple page documents must be stapled or bound. No other form will be accepted.
  - e. Your work must be well organized, using headers and titles to divide paragraphs and sections for clarity. You may consider the use of a variety of fonts and colors (**when appropriate**) for presentation.
  - f. You must use complete sentences. Use of bullets only when appropriate for content lists.
  - g. I should not be the first set of eyes on your paper: Typos and grammatical errors will count against you.
  - h. Your work must be thoughtful and demonstrate thorough thinking through of the problem as well as your proposed method for solving it.
  - i. Your work must be original.
  - j. Your work must be accompanied by a reference list of your sources. APA is standard, but any style is accepted as long as it is consistent.
  - k. Your work must be easy to read (readability).
  - l. Your work must be clear and to the point. I do not require a minimum amount of content, but you must include enough content to demonstrate to me that you have put satisfactory thought and effort into your

work. Remember: “Less is *not* more”; “less is more value” – because it does not dilute your message with too many words.

- m. If your submission does not meet the requirements of the assignment or fails to follow directions or is far off from the requested formatting, it is eligible to be awarded zero credit or an appropriate reduction for missing elements. A 20% penalty, per day, is assessed to any document resubmitted after having been graded.
- n. **Late work** receives a zero grade until submitted. Any late submission will receive a 20% penalty per day until submitted. A day is defined as a 24-hour cycle commencing from the deadline. This means that after 5 consecutive days past the deadline, your maximum allowable score is zero. Eastern Time Zone is controlling. **If you fail to join a canvas group, you will not receive a grade for your team’s submissions.**

**Grading scale:** The following table explains the grading formula and final letter grades:

**WARNING: There is NO extra credit. There is NO rounding. What you get is what you get. You have all the assignments before you. There is no additional work available to you if you fail to complete the actual assignments in the syllabus.**

Assignments	Total out of 100
Average of Individual Assignments	x .5
Average of Team Assignments { +/- 20% based on 360 peer review }	x .5
Letter Grades	
A	90.0 with no rounding
B	80.0
C	70.0
D	60.0
F	< 60.0

**COMMUNICATION POLICY and PREFERRED METHODS:** I follow a standard business day, which means 0800 – 1700, Monday through Friday. I will generally make myself available to you during the business day should you wish to call me or video conference with me.

If you choose to contact me through email, the response time will be no later than the close of the next business day. This means if you send me an email at 0800 on Friday, I will respond to that email no later than 1700 the next business day, Monday. Keep this in mind when timing your requests and inquiries.

I do not stand-by on my email server 24/7 waiting for new mail to arrive in my inbox. In fact, I do not have email notifications turned on, I check my email at the start of the business day for whatever arrived during the overnight cycle, and then again at the end of the business day for currency.

I have also posted my personal phone number above for any emergency situation. I completely intend for you to use it. Do not hesitate to call me on the phone if you are facing an extreme situation that is causing you stress. I am here to support you and get you to the skill level where you need to be.

### **MANDATORY STATEMENT ON COVID-19 PROCEDURES**

All students must comply with university policies and posted signs regarding COVID-19 mitigation measures, including wearing face coverings and maintaining social distancing during in-person classes. Failure to do so may result in dismissal from class, referral to the Student Conduct Office, and possible removal from campus. Additional details are available on the University's Core Syllabus Policy Statements page:

<https://www.usf.edu/provost/faculty/core-syllabus-policy-statements.aspx>

### **MANDATORY SYLLABUS STATEMENT ON CLASS RECORDING**

Some sections of this course have classes that are recorded and streamed online. If you are attending such a class section, be aware that any and all Student voices, faces and videos will be included in the class recordings. It is the student's responsibility to make sure the privacy of their surroundings and background is maintained.

#### **Learning Outcomes mapped to Course Exercises and Deliveries:**

<b>Learning Outcome</b>	<b>Exercise/Deliverable</b>
Describe a systems development life cycle	Chapter Discussion Questions SDIP: PDR
Determine requirements of an IS using information gathering techniques.	SDIP Project: SRR Chapter Discussion Questions
Conduct a feasibility analysis for development of an IS to assess:(operational, technical, schedule, economic, legal/contractual, political).	SDIP Project: CDR, IRR Chapter Discussion Questions
Create a Use Case Description to describe system functionality	SDIP Project: PDR and CDR
Describe system processes using Process Modeling (Data Flow Diagrams)	SDIP Project PDR and CDR Chapter Discussion Questions
Model system data created and/or stored by an IS	SDIP Project: PDR and CDR
Manage the modeled data for reporting and analytics.	SDIP Project: SRR, PDR, TRR
Recognize principles of user interface design.	SDIP Project: CDR
Describe how to manage implementation and the programming process.	SDIP Project: CDR, TRR, IRR
Generate a migration plan to transition to a new system.	SDIP Project: IRR

## University Policies:

1. *Early Notification Requirement for Observed Religious Days* - Students who anticipate the necessity of being absent from class due to the observation of a major religious observance must provide notice of the date(s) to the instructor, in writing, at the beginning of the term.
  - <http://www.ugs.usf.edu/policy/ReligiousDays.pdf>
2. *Academic Integrity of Students*
  - <http://www.ugs.usf.edu/policy/AcademicIntegrityOfStudents.pdf>
3. *Disruption of the Academic Process*
  - <http://www.ugs.usf.edu/policy/DisruptionOfAcademicProcess.pdf>
4. *Gender-Based Crimes* - Educators must report incidents of gender-based crimes including sexual assault, sexual harassment, stalking, dating violence and domestic violence. If a student discloses in class, in papers, or to an instructor, the instructor is required by law to report the disclosure. The [Center for Victim Advocacy and Violence Prevention](#) (813-974-5757) is a confidential resource where you can talk about such situations and receive assistance in confidence. Additional confidential resources on campus are: the [Counseling Center](#) (813-974-2831) and [Student Health Services](#) (813-974-2331).
5. *Student Academic Grievance Procedures*
  - <http://www.ugs.usf.edu/policy/StudentAcademicGrievanceProcedures.pdf>
6. *Students with Disabilities* - Students with disabilities are responsible for registering with Students with Disabilities Services (SDS) in order to receive academic accommodations. SDS encourages students to notify instructors of accommodation needs at least 5 business days prior to needing the accommodation. A letter from SDS must accompany this request.
  - See student responsibilities: <http://www.sds.usf.edu>
  - See instructor responsibilities: <http://www.asasd.usf.edu/instructorresponsibilities.asp?refer=FACULTY>
7. *SafeAssign Privacypolicy*
  - In order to comply with privacy laws, students are not required to include personal identifying information, such as your name, in the body of the document. Submitting to the SafeAssign Global Reference Database allows papers from other institutions to be checked against your paper to protect the originality of your work across institutions. Please follow your instructor's instructions carefully regarding what identifying information to include.
  - [Blackboard Quick Reference Guide - Submitting SafeAssignments](#)
8. *University EmergencyPolicy*
  - In the event of an emergency, it may be necessary for USF to suspend normal operations. During this time, USF may opt to continue delivery of instruction through methods that include but are not limited to: Blackboard, Elluminate, Skype, and email messaging and/or an alternate schedule. It's the responsibility of the student to monitor Blackboard site for each class for course specific communication, and the main USF, College, and department websites, emails, and MoBull messages for important general information.