Fall 2012 - Business Systems Analysis and Design
CISM 4310 Section 01 (crn: # 80133)
Tuesday & Thursday 1230 - 1350
Adamson hall 126
(Syllabus revision: # 081412)

FACULTY DATA:
Dr. Douglas Turner, Professor
Office of the Associate Dean – Adamson Hall
Phone: 678.839.6467

OFFICE HOURS:
- by appointment

CRITICAL INFORMATION:
- This syllabus is subject to change by the Professor. To communicate to the class as a whole the Professor will post changes on the “Daily Notes” at http://www.westga.edu/~dturner/fall12.htm. View the website for daily updates about the course. The contents of the daily notes are technically part of the syllabus contract and can alter the terms of this syllabus.
- The due dates are posted below in the FALL 2012 SCHEDULE.
- You have the option to submit your deliverables early, but remember that the item first submitted is the one graded.
- Deliverables will be graded against the posted criteria. If there is ANY confusion or something not clear the student has the obligation to ask the Professor.

COURSE LEARNING OBJECTIVES:
- The following course learning objectives are specific to the BBA Degree in Management Information System Learning Goals, they are:
  1. Have acquired at least limited proficiency in a programming language and several software packages, beyond spreadsheets and word processing (BBA 3, MIS 1).
  2. Understand the basic principles and concepts of business systems analysis, systems design, and data communications (BBA 3, MIS 1).
  3. Apply the above knowledge analogously to other areas of human endeavor (BBA 6).
  4. Critically analyze complex information systems, issues, and problems (BBA 6).

ALTERNATIVE INSTRUCTIONAL SUPPORT:
- A student with special needs or requirements is expected to contact me privately within five business days after the beginning of the course with the appropriate and valid documentation.
- Within ten business days after the beginning of the course the student seeking accommodations for special needs or requirements is expected to define in writing (an e-mail to the professor is acceptable) specifically what alterations or changes to the provisions or requirements of the syllabus are being requested.
- Failure to notify the Professor within the required time lines may result minimal accommodations.

Fall 2012 – CISM 4310
COMMUNICATIONS:
- All e-mails are to be sent to dturner@westga.edu.
- Your UWG e-mail account is the official individual communication method at UWG.
- Only assigned University of West Georgia e-mails accounts will receive an e-mail response.
- You are responsible for checking this e-mail account on a regular basis.
- Everyone please check and be sure that you are not over quota in your WESTGA e-mail account. I frequently have messages that bounce back due to this problem. I will not make multiple attempts to contact you via e-mail.
- The only website utilized in this course can be found at http://www.westga.edu/~dturner/fall12.htm.
- No other website or software like CourseDen, WebCT, or Ready2Learn is utilized.
- Even if website is listed as active by the University, no submissions or e-mails are answered within environments such as CourseDen, WebCT, or Ready2Learn.

PREREQUISITES:
- CISM 3330 and CISM 2335.
- It is expected that all students will be familiar with Win/XP (and current), Excel, Access, and PowerPoint.
- There is no assigned textbook for this course.

METHOD OF INSTRUCTION:
- The focus of this course has five primary components; presenting five PRS demonstrations (explained below), an individual research report relevant to the group project, two individual closed book exams, the development of a group project CD, and a final electronic presentation of the project.
- The three primary causes of failure in this course are the lack of expectation management with end users, failure to follow project guidelines, and group time management.
- Note that the project methodology presented by the Professor will be used to grade project components and may differ slightly with various reference authors.
- There are both individual and group graded components of this course.
- There will be days during the term that we will meet as breakout groups in various rooms.
- Grades are impacted by the lack of the quality of detail and attention to stated requirements.

REQUIRED SUPPLIES:
- (One per group) blank CD (this item will not be returned to the group).
- Windows 95 or better based software and hardware, and CD generation and label capability.

Suggested below but not required:
- A laser pointer for the group is an extremely useful tool during presentations.
DELIVERABLE SUBMISSIONS TYPES:
- **ECD** - Electronic media deliverables are word documents (format.doc), power point slides (.ppt), and excel files (.xls) retained by the students and then submitted on the project CD.
- **EML** - Electronic media deliverables are word documents (format.doc), power point slides (.ppt), and excel files (.xls) that are submitted as e-mail attachments to dtturner@westga.edu.
- **PRS** – Electronic media deliverables presented in front of the class by group selected members.
- **PIC** – Printed paper deliverables include printed word documents, printed power point slides, and printed excel files ready to turn to the Professor at the beginning of class or when due as stated in the syllabus. A cover sheet is required for all PIC submissions.

INDIVIDUAL EFFORTS:
- Each student in each group will be assigned a Data flow diagram (DFD) "leg" to decompose from the select group project.
- An atomic level process is defined as the lowest state of decomposition of a DFD (none exist on the content and system level).
- Each student is individually responsible to prepare 10 atomic level processes and the associated data (Include on CD under DIR:SEC_.II, SDIR:<student’s last name).
- The DFD leg will comply with the graphical and data standards utilized at the group level.
- Each individual student will take two exams (DFD modeling and quality methodologies).
- Each individual student will prepare a research paper.
- Each individual student is accountable for the review of projects during the five demonstrations.
- Each individual student is required to participate in the review of final project presentations (instructions for completing the student review matrix to be announced).

INDIVIDUAL TOPIC RESEARCH PAPER:
- The research paper is ECD, EML, and PIC.
- Adherence to the format requirements is critical for a positive grade.
- The research paper topic should be focused on the appropriate technologies that could/should be incorporated in the business environment under study.
- The topics selected may be taken from a broad view of Information Systems.
- Data must expand beyond what is currently available to MIS students from other classes.
- Strongly consider the future use of the paper topic (where will it be next year?).
- There are points associated with the (EML) submission date and the due date of your topic selection.
- EML submitted topics will be posted as accepted or rejected on the 4310 web page.
- There are (12) twelve quality references required for each paper, GO TO THE LIBRARY.
- Utilize current APA style format standards (with the additional requirement of full justification).
- Always print only on one side of the paper, always double spaced sentences, page numbers, times new roman 12, and laser print quality minimum. Maintain consistency of spacing between sentences. Using single sentence paragraphs demonstrates a poor writing style.
- Proper notations within the body of the text and the corresponding citations in the reference section are required.
- A title / cover sheet is required.
- No Wikipedia or “pedia” anything styled references. All references must be specifically authored by an individual name, or multiple authors and preferably blind peer reviewed.
- There is a minimum 3000 word count for each paper (excluding references).
- Look to the Web only to identify topics and parameters of the paper, consider discussing the applications, strengths, and weaknesses of the topic of interest.
- At least one definitive tool or technique (i.e.; SWOT, value chain, BCG matrix) found in texts like “Strategic Management” Thompson and Strickland will be explained and applied to the paper topic to assist in the analysis.
- The definitive tool or technique will be discussed at the beginning of the paper.
- The paper will have at least the following sections of an introduction, literature review, analysis tool use, discussion of technology use, and a conclusion of future technology use.

GROUPS EFFORTS:
- As groups are self selected there will be no team reassignments.
- Preferably groups will consist of a maximum of four members.
- **Chose your team carefully as they are with you for the entire term!!!**
- This is a very time consuming endeavor resulting in the iterative development of a substantial project.
- Students can expect to encounter a variety of interesting challenges in learning the concepts of system development and in applying these concepts in real-world situations.
- Learning to effectively use a systems modeling tool will be a part of this process.

DEMEANOR:
- The highest degree of professionalism is required when interacting with end users in public.
- **Proper business attire is always required when meeting with end users.**
- Chose your questions carefully for the end users.
- Never promise change to end users as this is only a study.

GROUP PROJECT PROPOSAL:
- The project proposal is ECD, PIC, and PRS.
- Each group will offer a single point of contact (name, e-mail, and telephone number) for the Professor to use as an information clearinghouse to the group.
- Each group will establish a single word name for the group.
- Each group will submit and present the proposal to the class.
- There must be at least enough major level processes for each group member (those processes at the context level).
- Limited electronic delivery (.ppt) may be used.
- The project proposal submission will include:
  - The Organization’s name, Organization’s contact name, telephone number and address (The organization should have minimum of ten members).
  - Listing of group members, each member’s e-mail address, and the name and telephone number of the contact member.
  - Description of group organizational structure chart of associated duties.
  - Identify which DFD leg each student wishes to be assigned.
  - Brief description of objectives and time line for the DFD project.
  - History of the firm (include the description of the business).
GROUP DFD DEMONSTRATIONS:
- Group demonstrations are PRS.
- Present relevant material and get full credit, present nothing and receive nothing, do not attend or participate and receive nothing.
- Coordinate where your problems are and use those for the class discussion.
- The more attention you pay to the other projects, the more apparent the problems of your own project will become.
- Expect to answer questions and represent in the next demonstration if errors are presented.

Group DFD demonstration_1 – Group project proposal.

Group DFD demonstration_2 - Context and Systems level DFDs, and the individual research paper topics (no duplicates in the class).

Group DFD demonstration_3 - All entity dictionary descriptions, two examples of data store content with M-LOGs.

Group DFD demonstration_4 – Completed single “leg” DFDs (with process names), This is the last opportunity to engage in questions concerning methodology and project requirements. If you have questions ask now.

Group DFD demonstration_5 - Complete drill down of all DFDs (Note: these demonstrations will not cover the entire project requirements, see the Project Notes for actual details). This is the last opportunity to engage in questions concerning the project CD layout. If you have questions ask now.

GROUP FINAL PROJECT PRESENTATION:
- Group final projects are ECD and PRS.
- The group final project has two components; the presentation of the final project in front of the class, and the CD (submitted to the professor).
  - The (ppt.) presentation will have a run time of between 7.5 to 8.5 minutes. PRACTICE!
  - Content considerations:
    - Title screen
    - Discussion of firm and current applications
      - Who owns it, and why the firm exist.
      - What is the nature of that specific business market (i.e; competitors).
      - A description of the current hardware/processes.
      - A discussion of the problems observed with the current system.
    - Explanation of the components of a DFD.
    - Explanation of entities used.
    - Decomposition of specific dfd legs as defined by the group.
    - Discussion of suggested process changes.
  - This is a research presentation, place a strong emphasis on TECHNICAL information, and do not spend a great deal of time stating the obvious or common knowledge issues.
  - Do not just read the slides!
FORMAT OF DOCUMENTS:
- The first submission received will be graded against the requirements, turn in what you wish to be graded the first time, there are no “corrected copies” or “do-overs”!
- Variances found between ECD, EML, and PIC deliverables will result in a lower score or grade.
- As this is a business course all submissions will be of business content and quality. There is no “I” when writing in this environment, eyes are for reading.
- Substantial point deduction (including 0 points for submission) for format, grammar, and punctuation errors.

TROUBLE SHOOTING:
- Each group is expected to maintain adequate control of back up programs and data.
- Loss of a system or data is not an acceptable response to project requirements and consultation reviews.
- Each group must organize and manage itself to effectively meet the requirements of the Professor and the user for whom you will be developing a system.
- It is strongly recommended that members of each group be assigned the task of contact point, archive librarian, hardware specialist, software specialist, quality assurance proof reader (text), diagram flow consistency proof reader, treasurer, prototype coordinator, and presenter.
- You may discover other major tasks that should be assigned as well.
- Consider assigning a primary and secondary role to each team member.
- However, all team members should be knowledgeable in all aspects of the project.

PEER EVALUATIONS:
- Peer evaluations incorrectly submitted or late are not valid, and awards full 100% credit to all.
- Peer evaluations are PIP (see schedule).
- Peer evaluations must be completed, signed, folded, and stapled to be valid.
- Use values ranges from 0% and 100%, in increments of five points, without self assessment.
- Peer evaluations are confidential; no feedback will be given except in the form of a single individual student grade.
- Peer evaluations will be collected in class.

ATTENDANCE:
- Attendance is expected every day regardless of the assignment, whether it is in class, in the break out rooms, or at the work site with the end users.
- At the end of the term all days missed divided by the number of days when attendance is taken determines the percentage of attendance credit.
- There is no day of grace from class assignments or obligations.
- Failure to participate or engage in class activities will count as NOT ATTENDING class.
- Loss of attendance credit and the loss of scheduled activity points can occur concurrently when you fail to attend class.
- You are considered missing and attendance credit is lost IF YOU ARE LATE TO CLASS, or LEAVE BEFORE BEING DISMISSED.
OTHER PROJECT DETAILS:
- Never, never pass up an opportunity to meet with you group.
- The final project should address functional problems in the original organizational design.
- Your project should meet the requirements of the end user.
- The project should be creative and explained thoroughly and clearly.
- **MAINTAIN BACK UP COPIES WITHIN YOUR TEAM. DISKS DO FAIL!**
- Consider the use of a father, grandfather, great grandfather method of data backup.
- Consider keeping a running list of data flow names to prevent duplication.
- Utilize the same printing format required for the word processing of the project.
- Do not expect approval if the team has a minimal grasp of the organization to be studied or is not adequately prepared to discuss organizational particulars.
- Quality issues (graphics, text, grammar, spelling, etc.) can severely damage a project grade.

EVALUATION:
- The total grade is based on a 10 point scale.

Individually generated grades (60 percent)
- a) Individual Quality Exam 05.0 %
- b) Individual DFD Exam 05.0 %
- c) Individual Attendance/participation 10.0 %
- d) Individual DFD production of atomic level processes 25.0 %
- e) Individual research paper 15.0 %

Group generated grades (40 percent)*
- f) Group DFD demonstrations_1 - 5 (2.0 points each) 10.0 %*
- g) Project CD (with all components) 15.0 %*
- h) Project presentation to the class 15.0 %*

* Properly submitted peer evaluations will alter 50% of the items f, g, & h.

COURSE POLICIES:
- Attendance is taken. You are responsible for everything that goes on in class, regardless of your attendance.
- Academic dishonesty includes the making of any type of copy of, or failing to return a test.
- While assignments may be returned to the student(s) for correction and evaluation, all material submitted as part of the course requirements become the property of the Professor.
- As this course is designed to be centered on group work incomplete grades are not given.
- The Professor retains the right to subjectively evaluate an individual student's grade upward in appropriate cases based upon observed performance.
- Within class all computer screens and cell phones are to remain off unless told otherwise.
- Note from the outset that there are components of this course that are **far less structured** than what are normally presented in most courses!
- Individual initiative and responsibility is required to succeed in this course.
- Plan you time carefully, acceptances of late work would require extraordinary circumstances and are subject to the Professors approval.
- A legitimate and verifiable physician or court related written excuse is required to prevent attendance point loss.
- Ensure that you have a file backup method for the worst case scenario.
- The University of West Georgia Academic Honesty Policy will be enforced.
- Violations of the academic honesty policy may result in expulsion from the University.
- Signing the attendance sheet for another person is deemed to be a violation of the academic honesty policy.
- Lying, cheating, stealing, or engaging in plagiarism in pursuit of one’s studies is a violation of academic honesty policy at UWG and will not be tolerated (Please read the university’s catalog for the official statement on academic integrity and plagiarism).
- Students are responsible for understanding plagiarism. In general, plagiarism is defined as the use of intellectual material produced by another person without acknowledging its source (- The following are some examples of what is considered plagiarism:
  * Copying of passages from works of others into an assignment, paper, discussion board posting, without acknowledgment.
  * Cutting/pasting information available on the web or online databases.
  * Using the views, opinions, or insights of another without acknowledgment.
  * Paraphrasing another person's characteristic or original phraseology, metaphor, or other literary device without acknowledgment.
- Violations of the academic honesty policy may result in expulsion from the University.
- You are not allowed to turn in work completed for another class for credit in this class. For example, you cannot write one paper and turn it in for credit in two different classes.

DETACH AND SUBMIT THE PEER EVALUATION FORM BELOW TO THE PROFESSOR

PEER EVALUATIONS

GROUP NUMBER ______ or PROJECT/COMPANY______________________________________

GROUP MEMBER NAME | ASSIGNED SCORE
---------------------|-------------------

PRINT YOUR NAME) (SIGN YOUR NAME)
FALL 2012 SCHEDULE:

- Changes to this schedule will be posted in the “Daily Notes”.

<table>
<thead>
<tr>
<th>DAY</th>
<th>DATE</th>
<th>MATERIAL COVERED</th>
</tr>
</thead>
<tbody>
<tr>
<td>TO BE POSTED LATER</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DAY</th>
<th>DATE</th>
<th>MATERIAL COVERED</th>
</tr>
</thead>
<tbody>
<tr>
<td>TUESDAY</td>
<td>AUG 21</td>
<td>Introduction, discussion, handouts, and team assignments.</td>
</tr>
<tr>
<td>THURSDAY</td>
<td>AUG 23</td>
<td>DFD examples.</td>
</tr>
<tr>
<td>TUESDAY</td>
<td>AUG 28</td>
<td>Work outside of class.</td>
</tr>
<tr>
<td>THURSDAY</td>
<td>AUG 30</td>
<td>DFD examples.</td>
</tr>
<tr>
<td>TUESDAY</td>
<td>SEP 04</td>
<td>DFD discussions, problem identification.</td>
</tr>
<tr>
<td>THURSDAY</td>
<td>SEP 06</td>
<td>Work inside of class.</td>
</tr>
<tr>
<td>TUESDAY</td>
<td>SEP 11</td>
<td>Present proposal and history.</td>
</tr>
<tr>
<td>THURSDAY</td>
<td>SEP 13</td>
<td>Quality Methodologies.</td>
</tr>
<tr>
<td>TUESDAY</td>
<td>SEP 18</td>
<td>Demonstration_1 by groups.</td>
</tr>
<tr>
<td>THURSDAY</td>
<td>SEP 20</td>
<td>Jeff Culverhouse <a href="http://www.systemsconversion.com/company/company.htm">http://www.systemsconversion.com/company/company.htm</a></td>
</tr>
<tr>
<td>TUESDAY</td>
<td>SEP 25</td>
<td>Quality Methodologies.</td>
</tr>
<tr>
<td>THURSDAY</td>
<td>SEP 27</td>
<td>Demonstration_2 by groups.</td>
</tr>
<tr>
<td>TUESDAY</td>
<td>OCT 02</td>
<td>Work outside of class.</td>
</tr>
<tr>
<td>THURSDAY</td>
<td>OCT 04</td>
<td>Demonstration_3 by groups.</td>
</tr>
<tr>
<td>TUESDAY</td>
<td>OCT 08</td>
<td>Demonstration_3 by groups.</td>
</tr>
<tr>
<td>THURSDAY</td>
<td>OCT 11</td>
<td>Paper due at 2:00 pm, Work outside of class.</td>
</tr>
<tr>
<td>TUESDAY</td>
<td>OCT 16</td>
<td>Work outside of class.</td>
</tr>
<tr>
<td>THURSDAY</td>
<td>OCT 18</td>
<td>Work outside of class.</td>
</tr>
<tr>
<td>TUESDAY</td>
<td>OCT 23</td>
<td>Demonstration_4 by groups.</td>
</tr>
<tr>
<td>THURSDAY</td>
<td>OCT 25</td>
<td>Demonstration_4 by groups.</td>
</tr>
<tr>
<td>TUESDAY</td>
<td>OCT 30</td>
<td>Work inside of class.</td>
</tr>
<tr>
<td>THURSDAY</td>
<td>NOV 01</td>
<td>Work inside of class.</td>
</tr>
<tr>
<td>TUESDAY</td>
<td>NOV 06</td>
<td>Demonstration_5 by groups.</td>
</tr>
<tr>
<td>THURSDAY</td>
<td>NOV 08</td>
<td>Demonstration_5 by groups.</td>
</tr>
<tr>
<td>TUESDAY</td>
<td>NOV 13</td>
<td>Exam (DFDS).</td>
</tr>
<tr>
<td>THURSDAY</td>
<td>NOV 15</td>
<td>Work outside of class.</td>
</tr>
<tr>
<td>TUESDAY</td>
<td>NOV 20</td>
<td>Thanksgiving break.</td>
</tr>
<tr>
<td>THURSDAY</td>
<td>NOV 22</td>
<td>Thanksgiving break.</td>
</tr>
<tr>
<td>TUESDAY</td>
<td>NOV 27</td>
<td>Presentations (1230-1245, 1250-1305, 1310-1325)</td>
</tr>
<tr>
<td>THURSDAY</td>
<td>NOV 29</td>
<td>Presentations (1230-1245, 1250-1305, 1310-1325)</td>
</tr>
<tr>
<td>THURSDAY</td>
<td>DEC 06</td>
<td>11:00 am – 1:30 pm Final exam (quality methodologies).</td>
</tr>
</tbody>
</table>

The dates above in YELLOW are very tentative and subject to change.
CISM 4310 PROJECT NOTES - DETAILED PROJECT REQUIREMENTS

ACTIVITIES IN PERFORMING SYSTEMS ANALYSIS AND DESIGN:
- Prepare a thorough history and business description of the firm.
- Define and thoroughly describe the project application.
- Define all users and expected usage of data supplied by your application.
- Define existing logical system, user requirements, and logical proposed system using DFD specifications and analysis/design dictionary entries.

PROJECT CD:
- THIS SUBMISSION WILL REMAIN WITH THE PROFESSOR, AND WILL NOT BE RETURNED.
- Below are the details of the CD. Each CD contains directories (dir) sub-directories (sdir), and individual files (file: name).
- Remember the first submission is what will be graded against the requirements.
- The project CD will have a printed label. The CD submission will be submitted in a clear CD case (with the label visible).
- The printed label will include the group name, the company of study, semester and year, Dr. Turner CISM 4310, and the names of the group members.

CD layout for submission
directory: sec_I (group project details)
  file: proposal.doc
  file: history.doc
  file: proposal.ppt (optional)
  file: context.xls (current context and system level DFDs)
  file: entities.doc
  file: mlogs.xls
  file: pres.ppt (group final presentation)
directory: sec_IIi (individual student project and DFD data)
sdir:<student's last name>
  file:major_process.doc
  file:ind_dfd.xls
  file: research.doc

sdir: <student’s last name>) A sub-directory (sdir: containing all of the exploded DFDs (all the way down to the required number of atomic levels) from the assigned major system level process. This is individually produced and individually graded work.

A single Word file containing the all process identity numbers, names, and descriptions. Remember that process names are small and exact at the lower levels, while larger in and length and more generalized as they go up the DFD legs. Use the nesting method similar to the MLOG example below (file:major_process).
A single excel file containing all of the correctly labeled exploded DFDs (file: inddfd).

a. Example: Sales and Service XXX00P01; first child XXX00001P00. Diagrams designed in a consistent manner (size, notation, etc.).

b. Processes are best represented by using the format where each process has two numeric values.

A single Word file containing the individual research paper (file: research.doc).

**HOW TO GUIDE:**
Your project will NOT require SV/MV designations. Below is an example of a M_LOG composition:

```
M_LOG_CABINET
M_LOG_BACKPAC

M_LOG_CHECK_BOOK

M_LOG_WALLET

LOG_DRIVER_LIC
   NAME
   SSIN
   DOB
   LIC_NUMBER
   EXPIRE_DATE

LOG_SHELL_CREDIT_CARD
   NAME
   ACCT_NUMBER
   EXPIRE_DATE

M_LOG_ORGANIZER_BOOK

   WEBCT_ACCT_NUMBER
   WEBCT_PASSWORD

LOG_ADDRESS_BOOK
   NAMES
   HOME_ADDRESS
   WORK_ADDRESS
   HOME_PHONE_NUMBER
   WORK_PHONE_NUMBER
```
### General Application Rules Chart:

<table>
<thead>
<tr>
<th>NAME</th>
<th>SYMBOL</th>
<th>RULES</th>
<th>LABELS/NUMBER</th>
<th>REQUIRED ENTRY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Process</td>
<td>![Process Symbol]</td>
<td>Each process is unique. DFDs decompose on processes.</td>
<td>Unique name (once per project) and number.</td>
<td>Diagram and Description.</td>
</tr>
<tr>
<td>Stored Data</td>
<td>![Stored Data Symbol]</td>
<td>Can be nested or reused. Represent the mass logical data stores (MLOG/LOG).</td>
<td>Unique name (once per project).</td>
<td>Description and MLOG/LOG</td>
</tr>
<tr>
<td>Entity</td>
<td>![Entity Symbol]</td>
<td>Must be reused. Entities represent groups of individuals/function providers.</td>
<td>Unique name (once per project).</td>
<td>Description.</td>
</tr>
<tr>
<td>Data flow</td>
<td>![Data Flow Symbol]</td>
<td>Each data flow is unique. Nested, but not modeled. Each line has two Labels. One way linear relationship are rare!</td>
<td>Unique name (once per project). No label required for linear relationship.</td>
<td>Flow table for ATOMIC PROCESSES.</td>
</tr>
</tbody>
</table>
JH0000P01
Payment Services

To the process

1. rec_norm_emp_log_computer
2. rec_cont_emp_log_computer
3. rec_emp_reg_data
4. mgnt_reg_supervise
5. req_norm_emp_pmt
6. req_cont_emp_pmt
7. req_mgnt_pmt
8. validate_credit_Check_pmt
9. send_Pmt_credit_data
10. sub_order_pmt_data
11. rec_tax_data
12. req_reg_cash_data

From the process

1. req_norm_emp_log_computer
2. req_cont_emp_log_computer
3. req_emp_reg_data
4. mgnt_correct_supervise
5. rec_norm_emp_pmt
6. rec_cont_emp_pmt
7. update_mgnt_pmt
8. validate_credit_Check_acct
9. rec_decision_credit_data
10. rev_order_pmt_data
11. rev_tax_data
12. rec_reg_change_cash_data